BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements
For Data Validation of
GC Analysis

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Certifications: CA ELAP #1186; NV #CA00014; AK UST101; OR ELAP #4032; DoD ELAP #66175

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Case Narrative

Analyses Requested: **RSK 175M**
Submission Number: 17-03278

Instrument ID: GC-V1
Model: Varian 3400

Column Type: RTX 502.2, 60m x 0.25mm ID, 1.4µm film thickness.

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and extractions took place within holding times.

Calibration: Initial calibration criteria were met. Frequency and accuracy criteria for initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL. Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample and Duplicate: Laboratory control sample analysis was performed at the required frequency. All parameters were within QC limits.

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:40
Received By:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received
☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		AF								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Date Numbering Completed By: Date/Time: 2-6-17 2310
Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMPREC.rev 20)
Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ (W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL				A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: Date/Time: 2-6-17 2315

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Numbering Completed By: Date/Time: 2/6/17 0360

Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RB								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/9/2017 10:21:56AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**GC**
Method:	**RSK-175M**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

RSK-175M

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

RSK-175M

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: GC-V1

Analyte	DL	LOD	LOQ	Units
Methane	0.00028	0.0006	0.001	mg/L
Ethane	0.00075	0.001	0.002	mg/L
Ethene	0.00077	0.001	0.002	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
RSK-175M

M051A_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-04	File ID:	15FEB19.D
Sampled:	02/06/17 11:30	Prepared:	02/15/17 06:08	Analyzed:	02/15/17 09:51
Solids:		Preparation:	RSK-175M	Initial/Final:	1 ml / 1 ml
Batch:	B[B1278	Sequence:	1702620	Calibration:	1702007
Instrument:	GC-V1				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/L)	DL	LOD	LOQ	Q
74-82-8	Methane	1	0.00060	0.00028	0.00060	0.0010	U
74-84-0	Ethane	1	0.0010	0.00075	0.0010	0.0020	U
74-85-1	Ethene	1	0.0010	0.00077	0.0010	0.0020	U

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

RSK-175M

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B1278
Batch Matrix: Water
Preparation: RSK-175M

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M051A_170206	1703278-04	15FEB19.D	02/15/17 06:08	
Blank	B[B1278-BLK1	15FEB04.D	02/15/17 06:08	
LCS	B[B1278-BS1	15FEB05.D	02/15/17 06:08	
LCS Dup	B[B1278-BSD1	15FEB06.D	02/15/17 06:08	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
RSK-175M

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B1278-BLK1	File ID:	15FEB04.D
Prepared:	02/15/17 06:08	Preparation:	RSK-175M	Initial/Final:	1 ml / 1 ml
Analyzed:	02/15/17 07:48	Instrument:	GC-V1		
Batch:	B[B1278	Sequence:	1702620	Calibration:	1702007

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
74-82-8	Methane	0.00060	0.00028	0.00060	0.0010	U
74-84-0	Ethane	0.0010	0.00075	0.0010	0.0020	U
74-85-1	Ethene	0.0010	0.00077	0.0010	0.0020	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
RSK-175M

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B1278
Laboratory ID: B[B1278-BS1
Preparation: RSK-175M
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Methane	0.010843	0.011407	105	73 - 125
Ethane	0.021736	0.023851	110	74 - 131
Ethene	0.028446	0.029657	104	72 - 133

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methane	0.010843	0.010934	101	4.23	20	73 - 125
Ethane	0.021736	0.020957	96.4	12.9	20	74 - 131
Ethene	0.028446	0.027672	97.3	6.92	20	72 - 133

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

RSK-175M

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1701454	Instrument:	GC-V1
Matrix:	Water	Calibration:	1702007

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1701454-CAL4	27JAN02.D	01/27/17 07:43
Cal Standard	1701454-CAL3	27JAN03.D	01/27/17 07:47
Cal Standard	1701454-CAL2	27JAN04.D	01/27/17 07:52
Cal Standard	1701454-CAL1	27JAN05.D	01/27/17 07:56

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

RSK-175M

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702620	Instrument:	GC-V1
Matrix:	Water	Calibration:	1702007

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702620-ICV1	27JAN06.D	01/27/17 08:40
Initial Cal Blank	1702620-ICB1	27JAN07.D	01/27/17 08:45
Calibration Check	1702620-CCV1	15FEB02.D	02/15/17 07:35
Calibration Blank	1702620-CCB1	15FEB03.D	02/15/17 07:43
Blank	B[B1278-BLK1	15FEB04.D	02/15/17 07:48
LCS	B[B1278-BS1	15FEB05.D	02/15/17 07:53
LCS Dup	B[B1278-BSD1	15FEB06.D	02/15/17 07:58
Calibration Check	1702620-CCV2	15FEB08.D	02/15/17 08:59
Calibration Blank	1702620-CCB2	15FEB09.D	02/15/17 09:04
M051A_170206	1703278-04	15FEB19.D	02/15/17 09:51
Calibration Check	1702620-CCV3	15FEB20.D	02/15/17 09:56
Calibration Blank	1702620-CCB3	15FEB21.D	02/15/17 10:01

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

RSK-175M

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V1	Calibration:	1702007
Lab File ID:	27JAN06.D	Calibration Date:	01/27/17 07:43
Sequence:	1702620	Injection Date:	01/27/17
Lab Sample ID:	1702620-ICV1	Injection Time:	08:40

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Methane	A	10.843	12.174	605292.5	679565.1		12.3	15
Ethane	A	21.736	24.956	580938.9	666976.9		14.8	15
Ethene	A	28.446	31.820	402477.4	450214.1		11.9	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

RSK-175M

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V1	Calibration:	1702007
Lab File ID:	15FEB02.D	Calibration Date:	01/27/17 07:43
Sequence:	1702620	Injection Date:	02/15/17
Lab Sample ID:	1702620-CCV1	Injection Time:	07:35

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Methane	A	10.843	11.092	605292.5	619190.2		2.3	15
Ethane	A	21.736	23.809	580938.9	636313		9.5	15
Ethene	A	28.446	29.692	402477.4	420102.7		4.4	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

RSK-175M

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V1	Calibration:	1702007
Lab File ID:	15FEB08.D	Calibration Date:	01/27/17 07:43
Sequence:	1702620	Injection Date:	02/15/17
Lab Sample ID:	1702620-CCV2	Injection Time:	08:59

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Methane	A	10.843	12.051	605292.5	672716.7		11.1	15
Ethane	A	21.736	24.904	580938.9	665574.2		14.6	15
Ethene	A	28.446	30.960	402477.4	438044.4		8.8	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

RSK-175M

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V1	Calibration:	1702007
Lab File ID:	15FEB20.D	Calibration Date:	01/27/17 07:43
Sequence:	1702620	Injection Date:	02/15/17
Lab Sample ID:	1702620-CCV3	Injection Time:	09:56

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Methane	A	10.843	11.317	605292.5	631762.1		4.4	15
Ethane	A	21.736	23.811	580938.9	636375.1		9.5	15
Ethene	A	28.446	28.609	402477.4	404785.9		0.6	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION STANDARDS

RSK-175M

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1701454	Instrument:	GC-V1
Calibration:	1702007		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
7B07024	RSK-175M CAL4	1701454-CAL4	27JAN02.D	01/27/17 07:43
7B07023	RSK-175M CAL3	1701454-CAL3	27JAN03.D	01/27/17 07:47
7B07022	RSK-175M CAL2	1701454-CAL2	27JAN04.D	01/27/17 07:52
7B07021	RSK-175M CAL1	1701454-CAL1	27JAN05.D	01/27/17 07:56

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
RSK-175M

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702007
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: GC-V1
Calibration Date: 01/27/17 07:43

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Methane	1.0843	637975.6	10.843	692653.9	108.43	493653.4	542.15	596887				
Ethane	2.1736	586625.4	21.736	661756.1	217.36	501173.7	1086.8	574200.6				
Ethene	2.8446	439934.3	28.446	440075.9	284.46	333630.7	1422.3	396268.7				

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

RSK-175M

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702007
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: GC-V1
Calibration Date: 01/27/17 07:43

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Methane	605292.5	13.89925	0.73	1.372967E-02			20	
Ethane	580938.9	11.31896	2.0825	0.4599198			20	
Ethene	402477.4	12.50156	1.7325	0.5526404			20	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 10:21:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
RSK-175M

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/15/17 06:08	9.00	14.00	02/15/17 09:51	9.00	14.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/9/2017 10:21:56AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Analyses Requested: 8260
Submission Number: 17-03278

Instrument ID: MS-V5
Model: HP5973/GC6890

Column Type: Rxi R-624 Sil MS 30m x 0.25mm ID, 1.4µm film thickness.

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and extractions took place within holding times.

Calibration: Initial calibration criteria were met. Frequency and accuracy criteria for initial calibration verification (ICV) were met. Frequency and accuracy criteria for continuing calibration verification (CCV) were met except the recoveries for Bromomethane in 1702254-CCV1 and 1702254-CCV3 were outside QC limits. Ending CCV criteria of fifty percent were met. Any compounds that were flagged, but not required, were not noted here.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL. Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameters for the required compounds were within QC limits.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy requirements for the requested compounds were met except the matrix spike recoveries for Naphthalene and 1,2,4-Trimethylbenzene and the matrix spike duplicate recoveries for 1,3-Dichlorobenzene and 1,2,4-Trimethylbenzene were outside QC limits. All precision requirements were met.

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:40	
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:40	
Received By:	Date: 2/6/17	Time: 16:40	
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830	
Received By:	Date: 2/6/17	Time: 18:30	
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200	
Received By (LAB):	Date: 2/6	Time: 2200	

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VSA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		AF								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: M Date/Time: 2-6-17 2310
A = Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMPREC rev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____	Other ☐ (Specify)_____	(W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL				A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: Date/Time: 2-6-17 2315

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

ments:
Numbering Completed By: Date/Time: 2/6/17 0360
ctual / C = Corrected

Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC\rev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RG								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/9/2017 2:49:21PM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**VOA**
Method:	**EPA-8260B**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
DUP04_170206	1703278-01
EB07_170206	1703278-02
M041E_170206	1703278-03
M051A_170206	1703278-04
M060A_170206	1703278-05
TB04_170206	1703278-06

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MS-V5

Analyte	DL	LOD	LOQ	Units
Benzene	0.083	0.16	0.50	ug/L
Bromobenzene	0.13	0.16	0.50	ug/L
Bromochloromethane	0.24	0.30	1.0	ug/L
Bromodichloromethane	0.14	0.30	0.50	ug/L
Bromoform	0.27	0.30	0.60	ug/L
Bromomethane	0.25	0.25	0.60	ug/L
n-Butylbenzene	0.11	0.16	0.50	ug/L
sec-Butylbenzene	0.15	0.16	0.50	ug/L
tert-Butylbenzene	0.13	0.16	0.50	ug/L
Carbon tetrachloride	0.18	0.20	0.50	ug/L
Chlorobenzene	0.093	0.16	0.50	ug/L
Chloroethane	0.14	0.16	0.50	ug/L
Chloroform	0.12	0.16	0.50	ug/L
Chloromethane	0.14	0.16	0.50	ug/L
2-Chlorotoluene	0.20	0.20	0.50	ug/L
4-Chlorotoluene	0.15	0.16	0.50	ug/L
Dibromochloromethane	0.13	0.16	0.50	ug/L
1,2-Dibromo-3-chloropropane	0.44	0.50	1.0	ug/L
1,2-Dibromoethane	0.16	0.16	0.50	ug/L
Dibromomethane	0.24	0.30	1.0	ug/L
1,2-Dichlorobenzene	0.072	0.16	0.50	ug/L
1,3-Dichlorobenzene	0.15	0.16	0.50	ug/L
1,4-Dichlorobenzene	0.062	0.16	0.50	ug/L
Dichlorodifluoromethane	0.099	0.16	0.50	ug/L
1,1-Dichloroethane	0.11	0.16	0.50	ug/L
1,2-Dichloroethane	0.17	0.20	0.50	ug/L
1,1-Dichloroethene	0.18	0.20	0.50	ug/L
cis-1,2-Dichloroethene	0.085	0.16	0.50	ug/L
trans-1,2-Dichloroethene	0.15	0.16	0.50	ug/L
1,2-Dichloropropane	0.13	0.16	0.50	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MS-V5

Analyte	DL	LOD	LOQ	Units
1,3-Dichloropropane	0.086	0.16	0.50	ug/L
2,2-Dichloropropane	0.13	0.16	0.50	ug/L
1,1-Dichloropropene	0.085	0.16	0.50	ug/L
cis-1,3-Dichloropropene	0.14	0.16	0.50	ug/L
trans-1,3-Dichloropropene	0.079	0.16	0.50	ug/L
Ethylbenzene	0.098	0.16	0.50	ug/L
Hexachlorobutadiene	0.17	0.20	0.50	ug/L
Isopropylbenzene	0.14	0.16	0.50	ug/L
p-Isopropyltoluene	0.12	0.16	0.50	ug/L
Methylene chloride	0.48	0.50	1.0	ug/L
Methyl t-butyl ether	0.11	0.16	0.50	ug/L
Naphthalene	0.36	0.40	0.50	ug/L
n-Propylbenzene	0.11	0.16	0.50	ug/L
Styrene	0.068	0.16	0.50	ug/L
1,1,1,2-Tetrachloroethane	0.18	0.20	0.50	ug/L
1,1,2,2-Tetrachloroethane	0.17	0.20	0.50	ug/L
Tetrachloroethene	0.13	0.16	0.50	ug/L
Toluene	0.093	0.16	0.50	ug/L
1,2,3-Trichlorobenzene	0.16	0.16	0.50	ug/L
1,2,4-Trichlorobenzene	0.19	0.20	0.50	ug/L
1,1,1-Trichloroethane	0.11	0.16	0.50	ug/L
1,1,2-Trichloroethane	0.16	0.16	0.50	ug/L
Trichloroethene	0.085	0.16	0.50	ug/L
Trichlorofluoromethane	0.13	0.16	0.50	ug/L
1,2,3-Trichloropropane	0.24	0.33	0.50	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	0.15	0.16	0.50	ug/L
1,2,4-Trimethylbenzene	0.12	0.16	0.50	ug/L
1,3,5-Trimethylbenzene	0.12	0.16	0.50	ug/L
Vinyl chloride	0.12	0.16	0.50	ug/L
Total Xylenes	0.36	0.46	1.0	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MS-V5

Analyte	DL	LOD	LOQ	Units
Acetone	4.6	5.0	10	ug/L
Acetonitrile	5.5	6.0	10	ug/L
Allyl chloride	0.80	1.0	5.0	ug/L
t-Amyl Methyl ether	0.25	0.30	0.50	ug/L
Benzyl chloride	0.60	0.60	1.0	ug/L
t-Butyl alcohol	9.4	10	12	ug/L
Carbon disulfide	0.38	0.40	1.0	ug/L
Chloroprene	0.37	1.0	5.0	ug/L
Diisopropyl ether	0.23	0.30	0.50	ug/L
Ethyl t-butyl ether	0.18	0.20	0.50	ug/L
2-Hexanone	3.4	4.0	10	ug/L
Methyl ethyl ketone	2.5	3.0	10	ug/L
Methyl isobutyl ketone	2.1	3.0	10	ug/L
Vinyl acetate	1.8	6.0	20	ug/L
p- & m-Xylenes	0.28	0.30	0.50	ug/L
o-Xylene	0.082	0.16	0.50	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

DUP04_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-01	File ID:	09FEB61.D
Sampled:	02/06/17 09:25	Prepared:	02/09/17 13:37	Analyzed:	02/10/17 04:30
Solids:		Preparation:	EPA 5030 Water MS	Initial/Final:	25 ml / 25 ml
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	1	0.16	0.083	0.16	0.50	U
108-86-1	Bromobenzene	1	0.16	0.13	0.16	0.50	U
74-97-5	Bromochloromethane	1	0.30	0.24	0.30	1.0	U
75-27-4	Bromodichloromethane	1	0.30	0.14	0.30	0.50	U
75-25-2	Bromoform	1	0.30	0.27	0.30	0.60	U
74-83-9	Bromomethane	1	0.25	0.25	0.25	0.60	U
104-51-8	n-Butylbenzene	1	0.16	0.11	0.16	0.50	U
135-98-8	sec-Butylbenzene	1	0.16	0.15	0.16	0.50	U
98-06-6	tert-Butylbenzene	1	0.16	0.13	0.16	0.50	U
56-23-5	Carbon tetrachloride	1	0.20	0.18	0.20	0.50	U
108-90-7	Chlorobenzene	1	0.16	0.093	0.16	0.50	U
75-00-3	Chloroethane	1	0.16	0.14	0.16	0.50	U
67-66-3	Chloroform	1	0.16	0.12	0.16	0.50	U
74-87-3	Chloromethane	1	0.16	0.14	0.16	0.50	U
95-49-8	2-Chlorotoluene	1	0.20	0.20	0.20	0.50	U
106-43-4	4-Chlorotoluene	1	0.16	0.15	0.16	0.50	U
124-48-1	Dibromochloromethane	1	0.16	0.13	0.16	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	0.44	0.50	1.0	U
106-93-4	1,2-Dibromoethane	1	0.16	0.16	0.16	0.50	U
74-95-3	Dibromomethane	1	0.30	0.24	0.30	1.0	U
95-50-1	1,2-Dichlorobenzene	1	0.16	0.072	0.16	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.16	0.15	0.16	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.16	0.062	0.16	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.16	0.099	0.16	0.50	U
75-34-3	1,1-Dichloroethane	1	0.16	0.11	0.16	0.50	U
107-06-2	1,2-Dichloroethane	1	0.20	0.17	0.20	0.50	U
75-35-4	1,1-Dichloroethene	1	0.20	0.18	0.20	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	2.0	0.085	0.16	0.50	
156-60-5	trans-1,2-Dichloroethene	1	0.74	0.15	0.16	0.50	
78-87-5	1,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U
142-28-9	1,3-Dichloropropane	1	0.16	0.086	0.16	0.50	U
594-20-7	2,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

DUP04_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-01	File ID:	09FEB61.D
Sampled:	02/06/17 09:25	Prepared:	02/09/17 13:37	Analyzed:	02/10/17 04:30
Solids:		Preparation:	EPA 5030 Water MS	Initial/Final:	25 ml / 25 ml
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
563-58-6	1,1-Dichloropropene	1	0.16	0.085	0.16	0.50	U
100-41-4	Ethylbenzene	1	0.16	0.098	0.16	0.50	U
87-68-3	Hexachlorobutadiene	1	0.20	0.17	0.20	0.50	U
98-82-8	Isopropylbenzene	1	0.19	0.14	0.16	0.50	J
99-87-6	p-Isopropyltoluene	1	0.16	0.12	0.16	0.50	U
75-09-2	Methylene chloride	1	0.50	0.48	0.50	1.0	U
1634-04-4	Methyl t-butyl ether	1	0.16	0.11	0.16	0.50	U
91-20-3	Naphthalene	1	0.40	0.36	0.40	0.50	U
103-65-1	n-Propylbenzene	1	0.16	0.11	0.16	0.50	U
100-42-5	Styrene	1	0.16	0.068	0.16	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.20	0.18	0.20	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.20	0.17	0.20	0.50	U
127-18-4	Tetrachloroethene	1	0.16	0.13	0.16	0.50	U
108-88-3	Toluene	1	0.16	0.093	0.16	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	0.16	0.16	0.16	0.50	U
120-82-1	1,2,4-Trichlorobenzene	1	0.20	0.19	0.20	0.50	U
71-55-6	1,1,1-Trichloroethane	1	0.16	0.11	0.16	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.16	0.16	0.16	0.50	U
79-01-6	Trichloroethene	1	0.44	0.085	0.16	0.50	J
75-69-4	Trichlorofluoromethane	1	0.16	0.13	0.16	0.50	U
96-18-4	1,2,3-Trichloropropane	1	0.33	0.24	0.33	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
75-01-4	Vinyl chloride	1	0.72	0.12	0.16	0.50	
67-64-1	Acetone	1	5.0	4.6	5.0	10	U
994-05-8	t-Amyl Methyl ether	1	0.30	0.25	0.30	0.50	U
75-65-0	t-Butyl alcohol	1	10	9.4	10	15	U
75-15-0	Carbon disulfide	1	0.40	0.38	0.40	1.0	U
108-20-3	Diisopropyl ether	1	0.30	0.23	0.30	0.50	U
637-92-3	Ethyl t-butyl ether	1	0.20	0.18	0.20	0.50	U
78-93-3	Methyl ethyl ketone	1	3.0	2.5	3.0	10	U
179601-23-1	p- & m-Xylenes	1	0.30	0.28	0.30	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

DUP04_170206

Laboratory:	BC Laboratories			SDG:	17-03278		
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda		
Matrix:	Water	Laboratory ID:	1703278-01			File ID:	09FEB61.D
Sampled:	02/06/17 09:25	Prepared:	02/09/17 13:37			Analyzed:	02/10/17 04:30
Solids:		Preparation:	EPA 5030 Water MS			Initial/Final:	25 ml / 25 ml
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
95-47-6	o-Xylene	1	0.16	0.082	0.16	0.50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	10.000	10.670	107	81 - 118	
Toluene-d8 (Surrogate)	10.000	9.9100	99.1	89 - 112	
4-Bromofluorobenzene (Surrogate)	10.000	9.8200	98.2	85 - 114	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	194334	6.58	202038	6.58	
Chlorobenzene-d5 (IS)	66142	9.62	73786	9.62	
1,4-Difluorobenzene (IS)	262519	7.39	288051	7.39	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: 09FEB62.D
Sampled: 02/06/17 14:30
Prepared: 02/09/17 13:37
Analyzed: 02/10/17 04:53
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	1	0.16	0.083	0.16	0.50	U
108-86-1	Bromobenzene	1	0.16	0.13	0.16	0.50	U
74-97-5	Bromochloromethane	1	0.30	0.24	0.30	1.0	U
75-27-4	Bromodichloromethane	1	0.30	0.14	0.30	0.50	U
75-25-2	Bromoform	1	0.30	0.27	0.30	0.60	U
74-83-9	Bromomethane	1	0.25	0.25	0.25	0.60	U
104-51-8	n-Butylbenzene	1	0.16	0.11	0.16	0.50	U
135-98-8	sec-Butylbenzene	1	0.16	0.15	0.16	0.50	U
98-06-6	tert-Butylbenzene	1	0.16	0.13	0.16	0.50	U
56-23-5	Carbon tetrachloride	1	0.20	0.18	0.20	0.50	U
108-90-7	Chlorobenzene	1	0.16	0.093	0.16	0.50	U
75-00-3	Chloroethane	1	0.16	0.14	0.16	0.50	U
67-66-3	Chloroform	1	0.16	0.12	0.16	0.50	U
74-87-3	Chloromethane	1	0.16	0.14	0.16	0.50	U
95-49-8	2-Chlorotoluene	1	0.20	0.20	0.20	0.50	U
106-43-4	4-Chlorotoluene	1	0.16	0.15	0.16	0.50	U
124-48-1	Dibromochloromethane	1	0.16	0.13	0.16	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	0.44	0.50	1.0	U
106-93-4	1,2-Dibromoethane	1	0.16	0.16	0.16	0.50	U
74-95-3	Dibromomethane	1	0.30	0.24	0.30	1.0	U
95-50-1	1,2-Dichlorobenzene	1	0.16	0.072	0.16	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.16	0.15	0.16	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.16	0.062	0.16	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.16	0.099	0.16	0.50	U
75-34-3	1,1-Dichloroethane	1	0.16	0.11	0.16	0.50	U
107-06-2	1,2-Dichloroethane	1	0.20	0.17	0.20	0.50	U
75-35-4	1,1-Dichloroethene	1	0.20	0.18	0.20	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.16	0.085	0.16	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.16	0.15	0.16	0.50	U
78-87-5	1,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U
142-28-9	1,3-Dichloropropane	1	0.16	0.086	0.16	0.50	U
594-20-7	2,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: 09FEB62.D
Sampled: 02/06/17 14:30
Prepared: 02/09/17 13:37
Analyzed: 02/10/17 04:53
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
563-58-6	1,1-Dichloropropene	1	0.16	0.085	0.16	0.50	U
100-41-4	Ethylbenzene	1	0.16	0.098	0.16	0.50	U
87-68-3	Hexachlorobutadiene	1	0.20	0.17	0.20	0.50	U
98-82-8	Isopropylbenzene	1	0.16	0.14	0.16	0.50	U
99-87-6	p-Isopropyltoluene	1	0.16	0.12	0.16	0.50	U
75-09-2	Methylene chloride	1	0.50	0.48	0.50	1.0	U
1634-04-4	Methyl t-butyl ether	1	0.16	0.11	0.16	0.50	U
91-20-3	Naphthalene	1	0.40	0.36	0.40	0.50	U
103-65-1	n-Propylbenzene	1	0.16	0.11	0.16	0.50	U
100-42-5	Styrene	1	0.16	0.068	0.16	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.20	0.18	0.20	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.20	0.17	0.20	0.50	U
127-18-4	Tetrachloroethene	1	0.16	0.13	0.16	0.50	U
108-88-3	Toluene	1	0.16	0.093	0.16	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	0.16	0.16	0.16	0.50	U
120-82-1	1,2,4-Trichlorobenzene	1	0.20	0.19	0.20	0.50	U
71-55-6	1,1,1-Trichloroethane	1	0.16	0.11	0.16	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.16	0.16	0.16	0.50	U
79-01-6	Trichloroethene	1	0.16	0.085	0.16	0.50	U
75-69-4	Trichlorofluoromethane	1	0.16	0.13	0.16	0.50	U
96-18-4	1,2,3-Trichloropropane	1	0.33	0.24	0.33	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
75-01-4	Vinyl chloride	1	0.16	0.12	0.16	0.50	U
67-64-1	Acetone	1	5.0	4.6	5.0	10	U
994-05-8	t-Amyl Methyl ether	1	0.30	0.25	0.30	0.50	U
75-65-0	t-Butyl alcohol	1	10	9.4	10	15	U
75-15-0	Carbon disulfide	1	0.40	0.38	0.40	1.0	U
108-20-3	Diisopropyl ether	1	0.30	0.23	0.30	0.50	U
637-92-3	Ethyl t-butyl ether	1	0.20	0.18	0.20	0.50	U
78-93-3	Methyl ethyl ketone	1	3.0	2.5	3.0	10	U
179601-23-1	p- & m-Xylenes	1	0.30	0.28	0.30	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

EB07_170206

Laboratory:	BC Laboratories			SDG:	17-03278		
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda		
Matrix:	Water	Laboratory ID:	1703278-02		File ID:	09FEB62.D	
Sampled:	02/06/17 14:30	Prepared:	02/09/17 13:37		Analyzed:	02/10/17 04:53	
Solids:		Preparation:	EPA 5030 Water MS		Initial/Final:	25 ml / 25 ml	
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
95-47-6	o-Xylene	1	0.16	0.082	0.16	0.50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	10.000	10.800	108	81 - 118	
Toluene-d8 (Surrogate)	10.000	10.020	100	89 - 112	
4-Bromofluorobenzene (Surrogate)	10.000	9.6400	96.4	85 - 114	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	175444	6.59	202038	6.58	
Chlorobenzene-d5 (IS)	60019	9.62	73786	9.62	
1,4-Difluorobenzene (IS)	237471	7.39	288051	7.39	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: 09FEB63.D
Sampled: 02/06/17 08:45
Prepared: 02/09/17 13:37
Analyzed: 02/10/17 05:16
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	1	0.16	0.083	0.16	0.50	U
108-86-1	Bromobenzene	1	0.16	0.13	0.16	0.50	U
74-97-5	Bromochloromethane	1	0.30	0.24	0.30	1.0	U
75-27-4	Bromodichloromethane	1	0.30	0.14	0.30	0.50	U
75-25-2	Bromoform	1	0.30	0.27	0.30	0.60	U
74-83-9	Bromomethane	1	0.25	0.25	0.25	0.60	U
104-51-8	n-Butylbenzene	1	0.16	0.11	0.16	0.50	U
135-98-8	sec-Butylbenzene	1	0.16	0.15	0.16	0.50	U
98-06-6	tert-Butylbenzene	1	0.16	0.13	0.16	0.50	U
56-23-5	Carbon tetrachloride	1	0.20	0.18	0.20	0.50	U
108-90-7	Chlorobenzene	1	0.16	0.093	0.16	0.50	U
75-00-3	Chloroethane	1	0.16	0.14	0.16	0.50	U
67-66-3	Chloroform	1	0.16	0.12	0.16	0.50	U
74-87-3	Chloromethane	1	0.16	0.14	0.16	0.50	U
95-49-8	2-Chlorotoluene	1	0.20	0.20	0.20	0.50	U
106-43-4	4-Chlorotoluene	1	0.16	0.15	0.16	0.50	U
124-48-1	Dibromochloromethane	1	0.16	0.13	0.16	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	0.44	0.50	1.0	U
106-93-4	1,2-Dibromoethane	1	0.16	0.16	0.16	0.50	U
74-95-3	Dibromomethane	1	0.30	0.24	0.30	1.0	U
95-50-1	1,2-Dichlorobenzene	1	0.16	0.072	0.16	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.16	0.15	0.16	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.16	0.062	0.16	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.16	0.099	0.16	0.50	U
75-34-3	1,1-Dichloroethane	1	0.16	0.11	0.16	0.50	U
107-06-2	1,2-Dichloroethane	1	0.20	0.17	0.20	0.50	U
75-35-4	1,1-Dichloroethene	1	0.20	0.18	0.20	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.16	0.085	0.16	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.16	0.15	0.16	0.50	U
78-87-5	1,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U
142-28-9	1,3-Dichloropropane	1	0.16	0.086	0.16	0.50	U
594-20-7	2,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: 09FEB63.D
Sampled: 02/06/17 08:45
Prepared: 02/09/17 13:37
Analyzed: 02/10/17 05:16
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
563-58-6	1,1-Dichloropropene	1	0.16	0.085	0.16	0.50	U
100-41-4	Ethylbenzene	1	0.16	0.098	0.16	0.50	U
87-68-3	Hexachlorobutadiene	1	0.20	0.17	0.20	0.50	U
98-82-8	Isopropylbenzene	1	0.16	0.14	0.16	0.50	U
99-87-6	p-Isopropyltoluene	1	0.16	0.12	0.16	0.50	U
75-09-2	Methylene chloride	1	0.50	0.48	0.50	1.0	U
1634-04-4	Methyl t-butyl ether	1	0.16	0.11	0.16	0.50	U
91-20-3	Naphthalene	1	0.40	0.36	0.40	0.50	U
103-65-1	n-Propylbenzene	1	0.16	0.11	0.16	0.50	U
100-42-5	Styrene	1	0.16	0.068	0.16	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.20	0.18	0.20	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.20	0.17	0.20	0.50	U
127-18-4	Tetrachloroethene	1	0.16	0.13	0.16	0.50	U
108-88-3	Toluene	1	0.16	0.093	0.16	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	0.16	0.16	0.16	0.50	U
120-82-1	1,2,4-Trichlorobenzene	1	0.20	0.19	0.20	0.50	U
71-55-6	1,1,1-Trichloroethane	1	0.16	0.11	0.16	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.16	0.16	0.16	0.50	U
79-01-6	Trichloroethene	1	0.16	0.085	0.16	0.50	U
75-69-4	Trichlorofluoromethane	1	0.16	0.13	0.16	0.50	U
96-18-4	1,2,3-Trichloropropane	1	0.33	0.24	0.33	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
75-01-4	Vinyl chloride	1	0.16	0.12	0.16	0.50	U
67-64-1	Acetone	1	5.0	4.6	5.0	10	U
994-05-8	t-Amyl Methyl ether	1	0.30	0.25	0.30	0.50	U
75-65-0	t-Butyl alcohol	1	10	9.4	10	15	U
75-15-0	Carbon disulfide	1	0.40	0.38	0.40	1.0	U
108-20-3	Diisopropyl ether	1	0.30	0.23	0.30	0.50	U
637-92-3	Ethyl t-butyl ether	1	0.20	0.18	0.20	0.50	U
78-93-3	Methyl ethyl ketone	1	3.0	2.5	3.0	10	U
179601-23-1	p- & m-Xylenes	1	0.30	0.28	0.30	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M041E_170206

Laboratory:	BC Laboratories			SDG:	17-03278		
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda		
Matrix:	Water	Laboratory ID:	1703278-03		File ID:	09FEB63.D	
Sampled:	02/06/17 08:45	Prepared:	02/09/17 13:37		Analyzed:	02/10/17 05:16	
Solids:		Preparation:	EPA 5030 Water MS		Initial/Final:	25 ml / 25 ml	
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
95-47-6	o-Xylene	1	0.16	0.082	0.16	0.50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	10.000	10.740	107	81 - 118	
Toluene-d8 (Surrogate)	10.000	9.8500	98.5	89 - 112	
4-Bromofluorobenzene (Surrogate)	10.000	9.5900	95.9	85 - 114	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	190392	6.58	202038	6.58	
Chlorobenzene-d5 (IS)	65221	9.62	73786	9.62	
1,4-Difluorobenzene (IS)	264169	7.39	288051	7.39	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: 09FEB30.D
Sampled: 02/06/17 11:30
Prepared: 02/09/17 13:37
Analyzed: 02/09/17 16:32
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	1	0.16	0.083	0.16	0.50	U
108-86-1	Bromobenzene	1	0.16	0.13	0.16	0.50	U
74-97-5	Bromochloromethane	1	0.30	0.24	0.30	1.0	U
75-27-4	Bromodichloromethane	1	0.30	0.14	0.30	0.50	U
75-25-2	Bromoform	1	0.30	0.27	0.30	0.60	U
74-83-9	Bromomethane	1	0.25	0.25	0.25	0.60	U
104-51-8	n-Butylbenzene	1	2.7	0.11	0.16	0.50	
135-98-8	sec-Butylbenzene	1	2.1	0.15	0.16	0.50	
98-06-6	tert-Butylbenzene	1	0.16	0.13	0.16	0.50	U
56-23-5	Carbon tetrachloride	1	0.20	0.18	0.20	0.50	U
108-90-7	Chlorobenzene	1	0.16	0.093	0.16	0.50	U
75-00-3	Chloroethane	1	0.16	0.14	0.16	0.50	U
67-66-3	Chloroform	1	0.16	0.12	0.16	0.50	U
74-87-3	Chloromethane	1	0.16	0.14	0.16	0.50	U
95-49-8	2-Chlorotoluene	1	0.20	0.20	0.20	0.50	U
106-43-4	4-Chlorotoluene	1	0.16	0.15	0.16	0.50	U
124-48-1	Dibromochloromethane	1	0.16	0.13	0.16	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	0.44	0.50	1.0	U
106-93-4	1,2-Dibromoethane	1	0.16	0.16	0.16	0.50	U
74-95-3	Dibromomethane	1	0.30	0.24	0.30	1.0	U
95-50-1	1,2-Dichlorobenzene	1	2.3	0.072	0.16	0.50	
541-73-1	1,3-Dichlorobenzene	1	0.16	0.15	0.16	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.53	0.062	0.16	0.50	
75-71-8	Dichlorodifluoromethane	1	0.16	0.099	0.16	0.50	U
75-34-3	1,1-Dichloroethane	1	0.16	0.11	0.16	0.50	U
107-06-2	1,2-Dichloroethane	1	0.20	0.17	0.20	0.50	U
75-35-4	1,1-Dichloroethene	1	0.52	0.18	0.20	0.50	
156-59-2	cis-1,2-Dichloroethene	1	20	0.085	0.16	0.50	
156-60-5	trans-1,2-Dichloroethene	1	3.9	0.15	0.16	0.50	
78-87-5	1,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U
142-28-9	1,3-Dichloropropane	1	0.16	0.086	0.16	0.50	U
594-20-7	2,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: 09FEB30.D
Sampled: 02/06/17 11:30
Prepared: 02/09/17 13:37
Analyzed: 02/09/17 16:32
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
563-58-6	1,1-Dichloropropene	1	0.16	0.085	0.16	0.50	U
100-41-4	Ethylbenzene	1	0.69	0.098	0.16	0.50	
87-68-3	Hexachlorobutadiene	1	0.20	0.17	0.20	0.50	U
98-82-8	Isopropylbenzene	1	1.6	0.14	0.16	0.50	
99-87-6	p-Isopropyltoluene	1	3.6	0.12	0.16	0.50	
75-09-2	Methylene chloride	1	0.50	0.48	0.50	1.0	U
1634-04-4	Methyl t-butyl ether	1	0.16	0.11	0.16	0.50	U
91-20-3	Naphthalene	1	0.40	0.36	0.40	0.50	U
103-65-1	n-Propylbenzene	1	2.0	0.11	0.16	0.50	
100-42-5	Styrene	1	0.16	0.068	0.16	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.20	0.18	0.20	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.20	0.17	0.20	0.50	U
127-18-4	Tetrachloroethene	1	0.16	0.13	0.16	0.50	U
108-88-3	Toluene	1	0.16	0.093	0.16	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	0.16	0.16	0.16	0.50	U
120-82-1	1,2,4-Trichlorobenzene	1	0.20	0.19	0.20	0.50	U
71-55-6	1,1,1-Trichloroethane	1	0.16	0.11	0.16	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.16	0.16	0.16	0.50	U
79-01-6	Trichloroethene	1	19	0.085	0.16	0.50	
75-69-4	Trichlorofluoromethane	1	0.16	0.13	0.16	0.50	U
96-18-4	1,2,3-Trichloropropane	1	0.33	0.24	0.33	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	26	0.12	0.16	0.50	
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.12	0.16	0.50	
75-01-4	Vinyl chloride	1	0.38	0.12	0.16	0.50	J
67-64-1	Acetone	1	5.0	4.6	5.0	10	U
994-05-8	t-Amyl Methyl ether	1	0.30	0.25	0.30	0.50	U
75-65-0	t-Butyl alcohol	1	10	9.4	10	15	U
75-15-0	Carbon disulfide	1	0.40	0.38	0.40	1.0	U
108-20-3	Diisopropyl ether	1	0.30	0.23	0.30	0.50	U
637-92-3	Ethyl t-butyl ether	1	0.20	0.18	0.20	0.50	U
78-93-3	Methyl ethyl ketone	1	3.0	2.5	3.0	10	U
179601-23-1	p- & m-Xylenes	1	2.7	0.28	0.30	0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M051A_170206

Laboratory:	BC Laboratories			SDG:	17-03278		
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda		
Matrix:	Water	Laboratory ID:	1703278-04	File ID:	09FEB30.D		
Sampled:	02/06/17 11:30	Prepared:	02/09/17 13:37	Analyzed:	02/09/17 16:32		
Solids:		Preparation:	EPA 5030 Water MS	Initial/Final:	25 ml / 25 ml		
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
95-47-6	o-Xylene	1	0.31	0.082	0.16	0.50	J

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	10.000	10.820	108	81 - 118	
Toluene-d8 (Surrogate)	10.000	9.8300	98.3	89 - 112	
4-Bromofluorobenzene (Surrogate)	10.000	10.310	103	85 - 114	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	187205	6.58	199913	6.58	
Chlorobenzene-d5 (IS)	62169	9.62	70233	9.62	
1,4-Difluorobenzene (IS)	250011	7.39	264847	7.39	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M060A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-05
File ID: 09FEB64.D
Sampled: 02/06/17 09:20
Prepared: 02/09/17 13:37
Analyzed: 02/10/17 05:40
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	1	0.16	0.083	0.16	0.50	U
108-86-1	Bromobenzene	1	0.16	0.13	0.16	0.50	U
74-97-5	Bromochloromethane	1	0.30	0.24	0.30	1.0	U
75-27-4	Bromodichloromethane	1	0.30	0.14	0.30	0.50	U
75-25-2	Bromoform	1	0.30	0.27	0.30	0.60	U
74-83-9	Bromomethane	1	0.25	0.25	0.25	0.60	U
104-51-8	n-Butylbenzene	1	0.16	0.11	0.16	0.50	U
135-98-8	sec-Butylbenzene	1	0.16	0.15	0.16	0.50	U
98-06-6	tert-Butylbenzene	1	0.16	0.13	0.16	0.50	U
56-23-5	Carbon tetrachloride	1	0.20	0.18	0.20	0.50	U
108-90-7	Chlorobenzene	1	0.16	0.093	0.16	0.50	U
75-00-3	Chloroethane	1	0.16	0.14	0.16	0.50	U
67-66-3	Chloroform	1	0.16	0.12	0.16	0.50	U
74-87-3	Chloromethane	1	0.16	0.14	0.16	0.50	U
95-49-8	2-Chlorotoluene	1	0.20	0.20	0.20	0.50	U
106-43-4	4-Chlorotoluene	1	0.16	0.15	0.16	0.50	U
124-48-1	Dibromochloromethane	1	0.16	0.13	0.16	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	0.44	0.50	1.0	U
106-93-4	1,2-Dibromoethane	1	0.16	0.16	0.16	0.50	U
74-95-3	Dibromomethane	1	0.30	0.24	0.30	1.0	U
95-50-1	1,2-Dichlorobenzene	1	0.16	0.072	0.16	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.16	0.15	0.16	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.16	0.062	0.16	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.16	0.099	0.16	0.50	U
75-34-3	1,1-Dichloroethane	1	0.16	0.11	0.16	0.50	U
107-06-2	1,2-Dichloroethane	1	0.20	0.17	0.20	0.50	U
75-35-4	1,1-Dichloroethene	1	0.20	0.18	0.20	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	2.1	0.085	0.16	0.50	
156-60-5	trans-1,2-Dichloroethene	1	0.75	0.15	0.16	0.50	
78-87-5	1,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U
142-28-9	1,3-Dichloropropane	1	0.16	0.086	0.16	0.50	U
594-20-7	2,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M060A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-05
File ID: 09FEB64.D
Sampled: 02/06/17 09:20
Prepared: 02/09/17 13:37
Analyzed: 02/10/17 05:40
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
563-58-6	1,1-Dichloropropene	1	0.16	0.085	0.16	0.50	U
100-41-4	Ethylbenzene	1	0.16	0.098	0.16	0.50	U
87-68-3	Hexachlorobutadiene	1	0.20	0.17	0.20	0.50	U
98-82-8	Isopropylbenzene	1	0.22	0.14	0.16	0.50	J
99-87-6	p-Isopropyltoluene	1	0.16	0.12	0.16	0.50	U
75-09-2	Methylene chloride	1	0.50	0.48	0.50	1.0	U
1634-04-4	Methyl t-butyl ether	1	0.16	0.11	0.16	0.50	U
91-20-3	Naphthalene	1	0.40	0.36	0.40	0.50	U
103-65-1	n-Propylbenzene	1	0.16	0.11	0.16	0.50	U
100-42-5	Styrene	1	0.16	0.068	0.16	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.20	0.18	0.20	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.20	0.17	0.20	0.50	U
127-18-4	Tetrachloroethene	1	0.16	0.13	0.16	0.50	U
108-88-3	Toluene	1	0.16	0.093	0.16	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	0.16	0.16	0.16	0.50	U
120-82-1	1,2,4-Trichlorobenzene	1	0.20	0.19	0.20	0.50	U
71-55-6	1,1,1-Trichloroethane	1	0.16	0.11	0.16	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.16	0.16	0.16	0.50	U
79-01-6	Trichloroethene	1	0.39	0.085	0.16	0.50	J
75-69-4	Trichlorofluoromethane	1	0.16	0.13	0.16	0.50	U
96-18-4	1,2,3-Trichloropropane	1	0.33	0.24	0.33	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
75-01-4	Vinyl chloride	1	0.82	0.12	0.16	0.50	
67-64-1	Acetone	1	5.0	4.6	5.0	10	U
994-05-8	t-Amyl Methyl ether	1	0.30	0.25	0.30	0.50	U
75-65-0	t-Butyl alcohol	1	10	9.4	10	15	U
75-15-0	Carbon disulfide	1	0.40	0.38	0.40	1.0	U
108-20-3	Diisopropyl ether	1	0.30	0.23	0.30	0.50	U
637-92-3	Ethyl t-butyl ether	1	0.20	0.18	0.20	0.50	U
78-93-3	Methyl ethyl ketone	1	3.0	2.5	3.0	10	U
179601-23-1	p- & m-Xylenes	1	0.30	0.28	0.30	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

M060A_170206

Laboratory:	BC Laboratories			SDG:	17-03278		
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda		
Matrix:	Water	Laboratory ID:	1703278-05			File ID:	09FEB64.D
Sampled:	02/06/17 09:20	Prepared:	02/09/17 13:37			Analyzed:	02/10/17 05:40
Solids:		Preparation:	EPA 5030 Water MS			Initial/Final:	25 ml / 25 ml
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
95-47-6	o-Xylene	1	0.16	0.082	0.16	0.50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	10.000	10.720	107	81 - 118	
Toluene-d8 (Surrogate)	10.000	9.8500	98.5	89 - 112	
4-Bromofluorobenzene (Surrogate)	10.000	9.4100	94.1	85 - 114	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	190824	6.58	202038	6.58	
Chlorobenzene-d5 (IS)	66320	9.62	73786	9.62	
1,4-Difluorobenzene (IS)	259240	7.39	288051	7.39	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

TB04_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-06
File ID: 09FEB42.D
Sampled: 02/06/17 12:00
Prepared: 02/09/17 13:37
Analyzed: 02/09/17 21:10
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	1	0.16	0.083	0.16	0.50	U
108-86-1	Bromobenzene	1	0.16	0.13	0.16	0.50	U
74-97-5	Bromochloromethane	1	0.30	0.24	0.30	1.0	U
75-27-4	Bromodichloromethane	1	0.30	0.14	0.30	0.50	U
75-25-2	Bromoform	1	0.30	0.27	0.30	0.60	U
74-83-9	Bromomethane	1	0.25	0.25	0.25	0.60	U
104-51-8	n-Butylbenzene	1	0.16	0.11	0.16	0.50	U
135-98-8	sec-Butylbenzene	1	0.16	0.15	0.16	0.50	U
98-06-6	tert-Butylbenzene	1	0.16	0.13	0.16	0.50	U
56-23-5	Carbon tetrachloride	1	0.20	0.18	0.20	0.50	U
108-90-7	Chlorobenzene	1	0.16	0.093	0.16	0.50	U
75-00-3	Chloroethane	1	0.16	0.14	0.16	0.50	U
67-66-3	Chloroform	1	0.16	0.12	0.16	0.50	U
74-87-3	Chloromethane	1	0.16	0.14	0.16	0.50	U
95-49-8	2-Chlorotoluene	1	0.20	0.20	0.20	0.50	U
106-43-4	4-Chlorotoluene	1	0.16	0.15	0.16	0.50	U
124-48-1	Dibromochloromethane	1	0.16	0.13	0.16	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	0.44	0.50	1.0	U
106-93-4	1,2-Dibromoethane	1	0.16	0.16	0.16	0.50	U
74-95-3	Dibromomethane	1	0.30	0.24	0.30	1.0	U
95-50-1	1,2-Dichlorobenzene	1	0.16	0.072	0.16	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.16	0.15	0.16	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.16	0.062	0.16	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.16	0.099	0.16	0.50	U
75-34-3	1,1-Dichloroethane	1	0.16	0.11	0.16	0.50	U
107-06-2	1,2-Dichloroethane	1	0.20	0.17	0.20	0.50	U
75-35-4	1,1-Dichloroethene	1	0.20	0.18	0.20	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.16	0.085	0.16	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.16	0.15	0.16	0.50	U
78-87-5	1,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U
142-28-9	1,3-Dichloropropane	1	0.16	0.086	0.16	0.50	U
594-20-7	2,2-Dichloropropane	1	0.16	0.13	0.16	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

TB04_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-06
File ID: 09FEB42.D
Sampled: 02/06/17 12:00
Prepared: 02/09/17 13:37
Analyzed: 02/09/17 21:10
Solids:
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Batch: B[B0851
Sequence: 1702254
Calibration: 1702011
Instrument: MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
563-58-6	1,1-Dichloropropene	1	0.16	0.085	0.16	0.50	U
100-41-4	Ethylbenzene	1	0.16	0.098	0.16	0.50	U
87-68-3	Hexachlorobutadiene	1	0.20	0.17	0.20	0.50	U
98-82-8	Isopropylbenzene	1	0.16	0.14	0.16	0.50	U
99-87-6	p-Isopropyltoluene	1	0.16	0.12	0.16	0.50	U
75-09-2	Methylene chloride	1	0.50	0.48	0.50	1.0	U
1634-04-4	Methyl t-butyl ether	1	0.16	0.11	0.16	0.50	U
91-20-3	Naphthalene	1	0.40	0.36	0.40	0.50	U
103-65-1	n-Propylbenzene	1	0.16	0.11	0.16	0.50	U
100-42-5	Styrene	1	0.16	0.068	0.16	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.20	0.18	0.20	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.20	0.17	0.20	0.50	U
127-18-4	Tetrachloroethene	1	0.16	0.13	0.16	0.50	U
108-88-3	Toluene	1	0.16	0.093	0.16	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	0.16	0.16	0.16	0.50	U
120-82-1	1,2,4-Trichlorobenzene	1	0.20	0.19	0.20	0.50	U
71-55-6	1,1,1-Trichloroethane	1	0.16	0.11	0.16	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.16	0.16	0.16	0.50	U
79-01-6	Trichloroethene	1	0.16	0.085	0.16	0.50	U
75-69-4	Trichlorofluoromethane	1	0.16	0.13	0.16	0.50	U
96-18-4	1,2,3-Trichloropropane	1	0.33	0.24	0.33	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.16	0.12	0.16	0.50	U
75-01-4	Vinyl chloride	1	0.16	0.12	0.16	0.50	U
67-64-1	Acetone	1	5.0	4.6	5.0	10	U
994-05-8	t-Amyl Methyl ether	1	0.30	0.25	0.30	0.50	U
75-65-0	t-Butyl alcohol	1	10	9.4	10	15	U
75-15-0	Carbon disulfide	1	0.40	0.38	0.40	1.0	U
108-20-3	Diisopropyl ether	1	0.30	0.23	0.30	0.50	U
637-92-3	Ethyl t-butyl ether	1	0.20	0.18	0.20	0.50	U
78-93-3	Methyl ethyl ketone	1	3.0	2.5	3.0	10	U
179601-23-1	p- & m-Xylenes	1	0.30	0.28	0.30	0.50	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

TB04_170206

Laboratory:	BC Laboratories			SDG:	17-03278		
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda		
Matrix:	Water	Laboratory ID:	1703278-06			File ID:	09FEB42.D
Sampled:	02/06/17 12:00	Prepared:	02/09/17 13:37			Analyzed:	02/09/17 21:10
Solids:		Preparation:	EPA 5030 Water MS			Initial/Final:	25 ml / 25 ml
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011	Instrument:	MS-V5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
95-47-6	o-Xylene	1	0.16	0.082	0.16	0.50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	10.000	10.210	102	81 - 118	
Toluene-d8 (Surrogate)	10.000	9.9000	99.0	89 - 112	
4-Bromofluorobenzene (Surrogate)	10.000	9.3700	93.7	85 - 114	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	205643	6.59	202038	6.58	
Chlorobenzene-d5 (IS)	72082	9.62	73786	9.62	
1,4-Difluorobenzene (IS)	280921	7.39	288051	7.39	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0851
Batch Matrix: Water
Preparation: EPA 5030 Water MS

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
DUP04_170206	1703278-01	09FEB61.D	02/09/17 13:37	Full SAP LIST
EB07_170206	1703278-02	09FEB62.D	02/09/17 13:37	Full SAP LIST
M041E_170206	1703278-03	09FEB63.D	02/09/17 13:37	Full SAP LIST
M051A_170206	1703278-04	09FEB30.D	02/09/17 13:37	Full SAP LIST
M060A_170206	1703278-05	09FEB64.D	02/09/17 13:37	Full SAP LIST
TB04_170206	1703278-06	09FEB42.D	02/09/17 13:37	Full SAP LIST
Blank	B[B0851-BLK1	09FEB29.D	02/09/17 13:37	
LCS	B[B0851-BS1	09FEB31.D	02/09/17 13:37	
M051A_170206	B[B0851-MS1	09FEB32.D	02/09/17 13:37	
M051A_170206	B[B0851-MSD1	09FEB33.D	02/09/17 13:37	

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Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8260B

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0851-BLK1	File ID:	09FEB29.D
Prepared:	02/09/17 13:37	Preparation:	EPA 5030 Water MS	Initial/Final:	25 ml / 25 ml
Analyzed:	02/09/17 16:09	Instrument:	MS-V5		
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	0.16	0.083	0.16	0.50	U
108-86-1	Bromobenzene	0.16	0.13	0.16	0.50	U
74-97-5	Bromochloromethane	0.30	0.24	0.30	1.0	U
75-27-4	Bromodichloromethane	0.30	0.14	0.30	0.50	U
75-25-2	Bromoform	0.30	0.27	0.30	0.60	U
74-83-9	Bromomethane	0.25	0.25	0.25	0.60	U
104-51-8	n-Butylbenzene	0.16	0.11	0.16	0.50	U
135-98-8	sec-Butylbenzene	0.16	0.15	0.16	0.50	U
98-06-6	tert-Butylbenzene	0.16	0.13	0.16	0.50	U
56-23-5	Carbon tetrachloride	0.20	0.18	0.20	0.50	U
108-90-7	Chlorobenzene	0.16	0.093	0.16	0.50	U
75-00-3	Chloroethane	0.16	0.14	0.16	0.50	U
67-66-3	Chloroform	0.16	0.12	0.16	0.50	U
74-87-3	Chloromethane	0.16	0.14	0.16	0.50	U
95-49-8	2-Chlorotoluene	0.20	0.20	0.20	0.50	U
106-43-4	4-Chlorotoluene	0.16	0.15	0.16	0.50	U
124-48-1	Dibromochloromethane	0.16	0.13	0.16	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	0.44	0.50	1.0	U
106-93-4	1,2-Dibromoethane	0.16	0.16	0.16	0.50	U
74-95-3	Dibromomethane	0.30	0.24	0.30	1.0	U
95-50-1	1,2-Dichlorobenzene	0.16	0.072	0.16	0.50	U
541-73-1	1,3-Dichlorobenzene	0.16	0.15	0.16	0.50	U
106-46-7	1,4-Dichlorobenzene	0.16	0.062	0.16	0.50	U
75-71-8	Dichlorodifluoromethane	0.16	0.099	0.16	0.50	U

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8260B

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0851-BLK1	File ID:	09FEB29.D
Prepared:	02/09/17 13:37	Preparation:	EPA 5030 Water MS	Initial/Final:	25 ml / 25 ml
Analyzed:	02/09/17 16:09	Instrument:	MS-V5		
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-34-3	1,1-Dichloroethane	0.16	0.11	0.16	0.50	U
107-06-2	1,2-Dichloroethane	0.20	0.17	0.20	0.50	U
75-35-4	1,1-Dichloroethene	0.20	0.18	0.20	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.16	0.085	0.16	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.16	0.15	0.16	0.50	U
78-87-5	1,2-Dichloropropane	0.16	0.13	0.16	0.50	U
142-28-9	1,3-Dichloropropane	0.16	0.086	0.16	0.50	U
594-20-7	2,2-Dichloropropane	0.16	0.13	0.16	0.50	U
563-58-6	1,1-Dichloropropene	0.16	0.085	0.16	0.50	U
100-41-4	Ethylbenzene	0.16	0.098	0.16	0.50	U
87-68-3	Hexachlorobutadiene	0.20	0.17	0.20	0.50	U
98-82-8	Isopropylbenzene	0.16	0.14	0.16	0.50	U
99-87-6	p-Isopropyltoluene	0.16	0.12	0.16	0.50	U
75-09-2	Methylene chloride	0.50	0.48	0.50	1.0	U
1634-04-4	Methyl t-butyl ether	0.16	0.11	0.16	0.50	U
91-20-3	Naphthalene	0.40	0.36	0.40	0.50	U
103-65-1	n-Propylbenzene	0.16	0.11	0.16	0.50	U
100-42-5	Styrene	0.16	0.068	0.16	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	0.18	0.20	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	0.17	0.20	0.50	U
127-18-4	Tetrachloroethene	0.16	0.13	0.16	0.50	U
108-88-3	Toluene	0.16	0.093	0.16	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.16	0.16	0.16	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.20	0.19	0.20	0.50	U

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8260B

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0851-BLK1	File ID:	09FEB29.D
Prepared:	02/09/17 13:37	Preparation:	EPA 5030 Water MS	Initial/Final:	25 ml / 25 ml
Analyzed:	02/09/17 16:09	Instrument:	MS-V5		
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-55-6	1,1,1-Trichloroethane	0.16	0.11	0.16	0.50	U
79-00-5	1,1,2-Trichloroethane	0.16	0.16	0.16	0.50	U
79-01-6	Trichloroethene	0.16	0.085	0.16	0.50	U
75-69-4	Trichlorofluoromethane	0.16	0.13	0.16	0.50	U
96-18-4	1,2,3-Trichloropropane	0.33	0.24	0.33	0.50	U
95-63-6	1,2,4-Trimethylbenzene	0.16	0.12	0.16	0.50	U
108-67-8	1,3,5-Trimethylbenzene	0.16	0.12	0.16	0.50	U
75-01-4	Vinyl chloride	0.16	0.12	0.16	0.50	U
67-64-1	Acetone	5.0	4.6	5.0	10	U
994-05-8	t-Amyl Methyl ether	0.30	0.25	0.30	0.50	U
75-65-0	t-Butyl alcohol	10	9.4	10	15	U
75-15-0	Carbon disulfide	0.40	0.38	0.40	1.0	U
108-20-3	Diisopropyl ether	0.30	0.23	0.30	0.50	U
637-92-3	Ethyl t-butyl ether	0.20	0.18	0.20	0.50	U
78-93-3	Methyl ethyl ketone	3.0	2.5	3.0	10	U
179601-23-1	p- & m-Xylenes	0.30	0.28	0.30	0.50	U
95-47-6	o-Xylene	0.16	0.082	0.16	0.50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	10.000	10.480	105	81 - 118	
Toluene-d8 (Surrogate)	10.000	10.010	100	89 - 112	
4-Bromofluorobenzene (Surrogate)	10.000	9.6000	96.0	85 - 114	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	198342	6.58	199913	6.58	

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8260B

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0851-BLK1	File ID:	09FEB29.D
Prepared:	02/09/17 13:37	Preparation:	EPA 5030 Water MS	Initial/Final:	25 ml / 25 ml
Analyzed:	02/09/17 16:09	Instrument:	MS-V5		
Batch:	B[B0851	Sequence:	1702254	Calibration:	1702011

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Chlorobenzene-d5 (IS)	64389	9.62	70233	9.62	
1,4-Difluorobenzene (IS)	262866	7.39	264847	7.39	

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Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-MS1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Benzene	25.000	ND	24.750	99.0	79 - 120
Bromobenzene	25.000	ND	24.030	96.1	80 - 120
Bromochloromethane	25.000	ND	25.070	100	78 - 123
Bromodichloromethane	25.000	ND	25.010	100	79 - 125
Bromoform	25.000	ND	22.840	91.4	66 - 130
Bromomethane	25.000	ND	22.020	88.1	53 - 141
n-Butylbenzene	25.000	2.7000	26.130	93.7	75 - 128
sec-Butylbenzene	25.000	2.0700	23.480	85.6	77 - 126
tert-Butylbenzene	25.000	ND	22.190	88.8	78 - 124
Carbon tetrachloride	25.000	ND	27.180	109	72 - 136
Chlorobenzene	25.000	ND	24.460	97.8	82 - 118
Chloroethane	25.000	ND	24.090	96.4	60 - 138
Chloroform	25.000	ND	25.170	101	79 - 124
Chloromethane	25.000	ND	24.800	99.2	50 - 139
2-Chlorotoluene	25.000	ND	23.740	95.0	79 - 122
4-Chlorotoluene	25.000	ND	23.190	92.8	78 - 122
Dibromochloromethane	25.000	ND	25.460	102	74 - 126
1,2-Dibromo-3-chloropropane	25.000	ND	24.270	97.1	62 - 128
1,2-Dibromoethane	25.000	ND	25.050	100	77 - 121
Dibromomethane	25.000	ND	22.900	91.6	79 - 123
1,2-Dichlorobenzene	25.000	2.2900	23.060	83.1	80 - 119
1,3-Dichlorobenzene	25.000	ND	20.830	83.3	80 - 119
1,4-Dichlorobenzene	25.000	0.53000	23.120	90.4	79 - 118
Dichlorodifluoromethane	25.000	ND	20.580	82.3	32 - 152
1,1-Dichloroethane	25.000	ND	23.030	92.1	77 - 125

AMEC Environmental & Infrastructure
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Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-MS1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
1,2-Dichloroethane	25.000	ND	24.280	97.1	73 - 128
1,1-Dichloroethene	25.000	0.52000	26.210	103	71 - 131
cis-1,2-Dichloroethene	25.000	19.830	43.900	96.3	78 - 123
trans-1,2-Dichloroethene	25.000	3.9100	28.610	98.8	75 - 124
1,2-Dichloropropane	25.000	ND	23.470	93.9	78 - 122
1,3-Dichloropropane	25.000	ND	24.080	96.3	80 - 119
2,2-Dichloropropane	25.000	ND	25.890	104	60 - 139
1,1-Dichloropropene	25.000	ND	26.680	107	79 - 125
cis-1,3-Dichloropropene	25.000	ND	24.350	97.4	75 - 124
trans-1,3-Dichloropropene	25.000	ND	25.190	101	73 - 127
Ethylbenzene	25.000	0.69000	25.370	98.7	79 - 121
Hexachlorobutadiene	25.000	ND	24.050	96.2	66 - 134
Isopropylbenzene	25.000	1.6200	25.010	93.6	72 - 131
p-Isopropyltoluene	25.000	3.6200	25.020	85.6	77 - 127
Methylene chloride	25.000	ND	23.440	93.8	74 - 124
Methyl t-butyl ether	25.000	ND	24.090	96.4	71 - 124
Naphthalene	25.000	ND	32.890	132 *	61 - 128
n-Propylbenzene	25.000	2.0400	24.510	89.9	76 - 126
Styrene	25.000	ND	24.380	97.5	78 - 123
1,1,1,2-Tetrachloroethane	25.000	ND	23.300	93.2	78 - 124
1,1,2,2-Tetrachloroethane	25.000	ND	24.540	98.2	71 - 121
Tetrachloroethene	25.000	ND	26.690	107	74 - 129
Toluene	25.000	ND	25.380	102	80 - 121
1,2,3-Trichlorobenzene	25.000	ND	28.510	114	69 - 129
1,2,4-Trichlorobenzene	25.000	ND	27.890	112	69 - 130

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-MS1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
1,1,1-Trichloroethane	25.000	ND	26.530	106	74 - 131
1,1,2-Trichloroethane	25.000	ND	25.930	104	80 - 119
Trichloroethene	25.000	18.950	41.930	91.9	79 - 123
Trichlorofluoromethane	25.000	ND	26.940	108	65 - 141
1,2,3-Trichloropropane	25.000	ND	26.590	106	73 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.000	ND	25.190	101	70 - 136
1,2,4-Trimethylbenzene	25.000	26.300	43.990	70.8 *	76 - 124
1,3,5-Trimethylbenzene	25.000	1.0100	25.300	97.2	75 - 124
Vinyl chloride	25.000	0.38000	27.950	110	58 - 137
Total Xylenes	75.000	2.9800	74.980	96.0	79 - 121
Acetone	320.00	ND	323.78	101	39 - 160
Acetonitrile	160.00	ND	208.17	130	50 - 142
Allyl chloride	32.000	ND	33.200	104	68 - 130
t-Amyl Methyl ether	16.000	ND	14.980	93.6	68 - 128
Benzyl chloride	32.000	ND	30.750	96.1	42 - 138
t-Butyl alcohol	800.00	ND	795.12	99.4	68 - 129
Carbon disulfide	32.000	ND	34.990	109	64 - 133
Chloroprene	32.000	ND	33.480	105	65 - 135
Diisopropyl ether	16.000	ND	17.820	111	67 - 128
Ethyl t-butyl ether	16.000	ND	14.800	92.5	70 - 127
2-Hexanone	320.00	ND	305.82	95.6	57 - 139
Methyl ethyl ketone	160.00	ND	140.85	88.0	56 - 143
Methyl isobutyl ketone	160.00	ND	153.19	95.7	67 - 130
Vinyl acetate	160.00	ND	142.01	88.8	54 - 146

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-MSD1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	25.000	24.540	98.2	0.852	30	79 - 120
Bromobenzene	25.000	23.530	94.1	2.10	30	80 - 120
Bromochloromethane	25.000	24.400	97.6	2.71	30	78 - 123
Bromodichloromethane	25.000	24.440	97.8	2.31	30	79 - 125
Bromoform	25.000	21.920	87.7	4.11	30	66 - 130
Bromomethane	25.000	22.780	91.1	3.39	30	53 - 141
n-Butylbenzene	25.000	24.530	87.3	6.32	30	75 - 128
sec-Butylbenzene	25.000	22.840	83.1	2.76	30	77 - 126
tert-Butylbenzene	25.000	21.440	85.8	3.44	30	78 - 124
Carbon tetrachloride	25.000	27.050	108	0.479	30	72 - 136
Chlorobenzene	25.000	23.060	92.2	5.89	30	82 - 118
Chloroethane	25.000	24.770	99.1	2.78	30	60 - 138
Chloroform	25.000	24.360	97.4	3.27	30	79 - 124
Chloromethane	25.000	23.900	95.6	3.70	30	50 - 139
2-Chlorotoluene	25.000	23.170	92.7	2.43	30	79 - 122
4-Chlorotoluene	25.000	22.460	89.8	3.20	30	78 - 122
Dibromochloromethane	25.000	24.850	99.4	2.42	30	74 - 126
1,2-Dibromo-3-chloropropane	25.000	23.280	93.1	4.16	30	62 - 128
1,2-Dibromoethane	25.000	24.660	98.6	1.57	30	77 - 121
Dibromomethane	25.000	22.220	88.9	3.01	30	79 - 123
1,2-Dichlorobenzene	25.000	22.480	80.8	2.55	30	80 - 119
1,3-Dichlorobenzene	25.000	19.560	78.2 *	6.29	30	80 - 119
1,4-Dichlorobenzene	25.000	22.520	88.0	2.63	30	79 - 118
Dichlorodifluoromethane	25.000	21.310	85.2	3.49	30	32 - 152
1,1-Dichloroethane	25.000	23.380	93.5	1.51	30	77 - 125
1,2-Dichloroethane	25.000	23.600	94.4	2.84	30	73 - 128

AMEC Environmental & Infrastructure
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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-MSD1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	25.000	25.950	102	0.997	30	71 - 131
cis-1,2-Dichloroethene	25.000	43.830	96.0	0.160	30	78 - 123
trans-1,2-Dichloroethene	25.000	29.060	101	1.56	30	75 - 124
1,2-Dichloropropane	25.000	23.010	92.0	1.98	30	78 - 122
1,3-Dichloropropane	25.000	23.680	94.7	1.68	30	80 - 119
2,2-Dichloropropane	25.000	25.820	103	0.271	30	60 - 139
1,1-Dichloropropene	25.000	26.840	107	0.598	30	79 - 125
cis-1,3-Dichloropropene	25.000	23.910	95.6	1.82	30	75 - 124
trans-1,3-Dichloropropene	25.000	24.160	96.6	4.17	30	73 - 127
Ethylbenzene	25.000	24.670	95.9	2.80	30	79 - 121
Hexachlorobutadiene	25.000	21.550	86.2	11.0	30	66 - 134
Isopropylbenzene	25.000	23.570	87.8	5.93	30	72 - 131
p-Isopropyltoluene	25.000	23.090	77.9	8.02	30	77 - 127
Methylene chloride	25.000	24.950	99.8	6.24	30	74 - 124
Methyl t-butyl ether	25.000	25.030	100	3.83	30	71 - 124
Naphthalene	25.000	29.740	119	10.1	30	61 - 128
n-Propylbenzene	25.000	23.420	85.5	4.55	30	76 - 126
Styrene	25.000	23.680	94.7	2.91	30	78 - 123
1,1,1,2-Tetrachloroethane	25.000	22.760	91.0	2.34	30	78 - 124
1,1,2,2-Tetrachloroethane	25.000	23.880	95.5	2.73	30	71 - 121
Tetrachloroethene	25.000	26.610	106	0.300	30	74 - 129
Toluene	25.000	24.080	96.3	5.26	30	80 - 121
1,2,3-Trichlorobenzene	25.000	26.500	106	7.31	30	69 - 129
1,2,4-Trichlorobenzene	25.000	26.640	107	4.58	30	69 - 130
1,1,1-Trichloroethane	25.000	26.420	106	0.415	30	74 - 131
1,1,2-Trichloroethane	25.000	25.290	101	2.50	30	80 - 119

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8260B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-MSD1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #		% RPD #	QC LIMITS RPD	QC LIMITS REC.
Trichloroethene	25.000	41.310	89.4		1.49	30	79 - 123
Trichlorofluoromethane	25.000	26.370	105		2.14	30	65 - 141
1,2,3-Trichloropropane	25.000	25.990	104		2.28	30	73 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.000	25.000	100		0.757	30	70 - 136
1,2,4-Trimethylbenzene	25.000	41.720	61.7	*	5.30	30	76 - 124
1,3,5-Trimethylbenzene	25.000	23.880	91.5		5.77	30	75 - 124
Vinyl chloride	25.000	28.060	111		0.393	30	58 - 137
Total Xylenes	75.000	71.690	91.6		4.49	30	79 - 121
Acetone	320.00	332.49	104		2.65	30	39 - 160
Acetonitrile	160.00	229.19	143	*	9.61	30	50 - 142
Allyl chloride	32.000	33.460	105		0.780	30	68 - 130
t-Amyl Methyl ether	16.000	16.320	102		8.56	30	68 - 128
Benzyl chloride	32.000	29.870	93.3		2.90	30	42 - 138
t-Butyl alcohol	800.00	896.34	112		12.0	30	68 - 129
Carbon disulfide	32.000	34.990	109		0.00	30	64 - 133
Chloroprene	32.000	33.770	106		0.862	30	65 - 135
Diisopropyl ether	16.000	18.170	114		1.94	30	67 - 128
Ethyl t-butyl ether	16.000	15.330	95.8		3.52	30	70 - 127
2-Hexanone	320.00	305.08	95.3		0.242	30	57 - 139
Methyl ethyl ketone	160.00	149.51	93.4		5.97	30	56 - 143
Methyl isobutyl ketone	160.00	154.41	96.5		0.793	30	67 - 130
Vinyl acetate	160.00	146.74	91.7		3.28	30	54 - 146

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-BS1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Benzene	25.000	26.160	105	79 - 120
Bromobenzene	25.000	25.290	101	80 - 120
Bromochloromethane	25.000	25.560	102	78 - 123
Bromodichloromethane	25.000	25.320	101	79 - 125
Bromoform	25.000	24.030	96.1	66 - 130
Bromomethane	25.000	21.860	87.4	53 - 141
n-Butylbenzene	25.000	25.950	104	75 - 128
sec-Butylbenzene	25.000	24.100	96.4	77 - 126
tert-Butylbenzene	25.000	24.880	99.5	78 - 124
Carbon tetrachloride	25.000	28.560	114	72 - 136
Chlorobenzene	25.000	25.360	101	82 - 118
Chloroethane	25.000	25.690	103	60 - 138
Chloroform	25.000	26.100	104	79 - 124
Chloromethane	25.000	25.970	104	50 - 139
2-Chlorotoluene	25.000	25.300	101	79 - 122
4-Chlorotoluene	25.000	24.710	98.8	78 - 122
Dibromochloromethane	25.000	25.080	100	74 - 126
1,2-Dibromo-3-chloropropane	25.000	21.080	84.3	62 - 128
1,2-Dibromoethane	25.000	24.310	97.2	77 - 121
Dibromomethane	25.000	22.350	89.4	79 - 123
1,2-Dichlorobenzene	25.000	23.800	95.2	80 - 119
1,3-Dichlorobenzene	25.000	22.350	89.4	80 - 119
1,4-Dichlorobenzene	25.000	23.840	95.4	79 - 118
Dichlorodifluoromethane	25.000	23.720	94.9	32 - 152

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Project Manager: Kelli Miller

LCS RECOVERY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-BS1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
1,1-Dichloroethane	25.000	24.730	98.9	77 - 125
1,2-Dichloroethane	25.000	25.030	100	73 - 128
1,1-Dichloroethene	25.000	27.210	109	71 - 131
cis-1,2-Dichloroethene	25.000	26.190	105	78 - 123
trans-1,2-Dichloroethene	25.000	27.080	108	75 - 124
1,2-Dichloropropane	25.000	24.080	96.3	78 - 122
1,3-Dichloropropane	25.000	23.580	94.3	80 - 119
2,2-Dichloropropane	25.000	28.560	114	60 - 139
1,1-Dichloropropene	25.000	28.280	113	79 - 125
cis-1,3-Dichloropropene	25.000	23.920	95.7	75 - 124
trans-1,3-Dichloropropene	25.000	24.320	97.3	73 - 127
Ethylbenzene	25.000	25.960	104	79 - 121
Hexachlorobutadiene	25.000	27.840	111	66 - 134
Isopropylbenzene	25.000	24.560	98.2	72 - 131
p-Isopropyltoluene	25.000	24.600	98.4	77 - 127
Methylene chloride	25.000	27.170	109	74 - 124
Methyl t-butyl ether	25.000	26.020	104	71 - 124
Naphthalene	25.000	26.820	107	61 - 128
n-Propylbenzene	25.000	24.440	97.8	76 - 126
Styrene	25.000	25.730	103	78 - 123
1,1,1,2-Tetrachloroethane	25.000	24.700	98.8	78 - 124
1,1,2,2-Tetrachloroethane	25.000	24.130	96.5	71 - 121
Tetrachloroethene	25.000	28.400	114	74 - 129
Toluene	25.000	25.370	101	80 - 121

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Project Manager: Kelli Miller

LCS RECOVERY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-BS1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
1,2,3-Trichlorobenzene	25.000	28.030	112	69 - 129
1,2,4-Trichlorobenzene	25.000	28.140	113	69 - 130
1,1,1-Trichloroethane	25.000	27.660	111	74 - 131
1,1,2-Trichloroethane	25.000	24.480	97.9	80 - 119
Trichloroethene	25.000	26.620	106	79 - 123
Trichlorofluoromethane	25.000	29.170	117	65 - 141
1,2,3-Trichloropropane	25.000	24.500	98.0	73 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.000	26.580	106	70 - 136
1,2,4-Trimethylbenzene	25.000	24.330	97.3	76 - 124
1,3,5-Trimethylbenzene	25.000	24.070	96.3	75 - 124
Vinyl chloride	25.000	28.720	115	58 - 137
Total Xylenes	75.000	75.710	101	79 - 121
Acetone	320.00	320.83	100	39 - 160
Acetonitrile	160.00	210.41	132	50 - 142
Allyl chloride	32.000	35.180	110	68 - 130
t-Amyl Methyl ether	16.000	15.870	99.2	68 - 128
Benzyl chloride	32.000	31.330	97.9	42 - 138
t-Butyl alcohol	800.00	844.63	106	68 - 129
Carbon disulfide	32.000	36.900	115	64 - 133
Chloroprene	32.000	36.080	113	65 - 135
Diisopropyl ether	16.000	18.510	116	67 - 128
Ethyl t-butyl ether	16.000	15.390	96.2	70 - 127
2-Hexanone	320.00	302.11	94.4	57 - 139
Methyl ethyl ketone	160.00	160.83	101	56 - 143

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Project Manager: Kelli Miller

LCS RECOVERY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0851
Laboratory ID: B[B0851-BS1
Preparation: EPA 5030 Water MS
Initial/Final: 25 ml / 25 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Methyl isobutyl ketone	160.00	150.04	93.8	67 - 130
Vinyl acetate	160.00	146.71	91.7	54 - 146

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702048
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1702048-TUN1	26JAN03.D	01/26/17 12:01
Cal Standard	1702048-CAL1	26JAN06.D	01/26/17 16:07
Cal Standard	1702048-CAL2	26JAN07.D	01/26/17 16:30
Cal Standard	1702048-CAL3	26JAN08.D	01/26/17 16:53
Cal Standard	1702048-CAL5	26JAN10.D	01/26/17 17:39
Cal Standard	1702048-CAL6	26JAN11.D	01/26/17 18:02
Cal Standard	1702048-CAL4	26JAN14.D	01/26/17 19:12
MS Tune	1702048-TUN2	07FEB05.D	02/07/17 08:42
Cal Standard	1702048-CAL7	07FEB07.D	02/07/17 09:30
Cal Standard	1702048-CAL8	07FEB08.D	02/07/17 09:53
Cal Standard	1702048-CAL9	07FEB09.D	02/07/17 10:17
Cal Standard	1702048-CALA	07FEB10.D	02/07/17 10:40
Cal Standard	1702048-CALB	07FEB11.D	02/07/17 11:03
Cal Standard	1702048-CALC	07FEB12.D	02/07/17 11:27
MS Tune	1702048-TUN3	13DEC05.D	12/13/16 09:45
Cal Standard	1702048-CALD	13DEC06.D	12/13/16 10:10
Cal Standard	1702048-CALE	13DEC07.D	12/13/16 10:32
Cal Standard	1702048-CALF	13DEC08.D	12/13/16 10:55
Cal Standard	1702048-CALG	13DEC09.D	12/13/16 11:18
Cal Standard	1702048-CALH	13DEC10.D	12/13/16 11:41
Cal Standard	1702048-CALI	13DEC11.D	12/13/16 12:04

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702254
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702254-ICV1	26JAN15.D	01/26/17 19:35
Initial Cal Blank	1702254-ICB1	26JAN17.D	01/26/17 20:23
Initial Cal Check	1702254-ICV2	07FEB15.D	02/07/17 12:46
Initial Cal Blank	1702254-ICB2	07FEB17.D	02/07/17 13:33
MS Tune	1702254-TUN1	09FEB05.D	02/09/17 06:41
Calibration Check	1702254-CCV1	09FEB06.D	02/09/17 07:04
Calibration Check	1702254-CCV2	09FEB07.D	02/09/17 07:28
Calibration Blank	1702254-CCB1	09FEB08.D	02/09/17 07:51
Blank	B[B0851-BLK1	09FEB29.D	02/09/17 16:09
M051A_170206	1703278-04	09FEB30.D	02/09/17 16:32
LCS	B[B0851-BS1	09FEB31.D	02/09/17 16:55
M051A_170206	B[B0851-MS1	09FEB32.D	02/09/17 17:18
M051A_170206	B[B0851-MSD1	09FEB33.D	02/09/17 17:41
MS Tune	1702254-TUN2	09FEB35.D	02/09/17 18:28
Calibration Check	1702254-CCV3	09FEB36.D	02/09/17 18:51
Calibration Check	1702254-CCV4	09FEB37.D	02/09/17 19:14
Calibration Blank	1702254-CCB2	09FEB38.D	02/09/17 19:37
TB04_170206	1703278-06	09FEB42.D	02/09/17 21:10
DUP04_170206	1703278-01	09FEB61.D	02/10/17 04:30
EB07_170206	1703278-02	09FEB62.D	02/10/17 04:53
M041E_170206	1703278-03	09FEB63.D	02/10/17 05:16
M060A_170206	1703278-05	09FEB64.D	02/10/17 05:40
MS Tune	1702254-TUN3	10FEB01.D	02/10/17 06:04
Calibration Check	1702254-CCV5	10FEB02.D	02/10/17 06:27
Calibration Check	1702254-CCV6	10FEB03.D	02/10/17 06:50
Calibration Blank	1702254-CCB3	10FEB04.D	02/10/17 07:14

AMEC Environmental & Infrastructure
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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	26JAN03.D	Injection Date:	01/26/17
Instrument ID:	MS-V5	Injection Time:	12:01
Sequence:	1702048	Lab Sample ID:	1702048-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	32.2	PASS
Mass 75	30 - 60% of Mass 95	50.9	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.86	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 100% of Mass 95	64.3	PASS
Mass 175	5 - 9% of Mass 174	7.93	PASS
Mass 176	95 - 101% of Mass 174	98.5	PASS
Mass 177	5 - 9% of Mass 176	5.13	PASS

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Project Number: 5023146096
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MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	07FEB05.D	Injection Date:	02/07/17
Instrument ID:	MS-V5	Injection Time:	08:42
Sequence:	1702048	Lab Sample ID:	1702048-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	25.6	PASS
Mass 75	30 - 60% of Mass 95	46.1	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.48	PASS
Mass 173	Less than 2% of Mass 174	0.982	PASS
Mass 174	50 - 100% of Mass 95	89.9	PASS
Mass 175	5 - 9% of Mass 174	8.56	PASS
Mass 176	95 - 101% of Mass 174	101	PASS
Mass 177	5 - 9% of Mass 176	5.99	PASS

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	13DEC05.D	Injection Date:	12/13/16
Instrument ID:	MS-V5	Injection Time:	09:45
Sequence:	1702048	Lab Sample ID:	1702048-TUN3

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	25.9	PASS
Mass 75	30 - 60% of Mass 95	54.3	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.64	PASS
Mass 173	Less than 2% of Mass 174	1.48	PASS
Mass 174	50 - 100% of Mass 95	75.1	PASS
Mass 175	5 - 9% of Mass 174	7.62	PASS
Mass 176	95 - 101% of Mass 174	98	PASS
Mass 177	5 - 9% of Mass 176	6.02	PASS

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	09FEB05.D	Injection Date:	02/09/17
Instrument ID:	MS-V5	Injection Time:	06:41
Sequence:	1702254	Lab Sample ID:	1702254-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	27.2	PASS
Mass 75	30 - 60% of Mass 95	42.6	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	5.57	PASS
Mass 173	Less than 2% of Mass 174	0.643	PASS
Mass 174	50 - 100% of Mass 95	90	PASS
Mass 175	5 - 9% of Mass 174	7.12	PASS
Mass 176	95 - 101% of Mass 174	100	PASS
Mass 177	5 - 9% of Mass 176	6.76	PASS

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Project Number: 5023146096
Project Manager: Kelli Miller

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	09FEB35.D	Injection Date:	02/09/17
Instrument ID:	MS-V5	Injection Time:	18:28
Sequence:	1702254	Lab Sample ID:	1702254-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	24.9	PASS
Mass 75	30 - 60% of Mass 95	47.5	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.46	PASS
Mass 173	Less than 2% of Mass 174	0.861	PASS
Mass 174	50 - 100% of Mass 95	78.5	PASS
Mass 175	5 - 9% of Mass 174	5.85	PASS
Mass 176	95 - 101% of Mass 174	97.1	PASS
Mass 177	5 - 9% of Mass 176	8.24	PASS

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MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	10FEB01.D	Injection Date:	02/10/17
Instrument ID:	MS-V5	Injection Time:	06:04
Sequence:	1702254	Lab Sample ID:	1702254-TUN3

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	22.8	PASS
Mass 75	30 - 60% of Mass 95	47.2	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	5.03	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 100% of Mass 95	99.5	PASS
Mass 175	5 - 9% of Mass 174	8.63	PASS
Mass 176	95 - 101% of Mass 174	99	PASS
Mass 177	5 - 9% of Mass 176	6.11	PASS

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	26JAN15.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	01/26/17
Lab Sample ID:	1702254-ICV1	Injection Time:	19:35

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Benzene	A	25.000	24.520	1.889545	1.853263		-1.9	20
Bromobenzene	A	25.000	26.750	1.179324	1.261962		7.0	20
Bromochloromethane	A	25.000	27.870	0.1547174	0.1724858		11.5	20
Bromodichloromethane	A	25.000	26.320	0.3292103	0.3466539		5.3	20
Bromoform	A	25.000	29.540	0.3506939	0.4143899	0.1	18.2	20
Bromomethane	A	25.000	25.400	0.3180084	0.323081		1.6	20
n-Butylbenzene	A	25.000	24.450	3.493597	3.416282		-2.2	20
sec-Butylbenzene	A	25.000	22.320	5.379312	4.803427		-10.7	20
tert-Butylbenzene	A	25.000	24.540	3.852201	3.780801		-1.9	20
Carbon tetrachloride	A	25.000	24.550	0.4688551	0.4604308		-1.8	20
Chlorobenzene	A	25.000	25.550	2.978027	3.04388	0.3	2.2	20
Chloroethane	A	25.000	25.010	0.3902835	0.3904325		0.04	20
Chloroform	A	25.000	25.080	0.7548469	0.7572197		0.3	20
Chloromethane	L	25.000	21.450	0.6989857	0.5449247	0.1	-14.2	20
2-Chlorotoluene	A	25.000	25.230	3.666018	3.699401		0.9	20
4-Chlorotoluene	A	25.000	25.250	3.285453	3.318671		1.0	20
Dibromochloromethane	A	25.000	28.210	0.1708407	0.1927603		12.8	20
1,2-Dibromo-3-chloropropane	L	25.000	26.780	0.0666406	0.0808198		7.1	20
1,2-Dibromoethane	A	25.000	28.160	0.1390115	0.1565905		12.6	20
Dibromomethane	A	25.000	25.600	0.1132441	0.1159592		2.4	20
1,2-Dichlorobenzene	A	25.000	25.120	1.693334	1.701651		0.5	20
1,3-Dichlorobenzene	A	25.000	23.440	2.068389	1.939285		-6.2	20
1,4-Dichlorobenzene	A	25.000	25.950	1.916207	1.989058		3.8	20

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CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	26JAN15.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	01/26/17
Lab Sample ID:	1702254-ICV1	Injection Time:	19:35

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Dichlorodifluoromethane	A	25.000	23.190	0.4765408	0.4420548		-7.2	20
1,1-Dichloroethane	A	25.000	25.000	1.030991	1.031141	0.1	0.01	20
1,2-Dichloroethane	A	25.000	26.060	0.438219	0.4568204		4.2	20
1,1-Dichloroethene	A	25.000	24.850	0.7766588	0.7719666		-0.6	20
cis-1,2-Dichloroethene	A	25.000	25.440	0.46668	0.474977		1.8	20
trans-1,2-Dichloroethene	A	25.000	23.910	0.4502706	0.4305847		-4.4	20
1,2-Dichloropropane	A	25.000	25.240	0.3723232	0.3758662		1.0	20
1,3-Dichloropropane	A	25.000	27.900	0.2667047	0.2976682		11.6	20
2,2-Dichloropropane	A	25.000	23.050	0.6461859	0.595668		-7.8	20
1,1-Dichloropropene	A	25.000	24.340	0.61317	0.5969539		-2.6	20
cis-1,3-Dichloropropene	A	25.000	25.890	0.436368	0.4519754		3.6	20
trans-1,3-Dichloropropene	A	25.000	27.510	0.3001727	0.3303126		10.0	20
Ethylbenzene	A	25.000	24.810	1.699115	1.686003		-0.8	20
Hexachlorobutadiene	A	25.000	22.520	0.8012975	0.7218586		-9.9	20
Isopropylbenzene	A	25.000	23.670	5.188549	4.913541		-5.3	20
p-Isopropyltoluene	A	25.000	22.960	4.064913	3.733001		-8.2	20
Methylene chloride	L	25.000	27.090	0.601454	0.4144394		8.4	20
Methyl t-butyl ether	A	25.000	29.040	0.6285989	0.7300879		16.1	20
Naphthalene	A	25.000	28.850	1.162765	1.341925		15.4	20
n-Propylbenzene	A	25.000	23.210	5.959786	5.533521		-7.2	20
Styrene	A	25.000	26.030	2.90027	3.020175		4.1	20
1,1,1,2-Tetrachloroethane	A	25.000	25.800	0.9261768	0.9556971		3.2	20
1,1,2,2-Tetrachloroethane	A	25.000	28.950	0.555952	0.6436956	0.3	15.8	20

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CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	26JAN15.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	01/26/17
Lab Sample ID:	1702254-ICV1	Injection Time:	19:35

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Tetrachloroethene	A	25.000	23.430	0.3412463	0.3197576		-6.3	20
Toluene	A	25.000	24.190	0.7797766	0.7546079		-3.2	20
1,2,3-Trichlorobenzene	A	25.000	26.710	1.02527	1.095334		6.8	20
1,2,4-Trichlorobenzene	A	25.000	26.280	1.194842	1.256226		5.1	20
1,1,1-Trichloroethane	A	25.000	24.320	0.6397625	0.6223499		-2.7	20
1,1,2-Trichloroethane	A	25.000	28.140	0.1533095	0.1725615		12.6	20
Trichloroethene	A	25.000	25.380	0.3255704	0.3305227		1.5	20
Trichlorofluoromethane	A	25.000	23.360	0.5867905	0.5482351		-6.6	20
1,2,3-Trichloropropane	L	25.000	29.760	0.105337	0.1291837		19.0	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	25.000	22.390	0.4183029	0.3745928		-10.4	20
1,2,4-Trimethylbenzene	A	25.000	24.970	3.597754	3.593467		-0.1	20
1,3,5-Trimethylbenzene	A	25.000	23.180	3.970515	3.680896		-7.3	20
Vinyl chloride	A	25.000	20.170	0.5958562	0.4807637		-19.3	20
Total Xylenes	A	75.000	74.270	1.988127	1.96886		-1.0	20
p- & m-Xylenes	A	50.000	49.530	2.011739	1.992895		-0.9	20
o-Xylene	A	25.000	24.740	1.940902	1.920791		-1.0	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	07FEB15.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/07/17
Lab Sample ID:	1702254-ICV2	Injection Time:	12:46

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Acetone	A	320.00	315.03	0.044841	4.414517E-02		-1.6	20
Acetonitrile	L	160.00	201.66	1.965066E-02	2.067974E-02		26.0	20 *
Allyl chloride	A	32.000	31.180	1.114402	1.08574		-2.6	20
t-Amyl Methyl ether	A	16.000	15.090	0.7281162	0.6866905		-5.7	20
Benzyl chloride	A	32.000	31.760	0.8656921	0.8592213		-0.7	20
t-Butyl alcohol	A	800.00	811.29	1.280474E-02	1.298544E-02		1.4	20
Carbon disulfide	A	32.000	32.220	1.344744	1.354047		0.7	20
Chloroprene	A	32.000	31.360	1.000946	0.9807911		-2.0	20
Diisopropyl ether	A	16.000	15.550	0.3174881	0.3085884		-2.8	20
Ethyl t-butyl ether	A	16.000	15.050	1.311089	1.233435		-5.9	20
2-Hexanone	Q	320.00	312.86	0.0923643	8.615645E-02		-2.2	20
Methyl ethyl ketone	A	160.00	154.88	0.0879739	0.0851614		-3.2	20
Methyl isobutyl ketone	A	160.00	147.91	0.1389299	0.12843		-7.6	20
Vinyl acetate	A	160.00	147.71	0.6344058	0.5856918		-7.7	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB06.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV1	Injection Time:	07:04

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Benzene	A	25.000	23.550	1.889545	1.780185		-5.8	20	
Bromobenzene	A	25.000	26.610	1.179324	1.255043		6.4	20	
Bromochloromethane	A	25.000	25.110	0.1547174	0.1553811		0.4	20	
Bromodichloromethane	A	25.000	25.580	0.3292103	0.3368542		2.3	20	
Bromoform	A	25.000	25.170	0.3506939	0.3530552	0.1	0.7	20	
Bromomethane	A	25.000	10.990	0.3180084	0.139738		-56.1	20	*
n-Butylbenzene	A	25.000	27.160	3.493597	3.796093		8.7	20	
sec-Butylbenzene	A	25.000	24.890	5.379312	5.354979		-0.5	20	
tert-Butylbenzene	A	25.000	25.290	3.852201	3.896256		1.1	20	
Carbon tetrachloride	A	25.000	26.320	0.4688551	0.4935598		5.3	20	
Chlorobenzene	A	25.000	25.590	2.978027	3.048659	0.3	2.4	20	
Chloroethane	A	25.000	24.010	0.3902835	0.3748411		-4.0	20	
Chloroform	A	25.000	24.990	0.7548469	0.7545169		-0.04	20	
Chloromethane	L	25.000	21.970	0.6989857	0.5576885	0.1	-12.1	20	
2-Chlorotoluene	A	25.000	26.140	3.666018	3.833127		4.6	20	
4-Chlorotoluene	A	25.000	25.840	3.285453	3.395808		3.4	20	
Dibromochloromethane	A	25.000	25.010	0.1708407	0.1709205		0.05	20	
1,2-Dibromo-3-chloropropane	L	25.000	23.650	0.0666406	7.142472E-02		-5.4	20	
1,2-Dibromoethane	A	25.000	24.810	0.1390115	0.1379678		-0.8	20	
Dibromomethane	A	25.000	23.460	0.1132441	0.1062545		-6.2	20	
1,2-Dichlorobenzene	A	25.000	24.950	1.693334	1.689815		-0.2	20	
1,3-Dichlorobenzene	A	25.000	24.020	2.068389	1.987516		-3.9	20	
1,4-Dichlorobenzene	A	25.000	26.200	1.916207	2.008466		4.8	20	

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CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB06.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV1	Injection Time:	07:04

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Dichlorodifluoromethane	A	25.000	24.760	0.4765408	0.4720114		-1.0	20
1,1-Dichloroethane	A	25.000	24.080	1.030991	0.9929275	0.1	-3.7	20
1,2-Dichloroethane	A	25.000	24.160	0.438219	0.4235072		-3.4	20
1,1-Dichloroethene	A	25.000	25.470	0.7766588	0.7912001		1.9	20
cis-1,2-Dichloroethene	A	25.000	24.410	0.46668	0.4556711		-2.4	20
trans-1,2-Dichloroethene	A	25.000	24.280	0.4502706	0.4373866		-2.9	20
1,2-Dichloropropane	A	25.000	23.660	0.3723232	0.3523884		-5.4	20
1,3-Dichloropropane	A	25.000	24.950	0.2667047	0.266206		-0.2	20
2,2-Dichloropropane	A	25.000	27.050	0.6461859	0.699155		8.2	20
1,1-Dichloropropene	A	25.000	25.290	0.61317	0.6201904		1.1	20
cis-1,3-Dichloropropene	A	25.000	23.970	0.436368	0.4183592		-4.1	20
trans-1,3-Dichloropropene	A	25.000	24.580	0.3001727	0.2950821		-1.7	20
Ethylbenzene	A	25.000	26.110	1.699115	1.774877		4.5	20
Hexachlorobutadiene	A	25.000	29.470	0.8012975	0.9444844		17.9	20
Isopropylbenzene	A	25.000	25.270	5.188549	5.243947		1.1	20
p-Isopropyltoluene	A	25.000	25.970	4.064913	4.222348		3.9	20
Methylene chloride	L	25.000	27.280	0.601454	0.4170997		9.1	20
Methyl t-butyl ether	A	25.000	23.680	0.6285989	0.5954424		-5.3	20
Naphthalene	A	25.000	29.200	1.162765	1.358324		16.8	20
n-Propylbenzene	A	25.000	24.310	5.959786	5.796271		-2.7	20
Styrene	A	25.000	26.640	2.90027	3.091085		6.6	20
1,1,1,2-Tetrachloroethane	A	25.000	25.510	0.9261768	0.9452322		2.1	20
1,1,2,2-Tetrachloroethane	A	25.000	25.410	0.555952	0.5650988	0.3	1.6	20

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CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB06.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV1	Injection Time:	07:04

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Tetrachloroethene	A	25.000	28.960	0.3412463	0.3952725		15.8	20
Toluene	A	25.000	25.560	0.7797766	0.797175		2.2	20
1,2,3-Trichlorobenzene	A	25.000	30.000	1.02527	1.230462		20.0	20
1,2,4-Trichlorobenzene	A	25.000	29.430	1.194842	1.40679		17.7	20
1,1,1-Trichloroethane	A	25.000	26.350	0.6397625	0.6742534		5.4	20
1,1,2-Trichloroethane	A	25.000	24.100	0.1533095	0.1477777		-3.6	20
Trichloroethene	A	25.000	25.960	0.3255704	0.3381195		3.9	20
Trichlorofluoromethane	A	25.000	27.120	0.5867905	0.6365908		8.5	20
1,2,3-Trichloropropane	L	25.000	26.530	0.105337	0.1159868		6.1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	25.000	25.050	0.4183029	0.4191934		0.2	20
1,2,4-Trimethylbenzene	A	25.000	26.240	3.597754	3.776765		5.0	20
1,3,5-Trimethylbenzene	A	25.000	24.550	3.970515	3.899735		-1.8	20
Vinyl chloride	A	25.000	25.660	0.5958562	0.6114797		2.6	20
Total Xylenes	A	75.000	77.370	1.988127	2.05084		3.2	20
p- & m-Xylenes	A	50.000	51.420	2.011739	2.068969		2.8	20
o-Xylene	A	25.000	25.950	1.940902	2.014582		3.8	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB07.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV2	Injection Time:	07:28

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Acetone	A	320.00	319.00	0.044841	4.470116E-02		-0.3	20
Acetonitrile	L	160.00	206.36	1.965066E-02	2.112606E-02		29.0	20 *
Allyl chloride	A	32.000	28.330	1.114402	0.9865213		-11.5	20
t-Amyl Methyl ether	A	16.000	14.720	0.7281162	0.6699195		-8.0	20
Benzyl chloride	A	32.000	28.290	0.8656921	0.7653854		-11.6	20
t-Butyl alcohol	A	800.00	788.55	1.280474E-02	1.262149E-02		-1.4	20
Carbon disulfide	A	32.000	30.950	1.344744	1.300483		-3.3	20
Chloroprene	A	32.000	30.140	1.000946	0.9427101		-5.8	20
Diisopropyl ether	A	16.000	16.160	0.3174881	0.3206395		1.0	20
Ethyl t-butyl ether	A	16.000	14.790	1.311089	1.211877		-7.6	20
2-Hexanone	Q	320.00	310.16	0.0923643	8.553122E-02		-3.1	20
Methyl ethyl ketone	A	160.00	149.23	0.0879739	8.205226E-02		-6.7	20
Methyl isobutyl ketone	A	160.00	153.80	0.1389299	0.1335455		-3.9	20
Vinyl acetate	A	160.00	143.54	0.6344058	0.5691501		-10.3	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB36.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV3	Injection Time:	18:51

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Benzene	A	25.000	24.890	1.889545	1.880904		-0.5	20	
Bromobenzene	A	25.000	25.410	1.179324	1.198471		1.6	20	
Bromochloromethane	A	25.000	27.140	0.1547174	0.1679844		8.6	20	
Bromodichloromethane	A	25.000	25.350	0.3292103	0.3337671		1.4	20	
Bromoform	A	25.000	25.470	0.3506939	0.3572578	0.1	1.9	20	
Bromomethane	A	25.000	18.160	0.3180084	0.2310224		-27.4	20	*
n-Butylbenzene	A	25.000	25.690	3.493597	3.590694		2.8	20	
sec-Butylbenzene	A	25.000	23.490	5.379312	5.05481		-6.0	20	
tert-Butylbenzene	A	25.000	23.530	3.852201	3.626184		-5.9	20	
Carbon tetrachloride	A	25.000	25.160	0.4688551	0.4719078		0.7	20	
Chlorobenzene	A	25.000	24.490	2.978027	2.917112	0.3	-2.0	20	
Chloroethane	A	25.000	25.380	0.3902835	0.3962819		1.5	20	
Chloroform	A	25.000	25.320	0.7548469	0.7645921		1.3	20	
Chloromethane	L	25.000	25.100	0.6989857	0.6345273	0.1	0.4	20	
2-Chlorotoluene	A	25.000	24.390	3.666018	3.57684		-2.4	20	
4-Chlorotoluene	A	25.000	23.920	3.285453	3.143769		-4.3	20	
Dibromochloromethane	A	25.000	25.710	0.1708407	0.1756974		2.8	20	
1,2-Dibromo-3-chloropropane	L	25.000	24.730	0.0666406	0.0746605		-1.1	20	
1,2-Dibromoethane	A	25.000	26.180	0.1390115	0.1455764		4.7	20	
Dibromomethane	A	25.000	23.870	0.1132441	0.1081351		-4.5	20	
1,2-Dichlorobenzene	A	25.000	23.920	1.693334	1.620404		-4.3	20	
1,3-Dichlorobenzene	A	25.000	22.340	2.068389	1.848157		-10.6	20	
1,4-Dichlorobenzene	A	25.000	24.060	1.916207	1.843792		-3.8	20	

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CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB36.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV3	Injection Time:	18:51

	(1)CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Dichlorodifluoromethane	A	25.000	23.400	0.4765408	0.44596		-6.4	20
1,1-Dichloroethane	A	25.000	24.650	1.030991	1.016432	0.1	-1.4	20
1,2-Dichloroethane	A	25.000	24.990	0.438219	0.4379591		-0.06	20
1,1-Dichloroethene	A	25.000	25.210	0.7766588	0.7833189		0.9	20
cis-1,2-Dichloroethene	A	25.000	25.300	0.46668	0.4722396		1.2	20
trans-1,2-Dichloroethene	A	25.000	24.730	0.4502706	0.4454289		-1.1	20
1,2-Dichloropropane	A	25.000	24.690	0.3723232	0.3677565		-1.2	20
1,3-Dichloropropane	A	25.000	25.460	0.2667047	0.2716389		1.9	20
2,2-Dichloropropane	A	25.000	24.210	0.6461859	0.6257306		-3.2	20
1,1-Dichloropropene	A	25.000	25.220	0.61317	0.6185372		0.9	20
cis-1,3-Dichloropropene	A	25.000	23.840	0.436368	0.4161348		-4.6	20
trans-1,3-Dichloropropene	A	25.000	24.830	0.3001727	0.2980978		-0.7	20
Ethylbenzene	A	25.000	24.750	1.699115	1.682198		-1.0	20
Hexachlorobutadiene	A	25.000	25.510	0.8012975	0.8177451		2.1	20
Isopropylbenzene	A	25.000	24.010	5.188549	4.982249		-4.0	20
p-Isopropyltoluene	A	25.000	24.050	4.064913	3.91075		-3.8	20
Methylene chloride	L	25.000	26.180	0.601454	0.4018048		4.7	20
Methyl t-butyl ether	A	25.000	26.480	0.6285989	0.6658044		5.9	20
Naphthalene	A	25.000	28.170	1.162765	1.310242		12.7	20
n-Propylbenzene	A	25.000	23.760	5.959786	5.664384		-5.0	20
Styrene	A	25.000	26.010	2.90027	3.017717		4.0	20
1,1,1,2-Tetrachloroethane	A	25.000	24.380	0.9261768	0.9031667		-2.5	20
1,1,2,2-Tetrachloroethane	A	25.000	25.300	0.555952	0.562684	0.3	1.2	20

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CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB36.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV3	Injection Time:	18:51

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Tetrachloroethene	A	25.000	25.550	0.3412463	0.3487952		2.2	20
Toluene	A	25.000	24.340	0.7797766	0.759221		-2.6	20
1,2,3-Trichlorobenzene	A	25.000	28.000	1.02527	1.1483		12.0	20
1,2,4-Trichlorobenzene	A	25.000	27.840	1.194842	1.330606		11.4	20
1,1,1-Trichloroethane	A	25.000	25.550	0.6397625	0.6537181		2.2	20
1,1,2-Trichloroethane	A	25.000	25.520	0.1533095	0.1564777		2.1	20
Trichloroethene	A	25.000	26.240	0.3255704	0.3416784		4.9	20
Trichlorofluoromethane	A	25.000	25.470	0.5867905	0.5977766		1.9	20
1,2,3-Trichloropropane	L	25.000	26.740	0.105337	0.116855		7.0	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	25.000	24.920	0.4183029	0.4169003		-0.3	20
1,2,4-Trimethylbenzene	A	25.000	24.110	3.597754	3.469029		-3.6	20
1,3,5-Trimethylbenzene	A	25.000	23.100	3.970515	3.669017		-7.6	20
Vinyl chloride	A	25.000	26.460	0.5958562	0.6305861		5.8	20
Total Xylenes	A	75.000	75.170	1.988127	1.992757		0.2	20
p- & m-Xylenes	A	50.000	50.140	2.011739	2.017465		0.3	20
o-Xylene	A	25.000	25.030	1.940902	1.943341		0.1	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	09FEB37.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/09/17
Lab Sample ID:	1702254-CCV4	Injection Time:	19:14

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Acetone	A	320.00	361.94	0.044841	5.071756E-02		13.1	20
Acetonitrile	L	160.00	238.04	1.965066E-02	2.413655E-02		48.8	20 *
Allyl chloride	A	32.000	31.350	1.114402	1.091767		-2.0	20
t-Amyl Methyl ether	A	16.000	15.830	0.7281162	0.7202977		-1.1	20
Benzyl chloride	A	32.000	26.040	0.8656921	0.7044824		-18.6	20
t-Butyl alcohol	A	800.00	833.82	1.280474E-02	1.334613E-02		4.2	20
Carbon disulfide	A	32.000	33.200	1.344744	1.395019		3.7	20
Chloroprene	A	32.000	32.080	1.000946	1.003377		0.2	20
Diisopropyl ether	A	16.000	16.750	0.3174881	0.3323942		4.7	20
Ethyl t-butyl ether	A	16.000	15.240	1.311089	1.249001		-4.7	20
2-Hexanone	Q	320.00	311.65	0.0923643	8.587705E-02		-2.6	20
Methyl ethyl ketone	A	160.00	179.65	0.0879739	9.877907E-02		12.3	20
Methyl isobutyl ketone	A	160.00	152.73	0.1389299	0.1326189		-4.5	20
Vinyl acetate	A	160.00	117.82	0.6344058	0.4671516		-26.4	20 *

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	10FEB02.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/10/17
Lab Sample ID:	1702254-CCV5	Injection Time:	06:27

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Benzene	A	25.000	25.100	1.889545	1.897065		0.4	20	
Bromobenzene	A	25.000	25.940	1.179324	1.223891		3.8	20	
Bromochloromethane	A	25.000	26.450	0.1547174	0.1637197		5.8	20	
Bromodichloromethane	A	25.000	25.790	0.3292103	0.3396615		3.2	20	
Bromoform	A	25.000	25.910	0.3506939	0.3634786	0.1	3.6	20	
Bromomethane	A	25.000	16.480	0.3180084	0.2096832		-34.1	20	*
n-Butylbenzene	A	25.000	26.550	3.493597	3.710435		6.2	20	
sec-Butylbenzene	A	25.000	25.000	5.379312	5.379252		-0.001	20	
tert-Butylbenzene	A	25.000	24.820	3.852201	3.825212		-0.7	20	
Carbon tetrachloride	A	25.000	28.020	0.4688551	0.5255107		12.1	20	
Chlorobenzene	A	25.000	25.700	2.978027	3.061192	0.3	2.8	20	
Chloroethane	A	25.000	26.540	0.3902835	0.4142865		6.2	20	
Chloroform	A	25.000	25.840	0.7548469	0.7802905		3.4	20	
Chloromethane	L	25.000	28.650	0.6989857	0.7214061	0.1	14.6	20	
2-Chlorotoluene	A	25.000	25.790	3.666018	3.782278		3.2	20	
4-Chlorotoluene	A	25.000	25.180	3.285453	3.309467		0.7	20	
Dibromochloromethane	A	25.000	26.420	0.1708407	0.1805393		5.7	20	
1,2-Dibromo-3-chloropropane	L	25.000	22.430	0.0666406	6.776286E-02		-10.3	20	
1,2-Dibromoethane	A	25.000	25.440	0.1390115	0.1414471		1.8	20	
Dibromomethane	A	25.000	24.320	0.1132441	0.1101824		-2.7	20	
1,2-Dichlorobenzene	A	25.000	23.980	1.693334	1.62436		-4.1	20	
1,3-Dichlorobenzene	A	25.000	23.930	2.068389	1.979812		-4.3	20	
1,4-Dichlorobenzene	A	25.000	25.420	1.916207	1.948193		1.7	20	

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CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	10FEB02.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/10/17
Lab Sample ID:	1702254-CCV5	Injection Time:	06:27

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Dichlorodifluoromethane	A	25.000	27.180	0.4765408	0.518137		8.7	20
1,1-Dichloroethane	A	25.000	24.930	1.030991	1.028065	0.1	-0.3	20
1,2-Dichloroethane	A	25.000	25.770	0.438219	0.4518011		3.1	20
1,1-Dichloroethene	A	25.000	27.220	0.7766588	0.8455953		8.9	20
cis-1,2-Dichloroethene	A	25.000	26.050	0.46668	0.4863274		4.2	20
trans-1,2-Dichloroethene	A	25.000	26.210	0.4502706	0.4720388		4.8	20
1,2-Dichloropropane	A	25.000	24.090	0.3723232	0.3587426		-3.6	20
1,3-Dichloropropane	A	25.000	24.990	0.2667047	0.2666359		-0.03	20
2,2-Dichloropropane	A	25.000	28.420	0.6461859	0.7344553		13.7	20
1,1-Dichloropropene	A	25.000	26.930	0.61317	0.66039		7.7	20
cis-1,3-Dichloropropene	A	25.000	24.760	0.436368	0.4321719		-1.0	20
trans-1,3-Dichloropropene	A	25.000	26.020	0.3001727	0.3124111		4.1	20
Ethylbenzene	A	25.000	26.140	1.699115	1.776889		4.6	20
Hexachlorobutadiene	A	25.000	29.420	0.8012975	0.9431199		17.7	20
Isopropylbenzene	A	25.000	25.210	5.188549	5.231826		0.8	20
p-Isopropyltoluene	A	25.000	25.640	4.064913	4.168734		2.6	20
Methylene chloride	L	25.000	25.800	0.601454	0.3965025		3.2	20
Methyl t-butyl ether	A	25.000	26.140	0.6285989	0.6572272		4.6	20
Naphthalene	A	25.000	26.970	1.162765	1.254176		7.9	20
n-Propylbenzene	A	25.000	24.660	5.959786	5.877738		-1.4	20
Styrene	A	25.000	26.360	2.90027	3.05833		5.4	20
1,1,1,2-Tetrachloroethane	A	25.000	25.050	0.9261768	0.9281508		0.2	20
1,1,2,2-Tetrachloroethane	A	25.000	25.260	0.555952	0.5616699	0.3	1.0	20

AMEC Environmental & Infrastructure
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Project: Alameda
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Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	10FEB02.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/10/17
Lab Sample ID:	1702254-CCV5	Injection Time:	06:27

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloroethene	A	25.000	28.590	0.3412463	0.3902644		14.4	20
Toluene	A	25.000	25.460	0.7797766	0.7940035		1.8	20
1,2,3-Trichlorobenzene	A	25.000	28.170	1.02527	1.155074		12.7	20
1,2,4-Trichlorobenzene	A	25.000	28.560	1.194842	1.364806		14.2	20
1,1,1-Trichloroethane	A	25.000	26.980	0.6397625	0.6903773		7.9	20
1,1,2-Trichloroethane	A	25.000	25.060	0.1533095	0.153673		0.2	20
Trichloroethene	A	25.000	26.970	0.3255704	0.3512447		7.9	20
Trichlorofluoromethane	A	25.000	29.370	0.5867905	0.6894156		17.5	20
1,2,3-Trichloropropane	L	25.000	28.080	0.105337	0.1223044		12.3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	25.000	26.630	0.4183029	0.4455427		6.5	20
1,2,4-Trimethylbenzene	A	25.000	25.800	3.597754	3.71242		3.2	20
1,3,5-Trimethylbenzene	A	25.000	24.060	3.970515	3.821059		-3.8	20
Vinyl chloride	A	25.000	29.470	0.5958562	0.7024753		17.9	20
Total Xylenes	A	75.000	77.380	1.988127	2.051539		3.2	20
p- & m-Xylenes	A	50.000	51.950	2.011739	2.090293		3.9	20
o-Xylene	A	25.000	25.430	1.940902	1.974032		1.7	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-V5	Calibration:	1702011
Lab File ID:	10FEB03.D	Calibration Date:	01/26/17 17:00
Sequence:	1702254	Injection Date:	02/10/17
Lab Sample ID:	1702254-CCV6	Injection Time:	06:50

	(1) CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	320.00	375.92	0.044841	5.267717E-02		17.5	20
Acetonitrile	L	160.00	230.99	1.965066E-02	2.346677E-02		44.4	20 *
Allyl chloride	A	32.000	32.280	1.114402	1.124265		0.9	20
t-Amyl Methyl ether	A	16.000	16.210	0.7281162	0.7375446		1.3	20
Benzyl chloride	A	32.000	31.310	0.8656921	0.8471597		-2.1	20
t-Butyl alcohol	A	800.00	873.30	1.280474E-02	1.397802E-02		9.2	20
Carbon disulfide	A	32.000	32.820	1.344744	1.379186		2.6	20
Chloroprene	A	32.000	32.610	1.000946	1.019895		1.9	20
Diisopropyl ether	A	16.000	16.780	0.3174881	0.3329841		4.9	20
Ethyl t-butyl ether	A	16.000	15.230	1.311089	1.247805		-4.8	20
2-Hexanone	Q	320.00	312.72	0.0923643	8.612243E-02		-2.3	20
Methyl ethyl ketone	A	160.00	171.15	0.0879739	9.410188E-02		7.0	20
Methyl isobutyl ketone	A	160.00	156.95	0.1389299	0.136279		-1.9	20
Vinyl acetate	A	160.00	144.87	0.6344058	0.574405		-9.5	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702048
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration: 1702011

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (1702048-CAL1)			Lab File ID: 26JAN06.D		Analyzed: 01/26/17 16:07			
1,2-Dichloroethane-d4 (Surrogate)	10.000	98.6		6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	95.5		8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	88.4		10.35	10.355	-0.0050	+/-1.0	
Cal Standard (1702048-CAL2)			Lab File ID: 26JAN07.D		Analyzed: 01/26/17 16:30			
1,2-Dichloroethane-d4 (Surrogate)	10.000	99.3		6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	97.1		8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	90.4		10.36	10.355	0.0050	+/-1.0	
Cal Standard (1702048-CAL3)			Lab File ID: 26JAN08.D		Analyzed: 01/26/17 16:53			
1,2-Dichloroethane-d4 (Surrogate)	10.000	103		6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	94.8		8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	96.0		10.36	10.355	0.0050	+/-1.0	
Cal Standard (1702048-CAL5)			Lab File ID: 26JAN10.D		Analyzed: 01/26/17 17:39			
1,2-Dichloroethane-d4 (Surrogate)	10.000	97.1		6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	97.2		8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	93.3		10.35	10.355	-0.0050	+/-1.0	
Cal Standard (1702048-CAL6)			Lab File ID: 26JAN11.D		Analyzed: 01/26/17 18:02			
1,2-Dichloroethane-d4 (Surrogate)	10.000	86.6		6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	93.4		8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	89.5		10.35	10.355	-0.0050	+/-1.0	
Cal Standard (1702048-CAL4)			Lab File ID: 26JAN14.D		Analyzed: 01/26/17 19:12			
1,2-Dichloroethane-d4 (Surrogate)	10.000	106		6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	102		8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	102		10.36	10.355	0.0050	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702254
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration: 1702011

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (1702254-ICV1)			Lab File ID: 26JAN15.D		Analyzed: 01/26/17 19:35			
1,2-Dichloroethane-d4 (Surrogate)	10.000	104	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	98.1	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	108	85 - 114	10.36	10.355	0.0050	+/-1.0	
Initial Cal Blank (1702254-ICB1)			Lab File ID: 26JAN17.D		Analyzed: 01/26/17 20:23			
1,2-Dichloroethane-d4 (Surrogate)	10.000	113	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	99.3	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	103	85 - 114	10.35	10.355	-0.0050	+/-1.0	
Calibration Check (1702254-CCV1)			Lab File ID: 09FEB06.D		Analyzed: 02/09/17 07:04			
1,2-Dichloroethane-d4 (Surrogate)	10.000	100	80 - 120	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	102	80 - 120	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	104	80 - 120	10.35	10.355	-0.0050	+/-1.0	
Calibration Blank (1702254-CCB1)			Lab File ID: 09FEB08.D		Analyzed: 02/09/17 07:51			
1,2-Dichloroethane-d4 (Surrogate)	10.000	104	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	98.9	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	96.7	85 - 114	10.35	10.355	-0.0050	+/-1.0	
Blank (B[B0851-BLK1)			Lab File ID: 09FEB29.D		Analyzed: 02/09/17 16:09			
1,2-Dichloroethane-d4 (Surrogate)	10.000	105	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	100	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	96.0	85 - 114	10.35	10.355	-0.0050	+/-1.0	
M051A_170206 (1703278-04)			Lab File ID: 09FEB30.D		Analyzed: 02/09/17 16:32			
1,2-Dichloroethane-d4 (Surrogate)	10.000	108	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	98.3	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	103	85 - 114	10.35	10.355	-0.0050	+/-1.0	
LCS (B[B0851-BS1)			Lab File ID: 09FEB31.D		Analyzed: 02/09/17 16:55			
1,2-Dichloroethane-d4 (Surrogate)	10.000	104	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	95.3	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	96.2	85 - 114	10.35	10.355	-0.0050	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702254
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Matrix Spike (B[B0851-MS1)			Lab File ID: 09FEB32.D		Analyzed: 02/09/17 17:18			
1,2-Dichloroethane-d4 (Surrogate)	10.000	99.8	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	98.0	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	96.9	85 - 114	10.35	10.355	-0.0050	+/-1.0	
Matrix Spike Dup (B[B0851-MSD1)			Lab File ID: 09FEB33.D		Analyzed: 02/09/17 17:41			
1,2-Dichloroethane-d4 (Surrogate)	10.000	96.8	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	96.9	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	92.0	85 - 114	10.35	10.355	-0.0050	+/-1.0	
Calibration Check (1702254-CCV3)			Lab File ID: 09FEB36.D		Analyzed: 02/09/17 18:51			
1,2-Dichloroethane-d4 (Surrogate)	10.000	97.9	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	97.9	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	106	85 - 114	10.35	10.355	-0.0050	+/-1.0	
Calibration Blank (1702254-CCB2)			Lab File ID: 09FEB38.D		Analyzed: 02/09/17 19:37			
1,2-Dichloroethane-d4 (Surrogate)	10.000	101	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	99.2	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	94.2	85 - 114	10.35	10.355	-0.0050	+/-1.0	
TB04_170206 (1703278-06)			Lab File ID: 09FEB42.D		Analyzed: 02/09/17 21:10			
1,2-Dichloroethane-d4 (Surrogate)	10.000	102	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	99.0	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	93.7	85 - 114	10.35	10.355	-0.0050	+/-1.0	
DUP04_170206 (1703278-01)			Lab File ID: 09FEB61.D		Analyzed: 02/10/17 04:30			
1,2-Dichloroethane-d4 (Surrogate)	10.000	107	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	99.1	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	98.2	85 - 114	10.35	10.355	-0.0050	+/-1.0	
EB07_170206 (1703278-02)			Lab File ID: 09FEB62.D		Analyzed: 02/10/17 04:53			
1,2-Dichloroethane-d4 (Surrogate)	10.000	108	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	100	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	96.4	85 - 114	10.35	10.355	-0.0050	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702254	Instrument:	MS-V5
Matrix:	Water	Calibration:	1702011

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
M041E_170206 (1703278-03)			Lab File ID: 09FEB63.D		Analyzed: 02/10/17 05:16			
1,2-Dichloroethane-d4 (Surrogate)	10.000	107	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	98.5	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	95.9	85 - 114	10.35	10.355	-0.0050	+/-1.0	
M060A_170206 (1703278-05)			Lab File ID: 09FEB64.D		Analyzed: 02/10/17 05:40			
1,2-Dichloroethane-d4 (Surrogate)	10.000	107	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	98.5	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	94.1	85 - 114	10.35	10.355	-0.0050	+/-1.0	
Calibration Check (1702254-CCV5)			Lab File ID: 10FEB02.D		Analyzed: 02/10/17 06:27			
1,2-Dichloroethane-d4 (Surrogate)	10.000	100	81 - 118	6.92	6.921667	-0.0017	+/-1.0	
Toluene-d8 (Surrogate)	10.000	101	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	97.0	85 - 114	10.35	10.355	-0.0050	+/-1.0	
Calibration Blank (1702254-CCB3)			Lab File ID: 10FEB04.D		Analyzed: 02/10/17 07:14			
1,2-Dichloroethane-d4 (Surrogate)	10.000	105	81 - 118	6.93	6.921667	0.0083	+/-1.0	
Toluene-d8 (Surrogate)	10.000	98.4	89 - 112	8.61	8.61	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	10.000	98.7	85 - 114	10.35	10.355	-0.0050	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
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Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702048
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (1702048-CALD)			Lab File ID: 13DEC06.D			Analyzed: 12/13/16 10:10			
Pentafluorobenzene (IS)	179698	6.71	210237	6.59	85	50 - 200	0.1200	+/-0.50	
Cal Standard (1702048-CALE)			Lab File ID: 13DEC07.D			Analyzed: 12/13/16 10:32			
Pentafluorobenzene (IS)	181927	6.7	210237	6.59	87	50 - 200	0.1100	+/-0.50	
Cal Standard (1702048-CALF)			Lab File ID: 13DEC08.D			Analyzed: 12/13/16 10:55			
Pentafluorobenzene (IS)	182850	6.7	210237	6.59	87	50 - 200	0.1100	+/-0.50	
Cal Standard (1702048-CALG)			Lab File ID: 13DEC09.D			Analyzed: 12/13/16 11:18			
Pentafluorobenzene (IS)	175456	6.7	210237	6.59	83	50 - 200	0.1100	+/-0.50	
Cal Standard (1702048-CALH)			Lab File ID: 13DEC10.D			Analyzed: 12/13/16 11:41			
Pentafluorobenzene (IS)	178003	6.7	210237	6.59	85	50 - 200	0.1100	+/-0.50	
Cal Standard (1702048-CALI)			Lab File ID: 13DEC11.D			Analyzed: 12/13/16 12:04			
Pentafluorobenzene (IS)	180722	6.71	210237	6.59	86	50 - 200	0.1200	+/-0.50	
Cal Standard (1702048-CAL1)			Lab File ID: 26JAN06.D			Analyzed: 01/26/17 16:07			
Pentafluorobenzene (IS)	220247	6.58	210237	6.59	105	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	74437	9.62	76990	9.62	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	307137	7.39	296345	7.39	104	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CAL2)			Lab File ID: 26JAN07.D			Analyzed: 01/26/17 16:30			
Pentafluorobenzene (IS)	220154	6.58	210237	6.59	105	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	72326	9.62	76990	9.62	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	293817	7.39	296345	7.39	99	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CAL3)			Lab File ID: 26JAN08.D			Analyzed: 01/26/17 16:53			
Pentafluorobenzene (IS)	205618	6.58	210237	6.59	98	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	69095	9.62	76990	9.62	90	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	296048	7.39	296345	7.39	100	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CAL5)			Lab File ID: 26JAN10.D			Analyzed: 01/26/17 17:39			
Pentafluorobenzene (IS)	205022	6.58	210237	6.59	98	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	71070	9.63	76990	9.62	92	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	294320	7.39	296345	7.39	99	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702048
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (1702048-CAL6)			Lab File ID: 26JAN11.D			Analyzed: 01/26/17 18:02			
Pentafluorobenzene (IS)	209417	6.58	210237	6.59	100	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	67636	9.63	76990	9.62	88	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	306655	7.39	296345	7.39	103	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CAL4)			Lab File ID: 26JAN14.D			Analyzed: 01/26/17 19:12			
Pentafluorobenzene (IS)	210237	6.59	210237	6.59	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	76990	9.62	76990	9.62	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	296345	7.39	296345	7.39	100	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CAL7)			Lab File ID: 07FEB07.D			Analyzed: 02/07/17 09:30			
Pentafluorobenzene (IS)	198502	6.59	210237	6.59	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	65644	9.62	76990	9.62	85	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	262651	7.39	296345	7.39	89	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CAL8)			Lab File ID: 07FEB08.D			Analyzed: 02/07/17 09:53			
Pentafluorobenzene (IS)	197084	6.59	210237	6.59	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	66400	9.62	76990	9.62	86	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	256192	7.39	296345	7.39	86	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CAL9)			Lab File ID: 07FEB09.D			Analyzed: 02/07/17 10:17			
Pentafluorobenzene (IS)	199098	6.58	210237	6.59	95	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	66850	9.62	76990	9.62	87	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	268584	7.39	296345	7.39	91	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CALA)			Lab File ID: 07FEB10.D			Analyzed: 02/07/17 10:40			
Pentafluorobenzene (IS)	189807	6.59	210237	6.59	90	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	67543	9.63	76990	9.62	88	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	267711	7.39	296345	7.39	90	50 - 200	0.0000	+/-0.50	
Cal Standard (1702048-CALB)			Lab File ID: 07FEB11.D			Analyzed: 02/07/17 11:03			
Pentafluorobenzene (IS)	192292	6.58	210237	6.59	91	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	64347	9.62	76990	9.62	84	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	268075	7.39	296345	7.39	90	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702048	Instrument:	MS-V5
Matrix:	Water	Calibration:	1702011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (1702048-CALC)			Lab File ID: 07FEB12.D			Analyzed: 02/07/17 11:27			
Pentafluorobenzene (IS)	198987	6.58	210237	6.59	95	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	68486	9.62	76990	9.62	89	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	272690	7.39	296345	7.39	92	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702254
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration: 1702011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (1702254-ICV1)			Lab File ID: 26JAN15.D			Analyzed: 01/26/17 19:35			
Pentafluorobenzene (IS)	213388	6.58	210237	6.59	101	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	73774	9.62	76990	9.62	96	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	304652	7.39	296345	7.39	103	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (1702254-ICB1)			Lab File ID: 26JAN17.D			Analyzed: 01/26/17 20:23			
Pentafluorobenzene (IS)	218750	6.59	213388	6.58	103	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	72255	9.62	73774	9.62	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	295229	7.39	304652	7.39	97	50 - 200	0.0000	+/-0.50	
Initial Cal Check (1702254-ICV2)			Lab File ID: 07FEB15.D			Analyzed: 02/07/17 12:46			
Pentafluorobenzene (IS)	188542	6.59	210237	6.59	90	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	65064	9.63	76990	9.62	85	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	259624	7.39	296345	7.39	88	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (1702254-ICB2)			Lab File ID: 07FEB17.D			Analyzed: 02/07/17 13:33			
Pentafluorobenzene (IS)	199643	6.58	188542	6.59	106	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	66387	9.63	65064	9.63	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	275356	7.39	259624	7.39	106	50 - 200	0.0000	+/-0.50	
Calibration Check (1702254-CCV1)			Lab File ID: 09FEB06.D			Analyzed: 02/09/17 07:04			
Pentafluorobenzene (IS)	192775	6.58	210237	6.59	92	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	63121	9.63	76990	9.62	82	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	263650	7.39	296345	7.39	89	50 - 200	0.0000	+/-0.50	
Calibration Check (1702254-CCV2)			Lab File ID: 09FEB07.D			Analyzed: 02/09/17 07:28			
Pentafluorobenzene (IS)	199913	6.58	210237	6.59	95	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	70233	9.62	76990	9.62	91	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	264847	7.39	296345	7.39	89	50 - 200	0.0000	+/-0.50	
Calibration Blank (1702254-CCB1)			Lab File ID: 09FEB08.D			Analyzed: 02/09/17 07:51			
Pentafluorobenzene (IS)	202332	6.58	199913	6.58	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	67208	9.62	70233	9.62	96	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	272258	7.39	264847	7.39	103	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702254
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B[B0851-BLK1)			Lab File ID: 09FEB29.D			Analyzed: 02/09/17 16:09			
Pentafluorobenzene (IS)	198342	6.58	199913	6.58	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	64389	9.62	70233	9.62	92	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	262866	7.39	264847	7.39	99	50 - 200	0.0000	+/-0.50	
M051A_170206 (1703278-04)			Lab File ID: 09FEB30.D			Analyzed: 02/09/17 16:32			
Pentafluorobenzene (IS)	187205	6.58	199913	6.58	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	62169	9.62	70233	9.62	89	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	250011	7.39	264847	7.39	94	50 - 200	0.0000	+/-0.50	
LCS (B[B0851-BS1)			Lab File ID: 09FEB31.D			Analyzed: 02/09/17 16:55			
Pentafluorobenzene (IS)	191016	6.58	199913	6.58	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	65800	9.63	70233	9.62	94	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	275506	7.39	264847	7.39	104	50 - 200	0.0000	+/-0.50	
Matrix Spike (B[B0851-MS1)			Lab File ID: 09FEB32.D			Analyzed: 02/09/17 17:18			
Pentafluorobenzene (IS)	192140	6.59	199913	6.58	96	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	67256	9.62	70233	9.62	96	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	266079	7.39	264847	7.39	100	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (B[B0851-MSD1)			Lab File ID: 09FEB33.D			Analyzed: 02/09/17 17:41			
Pentafluorobenzene (IS)	196475	6.58	199913	6.58	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	71699	9.62	70233	9.62	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	278332	7.39	264847	7.39	105	50 - 200	0.0000	+/-0.50	
Calibration Check (1702254-CCV3)			Lab File ID: 09FEB36.D			Analyzed: 02/09/17 18:51			
Pentafluorobenzene (IS)	202576	6.59	210237	6.59	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	70104	9.62	76990	9.62	91	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	290973	7.39	296345	7.39	98	50 - 200	0.0000	+/-0.50	
Calibration Check (1702254-CCV4)			Lab File ID: 09FEB37.D			Analyzed: 02/09/17 19:14			
Pentafluorobenzene (IS)	202038	6.58	210237	6.59	96	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	73786	9.62	76990	9.62	96	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	288051	7.39	296345	7.39	97	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702254
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Blank (1702254-CCB2)			Lab File ID: 09FEB38.D			Analyzed: 02/09/17 19:37			
Pentafluorobenzene (IS)	215460	6.58	202038	6.58	107	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	72313	9.62	73786	9.62	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	282843	7.39	288051	7.39	98	50 - 200	0.0000	+/-0.50	
TB04_170206 (1703278-06)			Lab File ID: 09FEB42.D			Analyzed: 02/09/17 21:10			
Pentafluorobenzene (IS)	205643	6.59	202038	6.58	102	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	72082	9.62	73786	9.62	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	280921	7.39	288051	7.39	98	50 - 200	0.0000	+/-0.50	
DUP04_170206 (1703278-01)			Lab File ID: 09FEB61.D			Analyzed: 02/10/17 04:30			
Pentafluorobenzene (IS)	194334	6.58	202038	6.58	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	66142	9.62	73786	9.62	90	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	262519	7.39	288051	7.39	91	50 - 200	0.0000	+/-0.50	
EB07_170206 (1703278-02)			Lab File ID: 09FEB62.D			Analyzed: 02/10/17 04:53			
Pentafluorobenzene (IS)	175444	6.59	202038	6.58	87	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	60019	9.62	73786	9.62	81	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	237471	7.39	288051	7.39	82	50 - 200	0.0000	+/-0.50	
M041E_170206 (1703278-03)			Lab File ID: 09FEB63.D			Analyzed: 02/10/17 05:16			
Pentafluorobenzene (IS)	190392	6.58	202038	6.58	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	65221	9.62	73786	9.62	88	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	264169	7.39	288051	7.39	92	50 - 200	0.0000	+/-0.50	
M060A_170206 (1703278-05)			Lab File ID: 09FEB64.D			Analyzed: 02/10/17 05:40			
Pentafluorobenzene (IS)	190824	6.58	202038	6.58	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	66320	9.62	73786	9.62	90	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	259240	7.39	288051	7.39	90	50 - 200	0.0000	+/-0.50	
Calibration Check (1702254-CCV5)			Lab File ID: 10FEB02.D			Analyzed: 02/10/17 06:27			
Pentafluorobenzene (IS)	190081	6.59	210237	6.59	90	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	65682	9.63	76990	9.62	85	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	264554	7.39	296345	7.39	89	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702254
Instrument: MS-V5
Matrix: Water
Calibration: 1702011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1702254-CCV6)			Lab File ID: 10FEB03.D			Analyzed: 02/10/17 06:50			
Pentafluorobenzene (IS)	187920	6.58	210237	6.59	89	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	66125	9.62	76990	9.62	86	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	261715	7.39	296345	7.39	88	50 - 200	0.0000	+/-0.50	
Calibration Blank (1702254-CCB3)			Lab File ID: 10FEB04.D			Analyzed: 02/10/17 07:14			
Pentafluorobenzene (IS)	195851	6.58	187920	6.58	104	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	63968	9.62	66125	9.62	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	268151	7.39	261715	7.39	102	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

INITIAL CALIBRATION STANDARDS

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702048
Calibration: 1702011

SDG: 17-03278
Project: Alameda
Instrument: MS-V5

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
6J06023	8260 V5 BFB 50NG	1702048-TUN3	13DEC05.D	12/13/16 09:45
6L13070	8260 V5 1621865 TPPH IC1	1702048-CALD	13DEC06.D	12/13/16 10:10
6L13071	8260 V5 1621865 TPPH IC2	1702048-CALE	13DEC07.D	12/13/16 10:32
6L13072	8260 V5 1621865 TPPH IC3	1702048-CALF	13DEC08.D	12/13/16 10:55
6L13073	8260 V5 1621865 TPPH IC4	1702048-CALG	13DEC09.D	12/13/16 11:18
6L13074	8260 V5 1621865 TPPH IC5	1702048-CALH	13DEC10.D	12/13/16 11:41
6L13075	8260 V5 1621865 TPPH IC6	1702048-CALI	13DEC11.D	12/13/16 12:04
7A05057	8260 V5 BFB 25NG	1702048-TUN1	26JAN03.D	01/26/17 12:01
7A26048	8260 V5 1701474 IC1	1702048-CAL1	26JAN06.D	01/26/17 16:07
7A26049	8260 V5 1701474 IC2	1702048-CAL2	26JAN07.D	01/26/17 16:30
7A26050	8260 V5 1701474 IC3	1702048-CAL3	26JAN08.D	01/26/17 16:53
7A26052	8260 V5 1701474 IC5	1702048-CAL5	26JAN10.D	01/26/17 17:39
7A26053	8260 V5 1701474 IC6	1702048-CAL6	26JAN11.D	01/26/17 18:02
7A26051	8260 V5 1701474 IC4	1702048-CAL4	26JAN14.D	01/26/17 19:12
7A05057	8260 V5 BFB 25NG	1702048-TUN2	07FEB05.D	02/07/17 08:42
7B08028	8260 V5 1702048 XIC1	1702048-CAL7	07FEB07.D	02/07/17 09:30
7B08029	8260 V5 1702048 XIC2	1702048-CAL8	07FEB08.D	02/07/17 09:53
7B08030	8260 V5 1702048 XIC3	1702048-CAL9	07FEB09.D	02/07/17 10:17
7B08031	8260 V5 1702048 XIC4	1702048-CALA	07FEB10.D	02/07/17 10:40
7B08032	8260 V5 1702048 XIC5	1702048-CALB	07FEB11.D	02/07/17 11:03
7B08033	8260 V5 1702048 XIC6	1702048-CALC	07FEB12.D	02/07/17 11:27

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Benzene	0.5	2.001299	1	2.095124	10	1.998001	25	1.814919	50	1.805429	100	1.622498
Bromobenzene	0.5	1.235138	1	1.233305	10	1.314683	25	1.165975	50	1.096814	100	1.03003
Bromochloromethane	0.5	0.1425672	1	0.1325436	10	0.1711621	25	0.1646656	50	0.1627728	100	0.154593
Bromodichloromethane	0.5	0.3039686	1	0.3564123	10	0.3451298	25	0.3564332	50	0.3208134	100	0.2925043
Bromoform	0.5	0.2880288	1	0.2935321	10	0.3894204	25	0.3803455	50	0.3835852	100	0.3692516
Bromomethane	0.5	0.3263609	1	0.2894338	10	0.3174722	25	0.3148428	50	0.3352665	100	0.3246742
n-Butylbenzene	0.5	3.799186	1	3.935929	10	3.945626	25	3.241273	50	3.207154	100	2.832412
sec-Butylbenzene	0.5	6.128404	1	5.946271	10	5.702019	25	4.595516	50	4.524348	100	~~3.86744~~
tert-Butylbenzene	0.5	4.422263	1	4.154523	10	4.063275	25	3.618345	50	3.62728	100	3.227521
Carbon tetrachloride	0.5	0.5077027	1	0.4617677	10	0.4844907	25	0.4578262	50	0.4643785	100	0.4369645
Chlorobenzene	0.5	3.403415	1	3.032519	10	3.204125	25	2.822528	50	2.805949	100	2.599626
Chloroethane	0.5	0.3998238	1	0.4016734	10	0.4094729	25	0.3785956	50	0.3854055	100	0.3667295
Chloroform	0.5	0.7843921	1	0.7785005	10	0.807726	25	0.7485419	50	0.7363083	100	0.6736125
Chloromethane	0.5	0.8379683	1	0.7822706	10	0.7263955	25	0.5612485	50	0.6787272	100	0.6073041
2-Chlorotoluene	0.5	3.913108	1	4.135581	10	4.180331	25	3.40969	50	3.352137	100	3.005263
4-Chlorotoluene	0.5	3.679622	1	3.680004	10	3.650988	25	3.096584	50	3.016066	100	2.589454
Dibromochloromethane	0.5	0.1342072	1	0.1716034	10	0.182467	25	0.1914998	50	0.1804288	100	0.1648377
1,2-Dibromo-3-chloropropane	0.5	3.895912E-02	1	5.295468E-02	10	8.012157E-02	25	0.0787323	50	7.379204E-02	100	7.528387E-02
1,2-Dibromoethane	0.5	0.1336863	1	0.1367178	10	0.1480571	25	0.1507689	50	0.1407957	100	0.1240433
Dibromomethane	0.5	0.1271745	1	0.1174541	10	0.1114515	25	0.1179693	50	0.1072479	100	9.816732E-02
1,2-Dichlorobenzene	0.5	2.013515	1	1.889639	10	1.776988	25	1.627884	50	1.504987	100	1.346993
1,3-Dichlorobenzene	0.5	2.385104	1	2.233775	10	2.130371	25	1.857124	50	1.735571	100	~~1.491212~~
1,4-Dichlorobenzene	0.5	1.946344	1	2.30263	10	2.087517	25	1.848552	50	1.760416	100	1.551786
Dichlorodifluoromethane	0.5	0.5168742	1	0.5226796	10	0.485405	25	0.4207518	50	0.4655754	100	0.4479589
1,1-Dichloroethane	0.5	1.107756	1	1.088874	10	1.102973	25	0.9868425	50	0.9803533	100	0.9191498

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,2-Dichloroethane	0.5	0.4109931	1	0.4806181	10	0.4661897	25	0.4574951	50	0.4285013	100	0.3855169
1,1-Dichloroethene	0.5	0.822077	1	0.8447269	10	0.830404	25	0.7319283	50	0.7397421	100	0.6910743
cis-1,2-Dichloroethene	0.5	0.4787352	1	0.465674	10	0.49377	25	0.4738671	50	0.4573558	100	0.430678
trans-1,2-Dichloroethene	0.5	0.5134236	1	0.4547271	10	0.4717729	25	0.4184687	50	0.4370799	100	0.4061514
Total 1,2-Dichloroethene	1	0.4960794	2	0.4602006	20	0.4827714	50	0.4461679	100	0.4472179	200	0.4184147
1,2-Dichloropropane	0.5	0.3695419	1	0.4161093	10	0.3856841	25	0.3855479	50	0.3571677	100	0.3198885
1,3-Dichloropropane	0.5	0.2666562	1	0.2813996	10	0.2688449	25	0.2920285	50	0.2572662	100	0.234033
2,2-Dichloropropane	0.5	0.6856847	1	0.694105	10	0.685368	25	0.5958894	50	0.6303353	100	0.5857332
1,1-Dichloropropene	0.5	0.6661612	1	0.6603559	10	0.6514751	25	0.5887013	50	0.577937	100	0.5343898
cis-1,3-Dichloropropene	0.5	0.4324455	1	0.4859147	10	0.4515889	25	0.4616187	50	0.417184	100	0.3694562
trans-1,3-Dichloropropene	0.5	0.2934847	1	0.3018546	10	0.3177998	25	0.3282147	50	0.2922465	100	0.267436
Total 1,3-Dichloropropene	1	0.3629651	2	0.3938846	20	0.3846944	50	0.3949167	100	0.3547153	200	0.3184461
Ethylbenzene	0.5	1.998469	1	1.919642	10	1.822346	25	1.555085	50	1.559384	100	1.339764
Hexachlorobutadiene	0.5	0.8608622	1	0.9649365	10	0.8274984	25	0.6743993	50	0.7067595	100	0.7733293
Isopropylbenzene	0.5	5.541599	1	5.735282	10	5.562761	25	4.617893	50	4.485209	100	~~3.88485~~
p-Isopropyltoluene	0.5	4.370139	1	4.541797	10	4.403227	25	3.50592	50	3.503481	100	~~2.972745~~
Methylene chloride	0.5	1.380813	1	0.6020785	10	0.4907061	25	0.4037044	50	0.3786286	100	0.3527932
Methyl t-butyl ether	0.5	0.620576	1	0.5944021	10	0.6643339	25	0.6932177	50	0.6343534	100	0.5647101
Naphthalene	0.5	0.995204	1	0.996737	10	1.150575	25	1.26631	50	1.223878	100	1.343888
n-Propylbenzene	0.5	6.643739	1	6.607306	10	6.34069	25	5.187874	50	5.019322	100	~~4.296814~~
Styrene	0.5	2.962237	1	3.059481	10	3.303756	25	2.912087	50	2.761897	100	2.402163
1,1,1,2-Tetrachloroethane	0.5	1.045717	1	0.9335509	10	1.031739	25	0.8899909	50	0.8747263	100	0.7813369
1,1,2,2-Tetrachloroethane	0.5	0.4779881	1	0.5739292	10	0.6053115	25	0.5986648	50	0.5656142	100	0.514204
Tetrachloroethene	0.5	0.406138	1	0.3933741	10	0.3359388	25	0.3169185	50	0.3112157	100	0.283893
Toluene	0.5	0.8762214	1	0.8889887	10	0.7874331	25	0.7579031	50	0.7340921	100	0.6340213
1,2,3-Trichlorobenzene	0.5	1.0124	1	0.9600973	10	1.063608	25	1.029141	50	1.01769	100	1.068681

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Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,2,4-Trichlorobenzene	0.5	1.113693	1	1.202472	10	1.312367	25	1.172028	50	1.14853	100	1.219963
1,1,1-Trichloroethane	0.5	0.6923136	1	0.6673965	10	0.6767841	25	0.6119399	50	0.6120982	100	0.5780424
1,1,2-Trichloroethane	0.5	0.1807662	1	0.141823	10	0.1556943	25	0.1617588	50	0.1464725	100	0.1333424
Trichloroethene	0.5	0.3552161	1	0.3431728	10	0.3314023	25	0.325283	50	0.3122907	100	0.2860576
Trichlorofluoromethane	0.5	0.6536298	1	0.6396432	10	0.5947437	25	0.5430728	50	0.5589381	100	0.5307153
1,2,3-Trichloropropane	0.5	6.824563E-02	1	9.885795E-02	10	0.1319488	25	0.1216781	50	0.1086731	100	0.1026184
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	0.4622083	1	0.4936999	10	0.4101976	25	0.3755476	50	0.3851518	100	0.3830124
1,2,4-Trimethylbenzene	0.5	4.004191	1	3.987501	10	4.061929	25	3.387905	50	3.272467	100	2.872534
1,3,5-Trimethylbenzene	0.5	4.453162	1	4.32265	10	4.183573	25	3.511978	50	3.38121	100	~~2.864052~~
Vinyl chloride	0.5	0.6796914	1	0.6803874	10	0.6002247	25	0.500264	50	0.5785057	100	0.5360639
Total Xylenes	1.5	2.24521	3	2.17529	30	2.169568	75	1.863115	150	1.843755	300	1.631824
Total Trihalomethanes	2	8219.5	4	8694	40	8729.6	100	8725.78	200	8143.66	400	7657.17
Acetone												
Acetonitrile												
Acrolein												
Acrylonitrile												
Allyl chloride												
t-Amyl Alcohol												
t-Amyl Methyl ether												
Benzyl chloride												
t-Butyl alcohol												
Carbon disulfide												
2-Chloroethyl vinyl ether	2	9.966237E-02	4	0.1032701	40	0.1104221	100	0.1195954	200	0.1023104	400	9.026862E-02
Chloroprene												
Chlorotrifluoroethene												
Cyclohexane												

AMEC Environmental & Infrastructure
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INITIAL CALIBRATION DATA
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Cyclohexanone												
trans-1,4-Dichloro-2-butene												
1,2-Dichlorotrifluoroethane												
2,2-Dichloro-1,1,1-trifluoroethane												
Diethyl ether												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl Amyl Ketone												
Ethyl methacrylate												
Ethyl t-butyl ether												
Hexachloroethane	0.5	0.6636485	1	0.674308	10	0.8036327	25	0.7136875	50	0.7169495	100	0.6525504
Hexane												
2-Hexanone												
Isobutanol												
Isopropyl alcohol												
Methacrylonitrile												
Methyl acetate												
Methylcyclohexane												
Methyl ethyl ketone												
5-Methyl-3-heptanone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl methacrylate												
Pentachloroethane												
Propionitrile												

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Project: Alameda
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Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Tetrahydrofuran												
Vinyl acetate												
p- & m-Xylenes	1	2.334995	2	2.206122	20	2.207287	50	1.86021	100	1.846253	200	1.615567
o-Xylene	0.5	2.065639	1	2.113624	10	2.094131	25	1.868923	50	1.838759	100	1.664337
Total Purgeable Petroleum Hydroc												
1,2-Dichloroethane-d4 (Surrogate)	10	0.2973525	10	0.2996357	10	0.3100069	10	0.3141835	10	0.2929637	10	0.2610772
Toluene-d8 (Surrogate)	10	1.132547	10	1.15171	10	1.124811	10	1.157786	10	1.153517	10	1.108464
4-Bromofluorobenzene (Surrogate)	10	1.327082	10	1.358059	10	1.440958	10	1.403026	10	1.400549	10	1.344476

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Benzene												
Bromobenzene												
Bromochloromethane												
Bromodichloromethane												
Bromoform												
Bromomethane												
n-Butylbenzene												
sec-Butylbenzene												
tert-Butylbenzene												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
2-Chlorotoluene												
4-Chlorotoluene												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												
Dichlorodifluoromethane												
1,1-Dichloroethane												

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
Total 1,2-Dichloroethene												
1,2-Dichloropropane												
1,3-Dichloropropane												
2,2-Dichloropropane												
1,1-Dichloropropene												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
Total 1,3-Dichloropropene												
Ethylbenzene												
Hexachlorobutadiene												
Isopropylbenzene												
p-Isopropyltoluene												
Methylene chloride												
Methyl t-butyl ether												
Naphthalene												
n-Propylbenzene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
Toluene												

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,2,3-Trichlorobenzene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl chloride												
Total Xylenes												
Total Trihalomethanes												
Acetone	16	~~5.885331E-02~~	64	5.486477E-02	160	4.575636E-02	320	4.303549E-02	480	4.238974E-02	800	3.815865E-02
Acetonitrile	8	2.630956E-02	32	2.305172E-02	80	1.904401E-02	160	1.759122E-02	240	1.628795E-02	400	1.561949E-02
Acrolein	10	2.014086E-02	40	2.119655E-02	100	2.164562E-02	200	2.087963E-02	320	1.881822E-02	500	1.687929E-02
Acrylonitrile	4	6.314798E-02	16	6.407166E-02	40	6.566992E-02	80	6.695815E-02	128	6.401479E-02	200	5.844955E-02
Allyl chloride	1.6	1.246209	6.4	1.315699	16	1.051404	32	1.112253	48	1.013242	80	0.9476071
t-Amyl Alcohol	50	8.368681E-03	800	1.000823E-02	1250	1.074325E-02	2500	8.599915E-03	5000	8.577871E-03	10000	7.209516E-03
t-Amyl Methyl ether	0.8	0.7890978	3.2	0.7684858	8	0.6892523	16	0.7455567	24	0.6924863	40	0.6838185
Benzyl chloride	1.6	0.7442607	6.4	0.925193	16	0.8848822	32	0.8672207	48	0.9347496	80	0.8378464
t-Butyl alcohol	40	1.442177E-02	160	1.491686E-02	400	1.279973E-02	800	1.090766E-02	1200	1.097766E-02	2000	~~9.742395E-03~~
Carbon disulfide	1.6	1.43122	6.4	1.565917	16	1.28503	32	1.374396	48	1.250966	80	1.160933
2-Chloroethyl vinyl ether												
Chloroprene	1.6	1.052005	6.4	1.14178	16	0.9459726	32	1.015339	48	0.9445065	80	0.9060749

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Chlorotrifluoroethene	0.5		8		12.5		25		50		100	
Cyclohexane	0.5	~~1.513133~~	8	1.14025	12.5	1.122121	25	1.141619	50	1.049253	100	0.978181
Cyclohexanone	20	4.801657E-02	80	5.026732E-02	200	4.903964E-02	400	3.924352E-02	640	0.0394305	1000	4.148994E-02
trans-1,4-Dichloro-2-butene	4	0.1390074	16	0.1734846	40	0.1540015	80	0.152377	120	0.1664349	200	0.1456137
1,2-Dichlorotrifluoroethane	0.5	0.600397	8	0.5858479	12.5	0.5631237	25	0.5863303	50	0.5569051	100	0.5084212
2,2-Dichloro-1,1,1-trifluoroethane	0.5	0.9930379	8	0.8988426	12.5	0.9032416	25	0.9175067	50	0.8494633	100	0.7593999
Diethyl ether	0.5	~~0.168764~~	8	0.2685847	12.5	0.2588715	25	0.2706454	50	0.2602594	100	0.2429581
Diisopropyl ether	0.8	0.3453366	3.2	0.3248456	8	0.2930466	16	0.3157978	24	0.3161555	40	0.3097464
1,4-Dioxane	100	8.646455E-04	400	8.345304E-04	1000	7.697778E-04	2000	6.080998E-04	3200	5.754803E-04	5000	6.211009E-04
Ethanol	200	~~1.961189E-03~~	800	1.782235E-03	2000	1.806949E-03	4000	1.342245E-03	6400	1.380193E-03	10000	0.0014058
Ethyl Amyl Ketone	0.5	0.2848699	8	0.3774285	12.5	0.401472	25	0.3713427	50	0.3908216	100	0.3433067
Ethyl methacrylate	4	0.1918515	16	0.2069249	40	0.1730604	80	0.1709325	120	0.1677136	200	0.1550915
Ethyl t-butyl ether	0.8	1.430653	3.2	1.466063	8	1.203704	16	1.304881	24	1.259166	40	1.202068
Hexachloroethane												
Hexane	0.5	0.5949562	8	0.5887845	12.5	0.6051452	25	0.6307923	50	0.5943815	100	0.5593928
2-Hexanone	16	0.1142652	64	0.1125322	160	9.156423E-02	320	8.783667E-02	480	8.119867E-02	800	6.678884E-02
Isobutanol	20	7.123354E-03	80	7.148602E-03	200	7.636189E-03	400	5.953416E-03	640	5.847877E-03	1000	5.458246E-03
Isopropyl alcohol	40	0.0104873	160	1.050187E-02	400	1.022373E-02	800	7.093126E-03	1280	7.063923E-03	2000	6.91995E-03
Methacrylonitrile	8	6.219711E-02	32	6.763931E-02	80	5.980472E-02	160	6.207918E-02	240	5.981788E-02	400	5.885384E-02
Methyl acetate	5	0.1573687	80	0.1495466	125	0.1512381	250	0.1460355	500	0.1424513	1000	0.1260794
Methylcyclohexane	0.5	0.7070219	8	0.6529624	12.5	0.6367468	25	0.6175689	50	0.5696085	100	0.5233474
Methyl ethyl ketone	8	0.1067181	32	9.618836E-02	80	8.350096E-02	160	8.184004E-02	240	8.202846E-02	400	0.0775675
5-Methyl-3-heptanone	1	0.4867162	16	0.508622	25	0.54838	50	0.4803251	100	0.4967023	200	0.3939813
Methyl iodide	1.6	0.5789929	6.4	0.6355158	16	0.5537757	32	0.609476	48	0.5838484	80	0.547304
Methyl isobutyl ketone	8	0.1497377	32	0.1713839	80	0.1389002	160	0.1345446	240	0.1270829	400	0.1119302

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Methyl methacrylate	4	8.801604E-02	16	9.652917E-02	40	7.997498E-02	80	7.903812E-02	120	7.863968E-02	200	7.818512E-02
Pentachloroethane	0.8	0.4423481	3.2	0.5834902	8	0.5450262	16	0.5418493	24	0.5844225	40	0.5225192
Propionitrile	20	0.0264355	80	2.570414E-02	200	2.384504E-02	400	2.216291E-02	640	2.125608E-02	1000	1.865313E-02
Tetrahydrofuran	16	5.908316E-02	64	5.764278E-02	160	4.946151E-02	320	4.948612E-02	480	0.0473374	800	4.534272E-02
Vinyl acetate	8	0.728072	32	0.7392454	80	0.5993619	160	0.6205669	240	0.584189	400	0.5349996
p- & m-Xylenes												
o-Xylene												
Total Purgeable Petroleum Hydroca												
1,2-Dichloroethane-d4 (Surrogate)												
Toluene-d8 (Surrogate)												
4-Bromofluorobenzene (Surrogate)												

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Benzene												
Bromobenzene												
Bromochloromethane												
Bromodichloromethane												
Bromoform												
Bromomethane												
n-Butylbenzene												
sec-Butylbenzene												
tert-Butylbenzene												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
2-Chlorotoluene												
4-Chlorotoluene												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												
Dichlorodifluoromethane												

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Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
Total 1,2-Dichloroethene												
1,2-Dichloropropane												
1,3-Dichloropropane												
2,2-Dichloropropane												
1,1-Dichloropropene												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
Total 1,3-Dichloropropene												
Ethylbenzene												
Hexachlorobutadiene												
Isopropylbenzene												
p-Isopropyltoluene												
Methylene chloride												
Methyl t-butyl ether												
Naphthalene												
n-Propylbenzene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Toluene												
1,2,3-Trichlorobenzene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethar												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl chloride												
Total Xylenes												
Total Trihalomethanes												
Acetone												
Acetonitrile												
Acrolein												
Acrylonitrile												
Allyl chloride												
t-Amyl Alcohol												
t-Amyl Methyl ether												
Benzyl chloride												
t-Butyl alcohol												
Carbon disulfide												
2-Chloroethyl vinyl ether												

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Chloroprene												
Chlorotrifluoroethene												
Cyclohexane												
Cyclohexanone												
trans-1,4-Dichloro-2-butene												
1,2-Dichlorotrifluoroethane												
2,2-Dichloro-1,1,1-trifluoroethane												
Diethyl ether												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl Amyl Ketone												
Ethyl methacrylate												
Ethyl t-butyl ether												
Hexachloroethane												
Hexane												
2-Hexanone												
Isobutanol												
Isopropyl alcohol												
Methacrylonitrile												
Methyl acetate												
Methylcyclohexane												
Methyl ethyl ketone												
5-Methyl-3-heptanone												
Methyl iodide												

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Calibration: 1702011
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-V5
Calibration Date: 01/26/17 17:00

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Methyl isobutyl ketone												
Methyl methacrylate												
Pentachloroethane												
Propionitrile												
Tetrahydrofuran												
Vinyl acetate												
p- & m-Xylenes												
o-Xylene												
Total Purgeable Petroleum Hydroc	50	2.870791	500	3.087034	1000	3.029454	1500	3.069891	2000	2.877825	2500	2.932973
1,2-Dichloroethane-d4 (Surrogate)												
Toluene-d8 (Surrogate)												
4-Bromofluorobenzene (Surrogate)												

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Benzene	1.889545	9.180943	6.94	5.634228E-03			15	
Bromobenzene	1.179324	8.781515	10.45	1.926087E-02			15	
Bromochloromethane	0.1547174	9.471048	6.183333	0.1673501			15	
Bromodichloromethane	0.3292103	8.362367	8.06	1.375235E-02			15	
Bromoform	0.3506939	13.37441	10.16	1.968264E-02			SPCC (0.10)	
Bromomethane	0.3180084	4.949792	2.436667	0.2126912			15	
n-Butylbenzene	3.493597	13.28005	11.23667	9.156336E-02			15	
sec-Butylbenzene	5.379312	14.19416	10.914	8.097688E-02			15	
tert-Butylbenzene	3.852201	11.35355	10.78333	5.100083E-02			15	
Carbon tetrachloride	0.4688551	5.191681	6.72	1.146183E-02			15	
Chlorobenzene	2.978027	9.870514	9.643333	4.988898E-02			SPCC (0.30)	
Chloroethane	0.3902835	4.138092	2.566667	0.2020673			15	
Chloroform	0.7548469	6.273066	6.331667	6.112167E-02			CCC (20)	
Chloromethane	0.6989857	14.97623	1.943333	0.2654085	0.99772		SPCC (0.10)	
2-Chlorotoluene	3.666018	13.06413	10.555	0.0536519			15	
4-Chlorotoluene	3.285453	13.86354	10.62667	4.983224E-02			15	
Dibromochloromethane	0.1708407	11.80164	9.241666	4.175574E-02			15	
1,2-Dibromo-3-chloropropane	0.0666406	25.17557	11.73833	8.312334E-02	0.99981		0.99	
1,2-Dibromoethane	0.1390115	7.054979	9.328333	4.188551E-02			15	
Dibromomethane	0.1132441	8.835653	7.91	1.653285E-02			15	
1,2-Dichlorobenzene	1.693334	14.65138	11.27833	8.752717E-02			15	
1,3-Dichlorobenzene	2.068389	12.94808	11.008	0.1004115			15	
1,4-Dichlorobenzene	1.916207	13.63312	11.065	7.433322E-02			15	
Dichlorodifluoromethane	0.4765408	8.332592	1.76	8.063699E-03			15	
1,1-Dichloroethane	1.030991	7.692112	5.058333	8.126204E-02			SPCC (0.10)	
1,2-Dichloroethane	0.438219	8.268656	7.005	7.754629E-02			15	

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1-Dichloroethene	0.7766588	8.198684	3.515	0.1557692			CCC (20)	
cis-1,2-Dichloroethene	0.46668	4.610702	5.831667	0.1294296			15	
trans-1,2-Dichloroethene	0.4502706	8.659956	4.501667	0.0902417			15	
Total 1,2-Dichloroethene	0.4584753	6.08411	5.831667	0.1294296			15	
1,2-Dichloropropane	0.3723232	8.709297	7.84	9.702376E-03			CCC (20)	
1,3-Dichloropropane	0.2667047	7.533232	9.09	0.0186287			15	
2,2-Dichloropropane	0.6461859	7.526579	5.84	0.1091096			15	
1,1-Dichloropropene	0.61317	8.797094	6.726667	7.685787E-02			15	
cis-1,3-Dichloropropene	0.436368	9.271827	8.408333	4.530242E-02			15	
trans-1,3-Dichloropropene	0.3001727	7.112617	8.83	2.384445E-02			15	
Total 1,3-Dichloropropene	0.3682704	7.991017	8.83	2.384445E-02			15	
Ethylbenzene	1.699115	14.95483	9.698333	4.299496E-02			CCC (20)	
Hexachlorobutadiene	0.8012975	13.30544	12.28833	0.1407559			15	
Isopropylbenzene	5.188549	11.33656	10.24	0.015589			15	
p-Isopropyltoluene	4.064913	12.68025	10.998	7.728538E-02			15	
Methylene chloride	0.601454	65.25738	4.151667	9.579772E-02	0.99908		0.99	
Methyl t-butyl ether	0.6285989	7.393993	4.491666	8.862136E-02			15	
Naphthalene	1.162765	12.34674	12.385	0.1128744			15	
n-Propylbenzene	5.959786	13.29814	10.488	3.977509E-02			15	
Styrene	2.90027	10.45117	10.03167	3.567744E-02			15	
1,1,1,2-Tetrachloroethane	0.9261768	10.84263	9.698333	4.299496E-02			15	
1,1,2,2-Tetrachloroethane	0.555952	8.993065	10.42	9.595757E-03			SPCC (0.30)	
Tetrachloroethene	0.3412463	14.19945	9.038333	3.957867E-02			15	
Toluene	0.7797766	12.17928	8.661667	0.04731			CCC (20)	
1,2,3-Trichlorobenzene	1.02527	3.862187	12.51667	0.1652262			15	
1,2,4-Trichlorobenzene	1.194842	5.768365	12.22	0.1261601			15	

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,1-Trichloroethane	0.6397625	7.075288	6.528334	6.356984E-02			15	
1,1,2-Trichloroethane	0.1533095	10.94703	8.978333	0.0413948			15	
Trichloroethene	0.3255704	7.473897	7.605	0.0716509			15	
Trichlorofluoromethane	0.5867905	8.741507	2.868333	0.1427778			15	
1,2,3-Trichloropropane	0.105337	20.84859	10.46167	3.519845E-02	0.99859		0.99	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.4183029	11.63839	3.535	0.154669			15	
1,2,4-Trimethylbenzene	3.597754	13.66403	10.81667	4.928939E-02			15	
1,3,5-Trimethylbenzene	3.970515	12.33762	10.588	4.151475E-02			15	
Vinyl chloride	0.5958562	12.3798	2.07	5.801038E-03			CCC (20)	
Total Xylenes	1.988127	12.26843	10.02	0.0198293			15	
Total Trihalomethanes	8361.618	5.192236	10.16	1.968264E-02			15	
Acetone	0.044841	13.89285	3.566	0.1535831			15	
Acetonitrile	1.965066E-02	21.35825	3.915	0.1394718	0.99895		0.99	
Acrolein	0.0199267	8.98742	3.396667	0.2401525			15	
Acrylonitrile	6.371868E-02	4.581122	4.443333	0.1152199			15	
Allyl chloride	1.114402	12.68532	3.991667	0.1026915			15	
t-Amyl Alcohol	8.917911E-03	14.14637	6.971666	6.115328E-02			15	
t-Amyl Methyl ether	0.7281162	6.262118	7.09	1.844497E-02			15	
Benzyl chloride	0.8656921	8.036501	11.1	1.307304E-02			15	
t-Butyl alcohol	1.280474E-02	14.61721	4.276	0.2100331			15	
Carbon disulfide	1.344744	10.69499	3.8	0.1664058			15	
2-Chloroethyl vinyl ether	0.1042548	9.542111	8.283333	6.161591E-02			15	
Chloroprene	1.000946	8.693085	5.151667	7.949544E-02			15	
Chlorotrifluoroethene							15	
Cyclohexane	1.086285	6.560645	6.622	6.679619E-02			15	
Cyclohexanone	4.458125E-02	11.37529	10.3	2.077223E-03			15	

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
trans-1,4-Dichloro-2-butene	0.1551532	8.274238	10.43167	3.686923E-02			15	
1,2-Dichlorotrifluoroethane	0.5668375	5.793663	3.3	1.804918E-02			15	
2,2-Dichloro-1,1,1-trifluoroethane	0.8869153	8.772737	3.391667	0.1202184			15	
Diethyl ether	0.2602638	4.202131	3.22	2.166916E-02			15	
Diisopropyl ether	0.3174881	5.440254	5.103333	9.952656E-02			15	
1,4-Dioxane	7.122724E-04	17.68626	7.9	0.1123963	0.99707		0.99	
Ethanol	1.543484E-03	14.9342	3.09	0.7928208			15	
Ethyl Amyl Ketone	0.3615402	11.74224	10.76	1.356797E-02			15	
Ethyl methacrylate	0.1775957	10.48137	8.86	1.624233E-02			15	
Ethyl t-butyl ether	1.311089	8.660484	5.591667	7.395801E-02			15	
Hexachloroethane	0.7041294	7.867683	11.45	0.0960662			15	
Hexane	0.5955754	3.893747	4.861667	8.576904E-02			15	
2-Hexanone	0.0923643	19.88289	9.103333	0.0561633		0.9995528	0.99	
Isobutanol	6.527947E-03	13.53742	6.845	0.1220592			15	
Isopropyl alcohol	8.714983E-03	21.27518	3.753333	0.575574	0.99615		0.99	
Methacrylonitrile	6.173201E-02	5.168261	6.13	1.714861E-02			15	
Methyl acetate	0.1454533	7.384817	3.973333	0.2059519			15	
Methylcyclohexane	0.617876	10.4386	7.815	6.776742E-02			15	
Methyl ethyl ketone	0.0879739	12.65874	5.813333	8.944584E-02			15	
5-Methyl-3-heptanone	0.4857878	10.50343	10.44	2.779896E-03			15	
Methyl iodide	0.5848188	5.714397	3.705	0.1477932			15	
Methyl isobutyl ketone	0.1389299	14.60526	8.51	1.340775E-02			15	
Methyl methacrylate	8.339718E-02	8.88122	7.88	9.924249E-03			15	
Pentachloroethane	0.5366092	9.742643	10.8	1.727045E-02			15	
Propionitrile	2.300947E-02	12.66567	5.898333	0.1266948			15	
Tetrahydrofuran	5.139228E-02	10.95959	6.196667	8.478846E-02			15	

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702011
Instrument: MS-V5
Matrix: Water
Calibration Date: 01/26/17 17:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Vinyl acetate	0.6344058	12.91925	5.063333	0.1028759			15	
p- & m-Xylenes	2.011739	13.84385	9.78	1.957201E-02			15	
o-Xylene	1.940902	9.244618	10.02	0.0198293			15	
Total Purgeable Petroleum Hydrocarbons	2.977995	3.239537	9.668333	4.855941			15	
1,2-Dichloroethane-d4 (Surrogate)	0.2958699	6.360265	6.921667	6.116163E-02			15	
Toluene-d8 (Surrogate)	1.138139	1.710998	8.61	0.0142186			15	
4-Bromofluorobenzene (Surrogate)	1.379025	3.111593	10.355	4.975555E-02			15	

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HOLDING TIME SUMMARY
EPA-8260B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DUP04_170206	02/06/17 09:25	02/06/17 22:00	02/09/17 13:37	4.00	14.00	02/10/17 04:30	4.00	14.00	
EB07_170206	02/06/17 14:30	02/06/17 22:00	02/09/17 13:37	4.00	14.00	02/10/17 04:53	4.00	14.00	
M041E_170206	02/06/17 08:45	02/06/17 22:00	02/09/17 13:37	4.00	14.00	02/10/17 05:16	4.00	14.00	
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/09/17 13:37	3.00	14.00	02/09/17 16:32	3.00	14.00	
M060A_170206	02/06/17 09:20	02/06/17 22:00	02/09/17 13:37	4.00	14.00	02/10/17 05:40	4.00	14.00	
TB04_170206	02/06/17 12:00	02/06/17 22:00	02/09/17 13:37	3.00	14.00	02/09/17 21:10	3.00	14.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 2:49:21PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements

For Data Validation of

Cyanide Analysis
Wet Chemistry Analysis

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Analyses Requested: **Gen-Chem.**
Submission #: 17-03278

Method 335.4
Instrument ID: Kone-1
Sample Volume(s): 50ml/50ml

Method 160.1
Instrument ID: Manual
Sample Volume(s): 100ml/100ml

Method 300.0
Instrument ID: IC-5
Sample Volume(s): 20ml/20ml

Method 310.1
Instrument ID: MET-1
Sample Volume(s): 50ml/50ml

Method 353.2
Instrument ID: Kone-1
Volume(s): 20ml/20ml

Method 415.1
Instrument ID: TOC2
Sample Volume(s): 100ml/100ml

Method SM4500SD
Instrument ID: SPEC06
Volume(s):25ml/25ml

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and preparations took place within holding times.

Calibration: Initial calibration criteria were met. Frequency and accuracy criteria for initial and continuing calibration verifications were met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL. Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameters were within QC limits.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy and precision requirements were met.

Chain of Custody and Cooler Receipt Form for 1703278 Page 1 of 6

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:40
Received By:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		A-F								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Date Numbering Completed By: M Date/Time: 2-6-17 2310
Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
(W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received
☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207
Temperature: (A) 1.5 °C / (C) 1.7 °C

Date/Time 2/6 2150
Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES		11		AB,AC,AD	11					
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL			A	A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2315
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Numbering Completed By: Date/Time: 2/6/17 0360

Actual / C = Corrected

Rev 21 05/23/2016

Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RG								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **CN**
Method: **EPA-335.4**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-335.4

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M041E_170206	1703278-03

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-335.4

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: KONE-1

Analyte	DL	LOD	LOQ	Units
Total Cyanide	0.0019	0.004	0.005	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
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Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-335.4

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: 170210 0908 CN-200
Sampled: 02/06/17 14:30
Prepared: 02/09/17 09:03
Analyzed: 02/10/17 15:02
Solids: 0.00
Preparation: EPA 335.3 Total
Initial/Final: 50 ml / 50 ml
Batch: B[B0778
Sequence: 1702557
Calibration: UNASSIGNED
Instrument: KONE-1

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
57-12-5	Total Cyanide	0.0040	0.0019	0.0040	0.0050	1	U	EPA-335.4

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-335.4

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: 170210 0908 CN-211
Sampled: 02/06/17 08:45
Prepared: 02/09/17 09:03
Analyzed: 02/10/17 15:21
Solids: 0.00
Preparation: EPA 335.3 Total
Initial/Final: 50 ml / 50 ml
Batch: B[B0778
Sequence: 1702557
Calibration: UNASSIGNED
Instrument: KONE-1

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
57-12-5	Total Cyanide	0.0040	0.0019	0.0040	0.0050	1	U	EPA-335.4

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-335.4

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0778
Batch Matrix: Water
Preparation: EPA 335.3 Total

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	170210 0908 CN-200	02/09/17 09:03	DOD/CLP
M041E_170206	1703278-03	170210 0908 CN-211	02/09/17 09:03	DOD/CLP
Blank	B[B0778-BLK1	170210 0908 CN-191	02/09/17 09:03	
LCS	B[B0778-BS1	170210 0908 CN-190	02/09/17 09:03	
Duplicate	B[B0778-DUP1	170210 0908 CN-197	02/09/17 09:03	
Matrix Spike	B[B0778-MS1	170210 0908 CN-223	02/09/17 09:03	
Matrix Spike Dup	B[B0778-MSD1	170210 0908 CN-224	02/09/17 09:03	

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Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-335.4

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0778-BLK1	File ID:	170210 0908 CN-191
Prepared:	02/09/17 09:03	Preparation:	EPA 335.3 Total	Initial/Final:	50 ml / 50 ml
Analyzed:	02/10/17 14:40	Instrument:	KONE-1		
Batch:	B[B0778	Sequence:	1702557	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
57-12-5	Total Cyanide	0.0040	0.0019	0.0040	0.0050	U

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Duplicate

DUPLICATES

EPA-335.4

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0778
Preparation: EPA 335.3 Total
Source Sample Name: Duplicate

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0778-DUP1
Lab Source ID: 1703274-12
Initial/Final: 50 ml / 50 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Total Cyanide	10	ND		ND				EPA-335.4

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-335.4

Matrix Spike

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0778
Laboratory ID: B[B0778-MS1
Preparation: EPA 335.3 Total
Initial/Final: 50 ml / 50 ml
Source Sample Number: 1703274-12

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Total Cyanide	0.10000	ND	0.091455	91.5	90 - 110

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Cyanide	0.10000	0.095950	96.0	4.80	10	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-335.4

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Matrix:	Water		
Batch:	B[B0778	Laboratory ID:	B[B0778-BS1
Preparation:	EPA 335.3 Total	Initial/Final:	50 ml / 50 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Total Cyanide	0.15000	0.13926	92.8	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-335.4

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702557
Instrument: KONE-1
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1702557-CCV1	170210 0908 CN-188	02/10/17 14:40
Calibration Blank	1702557-CCB1	170210 0908 CN-189	02/10/17 14:40
LCS	B[B0778-BS1	170210 0908 CN-190	02/10/17 14:40
Blank	B[B0778-BLK1	170210 0908 CN-191	02/10/17 14:40
Calibration Check	1702557-CCV2	170210 0908 CN-193	02/10/17 15:02
Calibration Blank	1702557-CCB2	170210 0908 CN-194	02/10/17 15:02
Duplicate	B[B0778-DUP1	170210 0908 CN-197	02/10/17 15:02
EB07_170206	1703278-02	170210 0908 CN-200	02/10/17 15:02
Calibration Check	1702557-CCV3	170210 0908 CN-205	02/10/17 15:03
Calibration Blank	1702557-CCB3	170210 0908 CN-206	02/10/17 15:03
Calibration Check	1702557-CCV4	170210 0908 CN-207	02/10/17 15:21
Calibration Blank	1702557-CCB4	170210 0908 CN-208	02/10/17 15:21
M041E_170206	1703278-03	170210 0908 CN-211	02/10/17 15:21
Calibration Check	1702557-CCV5	170210 0908 CN-213	02/10/17 15:22
Calibration Blank	1702557-CCB5	170210 0908 CN-214	02/10/17 15:22
Calibration Check	1702557-CCV6	170210 0908 CN-215	02/10/17 15:39
Calibration Blank	1702557-CCB6	170210 0908 CN-216	02/10/17 15:39
Calibration Check	1702557-CCV7	170210 0908 CN-219	02/10/17 15:41
Calibration Blank	1702557-CCB7	170210 0908 CN-220	02/10/17 15:41
Calibration Check	1702557-CCV8	170210 0908 CN-221	02/10/17 15:56
Calibration Blank	1702557-CCB8	170210 0908 CN-222	02/10/17 15:56
Matrix Spike	B[B0778-MS1	170210 0908 CN-223	02/10/17 15:56
Matrix Spike Dup	B[B0778-MSD1	170210 0908 CN-224	02/10/17 15:56
Calibration Check	1702557-CCV9	170210 0908 CN-225	02/10/17 15:57
Calibration Blank	1702557-CCB9	170210 0908 CN-226	02/10/17 15:57

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-335.4

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: KONE-1
Project: Alameda
Sequence: 1702557
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702557-CCB1	Total Cyanide	-0.00034200	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB2	Total Cyanide	-0.00013500	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB3	Total Cyanide	0.00024900	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB4	Total Cyanide	0.000070000	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB5	Total Cyanide	-0.00036000	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB6	Total Cyanide	0.00022500	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB7	Total Cyanide	-0.0010170	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB8	Total Cyanide	-0.000062000	0.0019		0.0050	mg/L	U	EPA-335.4
1702557-CCB9	Total Cyanide	-0.00096300	0.0019		0.0050	mg/L	U	EPA-335.4

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San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-335.4

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: KONE-1
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702557

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702557-CCV1	Total Cyanide	0.10000	0.10024	100	mg/L	EPA-335.4
1702557-CCV2	Total Cyanide	0.10000	0.096503	96.5	mg/L	EPA-335.4
1702557-CCV3	Total Cyanide	0.10000	0.10510	105	mg/L	EPA-335.4
1702557-CCV4	Total Cyanide	0.10000	0.096997	97.0	mg/L	EPA-335.4
1702557-CCV5	Total Cyanide	0.10000	0.10141	101	mg/L	EPA-335.4
1702557-CCV6	Total Cyanide	0.10000	0.10130	101	mg/L	EPA-335.4
1702557-CCV7	Total Cyanide	0.10000	0.10168	102	mg/L	EPA-335.4
1702557-CCV8	Total Cyanide	0.10000	0.10156	102	mg/L	EPA-335.4
1702557-CCV9	Total Cyanide	0.10000	0.10203	102	mg/L	EPA-335.4

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
EPA-335.4

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
EB07_170206	02/06/17 14:30	02/06/17 22:00	02/09/17 09:03	4.00	14.00	02/10/17 15:02	4.00	14.00	
M041E_170206	02/06/17 08:45	02/06/17 22:00	02/09/17 09:03	4.00	14.00	02/10/17 15:21	4.00	14.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

Raw Data From Instrument KONE-1

Raw Data - Calibration Summary

Calibration results Aquakem 7.2AQ1 Page: 1

Laboratory
Analyzer User

27.01.2017 10:53

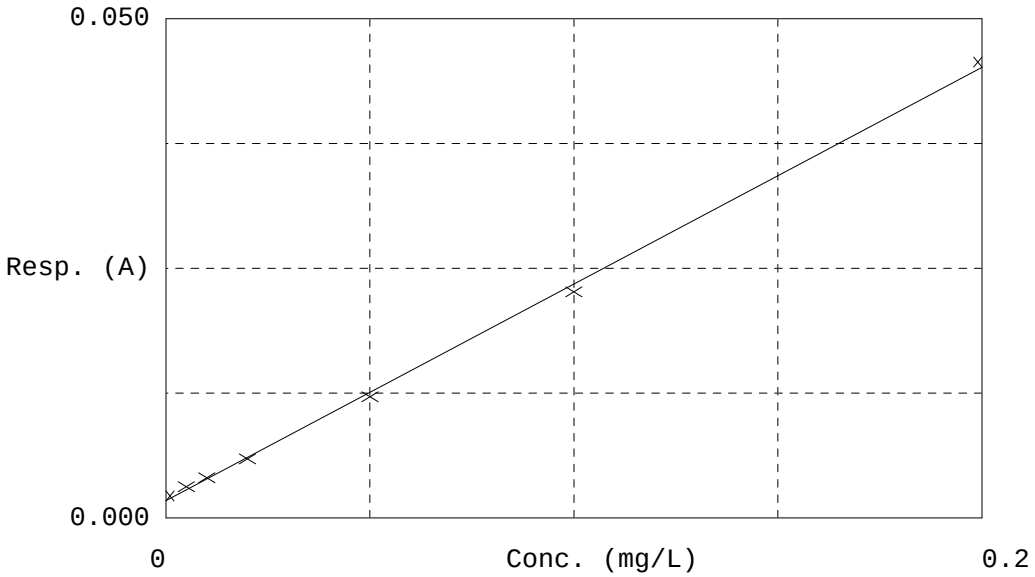
Test Cyanide

Accepted 27.01.2017 10:53

Factor 4.60714
Bias 0.00175

Coeff. of det. 0.999024

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN-0	0.00221	0.00216	0.00000	
2	CN-0.005	0.00315	0.00644	0.00500	
3	CN-0.010	0.00404	0.01056	0.01000	
4	CN-0.020	0.00592	0.01924	0.02000	
5	CN-0.050	0.01214	0.04788	0.05000	
6	CN-0.100	0.02266	0.09634	0.10000	
7	CN-0.200	0.04567	0.20237	0.20000	
8	ICB-CN(control)	0.00210	0.00165	0.00000	
9	ICV-CN(control)	0.02305	0.09814	0.10000	

Calibration results Aquakem 7.2AQ1 Page: 1

Laboratory
Analyzer User

27.01.2017 14:01

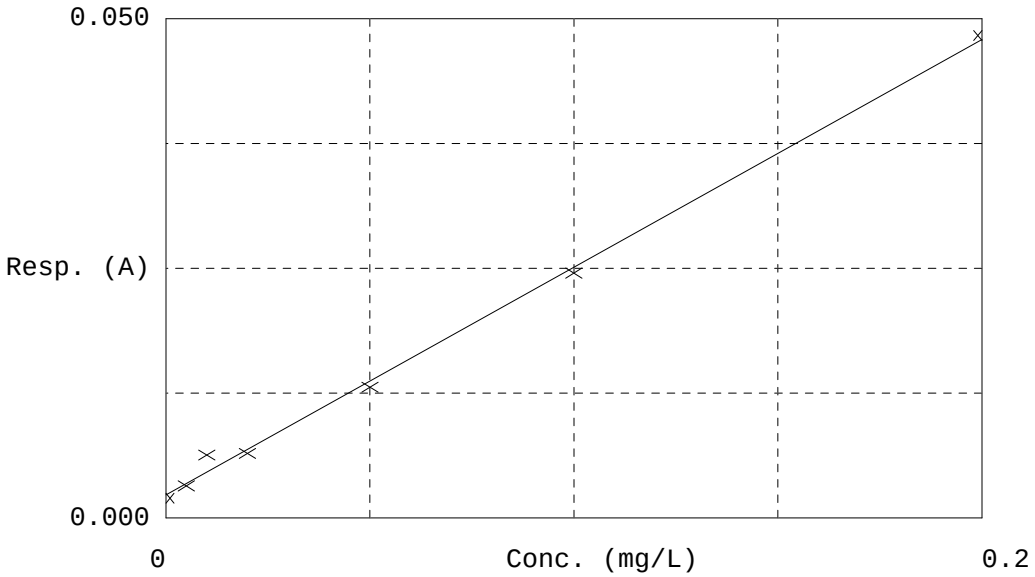
Test Cyanide

Accepted 27.01.2017 12:07

Factor 4.38402
Bias 0.00231

Coeff. of det. 0.997489

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN-0	0.00199	-0.00143	0.00000	
2	CN-0.005	0.00322	0.00399	0.00500	
3	CN-0.010	0.00632	0.01759	0.01000	
4	CN-0.020	0.00648	0.01829	0.02000	
5	CN-0.050	0.01312	0.04738	0.05000	
6	CN-0.100	0.02453	0.09742	0.10000	
7	CN-0.200	0.04834	0.20176	0.20000	
8	ICB-CN(control)	0.00194	-0.00165	0.00000	
9	ICV-CN(control)	0.02435	0.09662	0.10000	

Cyanide
Laboratory
Analyzer User
Date : 27.01.2017
Time : 10:53

Last change date 29.01.2016 06:08
Tick length (sec) 7.0

Full name	Cyanide				
Online Name		Test In Use	YES		
Test type	Photometric		LOW	HIGH	
		Test limit	*	1.00000 mg/L	
Result unit	mg/L	Initial absorbance	*	*	A
Number of Decim.	5	Dilution limit	*	0.200000 mg/L	
		Secondary dil 1+	0.0	4.0	
		Critical limit	*	*	mg/L
		Reflex test limit	*	*	mg/L
		Reflex test			

Acceptance	Manual	Reference class	LOW	HIGH	In Use
Dilution 1+	0.0				
Sample type		Correction factor	1.00		
		Correction bias	0.00	mg/L	

Calibration type	Linear		
Curve direction	Ascending		
Repeat time (d)	0	Abs error (mA)	*
Points/cal.	Single	Rel error (%)	*
Acceptance	Manual		
Response limit (mA)	MIN	MAX	
	*	*	

Bias correction in use NO

Cd reduction NO

Type of Calibrators	Separate	
Calibrator	Conc.	Dil. ratio
CN-0	0.000	1+0.0
CN-0.005	0.005	1+0.0
CN-0.010	0.010	1+0.0
CN-0.020	0.020	1+0.0
CN-0.050	0.050	1+0.0
CN-0.100	0.100	1+0.0
CN-0.200	0.200	1+0.0

Manual QC in Use		YES	Routine QC in Use		YES
Acceptance		Manual	Interval	Requests	10
			Additional condition		NO
Control	Mean	SD	Control	Mean	SD
ICB-CN	0.00	0.00	CCB-CN	0.00	0.00
ICV-CN	0.10	0.01	CCV-CN	0.10	0.01
Rules in Use		1:1.0*SD	Rules in Use		1:1.0*SD

Blank	YES		
		Normal cuvette	
Sample		Volume (ul)	100
Disp. with	Extra	Add. Volume (ul)	20
Dilution with	Special	Wash reagent	None

Cyanide
Laboratory
Analyzer User
Date : 27.01.2017
Time : 14:01

Last change date 29.01.2016 06:08
Tick length (sec) 7.0

Full name	Cyanide				
Online Name		Test In Use	YES		
Test type	Photometric		LOW	HIGH	
		Test limit	*	1.00000 mg/L	
Result unit	mg/L	Initial absorbance	*	*	A
Number of Decim.	5	Dilution limit	*	0.200000 mg/L	
		Secondary dil 1+	0.0	4.0	
		Critical limit	*	*	mg/L
		Reflex test limit	*	*	mg/L
		Reflex test			

Acceptance	Manual	Reference class	LOW	HIGH	In Use
Dilution 1+	0.0				
Sample type		Correction factor	1.00		
		Correction bias	0.00	mg/L	

Calibration type	Linear		
Curve direction	Ascending		
Repeat time (d)	0	Abs error (mA)	*
Points/cal.	Single	Rel error (%)	*
Acceptance	Manual		
Response limit (mA)	MIN	MAX	
	*	*	

Bias correction in use NO

Cd reduction NO

Type of Calibrators	Separate	
Calibrator	Conc.	Dil. ratio
CN-0	0.000	1+0.0
CN-0.005	0.005	1+0.0
CN-0.010	0.010	1+0.0
CN-0.020	0.020	1+0.0
CN-0.050	0.050	1+0.0
CN-0.100	0.100	1+0.0
CN-0.200	0.200	1+0.0

Manual QC in Use		YES	Routine QC in Use		YES
Acceptance		Manual	Interval	Requests	10
			Additional condition		NO
Control	Mean	SD	Control	Mean	SD
ICB-CN	0.00	0.00	CCB-CN	0.00	0.00
ICV-CN	0.10	0.01	CCV-CN	0.10	0.01
Rules in Use		1:1.0*SD	Rules in Use		1:1.0*SD

Blank	YES		
		Normal cuvette	
Sample		Volume (ul)	100
Disp. with	Extra	Add. Volume (ul)	20
Dilution with	Special	Wash reagent	None

Cyanide Laboratory
Analyzer User
Date : 27.01.2017
Time : 10:53

Raw Sample			
Disp. with	Extra	Add. Volume (ul)	20
Special diluent	CN-Diln		
Disp. with	Extra	Add. Volume (ul)	20
Syringe speed	Normal		
Reagent	CN Buffer	Volume (ul)	30
Disp. with	Extra	Add. Volume (ul)	20
Wash reagent	None		
Syringe speed	Normal		
Reagent	CN-ChlorT	Volume (ul)	4
Disp. with	Extra	Add. Volume (ul)	10
Wash reagent	None		
Syringe speed	Normal		
Incubation		Time (sec)	312
Measurement	End point	Blank	
Resp. Min(A)	*	Resp. Max(A)	*
Reagent	CN-PyrBarb	Volume (ul)	4
Disp. with	Water	Add. Volume (ul)	56
Wash reagent	None		
Syringe speed	Normal		
Incubation		Time (sec)	312
Measurement	End point		
Wavelength (nm)	575 nm	Side wavel. (nm)	None
Meas. type	Fixed timing		

Cyanide Laboratory
Analyzer User
Date : 27.01.2017
Time : 14:01

Raw Sample			
Disp. with	Extra	Add. Volume (ul)	20
Special diluent	CN-Diln		
Disp. with	Extra	Add. Volume (ul)	20
Syringe speed	Normal		
Reagent	CN Buffer	Volume (ul)	30
Disp. with	Extra	Add. Volume (ul)	20
Wash reagent	None		
Syringe speed	Normal		
Reagent	CN-ChlorT	Volume (ul)	4
Disp. with	Extra	Add. Volume (ul)	10
Wash reagent	None		
Syringe speed	Normal		
Incubation		Time (sec)	312
Measurement	End point	Blank	
Resp. Min(A)	*	Resp. Max(A)	*
Reagent	CN-PyrBarb	Volume (ul)	4
Disp. with	Water	Add. Volume (ul)	56
Wash reagent	None		
Syringe speed	Normal		
Incubation		Time (sec)	312
Measurement	End point		
Wavelength (nm)	575 nm	Side wavel. (nm)	None
Meas. type	Fixed timing		

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **WET**
Method: **EPA-160.1**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
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Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-160.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-160.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MANUAL

Analyte	DL	LOD	LOQ	Units
Total Dissolved Solids @ 180 C	10	10	10	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-160.1

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID:
Sampled: 02/06/17 11:30
Prepared: 02/09/17 09:00
Analyzed: 02/09/17 09:00
Solids: 0.00
Preparation: No Prep
Initial/Final: 100 ml / 100 ml
Batch: B[B0686
Sequence: 1702490
Calibration: UNASSIGNED
Instrument: MANUAL

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
---	Total Dissolved Solids @ 180 C	430	33	33	33	3.33	D	EPA-160.1

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-160.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0686
Batch Matrix: Water
Preparation: No Prep

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M051A_170206	1703278-04		02/09/17 09:00	
Blank	B[B0686-BLK1		02/09/17 09:00	
LCS	B[B0686-BS1		02/09/17 09:00	
M051A_170206	B[B0686-DUP1		02/09/17 09:00	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-160.1

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0686-BLK1	File ID:	
Prepared:	02/09/17 09:00	Preparation:	No Prep	Initial/Final:	100 ml / 100 ml
Analyzed:	02/09/17 09:00	Instrument:	MANUAL		
Batch:	B[B0686	Sequence:	1702490	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
---	Total Dissolved Solids @ 180 C	6.7	6.7	6.7	6.7	UD

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
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Project Manager: Kelli Miller

M051A_170206

DUPLICATES

EPA-160.1

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0686
Preparation: No Prep
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0686-DUP1
Lab Source ID: 1703278-04
Initial/Final: 100 ml / 100 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Total Dissolved Solids @ 180 C	10	430.00		440.00		2.30		EPA-160.1

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-160.1

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Matrix:	Water		
Batch:	B[B0686	Laboratory ID:	B[B0686-BS1
Preparation:	No Prep	Initial/Final:	20 ml / 20 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Total Dissolved Solids @ 180 C	586.00	620.00	106	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-160.1

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702490	Instrument:	MANUAL
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Blank	B[B0686-BLK1		02/09/17 09:00
LCS	B[B0686-BS1		02/09/17 09:00
M051A_170206	1703278-04		02/09/17 09:00
M051A_170206	B[B0686-DUP1		02/09/17 09:00

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
EPA-160.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/09/17 09:00	3.00	7.00	02/09/17 09:00	3.00	7.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **WET**
Method: **EPA-300.0**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
M051A_170206	1703278-04

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Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: IC5

Analyte	DL	LOD	LOQ	Units
Chloride	0.092	0.1	0.5	mg/L
Nitrate as NO3	0.096	0.23	0.44	mg/L
Nitrate as N	0.022	0.05	0.1	mg/L
Sulfate	0.14	0.2	1	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-300.0

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: E020717.seq-35
Sampled: 02/06/17 11:30
Prepared: 02/07/17 19:00
Analyzed: 02/07/17 23:18
Solids: 0.00
Preparation: No Prep
Initial/Final: 20 ml / 20 ml
Batch: B[B0596
Sequence: 1702240
Calibration: UNASSIGNED
Instrument: IC5

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
16887-00-6	Chloride	17	0.092	0.10	0.50	1		EPA-300.0
14797-55-8	Nitrate as N	0.050	0.022	0.050	0.10	1	U	EPA-300.0
14808-79-8	Sulfate	46	0.14	0.20	1.0	1		EPA-300.0

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0596
Batch Matrix: Water
Preparation: No Prep

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M051A_170206	1703278-04	E020717.seq-35	02/07/17 19:00	
Blank	B[B0596-BLK1	E020717.seq-22	02/07/17 19:00	
LCS	B[B0596-BS1	E020717.seq-23	02/07/17 19:00	
M051A_170206	B[B0596-DUP1	E020717.seq-36	02/07/17 19:00	
M051A_170206	B[B0596-MS1	E020717.seq-54	02/07/17 19:00	
M051A_170206	B[B0596-MSD1	E020717.seq-38	02/07/17 19:00	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-300.0

Laboratory:	BC Laboratories		SDG:	17-03278	
Client:	AMEC Environmental & Infrastructure $AMCN		Project:	Alameda	
Matrix:	Water	Laboratory ID:	B[B0596-BLK1	File ID:	E020717.seq-22
Prepared:	02/07/17 19:00	Preparation:	No Prep	Initial/Final:	20 ml / 20 ml
Analyzed:	02/07/17 19:32	Instrument:	IC5		
Batch:	B[B0596	Sequence:	1702240	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
16887-00-6	Chloride	0.10	0.092	0.10	0.50	U
14797-55-8	Nitrate as N	0.050	0.022	0.050	0.10	U
14808-79-8	Sulfate	0.20	0.14	0.20	1.0	U

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

M051A_170206

DUPLICATES
EPA-300.0

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0596
Preparation: No Prep
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0596-DUP1
Lab Source ID: 1703278-04
Initial/Final: 20 ml / 20 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Chloride	10	17.147		17.099		0.280		EPA-300.0
Nitrate as NO3	10	0.11510		0.11952		3.77		EPA-300.0
Nitrate as N	10	0.026000		0.027000		3.77		EPA-300.0
Sulfate	10	46.367		46.368		0.00216		EPA-300.0

* Values outside of QC limits

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-300.0

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0596
Laboratory ID: B[B0596-MS1
Preparation: No Prep
Initial/Final: 19.8 ml / 20 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Chloride	50.505	17.147	72.633	110	80 - 120
Nitrate as NO3	22.358	0.11510	23.077	103	80 - 120
Nitrate as N	5.0505	0.026000	5.2131	103	80 - 120
Sulfate	101.01	46.367	159.03	112	80 - 120

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Chloride	50.505	72.288	109	0.477	10	80 - 120
Nitrate as NO3	22.358	22.805	101	1.19	10	80 - 120
Nitrate as N	5.0505	5.1515	101	1.19	10	80 - 120
Sulfate	101.01	157.93	110	0.699	10	80 - 120

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0596
Laboratory ID: B[B0596-BS1
Preparation: No Prep
Initial/Final: 20 ml / 20 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Chloride	50.000	52.161	104	90 - 110
Nitrate as NO3	22.134	22.692	103	90 - 110
Nitrate as N	5.0000	5.1260	103	90 - 110
Sulfate	100.00	103.80	104	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702240
Instrument: IC5
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702240-ICV1	E020717.seq-08	02/07/17 15:22
Initial Cal Blank	1702240-ICB1	E020717.seq-09	02/07/17 15:40
Calibration Check	1702240-CCV1	E020717.seq-15	02/07/17 17:30
Calibration Blank	1702240-CCB1	E020717.seq-16	02/07/17 17:48
Blank	B[B0596-BLK1	E020717.seq-22	02/07/17 19:32
LCS	B[B0596-BS1	E020717.seq-23	02/07/17 19:49
Calibration Check	1702240-CCV2	E020717.seq-27	02/07/17 20:59
Calibration Blank	1702240-CCB2	E020717.seq-28	02/07/17 21:16
M051A_170206	1703278-04	E020717.seq-35	02/07/17 23:18
M051A_170206	B[B0596-DUP1	E020717.seq-36	02/07/17 23:36
M051A_170206	B[B0596-MSD1	E020717.seq-38	02/08/17 00:10
Calibration Check	1702240-CCV3	E020717.seq-39	02/08/17 00:28
Calibration Blank	1702240-CCB3	E020717.seq-40	02/08/17 00:45
Calibration Check	1702240-CCV4	E020717.seq-50	02/08/17 03:39
Calibration Blank	1702240-CCB4	E020717.seq-51	02/08/17 03:57
M051A_170206	B[B0596-MS1	E020717.seq-54	02/08/17 04:49
Calibration Check	1702240-CCV5	E020717.seq-55	02/08/17 05:06
Calibration Blank	1702240-CCB5	E020717.seq-56	02/08/17 05:24
Calibration Check	1702240-CCV6	E020717.seq-57	02/08/17 08:51
Calibration Blank	1702240-CCB6	E020717.seq-58	02/08/17 09:08
Calibration Check	1702240-CCV7	E020717.seq-65	02/08/17 11:10
Calibration Blank	1702240-CCB7	E020717.seq-66	02/08/17 11:28

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: IC5
Project: Alameda
Sequence: 1702240
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702240-ICB1	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0
1702240-CCB1	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0
1702240-CCB2	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0
1702240-CCB3	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0
1702240-CCB4	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0
1702240-CCB5	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0
1702240-CCB6	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: IC5
Project: Alameda
Sequence: 1702240
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702240-CCB7	Chloride	0.0000	0.092		0.50	mg/L	U	EPA-300.0
	Nitrate as NO3	0.0000	0.096		0.44	mg/L	U	EPA-300.0
	Nitrate as N	0.0000	0.022		0.10	mg/L	U	EPA-300.0
	Sulfate	0.0000	0.14		1.0	mg/L	U	EPA-300.0

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-300.0

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: IC5
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702240

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702240-ICV1	Chloride	50.000	52.480	105	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.692	103	mg/L	EPA-300.0
	Nitrate as N	5.0000	5.1260	103	mg/L	EPA-300.0
	Sulfate	100.00	102.79	103	mg/L	EPA-300.0
1702240-CCV1	Chloride	50.000	51.742	103	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.484	102	mg/L	EPA-300.0
	Nitrate as N	5.0000	5.0790	102	mg/L	EPA-300.0
	Sulfate	100.00	103.05	103	mg/L	EPA-300.0
1702240-CCV2	Chloride	50.000	52.416	105	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.727	103	mg/L	EPA-300.0
	Nitrate as N	5.0000	5.1340	103	mg/L	EPA-300.0
	Sulfate	100.00	103.62	104	mg/L	EPA-300.0
1702240-CCV3	Chloride	50.000	51.442	103	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.391	101	mg/L	EPA-300.0
	Nitrate as N	5.0000	5.0580	101	mg/L	EPA-300.0
	Sulfate	100.00	102.42	102	mg/L	EPA-300.0
1702240-CCV4	Chloride	50.000	51.573	103	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.426	101	mg/L	EPA-300.0
	Nitrate as N	5.0000	5.0660	101	mg/L	EPA-300.0
	Sulfate	100.00	102.30	102	mg/L	EPA-300.0
1702240-CCV5	Chloride	50.000	51.383	103	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.400	101	mg/L	EPA-300.0
	Nitrate as N	5.0000	5.0600	101	mg/L	EPA-300.0
	Sulfate	100.00	101.88	102	mg/L	EPA-300.0
1702240-CCV6	Chloride	50.000	50.272	101	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.045	99.6	mg/L	EPA-300.0
	Nitrate as N	5.0000	4.9800	99.6	mg/L	EPA-300.0
	Sulfate	100.00	100.30	100	mg/L	EPA-300.0
1702240-CCV7	Chloride	50.000	50.411	101	mg/L	EPA-300.0
	Nitrate as NO3	22.134	22.081	99.8	mg/L	EPA-300.0
	Nitrate as N	5.0000	4.9880	99.8	mg/L	EPA-300.0

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-300.0

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: IC5
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702240

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702240-CCV7	Sulfate	100.00	100.12	100	mg/L	EPA-300.0

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
EPA-300.0

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/07/17 19:00	1.00	28.00	02/07/17 23:18	1.00	28.00	
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/07/17 19:00	1.49	2.00	02/07/17 23:18	1.49	2.00	

* Holding time not met

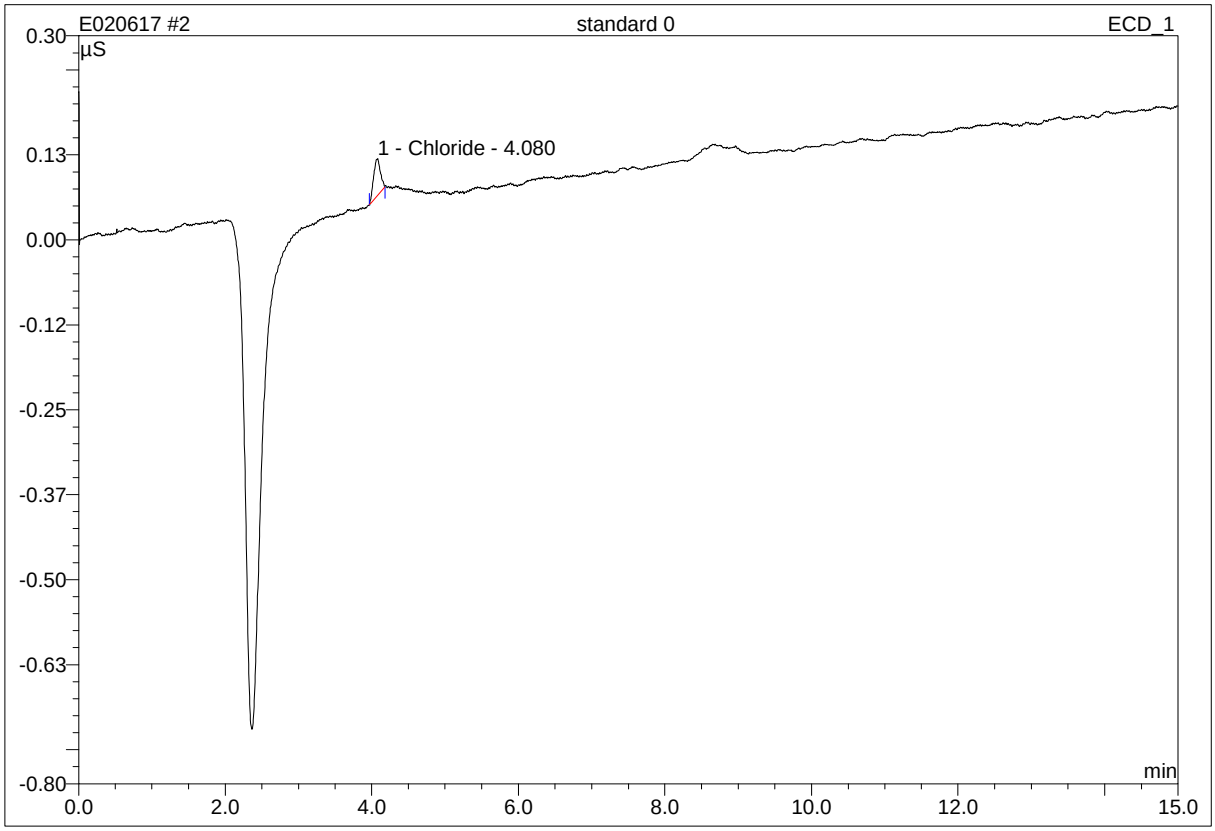
Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

Raw Data From Instrument IC5

Raw Data - Calibration Standards

2 standard 0

Sample Name:	**standard 0**	*Injection Volume:*	**20.0**
Vial Number:	**17**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 12:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



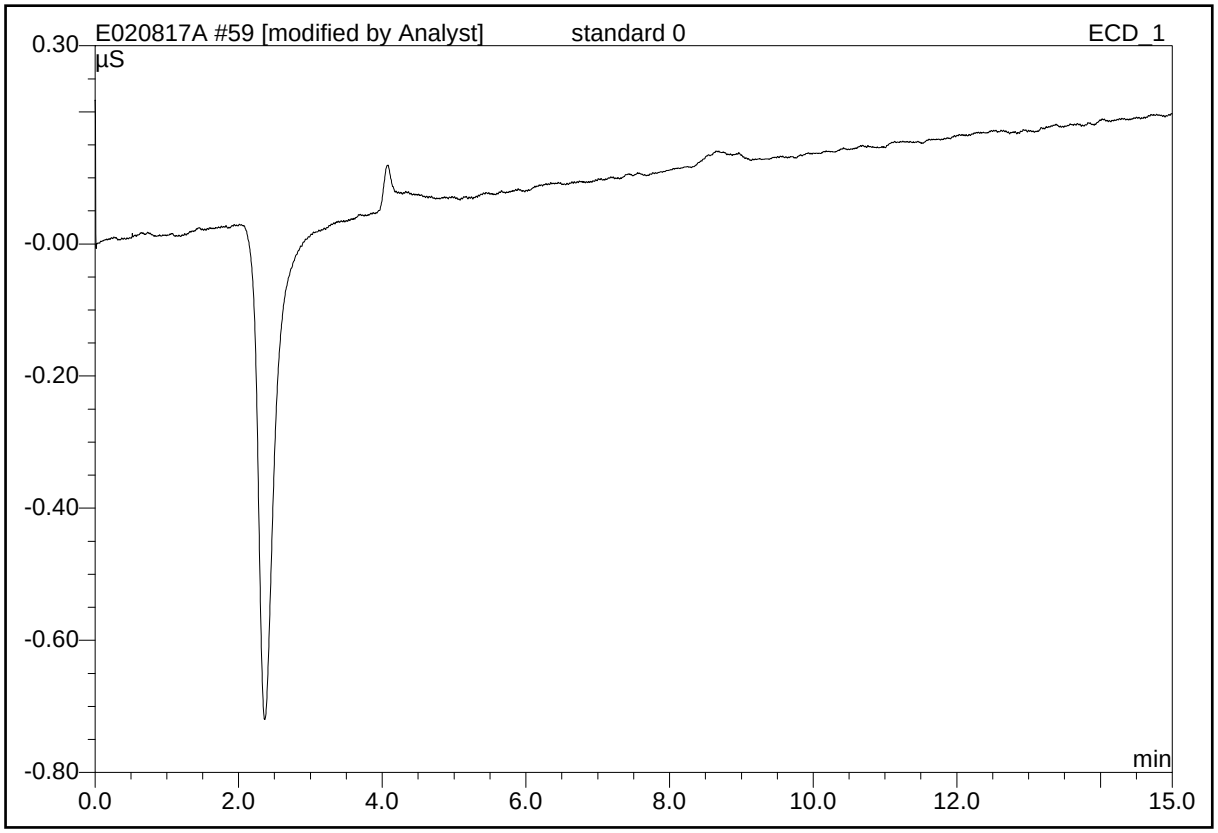
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.08	Chloride	0.054	0.006	100.00	0.200	BMB
Total:			0.054	0.006	100.00	0.200	

modified on: n.a. By: OLH/EMW/JSW

* = Manual integrations due to peak, rider or baseline error.
B = Baseline with direct contact on the left or right side of peak.
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

59 standard 0

Sample Name:	**standard 0**	*Injection Volume:*	**20.0**
Vial Number:	**17**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 12:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	

modified on: 02.06.17 15:03 By: OLH/EMW/JSW

* = Manual integrations due to peak, rider, or baseline errors.
B = Baseline with direct contact on the left or right side of peak.
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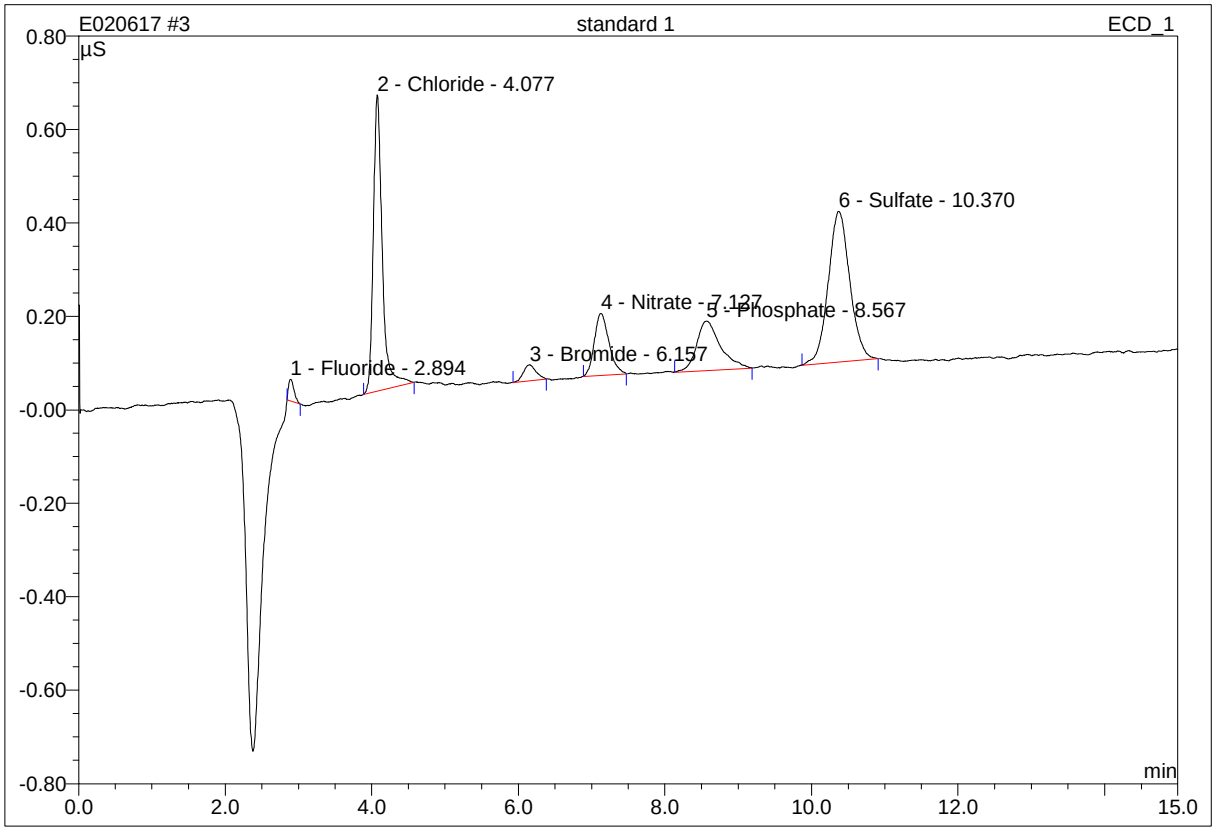
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

3 standard 1

Sample Name:	**standard 1**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 12:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.89	Fluoride	0.047	0.004	1.43	0.042	BMB
2	4.08	Chloride	0.634	0.090	31.96	0.539	BMB
3	6.16	Bromide	0.034	0.007	2.44	0.107	BMB
4	7.13	Nitrate	0.132	0.031	10.92	0.097	BMB
5	8.57	Phosphate	0.106	0.040	14.16	0.226	BMB
6	10.37	Sulfate	0.322	0.110	39.10	1.013	BMB
Total:			1.275	0.281	100.00	2.025	

modified on: n.a. By: OLH/EMW/JSW

* = Manual integrations due to peak, rider or baseline error.

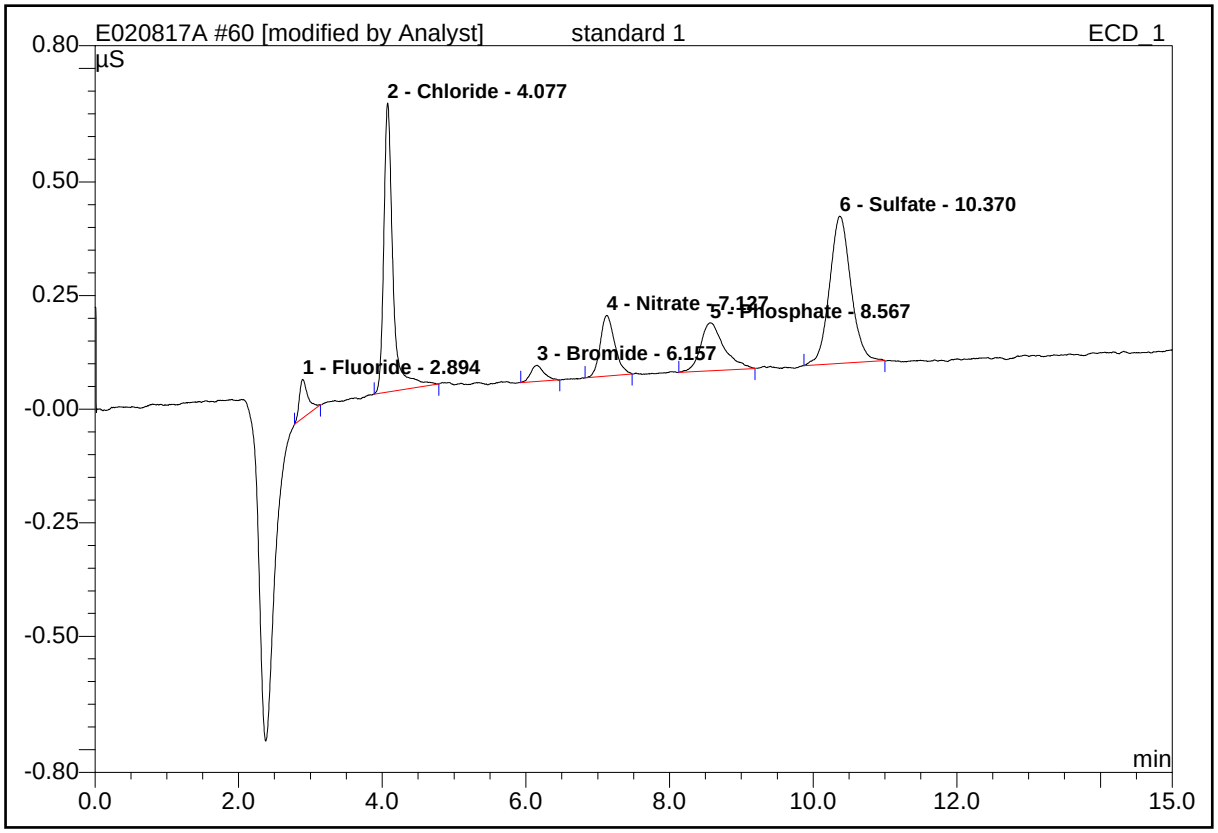
close up/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR15 Build 4656 (243203)

B = Baseline with direct contact on the left or right side of peak.
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

60 standard 1

Sample Name:	**standard 1**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 12:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.89	Fluoride	0.085	0.012	3.94	0.049	BMB*
2	4.08	Chloride	0.636	0.094	31.74	0.545	BMB*
3	6.16	Bromide	0.036	0.008	2.56	0.111	BMB*
4	7.13	Nitrate	0.133	0.031	10.53	0.097	BMB*
5	8.57	Phosphate	0.106	0.040	13.44	0.226	BMB
6	10.37	Sulfate	0.324	0.112	37.79	1.020	BMB*
Total:			1.320	0.296	100.00	2.049	

modified on: 02.06.17 15:05 By: OLH/EMW/JSW

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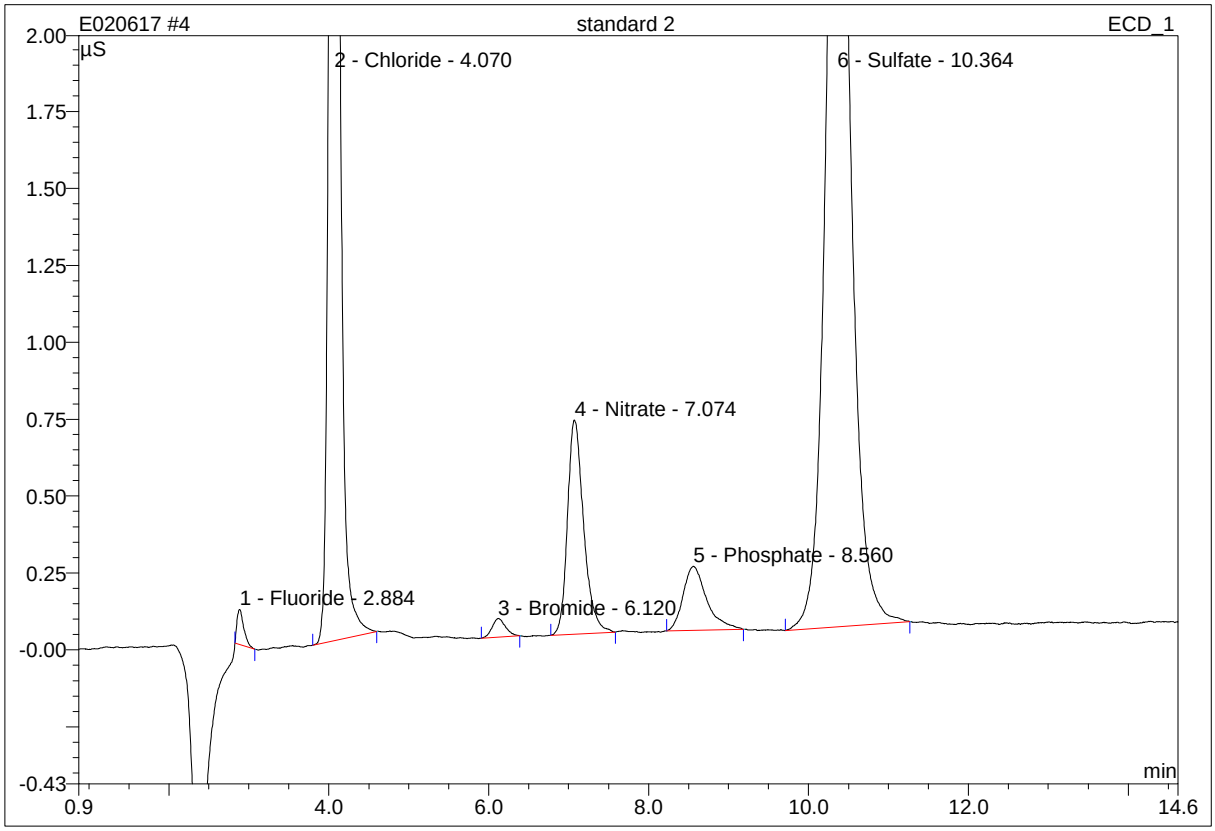
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

4 standard 2

Sample Name:	**standard 2**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 12:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.88	Fluoride	0.114	0.011	0.53	0.063	BMB
2	4.07	Chloride	5.702	0.764	35.90	3.778	BMB
3	6.12	Bromide	0.061	0.012	0.56	0.179	BMB
4	7.07	Nitrate	0.697	0.163	7.66	0.428	BMB
5	8.56	Phosphate	0.208	0.071	3.34	0.422	BMB
6	10.36	Sulfate	3.180	1.107	52.01	7.921	BMB
Total:			9.961	2.127	100.00	12.791	

modified on: n.a. By: OLH/EMW/JSW

* = Manual integrations due to peak, rider or baseline error.

Chromeleon (c) Dionex 1996-2006
close up/Integration
Version 6.80 SR15 Build 4656 (243203)

B = Baseline with direct contact on the left or right side of peak.
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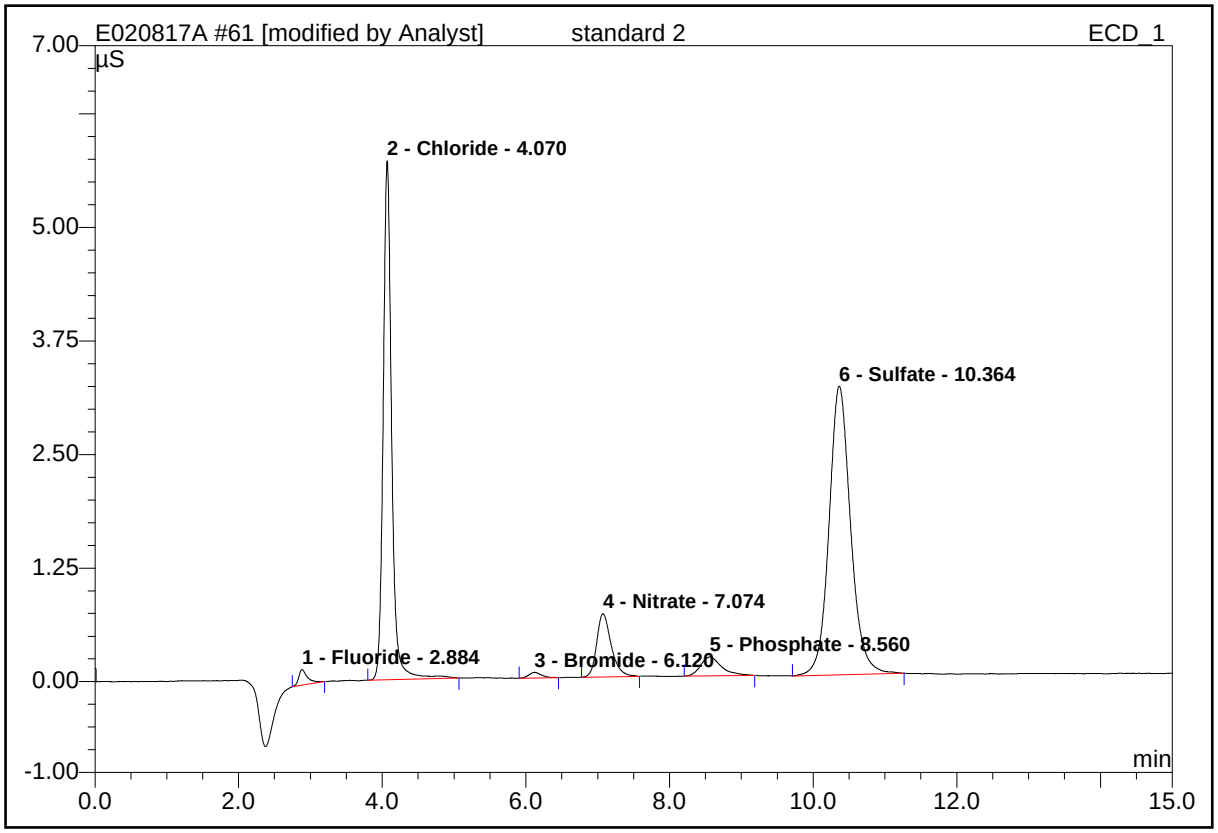
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

61 standard 2

Sample Name:	**standard 2**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 12:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.88	Fluoride	0.170	0.024	1.11	0.101	BMB*
2	4.07	Chloride	5.712	0.785	36.30	3.868	BMB*
3	6.12	Bromide	0.062	0.013	0.59	0.190	BMB*
4	7.07	Nitrate	0.697	0.163	7.54	0.427	BMB
5	8.56	Phosphate	0.208	0.071	3.29	0.423	BMB*
6	10.36	Sulfate	3.180	1.107	51.17	7.908	BMB
Total:			10.029	2.162	100.00	12.917	

modified on: 02.06.17 15:04 By: OLH/EMW/JSW

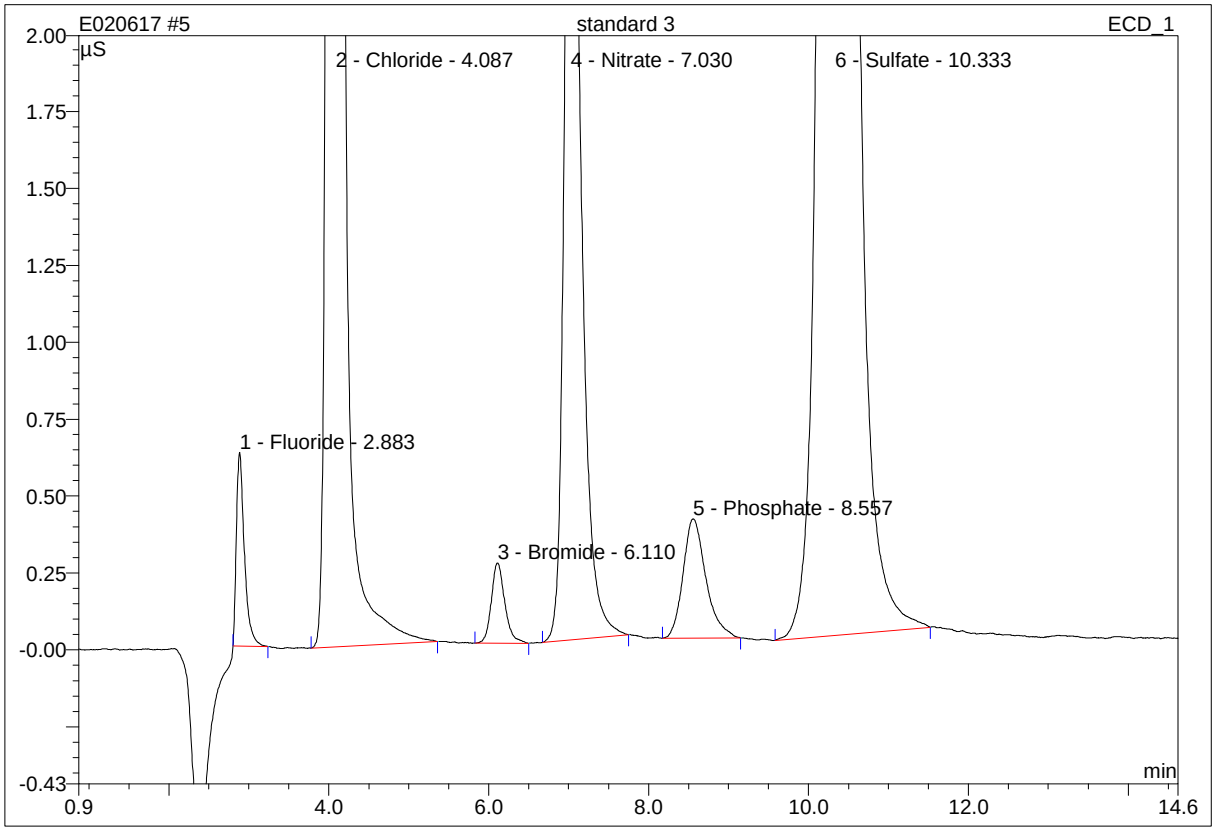
* = Manual integrations due to peak, rider, or baseline errors.

B = Baseline with direct contact on the left or right side of peak.

b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

5 standard 3

Sample Name:	**standard 3**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.88	Fluoride	0.629	0.073	0.73	0.335	BMB
2	4.09	Chloride	26.607	3.759	37.56	17.924	BMB
3	6.11	Bromide	0.260	0.051	0.51	0.755	BMB
4	7.03	Nitrate	3.260	0.764	7.63	1.896	BMB
5	8.56	Phosphate	0.388	0.128	1.28	0.783	BMB
6	10.33	Sulfate	15.505	5.232	52.28	35.908	BMB
Total:			46.649	10.007	100.00	57.602	

modified on: n.a. By: OLH/EMW/JSW

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close up/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR15 Build 4656 (243203)

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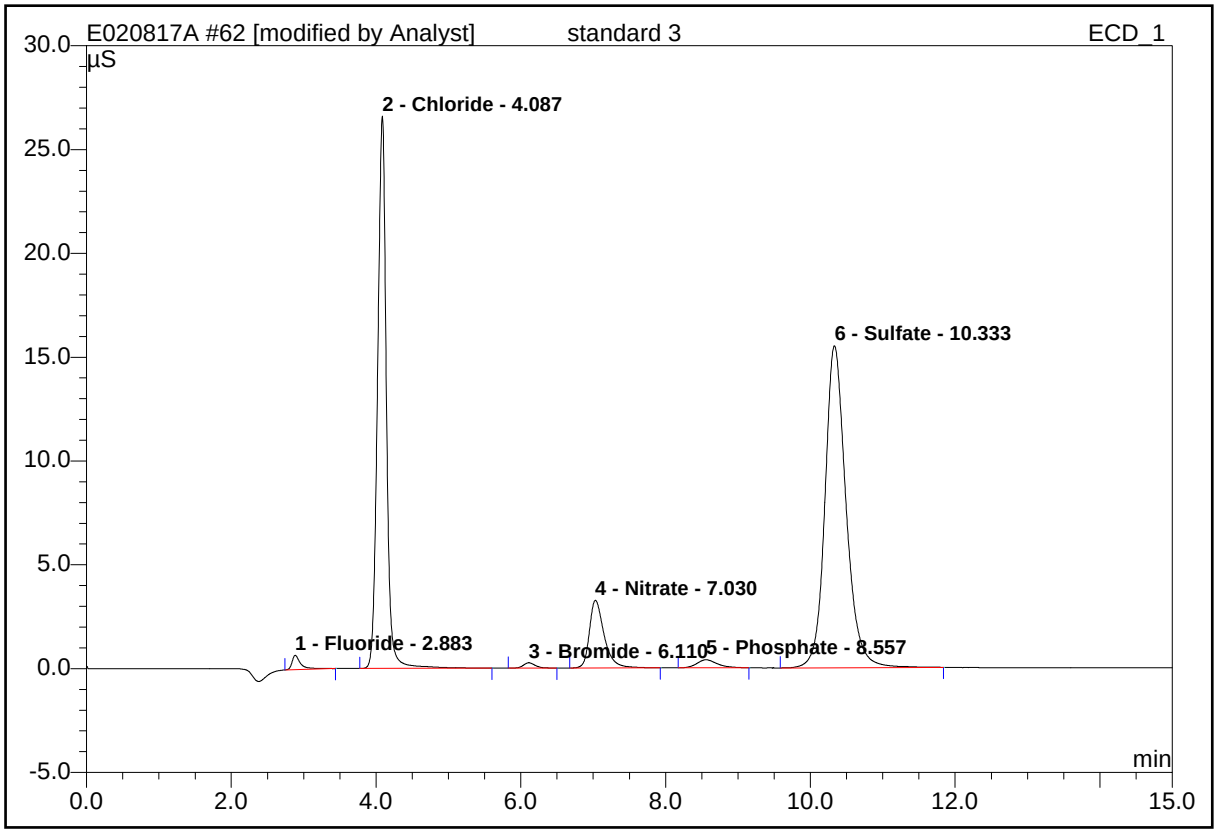
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

62 standard 3

Sample Name:	**standard 3**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.88	Fluoride	0.688	0.096	0.96	0.405	BMB*
2	4.09	Chloride	26.608	3.765	37.41	17.936	BMB*
3	6.11	Bromide	0.260	0.051	0.51	0.762	BMB
4	7.03	Nitrate	3.264	0.771	7.67	1.911	BMB*
5	8.56	Phosphate	0.388	0.128	1.28	0.784	BMB
6	10.33	Sulfate	15.512	5.251	52.18	35.981	BMB*
Total:			46.719	10.063	100.00	57.779	

modified on: 02.06.17 15:04 By: OLH/EMW/JSW

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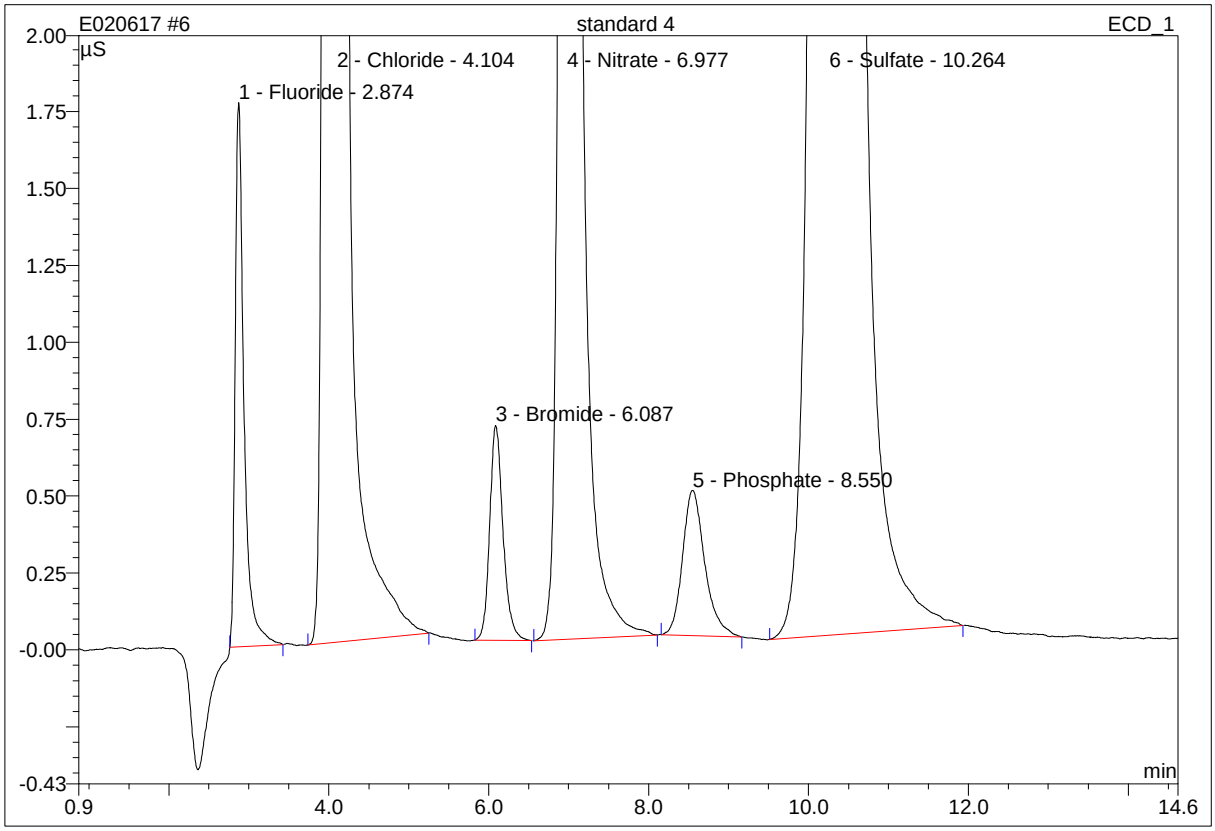
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

6 standard 4

Sample Name:	**standard 4**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.87	Fluoride	1.768	0.225	0.76	0.955	BMB
2	4.10	Chloride	66.932	11.293	38.15	51.791	BMB
3	6.09	Bromide	0.699	0.135	0.46	1.990	BMB
4	6.98	Nitrate	9.256	2.166	7.32	5.105	BMB
5	8.55	Phosphate	0.471	0.152	0.51	0.932	BMB
6	10.26	Sulfate	46.106	15.628	52.80	102.415	BMB
Total:			125.232	29.600	100.00	163.188	

modified on: n.a. By: OLH/EMW/JSW

* = Manual integrations due to peak, rider or baseline error.

close up/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR15 Build 4656 (243203)

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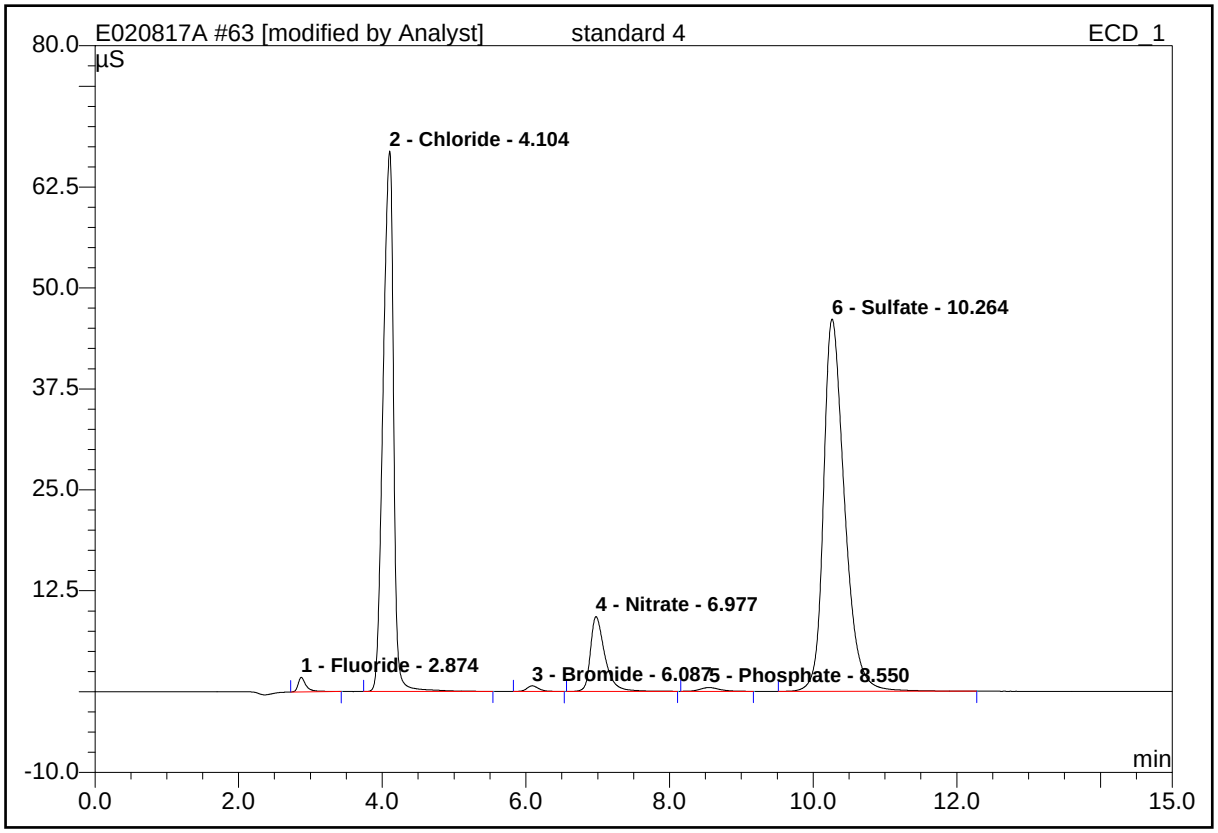
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

63 standard 4

Sample Name:	**standard 4**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.87	Fluoride	1.800	0.238	0.80	0.992	BMB*
2	4.10	Chloride	66.937	11.312	38.14	51.869	BMB*
3	6.09	Bromide	0.699	0.135	0.46	2.018	BMB
4	6.98	Nitrate	9.256	2.166	7.30	5.109	BMB
5	8.55	Phosphate	0.471	0.152	0.51	0.934	BMB
6	10.26	Sulfate	46.113	15.659	52.79	102.533	BMB*
Total:			125.275	29.663	100.00	163.455	

modified on: 02.06.17 15:04 By: OLH/EMW/JSW

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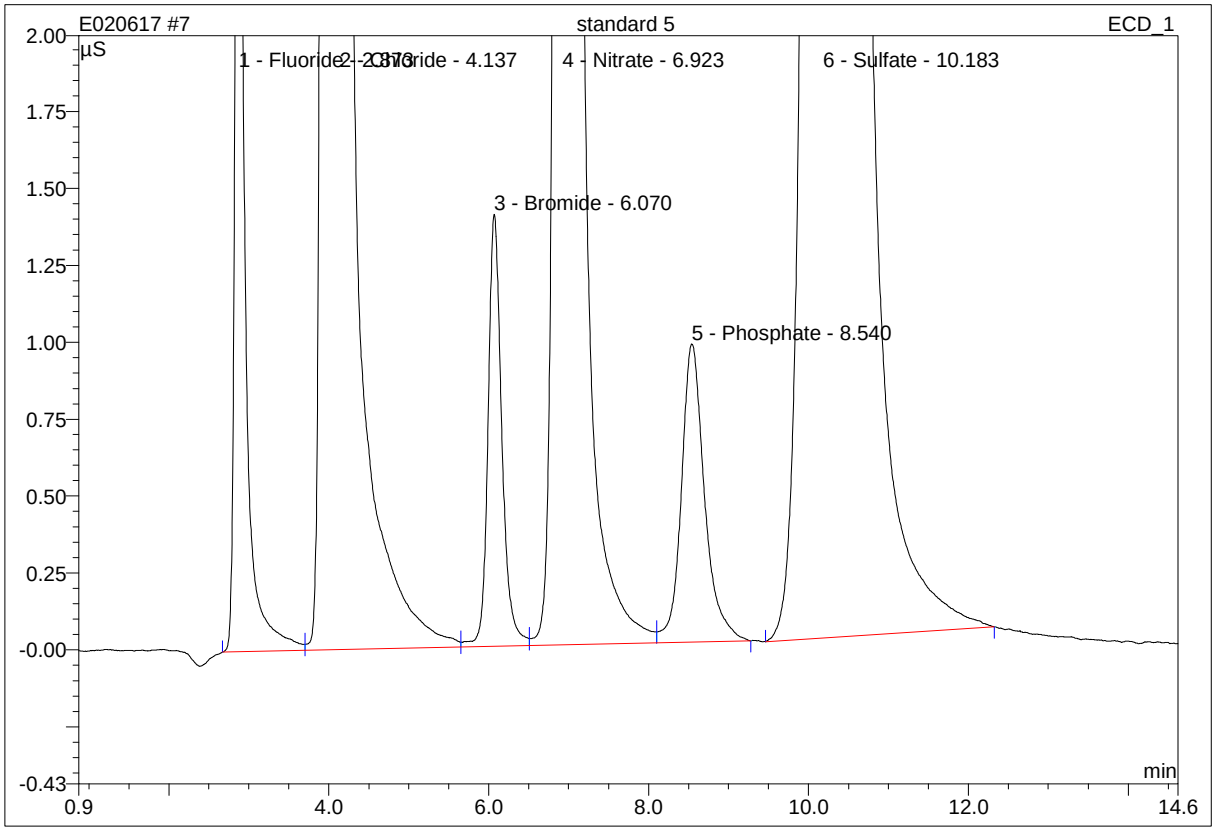
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

7 standard 5

Sample Name:	**standard 5**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.87	Fluoride	3.627	0.499	0.80	2.007	BM
2	4.14	Chloride	108.428	23.522	37.54	102.424	M
3	6.07	Bromide	1.404	0.282	0.45	4.091	M
4	6.92	Nitrate	19.731	4.582	7.31	10.109	M
5	8.54	Phosphate	0.969	0.327	0.52	2.040	MB
6	10.18	Sulfate	92.918	33.439	53.37	205.872	BMB
Total:			227.079	62.651	100.00	326.544	

modified on: n.a. By: OLH/EMW/JSW

* = Manual integrations due to peak, rider or baseline error.

close up/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR15 Build 4656 (243203)

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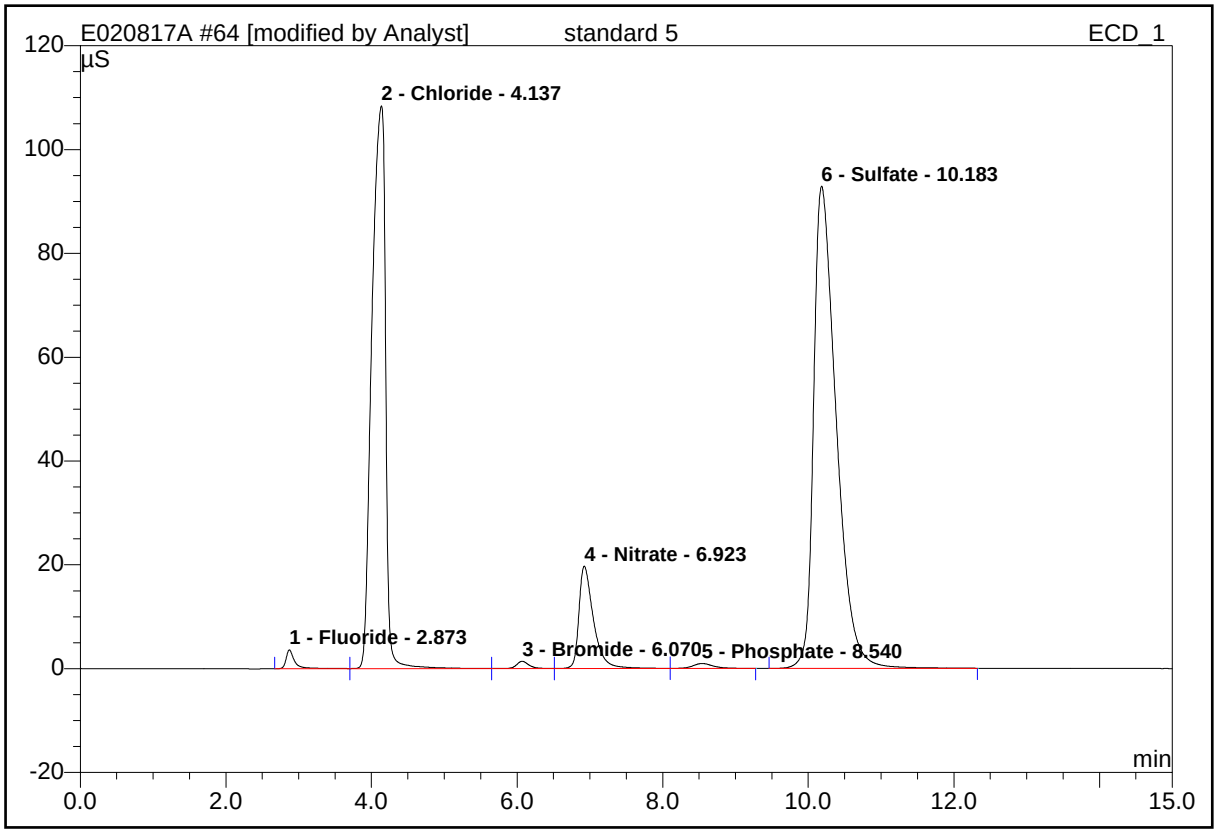
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

64 standard 5

Sample Name:	**standard 5**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.87	Fluoride	3.624	0.489	0.78	2.003	BMb*
2	4.14	Chloride	108.411	23.491	37.53	102.381	bM *
3	6.07	Bromide	1.393	0.273	0.44	4.038	M *
4	6.92	Nitrate	19.723	4.571	7.30	10.102	M *
5	8.54	Phosphate	0.967	0.325	0.52	2.034	MB*
6	10.18	Sulfate	92.918	33.439	53.43	205.849	BMB
Total:			227.036	62.588	100.00	326.407	

modified on: 02.06.17 15:05 By: OLH/EMW/JSW

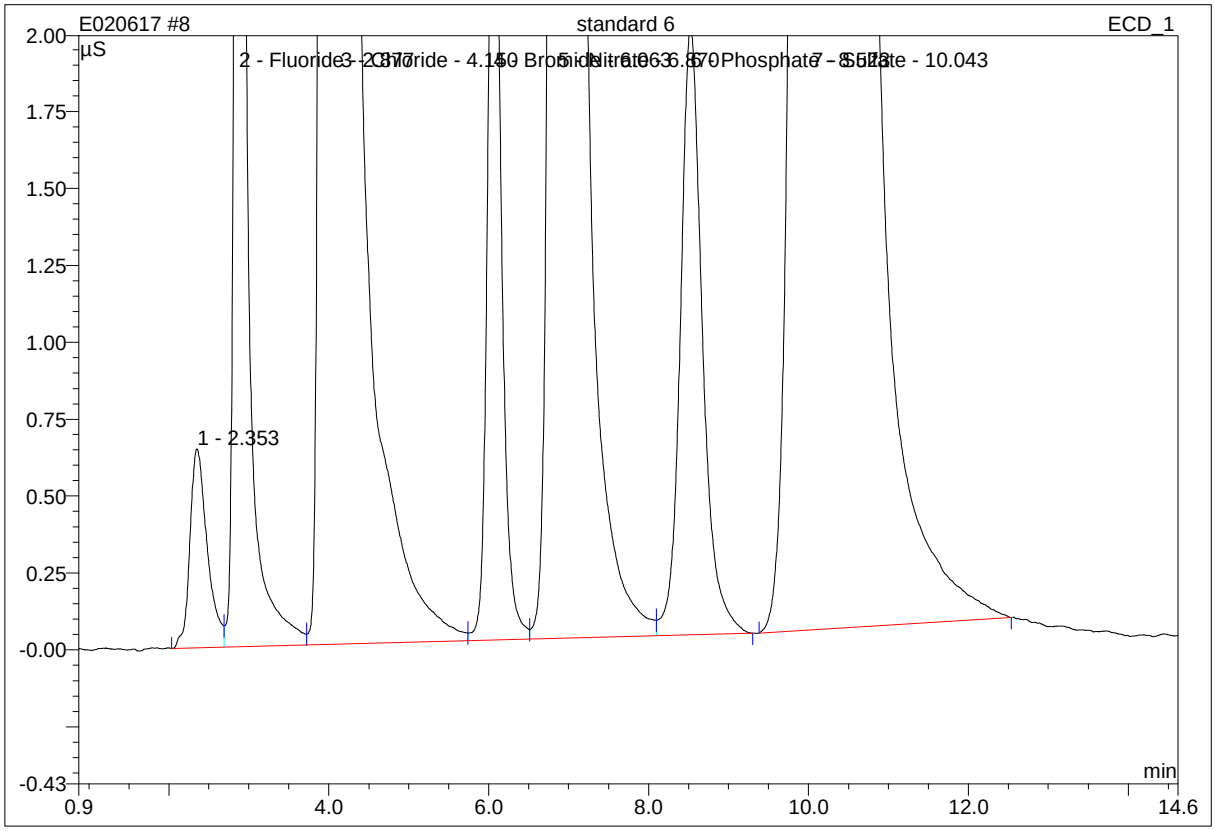
* = Manual integrations due to peak, rider, or baseline errors.

B = Baseline with direct contact on the left or right side of peak.

b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

8 standard 6

Sample Name:	**standard 6**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.35	n.a.	0.646	0.163	0.12	n.a.	BM
2	2.88	Fluoride	7.402	1.050	0.78	4.007	M
3	4.15	Chloride	167.108	49.935	37.24	198.806	M
4	6.06	Bromide	2.897	0.564	0.42	7.992	M
5	6.87	Nitrate	43.322	10.151	7.57	19.947	M
6	8.52	Phosphate	1.971	0.632	0.47	4.001	MB
7	10.04	Sulfate	176.196	71.599	53.39	397.394	BMB
Total:			399.543	134.094	100.00	632.147	

modified on: n.a. By: OLH/EMW/JSW

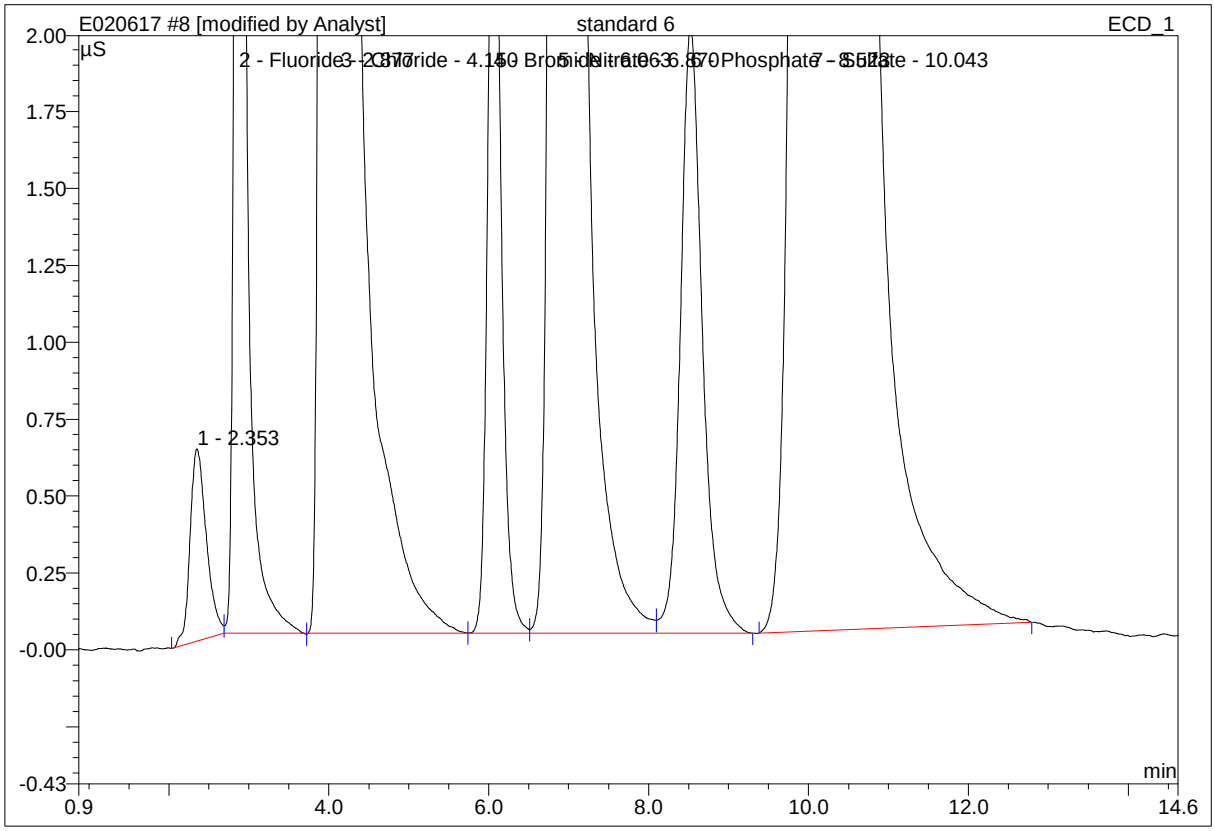
close up/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR15 Build 4656 (243203)

* = Manual integrations due to peak, rider or baseline error.
B = Baseline with direct contact on the left or right side of peak.
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

8 standard 6

Sample Name:	**standard 6**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.35	n.a.	0.624	0.148	0.11	n.a.	BM *
2	2.88	Fluoride	7.358	1.007	0.75	4.000	M *
3	4.15	Chloride	167.073	49.872	37.23	198.792	M *
4	6.06	Bromide	2.875	0.547	0.41	7.981	M *
5	6.87	Nitrate	43.305	10.129	7.56	19.945	M *
6	8.52	Phosphate	1.966	0.627	0.47	3.999	MB*
7	10.04	Sulfate	176.200	71.631	53.47	397.403	BMB*
Total:			399.402	133.961	100.00	632.121	

modified on: 02.06.17 15:05 By: OLH/EMW/JSW

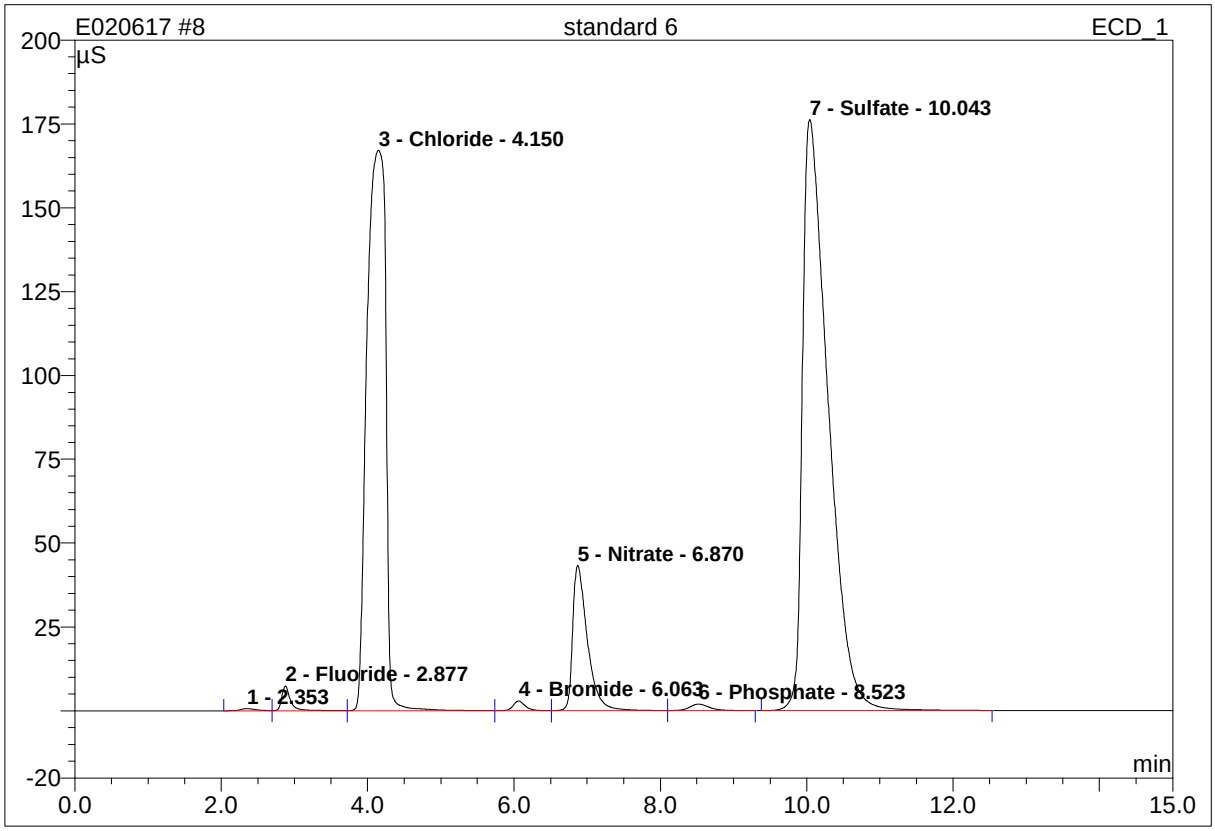
close up/Integration

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR15 Build 4656 (243203)

* = Manual integrations due to peak, rider or baseline error.
B = Baseline with direct contact on the left or right side of peak.
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R= Rider
BMB = This peak type is for resolved peaks.

8 standard 6

Sample Name:	**standard 6**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.35	n.a.	0.646	0.163	0.12	n.a.	BM
2	2.88	Fluoride	7.402	1.050	0.78	3.962	M
3	4.15	Chloride	167.108	49.935	37.24	198.793	M
4	6.06	Bromide	2.897	0.564	0.42	7.961	M
5	6.87	Nitrate	43.322	10.151	7.57	19.940	M
6	8.52	Phosphate	1.971	0.632	0.47	3.997	MB
7	10.04	Sulfate	176.196	71.599	53.39	397.354	BMB
Total:			399.543	134.094	100.00	632.006	

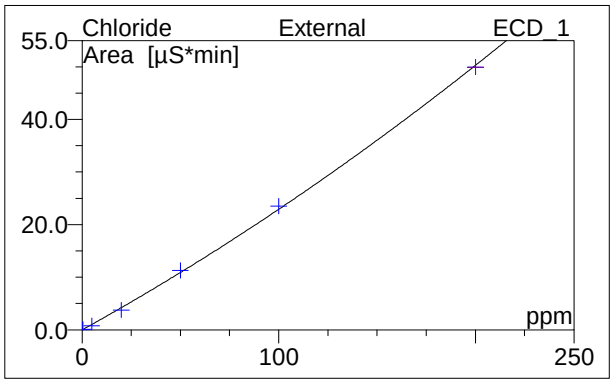
modified on: n.a. By: OLH/EMW/JSW

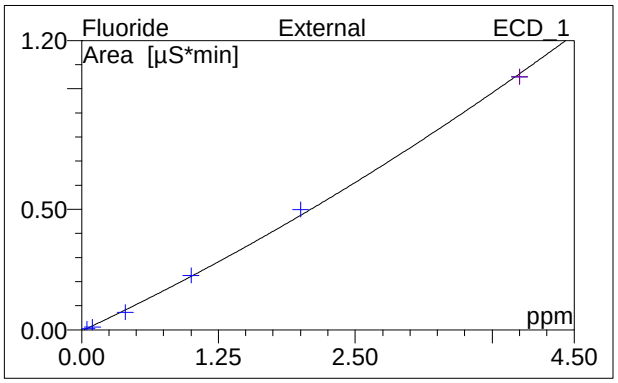
* = Manual integrations due to peak, rider, or baseline errors.

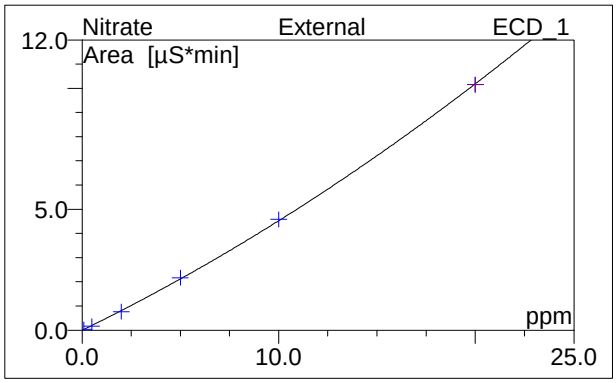
B = Baseline with direct contact on the left or right side of peak.
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

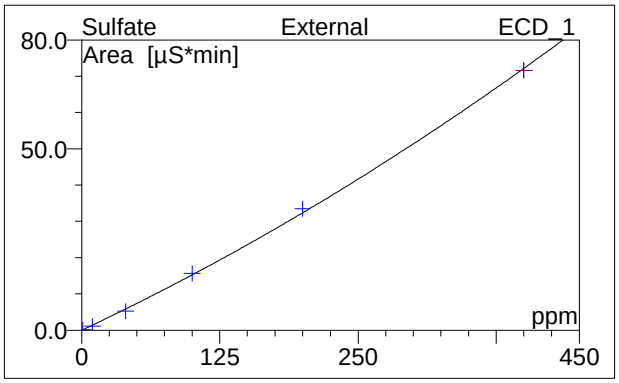
8 standard 6

Sample Name:	**standard 6**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**





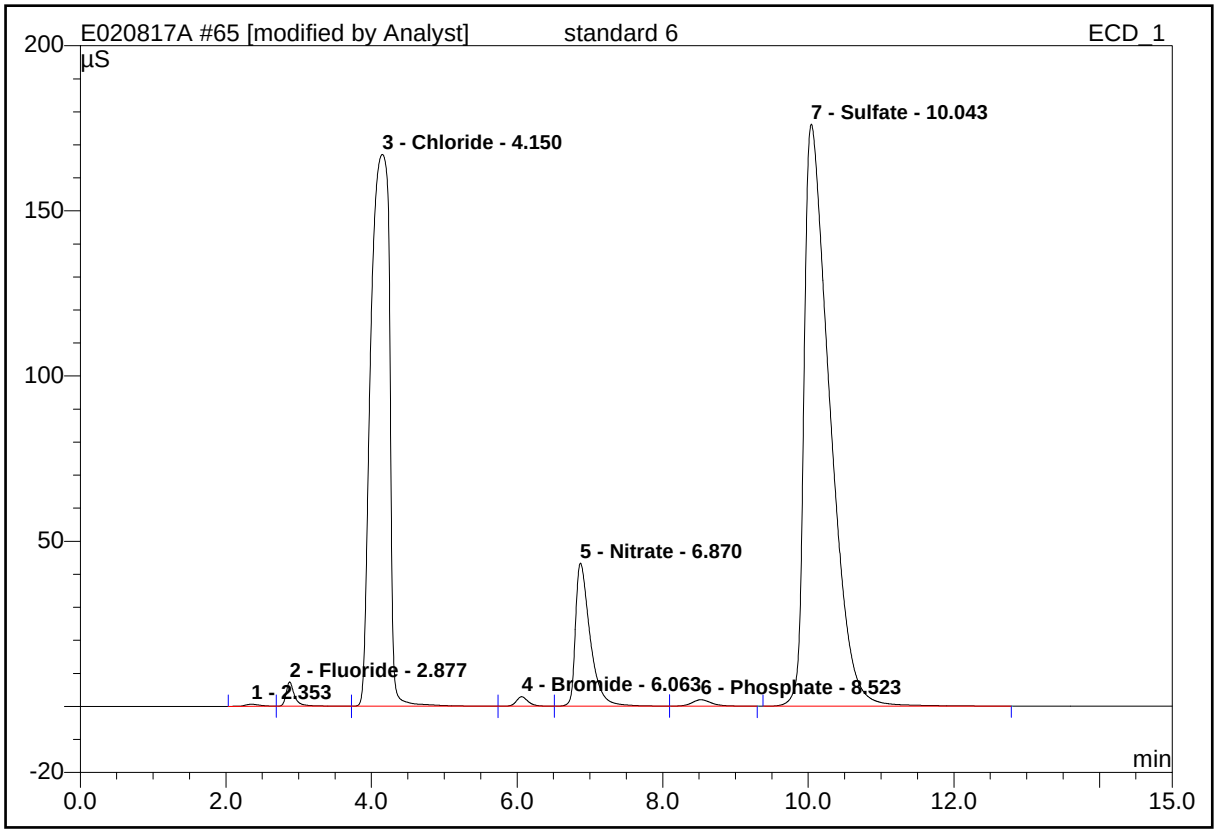




No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det. %	Offset	Slope	Curve
1	2.35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2.88	Fluoride	XA0QOff	6	99.6835	-0.0049	0.2126	0.0135
3	4.15	Chloride	XA0QOff	7	99.8526	-0.0356	0.2073	0.0002
4	6.06	Bromide	XA0QOff	6	99.9545	-0.0003	0.0669	0.0005
5	6.87	Nitrate	XA0QOff	6	99.9500	-0.0077	0.3961	0.0057
6	8.52	Phosphate	XA0QOff	6	99.7808	0.0037	0.1598	-0.0007
7	10.04	Sulfate	XA0QOff	6	99.8682	-0.0355	0.1433	0.0001
Average:					99.8482	-0.0134	0.1977	0.0032

65 standard 6

Sample Name:	**standard 6**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**IC5**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	2.35	n.a.	0.624	0.148	0.11	n.a.	BM *
2	2.88	Fluoride	7.358	1.007	0.75	4.000	M *
3	4.15	Chloride	167.073	49.872	37.23	198.792	M *
4	6.06	Bromide	2.875	0.547	0.41	7.981	M *
5	6.87	Nitrate	43.305	10.129	7.56	19.945	M *
6	8.52	Phosphate	1.966	0.627	0.47	3.999	MB*
7	10.04	Sulfate	176.200	71.631	53.47	397.403	BMB*
Total:			399.402	133.961	100.00	632.121	

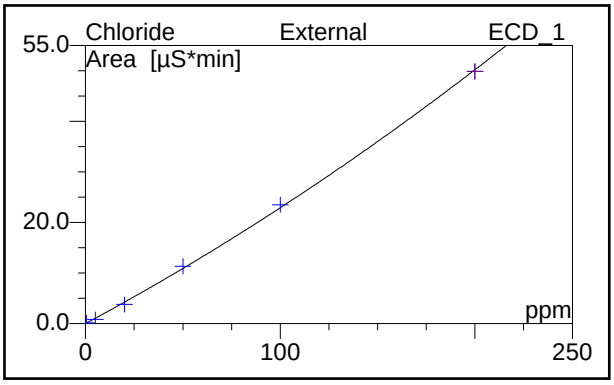
modified on: 02.06.17 15:05 By: OLH/EMW/JSW

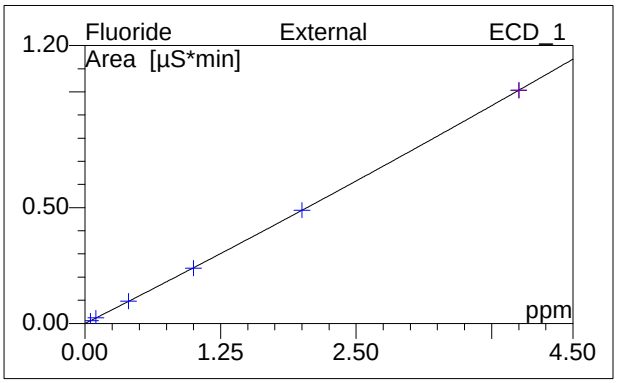
* = Manual integrations due to peak, rider, or baseline errors.

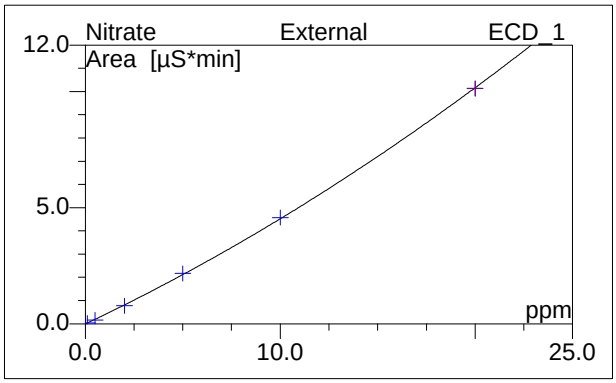
B = Baseline with direct contact on the left or right side of peak.
b = Baseline is below non resolved peaks drawn from peak end to peak end.
M = Main
R = Rider
BMB = This peak type is for resolved peaks.

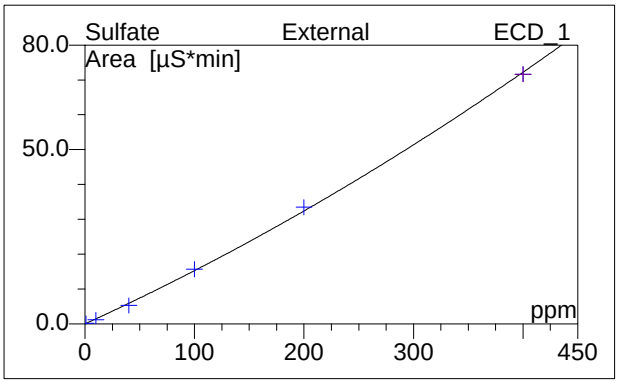
65 standard 6

Sample Name:	**standard 6**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**IC5**	*Bandwidth:*	**n.a.**
Quantif. Method:	**IC5 ANION**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/6/2017 13:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**









No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det. %	Offset	Slope	Curve
1	2.35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2.88	Fluoride	XA0QOff	6	99.9980	0.0000	0.2366	0.0038
3	4.15	Chloride	XA0QOff	6	99.8577	-0.0190	0.2070	0.0002
4	6.06	Bromide	XA0QOff	6	99.9702	0.0002	0.0663	0.0003
5	6.87	Nitrate	XA0QOff	6	99.9541	-0.0075	0.3969	0.0056
6	8.52	Phosphate	XA0QOff	6	99.7856	0.0038	0.1598	-0.0010
7	10.04	Sulfate	XA0QOff	6	99.8703	-0.0347	0.1436	0.0001
Average:					99.9060	-0.0095	0.2017	0.0015

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **WET**
Method: **EPA-310.1**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-310.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-310.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MET-1

Analyte	DL	LOD	LOQ	Units
Total Alkalinity as CaCO3	4.1	4.1	4.1	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-310.1

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: Tiamo020817-026
Sampled: 02/06/17 11:30
Prepared: 02/08/17 08:00
Analyzed: 02/08/17 11:10
Solids: 0.00
Preparation: No Prep
Initial/Final: 50 ml / 50 ml
Batch: B[B0636
Sequence: 1702313
Calibration: UNASSIGNED
Instrument: MET-1

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
---	Total Alkalinity as CaCO3	470	8.2	8.2	8.2	2	D	EPA-310.1

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-310.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0636
Batch Matrix: Water
Preparation: No Prep

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M051A_170206	1703278-04	Tiamo020817-026	02/08/17 08:00	
Blank	B[B0636-BLK1	Tiamo020817-025	02/08/17 08:00	
LCS	B[B0636-BS3	Tiamo020817-024	02/08/17 08:00	
M051A_170206	B[B0636-DUP1	Tiamo020817-027	02/08/17 08:00	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-310.1

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0636-BLK1	File ID:	Tiamo020817-025
Prepared:	02/08/17 08:00	Preparation:	No Prep	Initial/Final:	50 ml / 50 ml
Analyzed:	02/08/17 10:34	Instrument:	MET-1		
Batch:	B[B0636	Sequence:	1702313	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
---	Total Alkalinity as CaCO3	4.1	4.1	4.1	4.1	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

M051A_170206

DUPLICATES

EPA-310.1

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0636
Preparation: No Prep
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0636-DUP1
Lab Source ID: 1703278-04
Initial/Final: 50 ml / 50 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Total Alkalinity as CaCO3	10	470.70		470.39		0.0659		EPA-310.1

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-310.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0636
Laboratory ID: B[B0636-BS3
Preparation: No Prep
Initial/Final: 50 ml / 50 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Total Alkalinity as CaCO3	100.00	97.210	97.2	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-310.1

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702313	Instrument:	MET-1
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	B[B0636-BS3	Tiamo020817-024	02/08/17 10:27
Blank	B[B0636-BLK1	Tiamo020817-025	02/08/17 10:34
M051A_170206	1703278-04	Tiamo020817-026	02/08/17 11:10
M051A_170206	B[B0636-DUP1	Tiamo020817-027	02/08/17 11:20

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
EPA-310.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/08/17 08:00	2.00	14.00	02/08/17 11:10	2.00	14.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported:	3/9/2017 3:04:13PM
Project:	Alameda
Project Number:	5023146096
Project Manager:	Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**WET**
Method:	**EPA-353.2**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-353.2

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-353.2

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: KONE-1

Analyte	DL	LOD	LOQ	Units
Nitrite as N	0.01	0.03	0.05	mg/L
Nitrite as NO2	0.04	0.1	0.17	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-353.2

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: 170207 0822 NO2-080
Sampled: 02/06/17 11:30
Prepared: 02/07/17 08:22
Analyzed: 02/07/17 09:06
Solids: 0.00
Preparation: No Prep
Initial/Final: 20 ml / 20 ml
Batch: B[B0759
Sequence: 1702472
Calibration: UNASSIGNED
Instrument: KONE-1

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
14797-65-0	Nitrite as N	0.030	0.010	0.030	0.050	1	U	EPA-353.2

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-353.2

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0759
Batch Matrix: Water
Preparation: No Prep

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M051A_170206	1703278-04	170207 0822 NO2-080	02/07/17 08:22	
Blank	B[B0759-BLK1	170207 0822 NO2-068	02/07/17 08:22	
LCS	B[B0759-BS1	170207 0822 NO2-067	02/07/17 08:22	
Duplicate	B[B0759-DUP1	170207 0822 NO2-101	02/07/17 08:22	
Matrix Spike	B[B0759-MS1	170207 0822 NO2-104	02/07/17 08:22	
Matrix Spike Dup	B[B0759-MSD1	170207 0822 NO2-105	02/07/17 08:22	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-353.2

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0759-BLK1	File ID:	170207 0822 NO2-068
Prepared:	02/07/17 08:22	Preparation:	No Prep	Initial/Final:	20 ml / 20 ml
Analyzed:	02/07/17 09:01	Instrument:	KONE-1		
Batch:	B[B0759	Sequence:	1702472	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
14797-65-0	Nitrite as N	0.030	0.010	0.030	0.050	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Duplicate

DUPLICATES

EPA-353.2

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0759
Preparation: No Prep
Source Sample Name: Duplicate

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0759-DUP1
Lab Source ID: 1703277-04
Initial/Final: 20 ml / 20 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Nitrite as N	10	0.012334		0.011606		6.08		EPA-353.2
Nitrite as NO2	10	0.040511		ND				EPA-353.2

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-353.2

Matrix Spike

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0759
Laboratory ID: B[B0759-MS1
Preparation: No Prep
Initial/Final: 19 ml / 20 ml
Source Sample Number: 1703277-04

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Nitrite as N	0.52632	0.012334	0.52194	96.8	90 - 110
Nitrite as NO2	1.7289	0.040511	1.7143	96.8	90 - 110

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Nitrite as N	0.52632	0.52124	96.7	0.135	10	90 - 110
Nitrite as NO2	1.7289	1.7120	96.7	0.135	10	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-353.2

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Matrix:	Water		
Batch:	B[B0759	Laboratory ID:	B[B0759-BS1
Preparation:	No Prep	Initial/Final:	20 ml / 20 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Nitrite as N	0.50000	0.49560	99.1	90 - 110
Nitrite as NO2	1.6425	1.6278	99.1	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-353.2

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702472
Instrument: KONE-1
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1702472-CCV1	170207 0822 NO2-001	02/07/17 08:22
Calibration Blank	1702472-CCB1	170207 0822 NO2-002	02/07/17 08:22
Calibration Check	1702472-CCV2	170207 0822 NO2-013	02/07/17 08:27
Calibration Blank	1702472-CCB2	170207 0822 NO2-014	02/07/17 08:28
Calibration Check	1702472-CCV3	170207 0822 NO2-025	02/07/17 08:33
Calibration Blank	1702472-CCB3	170207 0822 NO2-026	02/07/17 08:33
Calibration Check	1702472-CCV4	170207 0822 NO2-037	02/07/17 08:38
Calibration Blank	1702472-CCB4	170207 0822 NO2-038	02/07/17 08:38
Calibration Check	1702472-CCV5	170207 0822 NO2-046	02/07/17 08:40
Calibration Blank	1702472-CCB5	170207 0822 NO2-047	02/07/17 08:40
Calibration Check	1702472-CCV6	170207 0822 NO2-048	02/07/17 08:55
Calibration Blank	1702472-CCB6	170207 0822 NO2-049	02/07/17 08:55
Calibration Check	1702472-CCV7	170207 0822 NO2-060	02/07/17 09:01
Calibration Blank	1702472-CCB7	170207 0822 NO2-061	02/07/17 09:01
LCS	B[B0759-BS1	170207 0822 NO2-067	02/07/17 09:01
Blank	B[B0759-BLK1	170207 0822 NO2-068	02/07/17 09:01
Calibration Check	1702472-CCV8	170207 0822 NO2-072	02/07/17 09:06
Calibration Blank	1702472-CCB8	170207 0822 NO2-073	02/07/17 09:06
M051A_170206	1703278-04	170207 0822 NO2-080	02/07/17 09:06
Calibration Check	1702472-CCV9	170207 0822 NO2-082	02/07/17 09:08
Calibration Blank	1702472-CCB9	170207 0822 NO2-083	02/07/17 09:08
Calibration Check	1702472-CCVA	170207 0822 NO2-084	02/07/17 09:22
Calibration Blank	1702472-CCBA	170207 0822 NO2-085	02/07/17 09:22
Calibration Check	1702472-CCVB	170207 0822 NO2-088	02/07/17 09:24
Calibration Blank	1702472-CCBB	170207 0822 NO2-089	02/07/17 09:24
Calibration Check	1702472-CCVC	170207 0822 NO2-090	02/07/17 09:57

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-353.2

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702472	Instrument:	KONE-1
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Blank	1702472-CCBC	170207 0822 NO2-091	02/07/17 09:57
Duplicate	B[B0759-DUP1	170207 0822 NO2-101	02/07/17 09:57
Calibration Check	1702472-CCVD	170207 0822 NO2-102	02/07/17 10:01
Calibration Blank	1702472-CCBD	170207 0822 NO2-103	02/07/17 10:01
Matrix Spike	B[B0759-MS1	170207 0822 NO2-104	02/07/17 10:01
Matrix Spike Dup	B[B0759-MSD1	170207 0822 NO2-105	02/07/17 10:01
Calibration Check	1702472-CCVE	170207 0822 NO2-110	02/07/17 10:04
Calibration Blank	1702472-CCBE	170207 0822 NO2-111	02/07/17 10:04

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-353.2

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: KONE-1
Project: Alameda
Sequence: 1702472
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702472-CCB1	Nitrite as N	0.0064920	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.021323	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB2	Nitrite as N	0.0071530	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.023494	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB3	Nitrite as N	0.0068840	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.022610	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB4	Nitrite as N	0.0067990	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.022331	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB5	Nitrite as N	0.0056330	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.018502	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB6	Nitrite as N	0.0076310	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.025064	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB7	Nitrite as N	0.0076310	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.025064	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB8	Nitrite as N	0.0076600	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.025159	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCB9	Nitrite as N	0.0070900	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.023287	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCBA	Nitrite as N	0.0074530	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.024479	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCBB	Nitrite as N	0.0076570	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.025149	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCBC	Nitrite as N	0.0092580	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.030408	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCBD	Nitrite as N	0.0099530	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.032691	0.040		0.17	mg/L	U	EPA-353.2
1702472-CCBE	Nitrite as N	0.0087530	0.010		0.050	mg/L	U	EPA-353.2
	Nitrite as NO2	0.028749	0.040		0.17	mg/L	U	EPA-353.2

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-353.2

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: KONE-1
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702472

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702472-CCV1	Nitrite as N	0.50000	0.49564	99.1	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6279	99.1	mg/L	EPA-353.2
1702472-CCV2	Nitrite as N	0.50000	0.49936	99.9	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6401	99.9	mg/L	EPA-353.2
1702472-CCV3	Nitrite as N	0.50000	0.49925	99.9	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6398	99.8	mg/L	EPA-353.2
1702472-CCV4	Nitrite as N	0.50000	0.49523	99.0	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6266	99.0	mg/L	EPA-353.2
1702472-CCV5	Nitrite as N	0.50000	0.49692	99.4	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6321	99.4	mg/L	EPA-353.2
1702472-CCV6	Nitrite as N	0.50000	0.49639	99.3	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6304	99.3	mg/L	EPA-353.2
1702472-CCV7	Nitrite as N	0.50000	0.50050	100	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6439	100	mg/L	EPA-353.2
1702472-CCV8	Nitrite as N	0.50000	0.50270	101	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6511	101	mg/L	EPA-353.2
1702472-CCV9	Nitrite as N	0.50000	0.50069	100	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6445	100	mg/L	EPA-353.2
1702472-CCVA	Nitrite as N	0.50000	0.50387	101	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6549	101	mg/L	EPA-353.2
1702472-CCVB	Nitrite as N	0.50000	0.49991	100	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6419	100	mg/L	EPA-353.2
1702472-CCVC	Nitrite as N	0.50000	0.50414	101	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6559	101	mg/L	EPA-353.2
1702472-CCVD	Nitrite as N	0.50000	0.50201	100	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6489	100	mg/L	EPA-353.2
1702472-CCVE	Nitrite as N	0.50000	0.50280	101	mg/L	EPA-353.2
	Nitrite as NO2	1.6425	1.6515	101	mg/L	EPA-353.2

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
EPA-353.2

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/07/17 08:22	0.90	2.00	02/07/17 09:06	0.90	2.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

Raw Data From Instrument KONE-1

Raw Data - Calibration Summary

Laboratory
Analyzer User

01.02.2017 09:00

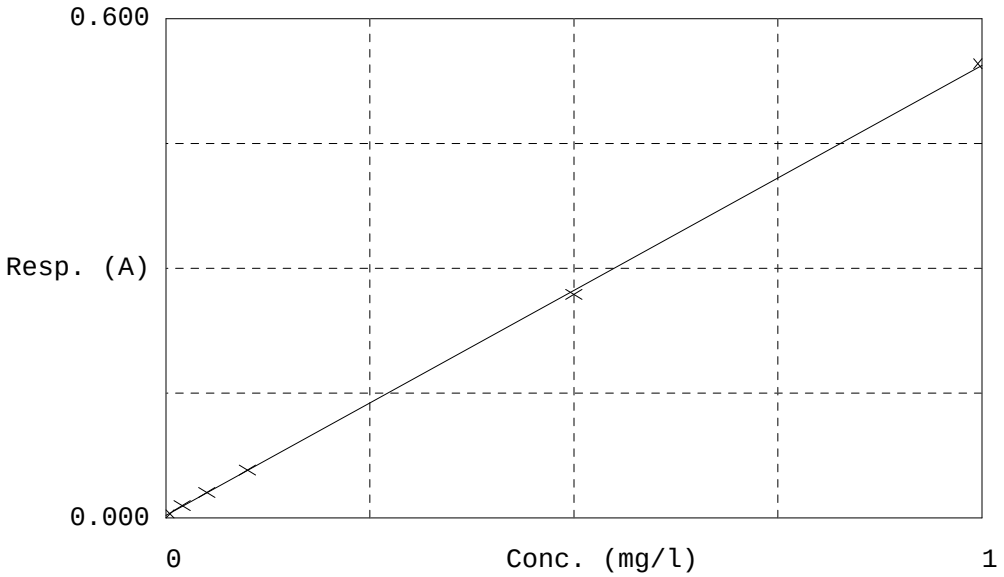
Test NO2

Accepted 01.02.2017 08:54

Factor 1.84952
Bias 0.00325

Coeff. of det. 0.999876

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	NO2-0	0.00393	0.00126	0.00000	
2	NO2-0.02	0.01508	0.02188	0.02000	
3	NO2-0.05	0.03072	0.05081	0.05000	
4	NO2-0.10	0.05760	0.10052	0.10000	
5	NO2-0.50	0.26889	0.49131	0.50000	
6	NO2-1.00	0.54620	1.00421	1.00000	
7	ICB-NO2(control	0.00553	0.00422	0.00000	
8	ICV-NO2(control	0.26982	0.49303	0.50000	

NO2 Laboratory
Analyzer User
Date : 01.02.2017
Time : 09:00

Last change date 04.02.2016 12:17
Tick length (sec) 7.0

Full name	Nitrite as N				
Online Name		Test In Use	YES		
Test type	Photometric		LOW	HIGH	
		Test limit	*	5.00000 mg/l	
Result unit	mg/l	Initial absorbance	-0.050	*	A
Number of Decim.	5	Dilution limit	*	1.000000 mg/l	
		Secondary dil 1+	0.0	4.0	
		Critical limit	*	*	mg/l
		Reflex test limit	*	*	mg/l
		Reflex test			

Acceptance	Manual	Reference class	LOW	HIGH	In Use
Dilution 1+	0.0				
Sample type	Water	Correction factor	1.00		
	Raw water	Correction bias	0.00	mg/l	
	Sewage				
Calibration type	Linear				
Curve direction	Ascending				
Repeat time (d)	0	Abs error (mA)	*		
Points/cal.	Single	Rel error (%)	*		
Acceptance	Manual				
Response limit (mA)	MIN	MAX			
	*	*			
Bias correction in use	NO				
Cd reduction	NO				
Type of Calibrators	Separate				
Calibrator	Conc.	Dil. ratio			
NO2-0	0.000	1+0.0			
NO2-0.02	0.020	1+0.0			
NO2-0.05	0.050	1+0.0			
NO2-0.10	0.100	1+0.0			
NO2-0.50	0.500	1+0.0			
NO2-1.00	1.000	1+0.0			
Manual QC in Use	YES	Routine QC in Use	YES		
Acceptance	Manual	Interval Requests	10		
		Additional condition	NO		

Control	Mean	SD	Control	Mean	SD
ICB-NO2	0.00	0.01	CCB-NO2	0.00	0.01
ICV-NO2	0.50	0.05	CCV-NO2	0.50	0.05

Rules in Use	1:1.0*SD	Rules in Use	1:1.0*SD
Blank	YES		
		Normal cuvette	
Sample		Volume (ul)	32
Disp. with	Extra	Add. Volume (ul)	30
Dilution with	Water	Wash reagent	None

NO2 Laboratory
Analyzer User
Date : 01.02.2017
Time : 09:00

Reagent	NO2 Buffer	Volume (ul)	120
Disp. with	Extra	Add. Volume (ul)	30
Wash reagent	None		
Syringe speed	Normal		
Measurement	End point	Blank	
Resp. Min(A)	*	Resp. Max(A)	*
Reagent	NO2 color	Volume (ul)	32
Disp. with	Extra	Add. Volume (ul)	30
Wash reagent	None		
Syringe speed	Normal		
Incubation		Time (sec)	360
Measurement	End point		
Wavelength (nm)	540 nm	Side wavel. (nm)	None
Meas. type	Fixed timing		

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/9/2017 3:04:13PM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**WET**
Method:	**EPA-415.1**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-415.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-415.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: TOC2

Analyte	DL	LOD	LOQ	Units
Non-Volatile Organic Carbon	0.3	0.3	1	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-415.1

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: 20170207_0822-040
Sampled: 02/06/17 11:30
Prepared: 02/07/17 07:00
Analyzed: 02/07/17 18:08
Solids: 0.00
Preparation: General Preparation
Initial/Final: 100 ml / 100 ml
Batch: B[B0519
Sequence: 1702200
Calibration: UNASSIGNED
Instrument: TOC2

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
---	Non-Volatile Organic Carbon	4.9	0.30	0.30	1.0	1		EPA-415.1

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-415.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0519
Batch Matrix: Water
Preparation: General Preparation

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M051A_170206	1703278-04	20170207_0822-040	02/07/17 07:00	
Blank	B[B0519-BLK1	20170207_0822-006	02/07/17 07:00	
LCS	B[B0519-BS1	20170207_0822-007	02/07/17 07:00	
M051A_170206	B[B0519-DUP1	20170207_0822-042	02/07/17 07:00	
M051A_170206	B[B0519-MS1	20170207_0822-043	02/07/17 07:00	
M051A_170206	B[B0519-MSD1	20170207_0822-044	02/07/17 07:00	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-415.1

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0519-BLK1	File ID:	20170207_0822-006
Prepared:	02/07/17 07:00	Preparation:	General Preparation	Initial/Final:	100 ml / 100 ml
Analyzed:	02/07/17 09:58	Instrument:	TOC2		
Batch:	B[B0519	Sequence:	1702200	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
---	Non-Volatile Organic Carbon	0.30	0.30	0.30	1.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

M051A_170206

DUPLICATES

EPA-415.1

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0519
Preparation: General Preparation
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0519-DUP1
Lab Source ID: 1703278-04
Initial/Final: 100 ml / 100 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Non-Volatile Organic Carbon	10	4.8730		4.9580		1.73		EPA-415.1

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-415.1

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0519
Laboratory ID: B[B0519-MS1
Preparation: General Preparation
Initial/Final: 99.5 ml / 100 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Non-Volatile Organic Carbon	5.0251	4.8730	10.198	106	80 - 120

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Non-Volatile Organic Carbon	5.0251	10.032	103	1.64	10	80 - 120

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-415.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0519
Laboratory ID: B[B0519-BS1
Preparation: General Preparation
Initial/Final: 100 ml / 100 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Non-Volatile Organic Carbon	5.0000	5.0710	101	85 - 115

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-415.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702200
Instrument: TOC2
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702200-ICV1	20170207_0822-003	02/07/17 09:16
Initial Cal Blank	1702200-ICB1	20170207_0822-004	02/07/17 09:30
MRL Check	1702200-CRL1	20170207_0822-005	02/07/17 09:44
Blank	B[B0519-BLK1	20170207_0822-006	02/07/17 09:58
LCS	B[B0519-BS1	20170207_0822-007	02/07/17 10:13
Calibration Check	1702200-CCV1	20170207_0822-015	02/07/17 12:08
Calibration Blank	1702200-CCB1	20170207_0822-016	02/07/17 12:22
Calibration Check	1702200-CCV2	20170207_0822-027	02/07/17 15:01
Calibration Blank	1702200-CCB2	20170207_0822-028	02/07/17 15:15
Calibration Check	1702200-CCV3	20170207_0822-038	02/07/17 17:39
Calibration Blank	1702200-CCB3	20170207_0822-039	02/07/17 17:53
M051A_170206	1703278-04	20170207_0822-040	02/07/17 18:08
M051A_170206	B[B0519-DUP1	20170207_0822-042	02/07/17 18:36
M051A_170206	B[B0519-MS1	20170207_0822-043	02/07/17 18:50
M051A_170206	B[B0519-MSD1	20170207_0822-044	02/07/17 19:05
Calibration Check	1702200-CCV4	20170207_0822-048	02/07/17 20:02
Calibration Blank	1702200-CCB4	20170207_0822-049	02/07/17 20:16
Calibration Check	1702200-CCV5	20170208_0743-001	02/08/17 07:49
Calibration Blank	1702200-CCB5	20170208_0743-002	02/08/17 08:03
Calibration Check	1702200-CCV6	20170208_0743-009	02/08/17 09:42
Calibration Blank	1702200-CCB6	20170208_0743-010	02/08/17 09:56

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-415.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: TOC2
Project: Alameda
Sequence: 1702200
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702200-ICB1	Non-Volatile Organic Carbon	0.0000	0.30		1.0	mg/L	U	EPA-415.1
1702200-CCB1	Non-Volatile Organic Carbon	0.0000	0.30		1.0	mg/L	U	EPA-415.1
1702200-CCB2	Non-Volatile Organic Carbon	0.0000	0.30		1.0	mg/L	U	EPA-415.1
1702200-CCB3	Non-Volatile Organic Carbon	0.052000	0.30		1.0	mg/L	U	EPA-415.1
1702200-CCB4	Non-Volatile Organic Carbon	0.052000	0.30		1.0	mg/L	U	EPA-415.1
1702200-CCB5	Non-Volatile Organic Carbon	0.0000	0.30		1.0	mg/L	U	EPA-415.1
1702200-CCB6	Non-Volatile Organic Carbon	0.0000	0.30		1.0	mg/L	U	EPA-415.1

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-415.1

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: TOC2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702200

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702200-ICV1	Non-Volatile Organic Carbon	5.0000	4.9710	99.4	mg/L	EPA-415.1
1702200-CCV1	Non-Volatile Organic Carbon	5.0000	5.0640	101	mg/L	EPA-415.1
1702200-CCV2	Non-Volatile Organic Carbon	5.0000	5.0500	101	mg/L	EPA-415.1
1702200-CCV3	Non-Volatile Organic Carbon	5.0000	5.2170	104	mg/L	EPA-415.1
1702200-CCV4	Non-Volatile Organic Carbon	5.0000	5.2450	105	mg/L	EPA-415.1
1702200-CCV5	Non-Volatile Organic Carbon	5.0000	5.2340	105	mg/L	EPA-415.1
1702200-CCV6	Non-Volatile Organic Carbon	5.0000	5.0070	100	mg/L	EPA-415.1

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
EPA-415.1

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/07/17 07:00	1.00	28.00	02/07/17 18:08	1.00	28.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

Raw Data From Instrument TOC2

Raw Data - Calibration Summary

O·I·CORPORATION

Date Prepared: 02/03/2017 **By:**

Date Approved: **By:**

TOC

OI Corporation
College Station, TX 77845 USA

No Customer
None, None - None

Sample Results Summary

Spl #	Vial #	Sample ID	Num Rep	Act Rep	Method	Type	Dil	Customer ID	Mode	Avg. Area (cts)	Avg. Mass (ug)	Avg. Conc (PPM)	Std. Dev	% RSD	Notes
1	-	Clean Up	6	6	DefaultCleanUpMethod	Clean Up	1 : 1	00000000	TIC	391	0.000	0.000	105	26.81	
									TOC	4,296	0.000	0.000	774	18.01	
3	1	TOC-RW	4	4	170202 - 5 mls - Feb 02, 2017; 12-32-00 PM	Standard	1 : 1	00000000	TOC	3,437	0.000	0.000	37	1.09	
4	2	TOC-Std#1-1.000 PPM	4	4	170202 - 5 mls - Feb 02, 2017; 12-32-00 PM	Standard	1 : 1	00000000	TOC	23,927	5.000	1.000	359	1.50	
5	3	TOC-Std#2-5.000 PPM	4	4	170202 - 5 mls - Feb 02, 2017; 12-32-00 PM	Standard	1 : 1	00000000	TOC	104,376	25.000	5.000	1,072	1.03	
6	4	TOC-Std#3-10.000 PPM	4	4	170202 - 5 mls - Feb 02, 2017; 12-32-00 PM	Standard	1 : 1	00000000	TOC	204,913	50.000	10.000	3,090	1.51	

O·I·CORPORATION

Date Prepared: 02/03/2017 **By:**

Date Approved: **By:**

TOC

OI Corporation
College Station, TX 77845 USA

No Customer
None, None - None

Sample Results

Spl #: 1 **Sample ID :** Clean Up **Type :** Clean Up **Date:** 02/02/2017 **Status:** Passed
Vial #: - **Method :** DefaultCleanUpMethod **Dilution** 1 : 1 **Customer ID:** 00000000

Rep #	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	12:44 pm	580	0.000	0.000	5,241	0.000	0.000
2	12:52 pm	276	0.000	0.000	5,339	0.000	0.000
3	1:00 pm	377	0.000	0.000	3,785	0.000	0.000
4	1:07 pm	392	0.000	0.000	3,861	0.000	0.000
5	1:15 pm	317	0.000	0.000	3,681	0.000	0.000
6	1:23 pm	405	0.000	0.000	3,868	0.000	0.000
	Avg.	391	0.000	0.000	4,296	0.000	0.000
	Std.Dev.	105			774		
	% RSD.	26.81			18.01		

Spl #: 3 **Sample ID :** TOC-RW **Type :** Standard **Date:** 02/02/2017 **Status:** Passed
Vial #: 1 **Method :** 170202 - 5 mls - Feb 02, 2017 **Dilution** 1 : 1 **Customer ID:** 00000000

Rep #	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	1:52 pm	-	-	-	3,450	0.000	0.000
2	1:57 pm	-	-	-	3,484	0.000	0.000
3	2:03 pm	-	-	-	3,405	0.000	0.000
4	2:09 pm	-	-	-	3,409	0.000	0.000
	Avg.	-	-	-	3,437	0.000	0.000
	Std.Dev.				37		
	% RSD.				1.09		

O·I·CORPORATION

Date Prepared: 02/03/2017 **By:**

Date Approved: **By:**

TOC

OI Corporation
College Station, TX 77845 USA

No Customer
None, None - None

Spl #:	4	**Sample ID :**	TOC-Std#1-1.000 PPM	**Type :**	Standard	**Date:**	02/02/2017	**Status:**	Passed
Vial #:	2	**Method :**	170202 - 5 mls - Feb 02, 2017	**Dilution**	1 : 1	**Customer ID:**	00000000		

Rep #	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	2:18 pm	-	-	-	24,253	5.000	1.000
2	2:23 pm	-	-	-	23,431	5.000	1.000
3	2:30 pm	-	-	-	24,113	5.000	1.000
4	2:35 pm	-	-	-	23,912	5.000	1.000
	Avg.	-	-	-	23,927	5.000	1.000
	Std.Dev.				359		
	% RSD.				1.50		

Spl #:	5	**Sample ID :**	TOC-Std#2-5.000 PPM	**Type :**	Standard	**Date:**	02/02/2017	**Status:**	Passed
Vial #:	3	**Method :**	170202 - 5 mls - Feb 02, 2017	**Dilution**	1 : 1	**Customer ID:**	00000000		

Rep #	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	2:44 pm	-	-	-	105,158	25.000	5.000
2	2:49 pm	-	-	-	103,461	25.000	5.000
3	2:56 pm	-	-	-	105,440	25.000	5.000
4	3:01 pm	-	-	-	103,446	25.000	5.000
	Avg.	-	-	-	104,376	25.000	5.000
	Std.Dev.				1,072		
	% RSD.				1.03		

O·I·CORPORATION

Date Prepared: 02/03/2017 **By:**

Date Approved: **By:**

TOC

OI Corporation
College Station, TX 77845 USA

No Customer
None, None - None

Spl #:	6	**Sample ID :**	TOC-Std#3-10.000 PPM	**Type :**	Standard	**Date:**	02/02/2017	**Status:**	Passed
Vial #:	4	**Method :**	170202 - 5 mls - Feb 02, 2017	**Dilution**	1 : 1	**Customer ID:**	00000000		

Rep #	Time	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (PPM)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (PPM)
1	3:10 pm	-	-	-	207,672	50.000	10.000
2	3:15 pm	-	-	-	202,531	50.000	10.000
3	3:22 pm	-	-	-	207,489	50.000	10.000
4	3:27 pm	-	-	-	201,960	50.000	10.000
	Avg.	-	-	-	204,913	50.000	10.000
	Std.Dev.				3,090		
	% RSD.				1.51		

O·I·CORPORATION

Date Prepared: 02/03/2017 **By:**

Date Approved: **By:**

TOC

OI Corporation
College Station, TX 77845 USA

No Customer
None, None - None

Method Summary

Method Details

Method Name:	170202 - 5 mls - Feb 02, 2017
Date Created:	02/02/2017
Time Created:	12:32
Created By:	ALW

Pre-Processing

Sample Dilution:	Disabled
Dilution Mode:	Automatic
Dilution Factor:	1 : 1
Sample Stirring in A/S:	Enabled

Times

	React	Detect
TIC	01:30	03:00
TOC	02:00	03:15

Temp

	React	Detect
TIC	70	70
TOC	98	98

Analysis Mode: NPOC Only

Sparging Mode:	Internal
Pre-Acid Volume (mL):	1.000
Sparge Time (mm:ss):	02:00

Outlier Removal Criteria

Additional Replicates:	0
Max. % RSD.	3.00

Peak Detection Parameters

Signal-to-Noise Ratio:	3
Minimum Peak Width (min:sec):	00:30
Peak Resolution to BaseLine(%):	99

Volumes

Sample Volume (mL):	5.000
Acid Volume (mL):	0.500
Persulfate Volume(mL):	1.000

Rinses

Rinse Volume (mL):	10.000
Rinses Per Sample:	1
Rinses Per Replicate:	0

Other

SysPressure:	20.00

Calibration Summary

Calibration Generation

Generation Mode:	Manual
# of Stds:	5
Dilution Factor:	10 : 1
Dilution Volume (mL):	1.000
Add Zero as Std #1:	No

Calibration Pass/Fail Criteria

Parameter	Low	High	Failure
RF (ugC/K-cts)	-	-	-
R2	0.995	1.000	Abort
Offset (area) (cts)	-	-	-
Offset (mass) (ugC)	-	-	-

Calibration Mode

Primary Mode:	TOC
User for ALL Modes:	Enabled

Checks, QC's and Actions

Type	Target (PPM)	Tolerance (+/- %)	1st Failure	2nd Failure
CK Std	n/a	10,000.00	Continue	Continue
QC #1	5.000	10,000.00	Continue	Continue
QC #2	5.000	15,000.00	Continue	Continue
QC #3	1.000	50,000.00	Continue	Continue
QC #4	0.001	100,000.00	Continue	Continue
SST	0.000	0.00	Continue	Continue

O·I·CORPORATION

Date Prepared: 02/03/2017 **By:**

Date Approved: **By:**

TOC

OI Corporation
College Station, TX 77845 USA

No Customer
None, None - None

Calibration Details

Calibration Mode:	TOC	
Date Calibrated:	02/02/2017	
Time Calibrated:	3:27 pm	
Calibrated By:	ALW	
RF (ugC/k-cts):		0.2483
R2:		0.9997
Offset (area)(cts):		3626
Offset (mass)(ugC):		-0.901
Reagent Blank (cts):		1,744

Calibration Settings

Stock Conc. For Dilutions: (PPM)	1,000.000
# of Reagent Blanks:	2
Total Flowrate w/EFC:	50 ml/min
Check Standards:	Subtract Offset
Regression type:	Unweighted

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **WET**
Method: **SM-4500SD**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

SM-4500SD

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-09-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

SM-4500SD

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: SPEC06

Analyte	DL	LOD	LOQ	Units
Total Sulfide	0.05	0.1	0.1	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
SM-4500SD

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID:
Sampled: 02/06/17 11:30
Prepared: 02/09/17 12:45
Analyzed: 02/09/17 12:45
Solids: 0.00
Preparation: No Prep
Initial/Final: 25 ml / 25 ml
Batch: B[B0841
Sequence: 1702317
Calibration: UNASSIGNED
Instrument: SPEC06

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
18496-25-8	Total Sulfide	0.10	0.050	0.10	0.10	1	U	SM-4500SD

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

SM-4500SD

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0841
Batch Matrix: Water
Preparation: No Prep

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M051A_170206	1703278-04		02/09/17 12:45	
Blank	B[B0841-BLK1		02/09/17 12:45	
LCS	B[B0841-BS1		02/09/17 12:45	
M051A_170206	B[B0841-DUP1		02/09/17 12:45	
M051A_170206	B[B0841-MS1		02/09/17 12:45	
M051A_170206	B[B0841-MSD1		02/09/17 12:45	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
SM-4500SD

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0841-BLK1	File ID:	
Prepared:	02/09/17 12:45	Preparation:	No Prep	Initial/Final:	25 ml / 25 ml
Analyzed:	02/09/17 12:45	Instrument:	SPEC06		
Batch:	B[B0841	Sequence:	1702317	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
18496-25-8	Total Sulfide	0.10	0.050	0.10	0.10	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

M051A_170206

DUPLICATES
SM-4500SD

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0841
Preparation: No Prep
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0841-DUP1
Lab Source ID: 1703278-04
Initial/Final: 25 ml / 25 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Total Sulfide	10	ND		ND				SM-4500SD

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SM-4500SD

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0841
Laboratory ID: B[B0841-MS1
Preparation: No Prep
Initial/Final: 25 ml / 25 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Total Sulfide	0.50000	ND	0.46541	93.1	80 - 120

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Sulfide	0.50000	0.46889	93.8	0.745	10	80 - 120

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
SM-4500SD

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Matrix:	Water		
Batch:	B[B0841	Laboratory ID:	B[B0841-BS1
Preparation:	No Prep	Initial/Final:	25 ml / 25 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Total Sulfide	0.50000	0.50714	101	90 - 110

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

SM-4500SD

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702317	Instrument:	SPEC06
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702317-ICV1		02/09/17 12:45
Initial Cal Blank	1702317-ICB1		02/09/17 12:45
LCS	B[B0841-BS1		02/09/17 12:45
Blank	B[B0841-BLK1		02/09/17 12:45
M051A_170206	1703278-04		02/09/17 12:45
M051A_170206	B[B0841-DUP1		02/09/17 12:45
M051A_170206	B[B0841-MS1		02/09/17 12:45
M051A_170206	B[B0841-MSD1		02/09/17 12:45
Calibration Check	1702317-CCV1		02/09/17 12:45
Calibration Blank	1702317-CCB1		02/09/17 12:45
Calibration Check	1702317-CCV2		02/09/17 12:45
Calibration Blank	1702317-CCB2		02/09/17 12:45

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
SM-4500SD

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: SPEC06
Project: Alameda
Sequence: 1702317
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702317-CCB1	Total Sulfide	0.0000	0.050		0.10	mg/L	U	SM-4500SD
1702317-CCB2	Total Sulfide	0.0000	0.050		0.10	mg/L	U	SM-4500SD
1702317-ICB1	Total Sulfide	0.0000	0.050		0.10	mg/L	U	SM-4500SD

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

SM-4500SD

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: SPEC06
Control Limt: +/- %

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702317

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702317-CCV1	Total Sulfide	0.50000	0.50714	101	mg/L	SM-4500SD
1702317-CCV2	Total Sulfide	0.50000	0.50714	101	mg/L	SM-4500SD
1702317-ICV1	Total Sulfide	0.50000	0.50019	100	mg/L	SM-4500SD

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY
SM-4500SD

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/09/17 12:45	3.00	7.00	02/09/17 12:45	3.00	7.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/9/2017 3:04:13PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppb units)

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

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Case Narrative

Analyses Requested: Metals
Submission Number: 17-03278

Method 6020B-PPB
Instrument ID: Perkins Elmer Élan 6100 (PE-EL2)
Sample Volume(s): 10ml
Digest Volume(s): 10ml

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and preparations took place within holding times.

Calibration: An initial calibration criterion was met. Frequency and accuracy criteria for initial calibration verification and continuing calibration verifications were met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL. Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameters were within QC limits.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy and precision requirements were met, except EPA Method 6020-PPB batch ID B[B01305 the sample Relative Percent Difference for Arsenic was outside QC limits.

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:40
Received By:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		AF								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Date Numbering Completed By: Date/Time: 2-6-17 2310
Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMPREC.rev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ (W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received		
☒ YES ☐ NO	Emissivity: 0.97 Container: VOA Thermometer ID: 207 Temperature: (A) 1.5 °C / (C) 1.7 °C	Date/Time 2/6 2150 Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL				A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: Date/Time: 2-6-17 2315

A = Actual / C = Corrected

Rev 21 05/23/2016
(S:\WP\Doc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Numbering Completed By: Date/Time: 2/6/17 0360
Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	/									
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RB								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **METALS-PPB**
Method: **EPA-6020**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M041E_170206	1703278-03
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: PE-EL2

Analyte	DL	LOD	LOQ	Units
Antimony	0.065	0.5	2	ug/L
Arsenic	0.38	1	2	ug/L
Barium	0.066	0.25	1	ug/L
Beryllium	0.05	0.25	1	ug/L
Cadmium	0.034	0.5	1	ug/L
Chromium	0.15	0.75	3	ug/L
Cobalt	0.011	0.5	1	ug/L
Copper	0.32	1	2	ug/L
Lead	0.021	0.5	1	ug/L
Molybdenum	0.033	0.5	1	ug/L
Nickel	0.15	1	2	ug/L
Selenium	0.25	1	2	ug/L
Silver	0.015	0.5	1	ug/L
Thallium	0.025	0.5	1	ug/L
Vanadium	0.39	1.5	3	ug/L
Zinc	2.2	2.5	5	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6020

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: PE_EL2_170215-113
Sampled: 02/06/17 14:30
Prepared: 02/15/17 09:17
Analyzed: 02/15/17 17:54
Solids: 0.00
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml
Batch: B[B1305
Sequence: 1702708
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-36-0	Antimony	0.50	0.065	0.50	2.0	1	U	EPA-6020
7440-38-2	Arsenic	1.0	0.38	1.0	2.0	1	U	EPA-6020
7440-39-3	Barium	0.25	0.066	0.25	1.0	1	U	EPA-6020
7440-41-7	Beryllium	0.25	0.050	0.25	1.0	1	U	EPA-6020
7440-43-9	Cadmium	0.50	0.034	0.50	1.0	1	U	EPA-6020
7440-47-3	Chromium	0.75	0.15	0.75	3.0	1	U	EPA-6020
7440-48-4	Cobalt	0.50	0.011	0.50	1.0	1	U	EPA-6020
7440-50-8	Copper	1.2	0.32	1.0	2.0	1	J	EPA-6020
7439-92-1	Lead	0.50	0.021	0.50	1.0	1	U	EPA-6020
7439-98-7	Molybdenum	0.50	0.033	0.50	1.0	1	U	EPA-6020
7782-49-2	Selenium	1.0	0.25	1.0	2.0	1	U	EPA-6020
7440-28-0	Thallium	0.50	0.025	0.50	1.0	1	U	EPA-6020
7440-66-6	Zinc	2.5	2.2	2.5	5.0	1	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6020

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: PE_EL2_170216-093
Sampled: 02/06/17 14:30
Prepared: 02/15/17 09:17
Analyzed: 02/16/17 14:45
Solids: 0.00
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml
Batch: B[B1305
Sequence: 1702795
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-02-0	Nickel	1.0	0.15	1.0	2.0	1	U	EPA-6020
7440-22-4	Silver	0.50	0.015	0.50	1.0	1	U	EPA-6020
7440-62-2	Vanadium	1.5	0.39	1.5	3.0	1	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6020

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: PE_EL2_170215-114
Sampled: 02/06/17 08:45
Prepared: 02/15/17 09:17
Analyzed: 02/15/17 17:57
Solids: 0.00
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml
Batch: B[B1305
Sequence: 1702708
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-36-0	Antimony	0.50	0.065	0.50	2.0	1	U	EPA-6020
7440-38-2	Arsenic	19	0.38	1.0	2.0	1		EPA-6020
7440-39-3	Barium	200	0.066	0.25	1.0	1		EPA-6020
7440-41-7	Beryllium	0.25	0.050	0.25	1.0	1	U	EPA-6020
7440-43-9	Cadmium	0.50	0.034	0.50	1.0	1	U	EPA-6020
7440-47-3	Chromium	4.1	0.15	0.75	3.0	1		EPA-6020
7440-48-4	Cobalt	1.3	0.011	0.50	1.0	1		EPA-6020
7440-50-8	Copper	2.4	0.32	1.0	2.0	1		EPA-6020
7439-92-1	Lead	16	0.021	0.50	1.0	1		EPA-6020
7439-98-7	Molybdenum	2.9	0.033	0.50	1.0	1		EPA-6020
7782-49-2	Selenium	48	0.25	1.0	2.0	1		EPA-6020
7440-28-0	Thallium	0.50	0.025	0.50	1.0	1	U	EPA-6020
7440-66-6	Zinc	29	2.2	2.5	5.0	1		EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6020

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: PE_EL2_170216-094
Sampled: 02/06/17 08:45
Prepared: 02/15/17 09:17
Analyzed: 02/16/17 14:48
Solids: 0.00
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml
Batch: B[B1305
Sequence: 1702795
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-02-0	Nickel	6.7	0.15	1.0	2.0	1		EPA-6020
7440-22-4	Silver	0.50	0.015	0.50	1.0	1	U	EPA-6020
7440-62-2	Vanadium	1.5	0.39	1.5	3.0	1	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6020

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: PE_EL2_170215-065
Sampled: 02/06/17 11:30
Prepared: 02/15/17 09:17
Analyzed: 02/15/17 14:41
Solids: 0.00
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml
Batch: B[B1305
Sequence: 1702708
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-36-0	Antimony	0.50	0.065	0.50	2.0	1	U	EPA-6020
7440-38-2	Arsenic	6.2	0.38	1.0	2.0	1		EPA-6020
7440-39-3	Barium	97	0.066	0.25	1.0	1		EPA-6020
7440-41-7	Beryllium	0.25	0.050	0.25	1.0	1	U	EPA-6020
7440-43-9	Cadmium	0.50	0.034	0.50	1.0	1	U	EPA-6020
7440-47-3	Chromium	2.3	0.15	0.75	3.0	1	J	EPA-6020
7440-48-4	Cobalt	0.50	0.011	0.50	1.0	1	U	EPA-6020
7440-50-8	Copper	1.0	0.32	1.0	2.0	1	U	EPA-6020
7439-92-1	Lead	0.64	0.021	0.50	1.0	1	J	EPA-6020
7439-98-7	Molybdenum	0.65	0.033	0.50	1.0	1	J	EPA-6020
7440-02-0	Nickel	2.2	0.15	1.0	2.0	1		EPA-6020
7782-49-2	Selenium	1.0	0.25	1.0	2.0	1	U	EPA-6020
7440-28-0	Thallium	0.50	0.025	0.50	1.0	1	U	EPA-6020
7440-66-6	Zinc	4.3	2.2	2.5	5.0	1	J	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6020

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: PE_EL2_170216-084
Sampled: 02/06/17 11:30
Prepared: 02/15/17 09:17
Analyzed: 02/16/17 14:07
Solids: 0.00
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml
Batch: B[B1305
Sequence: 1702795
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-22-4	Silver	0.50	0.015	0.50	1.0	1	U	EPA-6020
7440-62-2	Vanadium	1.5	0.39	1.5	3.0	1	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B1305
Batch Matrix: Water
Preparation: EPA 3005A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	PE_EL2_170215-113	02/15/17 09:17	
EB07_170206	1703278-02	PE_EL2_170216-093	02/15/17 09:17	
M041E_170206	1703278-03	PE_EL2_170215-114	02/15/17 09:17	
M041E_170206	1703278-03	PE_EL2_170216-094	02/15/17 09:17	
M051A_170206	1703278-04	PE_EL2_170216-084	02/15/17 09:17	
M051A_170206	1703278-04	PE_EL2_170215-065	02/15/17 09:17	
Blank	B[B1305-BLK1	PE_EL2_170215-071	02/15/17 09:17	
Blank	B[B1305-BLK2	PE_EL2_170216-064	02/15/17 09:17	
LCS	B[B1305-BS1	PE_EL2_170215-063	02/15/17 09:17	
LCS	B[B1305-BS2	PE_EL2_170216-063	02/15/17 09:17	
M051A_170206	B[B1305-DUP1	PE_EL2_170215-066	02/15/17 09:17	
M051A_170206	B[B1305-DUP2	PE_EL2_170216-085	02/15/17 09:17	
M051A_170206	B[B1305-MS1	PE_EL2_170215-068	02/15/17 09:17	
M051A_170206	B[B1305-MS2	PE_EL2_170216-087	02/15/17 09:17	
M051A_170206	B[B1305-MSD1	PE_EL2_170215-069	02/15/17 09:17	
M051A_170206	B[B1305-MSD2	PE_EL2_170216-088	02/15/17 09:17	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories		SDG:	17-03278	
Client:	AMEC Environmental & Infrastructure $AMCN		Project:	Alameda	
Matrix:	Water	Laboratory ID:	B[B1305-BLK1	File ID:	PE_EL2_170215-071
Prepared:	02/15/17 09:17	Preparation:	EPA 3005A	Initial/Final:	10 ml / 10 ml
Analyzed:	02/15/17 15:05	Instrument:	PE-EL2		
Batch:	B[B1305	Sequence:	1702708	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
7440-36-0	Antimony	0.50	0.065	0.50	2.0	U
7440-38-2	Arsenic	1.0	0.38	1.0	2.0	U
7440-39-3	Barium	0.25	0.066	0.25	1.0	U
7440-41-7	Beryllium	0.25	0.050	0.25	1.0	U
7440-43-9	Cadmium	0.50	0.034	0.50	1.0	U
7440-47-3	Chromium	0.75	0.15	0.75	3.0	U
7440-48-4	Cobalt	0.50	0.011	0.50	1.0	U
7440-50-8	Copper	1.0	0.32	1.0	2.0	U
7439-92-1	Lead	0.50	0.021	0.50	1.0	U
7439-98-7	Molybdenum	0.50	0.033	0.50	1.0	U
7440-02-0	Nickel	1.0	0.15	1.0	2.0	U
7782-49-2	Selenium	1.0	0.25	1.0	2.0	U
7440-28-0	Thallium	0.50	0.025	0.50	1.0	U
7440-66-6	Zinc	2.5	2.2	2.5	5.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories		SDG:	17-03278	
Client:	AMEC Environmental & Infrastructure $AMCN		Project:	Alameda	
Matrix:	Water	Laboratory ID:	B[B1305-BLK2	File ID:	PE_EL2_170216-064
Prepared:	02/15/17 09:17	Preparation:	EPA 3005A	Initial/Final:	10 ml / 10 ml
Analyzed:	02/16/17 12:49	Instrument:	PE-EL2		
Batch:	B[B1305	Sequence:	1702795	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
7440-22-4	Silver	0.50	0.015	0.50	1.0	U
7440-62-2	Vanadium	1.5	0.39	1.5	3.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

M051A_170206

DUPLICATES
EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B1305
Preparation: EPA 3005A
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B1305-DUP1
Lab Source ID: 1703278-04
Initial/Final: 10 ml / 10 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
Antimony	20	ND		ND				EPA-6020
Arsenic	20	6.2340		4.3200		36.3	*	EPA-6020
Barium	20	97.373		98.419		1.07		EPA-6020
Beryllium	20	0.24500		0.11800		70.0		EPA-6020
Cadmium	20	0.048000		0.044000		8.70		EPA-6020
Chromium	20	2.2930		2.6460		14.3		EPA-6020
Cobalt	20	0.33900		0.34300		1.17		EPA-6020
Copper	20	0.70800		0.80000		12.2		EPA-6020
Lead	20	0.64400		0.64500		0.155		EPA-6020
Molybdenum	20	0.64600		0.60200		7.05		EPA-6020
Nickel	20	2.2130		2.1090		4.81		EPA-6020
Selenium	20	0.31300		ND				EPA-6020
Thallium	20	ND		ND				EPA-6020
Zinc	20	4.2920		3.6690		15.7		EPA-6020

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

M051A_170206

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B1305
Preparation: EPA 3005A
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B1305-DUP2
Lab Source ID: 1703278-04
Initial/Final: 10 ml / 10 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
Silver	20	ND		ND				EPA-6020
Vanadium	20	ND		ND				EPA-6020

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B1305
Laboratory ID: B[B1305-MS1
Preparation: EPA 3005A
Initial/Final: 9.8 ml / 10 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Antimony	40.816	ND	40.297	98.7	85 - 117
Arsenic	102.04	6.2340	118.12	110	84 - 116
Barium	40.816	97.373	138.36	100	86 - 114
Beryllium	40.816	0.24500	39.191	95.4	83 - 121
Cadmium	40.816	0.048000	41.268	101	87 - 115
Chromium	40.816	2.2930	39.755	91.8	85 - 116
Cobalt	40.816	0.33900	37.022	89.9	86 - 115
Copper	102.04	0.70800	96.612	94.0	85 - 118
Lead	102.04	0.64400	98.032	95.4	88 - 115
Molybdenum	40.816	0.64600	40.093	96.6	83 - 115
Nickel	102.04	2.2130	93.200	89.2	85 - 117
Selenium	102.04	0.31300	119.85	117	80 - 120
Thallium	40.816	ND	39.113	95.8	82 - 116
Zinc	102.04	4.2920	111.02	105	83 - 119

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Antimony	40.816	41.120	101	2.02	20	85 - 117
Arsenic	102.04	117.27	109	0.721	20	84 - 116
Barium	40.816	139.79	104	1.03	20	86 - 114
Beryllium	40.816	39.200	95.4	0.0234	20	83 - 121
Cadmium	40.816	41.133	101	0.329	20	87 - 115
Chromium	40.816	40.902	94.6	2.84	20	85 - 116
Cobalt	40.816	37.771	91.7	2.00	20	86 - 115
Copper	102.04	95.309	92.7	1.36	20	85 - 118

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B1305
Laboratory ID: B[B1305-MSD1
Preparation: EPA 3005A
Initial/Final: 9.8 ml / 10 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Lead	102.04	99.023	96.4	1.01	20	88 - 115
Molybdenum	40.816	40.861	98.5	1.90	20	83 - 115
Nickel	102.04	94.838	90.8	1.74	20	85 - 117
Selenium	102.04	120.54	118	0.570	20	80 - 120
Thallium	40.816	39.627	97.1	1.30	20	82 - 116
Zinc	102.04	114.52	108	3.11	20	83 - 119

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B1305
Laboratory ID: B[B1305-MS2
Preparation: EPA 3005A
Initial/Final: 9.8 ml / 10 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Silver	40.816	ND	37.123	91.0	85 - 116
Vanadium	40.816	ND	35.240	86.3	86 - 115

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Silver	40.816	37.752	92.5	1.68	20	85 - 116
Vanadium	40.816	35.338	86.6	0.278	20	86 - 115

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B1305
Laboratory ID: B[B1305-BS1
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Antimony	40.000	38.770	96.9	85 - 117
Arsenic	100.00	90.710	90.7	84 - 116
Barium	40.000	37.642	94.1	86 - 114
Beryllium	40.000	38.898	97.2	83 - 121
Cadmium	40.000	38.473	96.2	87 - 115
Chromium	40.000	37.652	94.1	85 - 116
Cobalt	40.000	38.652	96.6	86 - 115
Copper	100.00	94.575	94.6	85 - 118
Lead	100.00	94.693	94.7	88 - 115
Molybdenum	40.000	37.116	92.8	83 - 115
Nickel	100.00	97.794	97.8	85 - 117
Selenium	100.00	94.972	95.0	80 - 120
Thallium	40.000	37.838	94.6	82 - 116
Zinc	100.00	95.112	95.1	83 - 119

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B1305
Laboratory ID: B[B1305-BS2
Preparation: EPA 3005A
Initial/Final: 10 ml / 10 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Silver	40.000	40.059	100	85 - 116
Vanadium	40.000	37.944	94.9	86 - 115

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702708
Instrument: PE-EL2
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702708-ICV1	PE_EL2_170215-012	02/15/17 11:20
Initial Cal Blank	1702708-ICB1	PE_EL2_170215-014	02/15/17 11:28
MRL Check	1702708-CRL1	PE_EL2_170215-015	02/15/17 11:32
MRL Check	1702708-CRL2	PE_EL2_170215-016	02/15/17 11:39
Interference Check B	1702708-IFB1	PE_EL2_170215-017	02/15/17 11:44
Interference Check A	1702708-IFA1	PE_EL2_170215-018	02/15/17 11:47
Calibration Check	1702708-CCV5	PE_EL2_170215-061	02/15/17 14:28
Calibration Blank	1702708-CCB5	PE_EL2_170215-062	02/15/17 14:31
LCS	B[B1305-BS1	PE_EL2_170215-063	02/15/17 14:34
M051A_170206	1703278-04	PE_EL2_170215-065	02/15/17 14:41
M051A_170206	B[B1305-DUP1	PE_EL2_170215-066	02/15/17 14:45
M051A_170206	1702708-SRD1	PE_EL2_170215-067	02/15/17 14:48
M051A_170206	B[B1305-MS1	PE_EL2_170215-068	02/15/17 14:52
M051A_170206	B[B1305-MSD1	PE_EL2_170215-069	02/15/17 14:55
Blank	B[B1305-BLK1	PE_EL2_170215-071	02/15/17 15:05
Calibration Check	1702708-CCV6	PE_EL2_170215-073	02/15/17 15:13
Calibration Blank	1702708-CCB6	PE_EL2_170215-074	02/15/17 15:16
Calibration Check	1702708-CCVA	PE_EL2_170215-111	02/15/17 17:46
Calibration Blank	1702708-CCBA	PE_EL2_170215-112	02/15/17 17:49
EB07_170206	1703278-02	PE_EL2_170215-113	02/15/17 17:54
M041E_170206	1703278-03	PE_EL2_170215-114	02/15/17 17:57
Calibration Check	1702708-CCVB	PE_EL2_170215-119	02/15/17 18:15
Calibration Blank	1702708-CCBB	PE_EL2_170215-120	02/15/17 18:18
Calibration Check	1702708-CCVC	PE_EL2_170215-126	02/15/17 18:42
Calibration Blank	1702708-CCBC	PE_EL2_170215-127	02/15/17 18:46
Calibration Check	1702708-CCVD	PE_EL2_170215-132	02/15/17 19:04

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702708	Instrument:	PE-EL2
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Blank	1702708-CCBD	PE_EL2_170215-133	02/15/17 19:08
Calibration Check	1702708-CCVE	PE_EL2_170215-140	02/15/17 19:35
Calibration Blank	1702708-CCBE	PE_EL2_170215-141	02/15/17 19:39

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702795
Instrument: PE-EL2
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702795-ICV1	PE_EL2_170216-014	02/16/17 08:10
Initial Cal Blank	1702795-ICB1	PE_EL2_170216-016	02/16/17 08:18
Calibration Check	1702795-CCV1	PE_EL2_170216-037	02/16/17 10:53
Calibration Blank	1702795-CCB1	PE_EL2_170216-038	02/16/17 10:57
MRL Check	1702795-CRL1	PE_EL2_170216-039	02/16/17 11:00
Calibration Check	1702795-CCV2	PE_EL2_170216-043	02/16/17 11:27
Calibration Blank	1702795-CCB2	PE_EL2_170216-044	02/16/17 11:30
Calibration Check	1702795-CCV3	PE_EL2_170216-052	02/16/17 11:58
Calibration Blank	1702795-CCB3	PE_EL2_170216-053	02/16/17 12:02
Interference Check A	1702795-IFA1	PE_EL2_170216-055	02/16/17 12:17
Interference Check B	1702795-IFB1	PE_EL2_170216-056	02/16/17 12:21
Calibration Check	1702795-CCV4	PE_EL2_170216-061	02/16/17 12:38
Calibration Blank	1702795-CCB4	PE_EL2_170216-062	02/16/17 12:42
LCS	B[B1305-BS2	PE_EL2_170216-063	02/16/17 12:46
Blank	B[B1305-BLK2	PE_EL2_170216-064	02/16/17 12:49
Calibration Check	1702795-CCV5	PE_EL2_170216-067	02/16/17 13:03
Calibration Blank	1702795-CCB5	PE_EL2_170216-068	02/16/17 13:07
Calibration Check	1702795-CCV6	PE_EL2_170216-082	02/16/17 14:00
Calibration Blank	1702795-CCB6	PE_EL2_170216-083	02/16/17 14:03
M051A_170206	1703278-04	PE_EL2_170216-084	02/16/17 14:07
M051A_170206	B[B1305-DUP2	PE_EL2_170216-085	02/16/17 14:10
M051A_170206	1702795-SRD2	PE_EL2_170216-086	02/16/17 14:14
M051A_170206	B[B1305-MS2	PE_EL2_170216-087	02/16/17 14:17
M051A_170206	B[B1305-MSD2	PE_EL2_170216-088	02/16/17 14:21
Calibration Check	1702795-CCV7	PE_EL2_170216-091	02/16/17 14:31
Calibration Blank	1702795-CCB7	PE_EL2_170216-092	02/16/17 14:35

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702795	Instrument:	PE-EL2
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
EB07_170206	1703278-02	PE_EL2_170216-093	02/16/17 14:45
M041E_170206	1703278-03	PE_EL2_170216-094	02/16/17 14:48
Calibration Check	1702795-CCV8	PE_EL2_170216-099	02/16/17 15:05
Calibration Blank	1702795-CCB8	PE_EL2_170216-100	02/16/17 15:09
Calibration Check	1702795-CCV9	PE_EL2_170216-109	02/16/17 15:44
Calibration Blank	1702795-CCB9	PE_EL2_170216-110	02/16/17 15:48
Calibration Check	1702795-CCVA	PE_EL2_170216-116	02/16/17 16:10
Calibration Blank	1702795-CCBA	PE_EL2_170216-117	02/16/17 16:13
Calibration Check	1702795-CCVB	PE_EL2_170216-122	02/16/17 16:38
Calibration Blank	1702795-CCBB	PE_EL2_170216-123	02/16/17 16:41

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Project: Alameda
Sequence: 1702708
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702708-ICB1	Antimony	-0.0090000	0.065		2.0	ug/L	U	EPA-6020
	Arsenic	-0.10400	0.38		2.0	ug/L	U	EPA-6020
	Barium	-0.012000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	0.050000	0.050		1.0	ug/L	J	EPA-6020
	Cadmium	0.029000	0.034		1.0	ug/L	U	EPA-6020
	Chromium	-0.18200	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	-0.0020000	0.011		1.0	ug/L	U	EPA-6020
	Copper	-0.053000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.0010000	0.021		1.0	ug/L	U	EPA-6020
	Molybdenum	0.015000	0.033		1.0	ug/L	U	EPA-6020
	Nickel	-0.017000	0.15		2.0	ug/L	U	EPA-6020
	Selenium	-0.16100	0.25		2.0	ug/L	U	EPA-6020
	Thallium	-0.011000	0.025		1.0	ug/L	U	EPA-6020
	Zinc	-0.15600	2.2		5.0	ug/L	U	EPA-6020
1702708-CCB5	Antimony	0.16000	0.065		2.0	ug/L	J	EPA-6020
	Arsenic	-0.69600	0.38		2.0	ug/L	U	EPA-6020
	Barium	0.0000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	0.072000	0.050		1.0	ug/L	J	EPA-6020
	Cadmium	0.050000	0.034		1.0	ug/L	J	EPA-6020
	Chromium	0.020000	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	0.0020000	0.011		1.0	ug/L	U	EPA-6020
	Copper	0.026000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.013000	0.021		1.0	ug/L	U	EPA-6020
	Molybdenum	0.092000	0.033		1.0	ug/L	J	EPA-6020
	Nickel	-0.023000	0.15		2.0	ug/L	U	EPA-6020
	Selenium	0.25600	0.25		2.0	ug/L	J	EPA-6020
	Thallium	0.021000	0.025		1.0	ug/L	U	EPA-6020
	Zinc	-0.024000	2.2		5.0	ug/L	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Project: Alameda
Sequence: 1702708
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702708-CCB6	Antimony	0.45300	0.065		2.0	ug/L	J	EPA-6020
	Arsenic	-0.46300	0.38		2.0	ug/L	U	EPA-6020
	Barium	0.0060000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	0.037000	0.050		1.0	ug/L	U	EPA-6020
	Cadmium	0.050000	0.034		1.0	ug/L	J	EPA-6020
	Chromium	0.086000	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	0.0070000	0.011		1.0	ug/L	U	EPA-6020
	Copper	-0.038000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.0070000	0.021		1.0	ug/L	U	EPA-6020
	Molybdenum	0.092000	0.033		1.0	ug/L	J	EPA-6020
	Nickel	-0.082000	0.15		2.0	ug/L	U	EPA-6020
	Selenium	0.28800	0.25		2.0	ug/L	J	EPA-6020
	Thallium	0.020000	0.025		1.0	ug/L	U	EPA-6020
	Zinc	-0.12300	2.2		5.0	ug/L	U	EPA-6020
1702708-CCBA	Antimony	0.051000	0.065		2.0	ug/L	U	EPA-6020
	Arsenic	0.17800	0.38		2.0	ug/L	U	EPA-6020
	Barium	0.010000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	-0.019000	0.050		1.0	ug/L	U	EPA-6020
	Cadmium	-0.043000	0.034		1.0	ug/L	U	EPA-6020
	Chromium	-0.45800	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	0.0070000	0.011		1.0	ug/L	U	EPA-6020
	Copper	-0.051000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.012000	0.021		1.0	ug/L	U	EPA-6020
	Molybdenum	0.13000	0.033		1.0	ug/L	J	EPA-6020
	Nickel	-0.087000	0.15		2.0	ug/L	U	EPA-6020
	Selenium	0.25800	0.25		2.0	ug/L	J	EPA-6020
	Thallium	0.032000	0.025		1.0	ug/L	J	EPA-6020
	Zinc	-0.12100	2.2		5.0	ug/L	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Project: Alameda
Sequence: 1702708
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702708-CCBB	Antimony	0.18500	0.065		2.0	ug/L	J	EPA-6020
	Arsenic	-0.0080000	0.38		2.0	ug/L	U	EPA-6020
	Barium	0.013000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	-0.074000	0.050		1.0	ug/L	U	EPA-6020
	Cadmium	-0.045000	0.034		1.0	ug/L	U	EPA-6020
	Chromium	-0.032000	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	0.011000	0.011		1.0	ug/L	J	EPA-6020
	Copper	-0.092000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.0050000	0.021		1.0	ug/L	U	EPA-6020
	Molybdenum	0.11200	0.033		1.0	ug/L	J	EPA-6020
	Nickel	0.23400	0.15		2.0	ug/L	J	EPA-6020
	Selenium	-0.18200	0.25		2.0	ug/L	U	EPA-6020
	Thallium	0.035000	0.025		1.0	ug/L	J	EPA-6020
	Zinc	-0.36700	2.2		5.0	ug/L	U	EPA-6020
1702708-CCBC	Antimony	0.49000	0.065		2.0	ug/L	J	EPA-6020
	Arsenic	-0.19200	0.38		2.0	ug/L	U	EPA-6020
	Barium	0.0030000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	-0.029000	0.050		1.0	ug/L	U	EPA-6020
	Cadmium	-0.032000	0.034		1.0	ug/L	U	EPA-6020
	Chromium	-0.57100	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	-0.0070000	0.011		1.0	ug/L	U	EPA-6020
	Copper	-0.040000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.0070000	0.021		1.0	ug/L	U	EPA-6020
	Molybdenum	0.091000	0.033		1.0	ug/L	J	EPA-6020
	Nickel	-0.065000	0.15		2.0	ug/L	U	EPA-6020
	Selenium	0.14600	0.25		2.0	ug/L	U	EPA-6020
	Thallium	0.040000	0.025		1.0	ug/L	J	EPA-6020
	Zinc	-0.34500	2.2		5.0	ug/L	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Project: Alameda
Sequence: 1702708
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702708-CCBD	Antimony	0.23900	0.065		2.0	ug/L	J	EPA-6020
	Arsenic	0.15800	0.38		2.0	ug/L	U	EPA-6020
	Barium	-0.0020000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	-0.018000	0.050		1.0	ug/L	U	EPA-6020
	Cadmium	-0.050000	0.034		1.0	ug/L	U	EPA-6020
	Chromium	-0.42900	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	-0.0030000	0.011		1.0	ug/L	U	EPA-6020
	Copper	0.044000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.018000	0.021		1.0	ug/L	U	EPA-6020
	Molybdenum	0.20500	0.033		1.0	ug/L	J	EPA-6020
	Nickel	0.62600	0.15		2.0	ug/L	J	EPA-6020
	Selenium	0.37800	0.25		2.0	ug/L	J	EPA-6020
	Thallium	0.037000	0.025		1.0	ug/L	J	EPA-6020
	Zinc	-0.084000	2.2		5.0	ug/L	U	EPA-6020
1702708-CCBE	Antimony	0.30400	0.065		2.0	ug/L	J	EPA-6020
	Arsenic	0.14700	0.38		2.0	ug/L	U	EPA-6020
	Barium	0.025000	0.066		1.0	ug/L	U	EPA-6020
	Beryllium	0.010000	0.050		1.0	ug/L	U	EPA-6020
	Cadmium	-0.012000	0.034		1.0	ug/L	U	EPA-6020
	Chromium	-0.37300	0.15		3.0	ug/L	U	EPA-6020
	Cobalt	0.0050000	0.011		1.0	ug/L	U	EPA-6020
	Copper	-0.039000	0.32		2.0	ug/L	U	EPA-6020
	Lead	0.031000	0.021		1.0	ug/L	J	EPA-6020
	Molybdenum	0.21300	0.033		1.0	ug/L	J	EPA-6020
	Nickel	0.22700	0.15		2.0	ug/L	J	EPA-6020
	Selenium	0.73600	0.25		2.0	ug/L	J	EPA-6020
	Thallium	0.059000	0.025		1.0	ug/L	J	EPA-6020
	Zinc	-0.16100	2.2		5.0	ug/L	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Project: Alameda
Sequence: 1702795
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702795-ICB1	Nickel	-0.14800	0.15		2.0	ug/L	U	EPA-6020
	Silver	-0.0070000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-0.38800	0.39		3.0	ug/L	U	EPA-6020
1702795-CCB1	Nickel	0.019000	0.15		2.0	ug/L	U	EPA-6020
	Silver	-0.0020000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-0.87100	0.39		3.0	ug/L	U	EPA-6020
1702795-CCB2	Nickel	0.10500	0.15		2.0	ug/L	U	EPA-6020
	Silver	-0.0010000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-0.88200	0.39		3.0	ug/L	U	EPA-6020
1702795-CCB3	Nickel	0.025000	0.15		2.0	ug/L	U	EPA-6020
	Silver	0.012000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-1.1410	0.39		3.0	ug/L	U	EPA-6020
1702795-CCB4	Nickel	-0.068000	0.15		2.0	ug/L	U	EPA-6020
	Silver	-0.0050000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-0.78500	0.39		3.0	ug/L	U	EPA-6020
1702795-CCB5	Nickel	0.090000	0.15		2.0	ug/L	U	EPA-6020
	Silver	0.0030000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-0.27700	0.39		3.0	ug/L	U	EPA-6020
1702795-CCB6	Nickel	-0.0020000	0.15		2.0	ug/L	U	EPA-6020
	Silver	0.0000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	0.60600	0.39		3.0	ug/L	J	EPA-6020
1702795-CCB7	Nickel	-0.13300	0.15		2.0	ug/L	U	EPA-6020
	Silver	0.0080000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	0.40600	0.39		3.0	ug/L	J	EPA-6020
1702795-CCB8	Nickel	0.14000	0.15		2.0	ug/L	U	EPA-6020
	Silver	0.011000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-0.63900	0.39		3.0	ug/L	U	EPA-6020
1702795-CCB9	Nickel	0.025000	0.15		2.0	ug/L	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6020

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Project: Alameda
Sequence: 1702795
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702795-CCB9	Silver	0.0060000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	0.80900	0.39		3.0	ug/L	J	EPA-6020
1702795-CCBA	Nickel	-0.045000	0.15		2.0	ug/L	U	EPA-6020
	Silver	0.017000	0.015		1.0	ug/L	J	EPA-6020
	Vanadium	-0.94900	0.39		3.0	ug/L	U	EPA-6020
1702795-CCBB	Nickel	-0.11900	0.15		2.0	ug/L	U	EPA-6020
	Silver	0.0060000	0.015		1.0	ug/L	U	EPA-6020
	Vanadium	-0.89600	0.39		3.0	ug/L	U	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702708

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702708-ICV1	Antimony	50.000	49.018	98.0	ug/L	EPA-6020
	Arsenic	125.00	133.90	107	ug/L	EPA-6020
	Barium	50.000	51.427	103	ug/L	EPA-6020
	Beryllium	50.000	48.655	97.3	ug/L	EPA-6020
	Cadmium	50.000	51.824	104	ug/L	EPA-6020
	Chromium	50.000	51.689	103	ug/L	EPA-6020
	Cobalt	50.000	50.850	102	ug/L	EPA-6020
	Copper	125.00	129.44	104	ug/L	EPA-6020
	Lead	125.00	128.96	103	ug/L	EPA-6020
	Molybdenum	50.000	48.957	97.9	ug/L	EPA-6020
	Nickel	125.00	130.27	104	ug/L	EPA-6020
	Selenium	125.00	127.26	102	ug/L	EPA-6020
	Thallium	50.000	51.737	103	ug/L	EPA-6020
	Zinc	125.00	129.89	104	ug/L	EPA-6020
1702708-CCV5	Antimony	40.000	39.577	98.9	ug/L	EPA-6020
	Arsenic	100.00	96.763	96.8	ug/L	EPA-6020
	Barium	40.000	39.081	97.7	ug/L	EPA-6020
	Beryllium	40.000	38.754	96.9	ug/L	EPA-6020
	Cadmium	40.000	40.028	100	ug/L	EPA-6020
	Chromium	40.000	38.762	96.9	ug/L	EPA-6020
	Cobalt	40.000	39.558	98.9	ug/L	EPA-6020
	Copper	100.00	99.412	99.4	ug/L	EPA-6020
	Lead	100.00	99.203	99.2	ug/L	EPA-6020
	Molybdenum	40.000	40.401	101	ug/L	EPA-6020
	Nickel	100.00	99.627	99.6	ug/L	EPA-6020
	Selenium	100.00	95.611	95.6	ug/L	EPA-6020
	Thallium	40.000	39.631	99.1	ug/L	EPA-6020
	Zinc	100.00	99.461	99.5	ug/L	EPA-6020
1702708-CCV6	Antimony	40.000	40.284	101	ug/L	EPA-6020
	Arsenic	100.00	97.548	97.5	ug/L	EPA-6020
	Barium	40.000	39.901	99.8	ug/L	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702708

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702708-CCV6	Beryllium	40.000	40.724	102	ug/L	EPA-6020
	Cadmium	40.000	39.900	99.8	ug/L	EPA-6020
	Chromium	40.000	39.548	98.9	ug/L	EPA-6020
	Cobalt	40.000	40.986	102	ug/L	EPA-6020
	Copper	100.00	99.698	99.7	ug/L	EPA-6020
	Lead	100.00	99.222	99.2	ug/L	EPA-6020
	Molybdenum	40.000	39.915	99.8	ug/L	EPA-6020
	Nickel	100.00	102.28	102	ug/L	EPA-6020
	Selenium	100.00	97.453	97.5	ug/L	EPA-6020
	Thallium	40.000	39.371	98.4	ug/L	EPA-6020
	Zinc	100.00	98.421	98.4	ug/L	EPA-6020
1702708-CCVA	Antimony	40.000	38.760	96.9	ug/L	EPA-6020
	Arsenic	100.00	99.478	99.5	ug/L	EPA-6020
	Barium	40.000	40.130	100	ug/L	EPA-6020
	Beryllium	40.000	40.603	102	ug/L	EPA-6020
	Cadmium	40.000	38.420	96.0	ug/L	EPA-6020
	Chromium	40.000	37.466	93.7	ug/L	EPA-6020
	Cobalt	40.000	38.427	96.1	ug/L	EPA-6020
	Copper	100.00	98.907	98.9	ug/L	EPA-6020
	Lead	100.00	102.14	102	ug/L	EPA-6020
	Molybdenum	40.000	39.091	97.7	ug/L	EPA-6020
	Nickel	100.00	96.751	96.8	ug/L	EPA-6020
	Selenium	100.00	99.208	99.2	ug/L	EPA-6020
	Thallium	40.000	40.398	101	ug/L	EPA-6020
	Zinc	100.00	97.826	97.8	ug/L	EPA-6020
1702708-CCVB	Antimony	40.000	38.772	96.9	ug/L	EPA-6020
	Arsenic	100.00	98.107	98.1	ug/L	EPA-6020
	Barium	40.000	37.580	94.0	ug/L	EPA-6020
	Beryllium	40.000	37.203	93.0	ug/L	EPA-6020
	Cadmium	40.000	39.565	98.9	ug/L	EPA-6020
	Chromium	40.000	40.619	102	ug/L	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702708

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702708-CCVB	Cobalt	40.000	44.042	110	ug/L	EPA-6020
	Copper	100.00	97.671	97.7	ug/L	EPA-6020
	Lead	100.00	99.925	99.9	ug/L	EPA-6020
	Molybdenum	40.000	39.575	98.9	ug/L	EPA-6020
	Nickel	100.00	111.94	112 *	ug/L	EPA-6020
	Selenium	100.00	96.807	96.8	ug/L	EPA-6020
	Thallium	40.000	39.641	99.1	ug/L	EPA-6020
	Zinc	100.00	97.015	97.0	ug/L	EPA-6020
1702708-CCVC	Antimony	40.000	38.930	97.3	ug/L	EPA-6020
	Arsenic	100.00	96.619	96.6	ug/L	EPA-6020
	Barium	40.000	38.525	96.3	ug/L	EPA-6020
	Beryllium	40.000	39.095	97.7	ug/L	EPA-6020
	Cadmium	40.000	40.194	100	ug/L	EPA-6020
	Chromium	40.000	39.162	97.9	ug/L	EPA-6020
	Cobalt	40.000	41.600	104	ug/L	EPA-6020
	Copper	100.00	98.428	98.4	ug/L	EPA-6020
	Lead	100.00	97.805	97.8	ug/L	EPA-6020
	Molybdenum	40.000	38.981	97.5	ug/L	EPA-6020
	Nickel	100.00	104.92	105	ug/L	EPA-6020
	Selenium	100.00	98.413	98.4	ug/L	EPA-6020
	Thallium	40.000	38.856	97.1	ug/L	EPA-6020
	Zinc	100.00	97.522	97.5	ug/L	EPA-6020
1702708-CCVD	Antimony	40.000	38.514	96.3	ug/L	EPA-6020
	Arsenic	100.00	97.289	97.3	ug/L	EPA-6020
	Barium	40.000	37.604	94.0	ug/L	EPA-6020
	Beryllium	40.000	42.010	105	ug/L	EPA-6020
	Cadmium	40.000	39.904	99.8	ug/L	EPA-6020
	Chromium	40.000	39.834	99.6	ug/L	EPA-6020
	Cobalt	40.000	43.327	108	ug/L	EPA-6020
	Copper	100.00	98.532	98.5	ug/L	EPA-6020
	Lead	100.00	97.335	97.3	ug/L	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702708

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702708-CCVD	Molybdenum	40.000	39.885	99.7	ug/L	EPA-6020
	Nickel	100.00	108.81	109	ug/L	EPA-6020
	Selenium	100.00	94.650	94.6	ug/L	EPA-6020
	Thallium	40.000	38.639	96.6	ug/L	EPA-6020
	Zinc	100.00	97.166	97.2	ug/L	EPA-6020
1702708-CCVE	Antimony	40.000	38.292	95.7	ug/L	EPA-6020
	Arsenic	100.00	97.671	97.7	ug/L	EPA-6020
	Barium	40.000	38.758	96.9	ug/L	EPA-6020
	Beryllium	40.000	39.118	97.8	ug/L	EPA-6020
	Cadmium	40.000	39.509	98.8	ug/L	EPA-6020
	Chromium	40.000	38.425	96.1	ug/L	EPA-6020
	Cobalt	40.000	41.190	103	ug/L	EPA-6020
	Copper	100.00	98.195	98.2	ug/L	EPA-6020
	Lead	100.00	96.151	96.2	ug/L	EPA-6020
	Molybdenum	40.000	40.341	101	ug/L	EPA-6020
	Nickel	100.00	102.76	103	ug/L	EPA-6020
	Selenium	100.00	99.471	99.5	ug/L	EPA-6020
	Thallium	40.000	38.548	96.4	ug/L	EPA-6020
	Zinc	100.00	97.823	97.8	ug/L	EPA-6020

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702795

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702795-ICV1	Nickel	125.00	130.19	104	ug/L	EPA-6020
	Silver	50.000	52.018	104	ug/L	EPA-6020
	Vanadium	50.000	50.687	101	ug/L	EPA-6020
1702795-CCV1	Nickel	100.00	105.28	105	ug/L	EPA-6020
	Silver	40.000	41.141	103	ug/L	EPA-6020
	Vanadium	40.000	39.478	98.7	ug/L	EPA-6020
1702795-CCV2	Nickel	100.00	103.25	103	ug/L	EPA-6020
	Silver	40.000	40.262	101	ug/L	EPA-6020
	Vanadium	40.000	39.391	98.5	ug/L	EPA-6020
1702795-CCV3	Nickel	100.00	101.46	101	ug/L	EPA-6020
	Silver	40.000	39.642	99.1	ug/L	EPA-6020
	Vanadium	40.000	39.194	98.0	ug/L	EPA-6020
1702795-CCV4	Nickel	100.00	100.94	101	ug/L	EPA-6020
	Silver	40.000	40.359	101	ug/L	EPA-6020
	Vanadium	40.000	40.071	100	ug/L	EPA-6020
1702795-CCV5	Nickel	100.00	102.21	102	ug/L	EPA-6020
	Silver	40.000	39.365	98.4	ug/L	EPA-6020
	Vanadium	40.000	40.689	102	ug/L	EPA-6020
1702795-CCV6	Nickel	100.00	102.77	103	ug/L	EPA-6020
	Silver	40.000	40.045	100	ug/L	EPA-6020
	Vanadium	40.000	39.753	99.4	ug/L	EPA-6020
1702795-CCV7	Nickel	100.00	102.32	102	ug/L	EPA-6020
	Silver	40.000	40.053	100	ug/L	EPA-6020
	Vanadium	40.000	41.091	103	ug/L	EPA-6020
1702795-CCV8	Nickel	100.00	107.82	108	ug/L	EPA-6020
	Silver	40.000	39.198	98.0	ug/L	EPA-6020
	Vanadium	40.000	40.610	102	ug/L	EPA-6020
1702795-CCV9	Nickel	100.00	98.766	98.8	ug/L	EPA-6020
	Silver	40.000	39.788	99.5	ug/L	EPA-6020
	Vanadium	40.000	39.712	99.3	ug/L	EPA-6020
1702795-CCVA	Nickel	100.00	98.302	98.3	ug/L	EPA-6020

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702795

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702795-CCVA	Silver	40.000	40.780	102	ug/L	EPA-6020
	Vanadium	40.000	37.159	92.9	ug/L	EPA-6020
1702795-CCVB	Nickel	100.00	97.493	97.5	ug/L	EPA-6020
	Silver	40.000	40.691	102	ug/L	EPA-6020
	Vanadium	40.000	38.032	95.1	ug/L	EPA-6020

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Sequence: 1702708

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
1702708-IFB1	Antimony		-0.53300		ug/L
	Arsenic	20.000	20.17	101	ug/L
	Barium		1.4800	*	ug/L
	Beryllium		1.2220	*	ug/L
	Cadmium	20.000	18.45	92.3	ug/L
	Chromium	20.000	20.41	102	ug/L
	Cobalt	20.000	18.37	91.8	ug/L
	Copper	20.000	20.68	103	ug/L
	Lead		0.33900		ug/L
	Molybdenum	2000.0	2,030.91	102	ug/L
	Nickel	20.000	20.49	102	ug/L
	Selenium		-1.5040		ug/L
	Thallium		-0.0070000		ug/L
	Zinc	20.000	22.23	111	ug/L
1702708-IFA1	Antimony		-0.26500		ug/L
	Arsenic		-0.028000		ug/L
	Barium		1.5350	*	ug/L
	Beryllium		0.97100		ug/L
	Cadmium		0.62200		ug/L
	Chromium		1.7700		ug/L
	Cobalt		0.18600		ug/L
	Copper		3.3480	*	ug/L
	Lead		0.21400		ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Sequence: 1702708

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
1702708-IFA1	Molybdenum	2000.0	2,162.90	108	ug/L
	Nickel		2.4170	*	ug/L
	Selenium		-1.4750		ug/L
	Thallium		-0.017000		ug/L
	Zinc		5.8930	*	ug/L

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-EL2
Sequence: 1702795

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
1702795-IFA1	Nickel		2.4860	*	ug/L
	Silver		0.30100		ug/L
	Vanadium		-2.7460		ug/L
1702795-IFB1	Nickel	20.000	20.74	104	ug/L
	Silver	20.000	19.27	96.3	ug/L
	Vanadium		-2.0150		ug/L

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SERIAL DILUTION

EPA-6020

M051A_170206

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Sequence: 1702708
Preparation: B[B1305
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: 1702708-SRD1
Lab Source ID: 1703278-04
Initial/Final: 10 / 10
% Solids:

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method	QC Limits % Difference
Antimony	ND		3.1350				EPA-6020	10
Arsenic	6.2340		2.7850		55.3		EPA-6020	10
Barium	97.373		100.81		3.53		EPA-6020	10
Beryllium	0.24500		ND				EPA-6020	10
Cadmium	0.048000		ND				EPA-6020	10
Chromium	2.2930		ND				EPA-6020	10
Cobalt	0.33900		0.32500		4.13		EPA-6020	10
Copper	0.70800		ND				EPA-6020	10
Lead	0.64400		0.71000		10.2		EPA-6020	10
Molybdenum	0.64600		0.66500		2.94		EPA-6020	10
Nickel	2.2130		ND				EPA-6020	10
Selenium	0.31300		ND				EPA-6020	10
Thallium	ND		ND				EPA-6020	10
Zinc	4.2920		ND				EPA-6020	10

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SERIAL DILUTION

EPA-6020

M051A_170206

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Sequence: 1702795
Preparation: B[B1305
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: 1702795-SRD2
Lab Source ID: 1703278-04
Initial/Final: 10 / 10
% Solids:

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method	QC Limits % Difference
Silver	ND		ND				EPA-6020	10
Vanadium	ND		ND				EPA-6020	10

* Values outside of QC limits

Raw Data From Instrument PE-EL2

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, February 15, 2017 10:56:11
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2.333				ug/L
	B	11	163.335				ug/L
	Al	27	3030.597				ug/L
>	Sc	45	103911.423				ug/L
	V	51	10775.069				ug/L
	Cr	52	2155.802				ug/L
	Cr	53	16445.563				ug/L
	Mn	55	164.668				ug/L
	Co	59	22.333				ug/L
	Ni	60	199.003				ug/L
	Cu	63	73.334				ug/L
	Cu	65	39.000				ug/L
	Zn	66	54.000				ug/L
	Zn	68	87.667				ug/L
>	Ge	72	62516.835				ug/L
	As	75	22.605				ug/L
	Se	77	503.850				ug/L
	Se	82	8.061				ug/L
	Sr	88	77.334				ug/L
	Mo	98	18.452				ug/L
>	Rh	103	68984.635				ug/L
	Ag	107	9.333				ug/L
	Cd	111	3.685				ug/L
	Cd	114	11.457				ug/L
>	In	115	113266.705				ug/L
	Sn	120	144.600				ug/L
	Sb	121	642.027				ug/L
	Ba	137	16.295				ug/L
	Ba	138	64.629				ug/L
>	Tb	159	174162.403				ug/L
	Tl	205	117.668				ug/L
	Pb	208	15.000				ug/L
	Hg	200	2.615				ug/L
	Hg	201	2.667				ug/L
>	Bi	209	109063.176				ug/L
	U	238	4.000				ug/L
	C	13	333.341				ug/L
	W	184	7.999				ug/L

	Pd	106	4.813	ug/L
	Kr	83	12.167	ug/L
	Na	23	1266.771	ug/L
	Mg	24	113.334	ug/L
	K	39	64986.872	ug/L
	Ca	44	2973.909	ug/L
	Ti	47	76.667	ug/L
	Sc-1	45	103911.423	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		

W	184
Pd	106
Kr	83
Na	23
Mg	24
K	39
Ca	44
Ti	47
Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero

Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, February 15, 2017 10:59:40
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	27.000	**1.000**	0.16	16.3	ug/L
|	B	11	1038.737	**20.000**	0.97	4.8	ug/L
|	Al	27	11134.723	**20.000**	0.30	1.5	ug/L
|>	Sc	45	103918.880				ug/L
|	V	51	12559.379	**3.000**	0.79	26.3	ug/L
|	Cr	52	4070.744	**3.000**	0.19	6.4	ug/L
|	Cr	53	16144.759	**3.000**	3.04	101.3	ug/L
|	Mn	55	1186.091	**1.000**	0.05	4.9	ug/L
|	Co	59	666.696	**1.000**	0.01	1.4	ug/L
⌊	Ni	60	434.679	**1.000**	0.06	6.4	ug/L
⌈	Cu	63	610.024	**2.000**	0.12	5.9	ug/L
|	Cu	65	297.006	**2.000**	0.16	8.0	ug/L
|	Zn	66	402.677	**5.000**	0.23	4.6	ug/L
|	Zn	68	314.673	**5.000**	0.17	3.4	ug/L
|>	Ge	72	62131.615				ug/L
|	As	75	143.041	**2.000**	0.37	18.3	ug/L
|	Se	77	499.683	**2.000**	21.69	1084.4	ug/L
|	Se	82	25.883	**2.000**	0.24	11.8	ug/L
⌊	Sr	88	260.004	**0.200**	0.00	2.3	ug/L
⌈	Mo	98	285.201	**1.000**	0.02	1.8	ug/L
|>	Rh	103	68178.182				ug/L
⌊	Ag	107	616.691	**1.000**	0.02	2.4	ug/L
⌈	Cd	111	163.241	**1.000**	0.05	5.4	ug/L
|	Cd	114	391.922	**1.000**	0.03	3.4	ug/L
|>	In	115	113410.883				ug/L
|	Sn	120	853.988	**1.000**	0.01	0.5	ug/L
⌊	Sb	121	1835.553	**2.000**	0.22	11.0	ug/L
⌈	Ba	137	330.647	**1.000**	0.08	8.4	ug/L
|	Ba	138	2097.592	**1.000**	0.01	1.0	ug/L
|>	Tb	159	173380.881				ug/L
|	Tl	205	1782.207	**1.000**	0.05	4.7	ug/L
⌊	Pb	208	1276.773	**1.000**	0.03	2.9	ug/L
⌈	Hg	200	40.616	**0.200**	0.03	15.4	ug/L
|	Hg	201	21.333	**0.200**	0.07	35.6	ug/L
|>	Bi	209	109321.781				ug/L
⌊	U	238	3501.464	**1.000**	0.00	0.3	ug/L
	C	13	313.341				ug/L
	W	184	7.997				ug/L

Pd	106	0.781				ug/L
Kr	83	13.500				ug/L
Na	23	50827.541	**100.000**	4.02	4.0	ug/L
Mg	24	30373.240	**100.000**	3.90	3.9	ug/L
K	39	113355.883	**100.000**	3.24	3.2	ug/L
Ca	44	4881.553	**100.000**	17.86	17.9	ug/L
Ti	47	30.000				ug/L
Sc-1	45	103918.880				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		

W	184
Pd	106
Kr	83
Na	23
Mg	24
K	39
Ca	44
Ti	47
Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000237	0.000	1.000000	Linear Thru Zero
B	11.009	0.000421	0.000	1.000000	Linear Thru Zero
Al	26.982	0.003899	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005745	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006149	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000952	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009836	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006200	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002269	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004322	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002077	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001123	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000732	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000972	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000009	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000144	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.014740	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003916	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008911	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001408	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003357	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006253	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005270	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001814	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011727	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009604	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007278	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001735	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000856	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031991	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	495.607698	0.000	1.000000	Linear Thru Zero

Mg	23.985	302.599055	0.000	1.000000	Linear Thru Zero
K	38.964	483.690109	0.000	1.000000	Linear Thru Zero
Ca	43.956	19.076442	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, February 15, 2017 11:03:08
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	203.336	**9.978**	0.70	7.0	ug/L
|	B	11	4062.406	**99.539**	0.74	0.7	ug/L
|	Al	27	14633.932	**26.323**	1.48	5.6	ug/L
|>	Sc	45	103716.587				ug/L
|	V	51	18719.113	**10.212**	0.85	8.3	ug/L
|	Cr	52	8667.047	**10.018**	0.18	1.8	ug/L
|	Cr	53	16913.747	**13.259**	8.96	67.6	ug/L
|	Mn	55	23711.160	**24.997**	0.49	2.0	ug/L
|	Co	59	6220.848	**9.996**	0.13	1.3	ug/L
⌊	Ni	60	3316.381	**24.965**	0.08	0.3	ug/L
⌈	Cu	63	6477.394	**24.992**	0.21	0.9	ug/L
|	Cu	65	2864.201	**24.977**	1.23	4.9	ug/L
|	Zn	66	1876.896	**25.038**	1.41	5.6	ug/L
|	Zn	68	1352.452	**25.094**	0.50	2.0	ug/L
|>	Ge	72	62335.982				ug/L
|	As	75	1694.533	**25.015**	0.71	2.8	ug/L
|	Se	77	614.025	**25.181**	1.68	6.7	ug/L
|	Se	82	213.716	**24.986**	0.90	3.6	ug/L
⌊	Sr	88	2027.934	**2.001**	0.05	2.4	ug/L
⌈	Mo	98	2663.247	**9.999**	0.20	2.0	ug/L
|>	Rh	103	68005.977				ug/L
⌊	Ag	107	6079.069	**10.000**	0.22	2.2	ug/L
⌈	Cd	111	1581.299	**10.000**	0.26	2.6	ug/L
|	Cd	114	3849.405	**10.002**	0.08	0.8	ug/L
|>	In	115	112302.389				ug/L
|	Sn	120	7610.971	**10.006**	0.07	0.7	ug/L
⌊	Sb	121	6401.999	**9.990**	0.32	3.2	ug/L
⌈	Ba	137	2934.174	**9.992**	0.13	1.3	ug/L
|	Ba	138	19697.810	**9.997**	0.23	2.4	ug/L
|>	Tb	159	173244.630				ug/L
|	Tl	205	16582.531	**9.999**	0.24	2.4	ug/L
⌊	Pb	208	31570.014	**25.000**	0.49	2.0	ug/L
⌈	Hg	200	282.646	**1.993**	0.13	6.6	ug/L
|	Hg	201	170.002	**1.998**	0.08	4.0	ug/L
|>	Bi	209	109672.144				ug/L
⌊	U	238	34902.011	**9.999**	0.06	0.6	ug/L
	C	13	313.340				ug/L
	W	184	3.998				ug/L

Pd	106	-12.376				ug/L
Kr	83	13.833				ug/L
Na	23	431015.045	**998.485**	17.07	1.7	ug/L
Mg	24	291988.922	**999.636**	10.73	1.1	ug/L
K	39	553804.630	**1000.104**	14.08	1.4	ug/L
Ca	44	22265.536	**1000.110**	39.92	4.0	ug/L
Ti	47	50.000				ug/L
Sc-1	45	103716.587				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		

W	184
Pd	106
Kr	83
Na	23
Mg	24
K	39
Ca	44
Ti	47
Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000194	0.000	0.999760	Linear Thru Zero
B	11.009	0.000378	0.000	0.999734	Linear Thru Zero
Al	26.982	0.004251	0.000	0.997818	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007515	0.000	0.997514	Linear Thru Zero
Cr	51.941	0.006271	0.000	0.999983	Linear Thru Zero
Cr	52.941	0.000363	0.000	0.677288	Linear Thru Zero
Mn	54.938	0.009083	0.000	0.999995	Linear Thru Zero
Co	58.933	0.005979	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001204	0.000	0.999375	Linear Thru Zero
Cu	62.930	0.004111	0.000	0.999992	Linear Thru Zero
Cu	64.928	0.001814	0.000	0.999933	Linear Thru Zero
Zn	65.926	0.001168	0.000	0.999971	Linear Thru Zero
Zn	67.925	0.000808	0.000	0.999823	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001072	0.000	0.999972	Linear Thru Zero
Se	76.920	0.000071	0.000	0.995941	Linear Thru Zero
Se	81.917	0.000132	0.000	0.999974	Linear Thru Zero
Sr	87.906	0.015644	0.000	0.999983	Linear Thru Zero
Mo	97.906	0.003890	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008925	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001405	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003417	0.000	0.999998	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006645	0.000	0.999983	Linear Thru Zero
Sb	120.904	0.005138	0.000	0.999987	Linear Thru Zero
Ba	136.905	0.001686	0.000	0.999971	Linear Thru Zero
Ba	137.905	0.011337	0.000	0.999994	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009505	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.007285	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001282	0.000	0.999376	Linear Thru Zero
Hg	200.970	0.000764	0.000	0.999927	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031824	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	430.400347	0.000	0.999885	Linear Thru Zero

Mg	23.985	291.981761	0.000	0.999993	Linear Thru Zero
K	38.964	488.766989	0.000	0.999999	Linear Thru Zero
Ca	43.956	19.289497	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Wednesday, February 15, 2017 11:06:35
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	409.011	**20.040**	0.91	4.5	ug/L
|	B	11	8094.264	**200.534**	9.92	4.9	ug/L
|	Al	27	24967.807	**49.944**	1.19	2.4	ug/L
|>	Sc	45	103638.167				ug/L
|	V	51	26399.648	**20.021**	0.27	1.4	ug/L
|	Cr	52	15193.993	**20.015**	0.32	1.6	ug/L
|	Cr	53	17571.715	**21.652**	2.56	11.8	ug/L
|	Mn	55	48074.480	**50.177**	1.36	2.7	ug/L
|	Co	59	12239.397	**19.942**	0.24	1.2	ug/L
⌊	Ni	60	6365.635	**49.882**	1.66	3.3	ug/L
⌈	Cu	63	12828.365	**49.902**	0.83	1.7	ug/L
|	Cu	65	5714.123	**49.993**	2.21	4.4	ug/L
|	Zn	66	3506.466	**49.393**	0.36	0.7	ug/L
|	Zn	68	2528.749	**49.618**	1.85	3.7	ug/L
|>	Ge	72	62654.924				ug/L
|	As	75	3404.713	**50.073**	0.19	0.4	ug/L
|	Se	77	760.204	**51.318**	6.22	12.1	ug/L
|	Se	82	439.392	**50.421**	0.73	1.5	ug/L
⌊	Sr	88	3863.304	**3.972**	0.10	2.5	ug/L
⌈	Mo	98	5409.916	**20.101**	0.24	1.2	ug/L
|>	Rh	103	67586.293				ug/L
⌊	Ag	107	12460.086	**20.126**	0.32	1.6	ug/L
⌈	Cd	111	2944.835	**19.694**	0.59	3.0	ug/L
|	Cd	114	7797.196	**20.042**	0.34	1.7	ug/L
|>	In	115	112738.807				ug/L
|	Sn	120	15150.162	**20.006**	0.26	1.3	ug/L
⌊	Sb	121	12204.346	**19.994**	0.82	4.1	ug/L
⌈	Ba	137	6080.687	**20.107**	0.44	2.2	ug/L
|	Ba	138	39656.584	**19.987**	0.24	1.2	ug/L
|>	Tb	159	175158.573				ug/L
|	Tl	205	33401.379	**19.998**	0.20	1.0	ug/L
⌊	Pb	208	62654.475	**49.815**	0.09	0.2	ug/L
⌈	Hg	200	568.666	**4.002**	0.18	4.6	ug/L
|	Hg	201	326.007	**3.967**	0.30	7.4	ug/L
|>	Bi	209	110137.552				ug/L
⌊	U	238	70792.598	**20.039**	0.07	0.3	ug/L
	C	13	366.676				ug/L
	W	184	3.330				ug/L

Pd	106	-57.949				ug/L
Kr	83	14.000				ug/L
Na	23	859227.860	**1998.666**	68.48	3.4	ug/L
Mg	24	586727.889	**2001.824**	45.94	2.3	ug/L
K	39	1052652.582	**2004.145**	2.93	0.1	ug/L
Ca	44	41045.886	**1994.645**	9.28	0.5	ug/L
Ti	47	70.000				ug/L
Sc-1	45	103638.167				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		

W	184
Pd	106
Kr	83
Na	23
Mg	24
K	39
Ca	44
Ti	47
Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000196	0.000	0.999945	Linear Thru Zero
B	11.009	0.000382	0.000	0.999933	Linear Thru Zero
Al	26.982	0.004239	0.000	0.999359	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007544	0.000	0.999468	Linear Thru Zero
Cr	51.941	0.006288	0.000	0.999995	Linear Thru Zero
Cr	52.941	0.000521	0.000	0.933410	Linear Thru Zero
Mn	54.938	0.009214	0.000	0.999974	Linear Thru Zero
Co	58.933	0.005911	0.000	0.999982	Linear Thru Zero
Ni	59.933	0.001193	0.000	0.999861	Linear Thru Zero
Cu	62.930	0.004079	0.000	0.999991	Linear Thru Zero
Cu	64.928	0.001813	0.000	0.999986	Linear Thru Zero
Zn	65.926	0.001115	0.000	0.999710	Linear Thru Zero
Zn	67.925	0.000785	0.000	0.999849	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001078	0.000	0.999990	Linear Thru Zero
Se	76.920	0.000079	0.000	0.997967	Linear Thru Zero
Se	81.917	0.000137	0.000	0.999854	Linear Thru Zero
Sr	87.906	0.015217	0.000	0.999897	Linear Thru Zero
Mo	97.906	0.003969	0.000	0.999950	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009153	0.000	0.999922	Linear Thru Zero
Cd	110.904	0.001325	0.000	0.999538	Linear Thru Zero
Cd	113.904	0.003446	0.000	0.999991	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006654	0.000	0.999996	Linear Thru Zero
Sb	120.904	0.005132	0.000	0.999997	Linear Thru Zero
Ba	136.905	0.001722	0.000	0.999938	Linear Thru Zero
Ba	137.905	0.011309	0.000	0.999998	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009501	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007179	0.000	0.999973	Linear Thru Zero
Hg	199.968	0.001284	0.000	0.999874	Linear Thru Zero
Hg	200.970	0.000740	0.000	0.999853	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032074	0.000	0.999992	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	429.266772	0.000	0.999976	Linear Thru Zero

Mg	23.985	293.040057	0.000	0.999997	Linear Thru Zero
K	38.964	492.811593	0.000	0.999991	Linear Thru Zero
Ca	43.956	19.087095	0.000	0.999986	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Wednesday, February 15, 2017 11:10:03
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	860.048	**40.529**	1.19	2.9	ug/L
	B	11	15659.929	**398.136**	5.17	1.3	ug/L
	Al	27	45103.877	**98.900**	0.70	0.7	ug/L
>	Sc	45	103503.759				ug/L
	V	51	42705.010	**40.224**	0.55	1.4	ug/L
	Cr	52	28394.979	**40.079**	0.48	1.2	ug/L
	Cr	53	19010.469	**41.808**	3.48	8.3	ug/L
	Mn	55	96294.439	**100.189**	0.65	0.6	ug/L
	Co	59	24858.769	**40.141**	0.52	1.3	ug/L
	Ni	60	12541.553	**99.991**	1.42	1.4	ug/L
	Cu	63	25802.546	**100.468**	0.28	0.3	ug/L
	Cu	65	11424.820	**100.361**	2.27	2.3	ug/L
	Zn	66	6692.244	**99.072**	0.63	0.6	ug/L
	Zn	68	4692.432	**98.710**	2.89	2.9	ug/L
>	Ge	72	61849.715				ug/L
	As	75	6611.667	**99.716**	0.68	0.7	ug/L
	Se	77	1037.570	**102.136**	5.05	4.9	ug/L
	Se	82	828.419	**99.294**	4.06	4.1	ug/L
	Sr	88	7776.596	**8.043**	0.13	1.6	ug/L
	Mo	98	10883.747	**40.107**	0.41	1.0	ug/L
>	Rh	103	67671.711				ug/L
	Ag	107	23813.475	**39.615**	0.71	1.8	ug/L
	Cd	111	5969.041	**39.967**	1.47	3.7	ug/L
	Cd	114	15820.694	**40.145**	1.21	3.0	ug/L
>	In	115	113012.720				ug/L
	Sn	120	30150.931	**39.978**	0.43	1.1	ug/L
	Sb	121	23958.596	**40.050**	0.63	1.6	ug/L
	Ba	137	12067.382	**39.929**	1.01	2.5	ug/L
	Ba	138	78825.073	**39.882**	0.48	1.2	ug/L
>	Tb	159	176279.253				ug/L
	Tl	205	66482.116	**39.911**	0.81	2.0	ug/L
	Pb	208	126227.841	**99.938**	1.85	1.8	ug/L
	Hg	200	1180.035	**8.106**	0.28	3.4	ug/L
	Hg	201	691.365	**8.134**	0.64	7.9	ug/L
>	Bi	209	108305.858				ug/L
	U	238	141004.809	**40.139**	0.18	0.4	ug/L
	C	13	386.676				ug/L
	W	184	8.666				ug/L

Pd	106	-83.015				ug/L
Kr	83	14.667				ug/L
Na	23	1732954.384	**4008.069**	32.72	0.8	ug/L
Mg	24	1178327.676	**4004.907**	91.69	2.3	ug/L
K	39	1953531.536	**3958.662**	29.11	0.7	ug/L
Ca	44	79747.969	**4005.296**	56.90	1.4	ug/L
Ti	47	43.333				ug/L
Sc-1	45	103503.759				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		

W	184
Pd	106
Kr	83
Na	23
Mg	24
K	39
Ca	44
Ti	47
Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000204	0.000	0.999708	Linear Thru Zero
B	11.009	0.000376	0.000	0.999949	Linear Thru Zero
Al	26.982	0.004111	0.000	0.999651	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007679	0.000	0.999827	Linear Thru Zero
Cr	51.941	0.006328	0.000	0.999993	Linear Thru Zero
Cr	52.941	0.000607	0.000	0.984054	Linear Thru Zero
Mn	54.938	0.009270	0.000	0.999988	Linear Thru Zero
Co	58.933	0.005978	0.000	0.999976	Linear Thru Zero
Ni	59.933	0.001193	0.000	0.999967	Linear Thru Zero
Cu	62.930	0.004141	0.000	0.999963	Linear Thru Zero
Cu	64.928	0.001834	0.000	0.999976	Linear Thru Zero
Zn	65.926	0.001084	0.000	0.999790	Linear Thru Zero
Zn	67.925	0.000754	0.000	0.999697	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001068	0.000	0.999985	Linear Thru Zero
Se	76.920	0.000085	0.000	0.998851	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999884	Linear Thru Zero
Sr	87.906	0.015482	0.000	0.999931	Linear Thru Zero
Mo	97.906	0.004003	0.000	0.999977	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008880	0.000	0.999832	Linear Thru Zero
Cd	110.904	0.001322	0.000	0.999888	Linear Thru Zero
Cd	113.904	0.003486	0.000	0.999977	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006642	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.005153	0.000	0.999997	Linear Thru Zero
Ba	136.905	0.001712	0.000	0.999980	Linear Thru Zero
Ba	137.905	0.011204	0.000	0.999986	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009434	0.000	0.999992	Linear Thru Zero
Pb	207.977	0.007165	0.000	0.999993	Linear Thru Zero
Hg	199.968	0.001341	0.000	0.999693	Linear Thru Zero
Hg	200.970	0.000782	0.000	0.999523	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032433	0.000	0.999979	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	432.050308	0.000	0.999988	Linear Thru Zero

Mg	23.985	294.192673	0.000	0.999997	Linear Thru Zero
K	38.964	477.066384	0.000	0.999827	Linear Thru Zero
Ca	43.956	19.168138	0.000	0.999994	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Wednesday, February 15, 2017 11:13:31
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2142.299	**100.199**	5.59	5.6	ug/L
	B	11	38781.570	**998.716**	19.84	2.0	ug/L
	Al	27	113409.715	**251.648**	5.53	2.2	ug/L
>	Sc	45	103444.964				ug/L
	V	51	90647.591	**100.106**	0.95	0.9	ug/L
	Cr	52	68454.762	**100.224**	0.20	0.2	ug/L
	Cr	53	23235.878	**101.498**	3.61	3.6	ug/L
	Mn	55	238585.231	**249.760**	2.63	1.1	ug/L
	Co	59	62209.241	**100.095**	0.49	0.5	ug/L
	Ni	60	31158.982	**250.170**	1.19	0.5	ug/L
	Cu	63	62832.706	**249.656**	2.91	1.2	ug/L
	Cu	65	27987.179	**249.895**	1.56	0.6	ug/L
	Zn	66	16851.443	**250.647**	5.07	2.0	ug/L
	Zn	68	11809.736	**250.722**	4.01	1.6	ug/L
>	Ge	72	61111.586				ug/L
	As	75	16303.472	**249.896**	5.59	2.2	ug/L
	Se	77	1880.730	**252.649**	9.38	3.7	ug/L
	Se	82	2063.828	**250.345**	4.61	1.8	ug/L
	Sr	88	18985.741	**19.999**	0.39	2.0	ug/L
	Mo	98	27419.572	**100.537**	1.29	1.3	ug/L
>	Rh	103	66335.551				ug/L
	Ag	107	59800.240	**100.259**	0.82	0.8	ug/L
	Cd	111	15150.355	**100.338**	3.10	3.1	ug/L
	Cd	114	40078.878	**100.383**	2.35	2.3	ug/L
>	In	115	112421.226				ug/L
	Sn	120	77288.985	**100.561**	1.63	1.6	ug/L
	Sb	121	59729.705	**100.345**	1.23	1.2	ug/L
	Ba	137	30715.013	**100.343**	1.04	1.0	ug/L
	Ba	138	200972.779	**100.348**	1.49	1.5	ug/L
>	Tb	159	175751.953				ug/L
	Tl	205	168706.099	**100.289**	2.13	2.1	ug/L
	Pb	208	316754.472	**250.268**	4.13	1.7	ug/L
	Hg	200	2904.506	**20.014**	0.13	0.7	ug/L
	Hg	201	1624.172	**19.863**	0.89	4.5	ug/L
>	Bi	209	107768.179				ug/L
	U	238	363452.567	**100.673**	1.72	1.7	ug/L
	C	13	380.010				ug/L
	W	184	6.662				ug/L
	Pd	106	-226.230				ug/L
	Kr	83	13.667				ug/L
	Na	23	4287963.371	**9986.326**	385.32	3.9	ug/L
	Mg	24	2717847.628	**9858.797**	481.89	4.9	ug/L

K	39	4713827.537	**9954.708**	105.16		1.1	ug/L
Ca	44	197014.416	**10021.153**	42.97		0.4	ug/L
Ti	47	93.334					ug/L
Sc-1	45	103444.964					ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000206	0.000	0.999941	Linear Thru Zero
B	11.009	0.000374	0.000	0.999987	Linear Thru Zero
Al	26.982	0.004240	0.000	0.999841	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007718	0.000	0.999967	Linear Thru Zero
Cr	51.941	0.006396	0.000	0.999987	Linear Thru Zero
Cr	52.941	0.000654	0.000	0.997026	Linear Thru Zero
Mn	54.938	0.009227	0.000	0.999996	Linear Thru Zero
Co	58.933	0.006006	0.000	0.999994	Linear Thru Zero
Ni	59.933	0.001196	0.000	0.999993	Linear Thru Zero
Cu	62.930	0.004114	0.000	0.999989	Linear Thru Zero
Cu	64.928	0.001830	0.000	0.999995	Linear Thru Zero
Zn	65.926	0.001097	0.000	0.999948	Linear Thru Zero
Zn	67.925	0.000765	0.000	0.999929	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001066	0.000	0.999997	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999553	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999976	Linear Thru Zero
Sr	87.906	0.015477	0.000	0.999988	Linear Thru Zero
Mo	97.906	0.004108	0.000	0.999928	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008991	0.000	0.999956	Linear Thru Zero
Cd	110.904	0.001343	0.000	0.999954	Linear Thru Zero
Cd	113.904	0.003551	0.000	0.999961	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006825	0.000	0.999925	Linear Thru Zero
Sb	120.904	0.005239	0.000	0.999971	Linear Thru Zero
Ba	136.905	0.001741	0.000	0.999969	Linear Thru Zero
Ba	137.905	0.011393	0.000	0.999969	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009565	0.000	0.999979	Linear Thru Zero
Pb	207.977	0.007201	0.000	0.999996	Linear Thru Zero
Hg	199.968	0.001345	0.000	0.999946	Linear Thru Zero
Hg	200.970	0.000757	0.000	0.999800	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033507	0.000	0.999889	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	429.256615	0.000	0.999993	Linear Thru Zero
Mg	23.985	275.665904	0.000	0.999525	Linear Thru Zero
K	38.964	466.999185	0.000	0.999920	Linear Thru Zero
Ca	43.956	19.363091	0.000	0.999988	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, February 15, 2017 12:21:29
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.027
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2.333				ug/L
	B	11	194.669				ug/L
	Al	27	4612.049				ug/L
>	Sc	45	96188.450				ug/L
	V	51	10110.243				ug/L
	Cr	52	2845.193				ug/L
	Cr	53	15820.926				ug/L
	Mn	55	210.003				ug/L
	Co	59	16.000				ug/L
	Ni	60	215.336				ug/L
	Cu	63	81.000				ug/L
	Cu	65	32.000				ug/L
	Zn	66	102.001				ug/L
	Zn	68	138.001				ug/L
>	Ge	72	55127.953				ug/L
	As	75	41.246				ug/L
	Se	77	421.678				ug/L
	Se	82	5.059				ug/L
	Sr	88	63.667				ug/L
	Mo	98	17.895				ug/L
>	Rh	103	61219.338				ug/L
	Ag	107	6.667				ug/L
	Cd	111	0.049				ug/L
	Cd	114	10.396				ug/L
>	In	115	102096.099				ug/L
	Sn	120	105.266				ug/L
	Sb	121	403.344				ug/L
	Ba	137	11.316				ug/L
	Ba	138	71.316				ug/L
>	Tb	159	147567.448				ug/L
	Tl	205	42.333				ug/L
	Pb	208	34.333				ug/L
	Hg	200	2.641				ug/L
	Hg	201	2.667				ug/L
>	Bi	209	94239.717				ug/L
	U	238	8.667				ug/L
	C	13	326.674				ug/L
	W	184	3.998				ug/L
	Pd	106	3.805				ug/L
	Kr	83	12.333				ug/L
	Na	23	2393.708				ug/L
	Mg	24	190.003				ug/L

K	39	64475.763		ug/L
Ca	44	2010.264		ug/L
Ti	47	43.333		ug/L
Sc-1	45	96188.450		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000206	0.000	0.999941	Linear Thru Zero
B	11.009	0.000374	0.000	0.999987	Linear Thru Zero
Al	26.982	0.004240	0.000	0.999841	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007718	0.000	0.999967	Linear Thru Zero
Cr	51.941	0.006396	0.000	0.999987	Linear Thru Zero
Cr	52.941	0.000654	0.000	0.997026	Linear Thru Zero
Mn	54.938	0.009227	0.000	0.999996	Linear Thru Zero
Co	58.933	0.006006	0.000	0.999994	Linear Thru Zero
Ni	59.933	0.001196	0.000	0.999993	Linear Thru Zero
Cu	62.930	0.004114	0.000	0.999989	Linear Thru Zero
Cu	64.928	0.001830	0.000	0.999995	Linear Thru Zero
Zn	65.926	0.001097	0.000	0.999948	Linear Thru Zero
Zn	67.925	0.000765	0.000	0.999929	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001066	0.000	0.999997	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999553	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999976	Linear Thru Zero
Sr	87.906	0.015477	0.000	0.999988	Linear Thru Zero
Mo	97.906	0.004108	0.000	0.999928	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008991	0.000	0.999956	Linear Thru Zero
Cd	110.904	0.001343	0.000	0.999954	Linear Thru Zero
Cd	113.904	0.003551	0.000	0.999961	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006825	0.000	0.999925	Linear Thru Zero
Sb	120.904	0.005239	0.000	0.999971	Linear Thru Zero
Ba	136.905	0.001741	0.000	0.999969	Linear Thru Zero
Ba	137.905	0.011393	0.000	0.999969	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009565	0.000	0.999979	Linear Thru Zero
Pb	207.977	0.007201	0.000	0.999996	Linear Thru Zero
Hg	199.968	0.001345	0.000	0.999946	Linear Thru Zero
Hg	200.970	0.000757	0.000	0.999800	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033507	0.000	0.999889	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	429.256615	0.000	0.999993	Linear Thru Zero
Mg	23.985	275.665904	0.000	0.999525	Linear Thru Zero
K	38.964	466.999185	0.000	0.999920	Linear Thru Zero
Ca	43.956	19.363091	0.000	0.999988	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, February 15, 2017 12:24:57
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.027
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	27.667	**1.000**	0.12	12.4	ug/L
	B	11	945.392	**20.000**	1.46	7.3	ug/L
	Al	27	10196.757	**20.000**	1.17	5.8	ug/L
>	Sc	45	95308.241				ug/L
	V	51	11780.785	**3.000**	1.39	46.4	ug/L
	Cr	52	3654.702	**3.000**	0.15	5.1	ug/L
	Cr	53	15798.711	**3.000**	0.71	23.6	ug/L
	Mn	55	1039.404	**1.000**	0.02	2.0	ug/L
	Co	59	576.022	**1.000**	0.06	5.9	ug/L
	Ni	60	394.677	**1.000**	0.13	13.4	ug/L
	Cu	63	575.022	**2.000**	0.08	4.2	ug/L
	Cu	65	242.004	**2.000**	0.09	4.5	ug/L
	Zn	66	371.342	**5.000**	0.27	5.4	ug/L
	Zn	68	305.339	**5.000**	0.39	7.7	ug/L
>	Ge	72	55134.599				ug/L
	As	75	117.857	**2.000**	1.01	50.6	ug/L
	Se	77	424.178	**2.000**	11.82	591.0	ug/L
	Se	82	18.884	**2.000**	0.76	37.9	ug/L
	Sr	88	208.670	**0.200**	0.03	13.3	ug/L
	Mo	98	254.977	**1.000**	0.04	3.6	ug/L
>	Rh	103	60916.273				ug/L
	Ag	107	536.019	**1.000**	0.14	14.5	ug/L
	Cd	111	132.136	**1.000**	0.07	6.8	ug/L
	Cd	114	331.214	**1.000**	0.06	5.9	ug/L
>	In	115	100934.118				ug/L
	Sn	120	773.364	**1.000**	0.05	4.5	ug/L
	Sb	121	1501.480	**2.000**	0.20	9.9	ug/L
	Ba	137	281.313	**1.000**	0.05	5.4	ug/L
	Ba	138	1889.540	**1.000**	0.01	1.2	ug/L
>	Tb	159	148910.179				ug/L
	Tl	205	1511.815	**1.000**	0.04	3.5	ug/L
	Pb	208	1113.081	**1.000**	0.03	2.9	ug/L
	Hg	200	29.979	**0.200**	0.09	45.9	ug/L
	Hg	201	24.667	**0.200**	0.04	20.5	ug/L
>	Bi	209	94445.036				ug/L
	U	238	3065.278	**1.000**	0.02	2.0	ug/L
	C	13	293.339				ug/L
	W	184	3.328				ug/L
	Pd	106	-0.550				ug/L
	Kr	83	13.333				ug/L
	Na	23	46486.831	**100.000**	3.81	3.8	ug/L
	Mg	24	28663.305	**100.000**	0.65	0.6	ug/L

K	39	116739.331	**100.000**	3.92	3.9	ug/L
Ca	44	4074.419	**100.000**	19.96	20.0	ug/L
Ti	47	33.333				ug/L
Sc-1	45	95308.241				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000266	0.000	1.000000	Linear Thru Zero
B	11.009	0.000394	0.000	1.000000	Linear Thru Zero
Al	26.982	0.002953	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006164	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.002921	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000428	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.008721	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005874	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001901	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004481	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001905	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000977	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000607	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000690	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000022	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000125	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.013166	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003893	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008682	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001309	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003181	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006634	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005468	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001813	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012206	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009865	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007242	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001452	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001167	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032360	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	440.931233	0.000	1.000000	Linear Thru Zero
Mg	23.985	284.733026	0.000	1.000000	Linear Thru Zero
K	38.964	522.635677	0.000	1.000000	Linear Thru Zero
Ca	43.956	20.641556	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, February 15, 2017 12:28:24
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.027
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	226.003	**9.987**	1.10	11.0	ug/L
	B	11	4065.075	**100.131**	4.78	4.8	ug/L
	Al	27	13139.215	**26.946**	0.14	0.5	ug/L
>	Sc	45	94839.869				ug/L
	V	51	16896.422	**10.130**	0.86	8.4	ug/L
	Cr	52	7866.189	**10.388**	0.35	3.3	ug/L
	Cr	53	16209.896	**10.288**	3.49	33.9	ug/L
	Mn	55	21546.141	**25.001**	0.03	0.1	ug/L
	Co	59	5624.389	**10.001**	0.16	1.6	ug/L
	Ni	60	2953.234	**24.974**	0.22	0.9	ug/L
	Cu	63	5858.232	**24.989**	0.19	0.8	ug/L
	Cu	65	2603.774	**24.996**	0.43	1.7	ug/L
	Zn	66	1626.172	**25.110**	0.41	1.6	ug/L
	Zn	68	1187.758	**25.195**	0.86	3.4	ug/L
>	Ge	72	55247.132				ug/L
	As	75	1597.345	**25.062**	0.48	1.9	ug/L
	Se	77	536.685	**25.117**	1.46	5.8	ug/L
	Se	82	201.225	**25.019**	0.53	2.1	ug/L
	Sr	88	1755.534	**2.003**	0.03	1.6	ug/L
	Mo	98	2376.819	**10.000**	0.25	2.5	ug/L
>	Rh	103	60662.260				ug/L
	Ag	107	5219.771	**9.999**	0.24	2.4	ug/L
	Cd	111	1376.356	**10.004**	0.26	2.6	ug/L
	Cd	114	3598.348	**10.011**	0.37	3.7	ug/L
>	In	115	100636.142				ug/L
	Sn	120	6940.430	**10.002**	0.20	2.0	ug/L
	Sb	121	5714.789	**9.987**	0.25	2.5	ug/L
	Ba	137	2651.738	**9.999**	0.33	3.3	ug/L
	Ba	138	17644.161	**9.998**	0.11	1.1	ug/L
>	Tb	159	147513.144				ug/L
	Tl	205	14087.557	**9.996**	0.03	0.3	ug/L
	Pb	208	27077.248	**25.000**	0.12	0.5	ug/L
	Hg	200	257.299	**1.998**	0.18	8.9	ug/L
	Hg	201	129.334	**1.985**	0.13	6.6	ug/L
>	Bi	209	94637.337				ug/L
	U	238	30830.669	**10.001**	0.04	0.4	ug/L
	C	13	233.337				ug/L
	W	184	6.000				ug/L
	Pd	106	-23.657				ug/L
	Kr	83	12.833				ug/L
	Na	23	412934.141	**999.268**	7.73	0.8	ug/L
	Mg	24	279169.027	**999.796**	7.55	0.8	ug/L

K	39	568117.075	**999.627**	22.49	2.3	ug/L
Ca	44	21319.504	**999.317**	8.06	0.8	ug/L
Ti	47	23.333				ug/L
Sc-1	45	94839.869				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000236	0.000	0.999921	Linear Thru Zero
B	11.009	0.000408	0.000	0.999978	Linear Thru Zero
Al	26.982	0.003362	0.000	0.995299	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007206	0.000	0.999061	Linear Thru Zero
Cr	51.941	0.005136	0.000	0.991729	Linear Thru Zero
Cr	52.941	0.000628	0.000	0.995432	Linear Thru Zero
Mn	54.938	0.008999	0.000	0.999999	Linear Thru Zero
Co	58.933	0.005915	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001157	0.000	0.999670	Linear Thru Zero
Cu	62.930	0.004184	0.000	0.999984	Linear Thru Zero
Cu	64.928	0.001863	0.000	0.999998	Linear Thru Zero
Zn	65.926	0.001098	0.000	0.999757	Linear Thru Zero
Zn	67.925	0.000754	0.000	0.999239	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001124	0.000	0.999524	Linear Thru Zero
Se	76.920	0.000082	0.000	0.998283	Linear Thru Zero
Se	81.917	0.000142	0.000	0.999956	Linear Thru Zero
Sr	87.906	0.015289	0.000	0.999904	Linear Thru Zero
Mo	97.906	0.003889	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008594	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001367	0.000	0.999991	Linear Thru Zero
Cd	113.904	0.003563	0.000	0.999943	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006793	0.000	0.999997	Linear Thru Zero
Sb	120.904	0.005292	0.000	0.999978	Linear Thru Zero
Ba	136.905	0.001791	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.011917	0.000	0.999997	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009525	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.007333	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001345	0.000	0.999968	Linear Thru Zero
Hg	200.970	0.000674	0.000	0.997343	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032567	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	410.841333	0.000	0.999973	Linear Thru Zero
Mg	23.985	279.035995	0.000	0.999998	Linear Thru Zero
K	38.964	503.829375	0.000	0.999993	Linear Thru Zero
Ca	43.956	19.322431	0.000	0.999977	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Wednesday, February 15, 2017 12:31:52
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.027
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	436.012	**19.844**	0.39	1.9	ug/L
	B	11	8090.253	**200.638**	2.84	1.4	ug/L
	Al	27	23315.295	**52.202**	0.77	1.5	ug/L
>	Sc	45	95326.442				ug/L
	V	51	23721.411	**19.989**	0.55	2.8	ug/L
	Cr	52	13889.863	**20.507**	0.22	1.1	ug/L
	Cr	53	16661.527	**19.102**	1.08	5.7	ug/L
	Mn	55	43715.245	**50.141**	0.50	1.0	ug/L
	Co	59	11171.775	**19.957**	0.09	0.4	ug/L
	Ni	60	5935.292	**50.362**	1.45	2.9	ug/L
	Cu	63	11804.052	**50.253**	1.04	2.1	ug/L
	Cu	65	5076.676	**49.910**	0.36	0.7	ug/L
	Zn	66	3159.982	**50.202**	1.54	3.1	ug/L
	Zn	68	2242.661	**50.218**	0.46	0.9	ug/L
>	Ge	72	54656.306				ug/L
	As	75	2967.086	**49.510**	1.64	3.3	ug/L
	Se	77	648.027	**50.210**	7.19	14.3	ug/L
	Se	82	367.905	**49.320**	0.26	0.5	ug/L
	Sr	88	3434.767	**4.007**	0.06	1.6	ug/L
	Mo	98	4854.505	**20.145**	0.78	3.9	ug/L
>	Rh	103	59983.696				ug/L
	Ag	107	10912.405	**20.223**	0.30	1.5	ug/L
	Cd	111	2702.571	**19.966**	0.20	1.0	ug/L
	Cd	114	7166.653	**20.031**	0.41	2.0	ug/L
>	In	115	99661.144				ug/L
	Sn	120	13577.229	**19.981**	0.13	0.6	ug/L
	Sb	121	10766.863	**19.930**	0.20	1.0	ug/L
	Ba	137	5406.169	**20.090**	0.16	0.8	ug/L
	Ba	138	34730.165	**19.948**	0.33	1.6	ug/L
>	Tb	159	147320.073				ug/L
	Tl	205	28339.451	**20.034**	0.39	2.0	ug/L
	Pb	208	53699.126	**49.935**	0.39	0.8	ug/L
	Hg	200	515.321	**4.019**	0.18	4.6	ug/L
	Hg	201	294.672	**4.116**	0.06	1.3	ug/L
>	Bi	209	93119.388				ug/L
	U	238	61701.472	**20.069**	0.42	2.1	ug/L
	C	13	360.009				ug/L
	W	184	4.664				ug/L
	Pd	106	-40.059				ug/L
	Kr	83	12.000				ug/L
	Na	23	825542.673	**2000.718**	32.25	1.6	ug/L
	Mg	24	564855.510	**2004.719**	75.64	3.8	ug/L

K	39	1062476.835	**1996.106**	40.44	2.0	ug/L
Ca	44	39082.388	**1983.040**	39.14	2.0	ug/L
Ti	47	50.000				ug/L
Sc-1	45	95326.442				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000229	0.000	0.999862	Linear Thru Zero
B	11.009	0.000413	0.000	0.999976	Linear Thru Zero
Al	26.982	0.003766	0.000	0.996556	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007192	0.000	0.999797	Linear Thru Zero
Cr	51.941	0.005663	0.000	0.997356	Linear Thru Zero
Cr	52.941	0.000540	0.000	0.995005	Linear Thru Zero
Mn	54.938	0.009102	0.000	0.999984	Linear Thru Zero
Co	58.933	0.005864	0.000	0.999991	Linear Thru Zero
Ni	59.933	0.001192	0.000	0.999833	Linear Thru Zero
Cu	62.930	0.004270	0.000	0.999946	Linear Thru Zero
Cu	64.928	0.001850	0.000	0.999993	Linear Thru Zero
Zn	65.926	0.001116	0.000	0.999920	Linear Thru Zero
Zn	67.925	0.000767	0.000	0.999811	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001082	0.000	0.999706	Linear Thru Zero
Se	76.920	0.000084	0.000	0.999630	Linear Thru Zero
Se	81.917	0.000135	0.000	0.999622	Linear Thru Zero
Sr	87.906	0.015399	0.000	0.999974	Linear Thru Zero
Mo	97.906	0.004004	0.000	0.999896	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008991	0.000	0.999755	Linear Thru Zero
Cd	110.904	0.001358	0.000	0.999992	Linear Thru Zero
Cd	113.904	0.003585	0.000	0.999984	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006767	0.000	0.999998	Linear Thru Zero
Sb	120.904	0.005222	0.000	0.999972	Linear Thru Zero
Ba	136.905	0.001823	0.000	0.999960	Linear Thru Zero
Ba	137.905	0.011795	0.000	0.999986	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009588	0.000	0.999993	Linear Thru Zero
Pb	207.977	0.007295	0.000	0.999997	Linear Thru Zero
Hg	199.968	0.001371	0.000	0.999950	Linear Thru Zero
Hg	200.970	0.000762	0.000	0.997918	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033020	0.000	0.999976	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	411.426682	0.000	0.999994	Linear Thru Zero
Mg	23.985	281.668138	0.000	0.999989	Linear Thru Zero
K	38.964	499.974015	0.000	0.999991	Linear Thru Zero
Ca	43.956	18.694592	0.000	0.999853	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Wednesday, February 15, 2017 12:35:19
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.027
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	886.718	**40.043**	0.86	2.2	ug/L
	B	11	15247.099	**394.926**	1.37	0.3	ug/L
	Al	27	42340.244	**101.107**	4.04	4.0	ug/L
>	Sc	45	96021.736				ug/L
	V	51	37780.807	**40.025**	0.72	1.8	ug/L
	Cr	52	25315.432	**40.314**	0.70	1.7	ug/L
	Cr	53	17535.804	**38.259**	6.58	17.2	ug/L
	Mn	55	85434.617	**99.399**	1.55	1.6	ug/L
	Co	59	22103.054	**39.813**	0.46	1.2	ug/L
	Ni	60	11367.732	**99.386**	2.04	2.1	ug/L
	Cu	63	22619.567	**99.602**	2.56	2.6	ug/L
	Cu	65	9943.430	**99.956**	1.02	1.0	ug/L
	Zn	66	5873.575	**99.128**	1.82	1.8	ug/L
	Zn	68	4151.454	**99.403**	0.60	0.6	ug/L
>	Ge	72	53679.771				ug/L
	As	75	5720.778	**99.466**	1.87	1.9	ug/L
	Se	77	904.053	**102.196**	1.12	1.1	ug/L
	Se	82	726.247	**99.945**	2.60	2.6	ug/L
	Sr	88	6721.603	**8.014**	0.05	0.6	ug/L
	Mo	98	9621.652	**40.176**	0.20	0.5	ug/L
>	Rh	103	58859.740				ug/L
	Ag	107	21249.317	**40.035**	0.56	1.4	ug/L
	Cd	111	5349.481	**39.871**	1.71	4.3	ug/L
	Cd	114	13672.938	**39.554**	0.29	0.7	ug/L
>	In	115	99775.985				ug/L
	Sn	120	25997.140	**39.595**	0.14	0.3	ug/L
	Sb	121	20589.519	**39.696**	0.63	1.6	ug/L
	Ba	137	10494.765	**39.878**	0.50	1.3	ug/L
	Ba	138	68663.914	**39.985**	1.30	3.2	ug/L
>	Tb	159	145624.208				ug/L
	Tl	205	55370.667	**39.909**	0.80	2.0	ug/L
	Pb	208	104554.598	**99.610**	1.16	1.2	ug/L
	Hg	200	964.001	**7.937**	0.50	6.3	ug/L
	Hg	201	538.019	**7.942**	0.82	10.3	ug/L
>	Bi	209	90600.569				ug/L
	U	238	120345.396	**40.053**	0.10	0.3	ug/L
	C	13	326.674				ug/L
	W	184	9.333				ug/L
	Pd	106	-73.575				ug/L
	Kr	83	14.000				ug/L
	Na	23	1615703.644	**3980.937**	38.46	1.0	ug/L
	Mg	24	1131917.491	**4004.265**	52.86	1.3	ug/L

K	39	2002366.415	**3969.712**	68.96	1.7	ug/L
Ca	44	75145.304	**3978.682**	55.91	1.4	ug/L
Ti	47	46.667				ug/L
Sc-1	45	96021.736				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000230	0.000	0.999966	Linear Thru Zero
B	11.009	0.000397	0.000	0.999738	Linear Thru Zero
Al	26.982	0.003889	0.000	0.998981	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007206	0.000	0.999951	Linear Thru Zero
Cr	51.941	0.005807	0.000	0.999295	Linear Thru Zero
Cr	52.941	0.000475	0.000	0.995482	Linear Thru Zero
Mn	54.938	0.008930	0.000	0.999938	Linear Thru Zero
Co	58.933	0.005778	0.000	0.999963	Linear Thru Zero
Ni	59.933	0.001169	0.000	0.999898	Linear Thru Zero
Cu	62.930	0.004217	0.000	0.999961	Linear Thru Zero
Cu	64.928	0.001847	0.000	0.999998	Linear Thru Zero
Zn	65.926	0.001085	0.000	0.999859	Linear Thru Zero
Zn	67.925	0.000753	0.000	0.999896	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001064	0.000	0.999882	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999154	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999909	Linear Thru Zero
Sr	87.906	0.015483	0.000	0.999989	Linear Thru Zero
Mo	97.906	0.004061	0.000	0.999945	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009016	0.000	0.999941	Linear Thru Zero
Cd	110.904	0.001344	0.000	0.999981	Linear Thru Zero
Cd	113.904	0.003462	0.000	0.999798	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006555	0.000	0.999835	Linear Thru Zero
Sb	120.904	0.005099	0.000	0.999901	Linear Thru Zero
Ba	136.905	0.001805	0.000	0.999975	Linear Thru Zero
Ba	137.905	0.011781	0.000	0.999996	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009519	0.000	0.999990	Linear Thru Zero
Pb	207.977	0.007205	0.000	0.999975	Linear Thru Zero
Hg	199.968	0.001337	0.000	0.999887	Linear Thru Zero
Hg	200.970	0.000745	0.000	0.999397	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033161	0.000	0.999992	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	405.258802	0.000	0.999962	Linear Thru Zero
Mg	23.985	282.630525	0.000	0.999995	Linear Thru Zero
K	38.964	488.169082	0.000	0.999906	Linear Thru Zero
Ca	43.956	18.381726	0.000	0.999918	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Wednesday, February 15, 2017 12:38:47
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.027
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2227.656	**100.228**	2.92	2.9	ug/L
	B	11	37923.973	**999.222**	31.88	3.2	ug/L
	Al	27	105213.415	**253.502**	4.31	1.7	ug/L
>	Sc	45	95482.953				ug/L
	V	51	81608.247	**100.679**	1.86	1.8	ug/L
	Cr	52	61610.083	**101.001**	1.00	1.0	ug/L
	Cr	53	21332.541	**103.512**	5.31	5.1	ug/L
	Mn	55	214189.131	**250.167**	2.28	0.9	ug/L
	Co	59	55702.630	**100.163**	1.05	1.0	ug/L
	Ni	60	27930.618	**249.722**	2.77	1.1	ug/L
	Cu	63	56884.248	**250.223**	1.47	0.6	ug/L
	Cu	65	24881.192	**250.160**	2.28	0.9	ug/L
	Zn	66	14954.863	**250.895**	2.86	1.1	ug/L
	Zn	68	10425.397	**250.843**	2.42	1.0	ug/L
>	Ge	72	53615.585				ug/L
	As	75	14619.110	**250.960**	3.75	1.5	ug/L
	Se	77	1670.515	**251.891**	3.15	1.3	ug/L
	Se	82	1843.622	**250.884**	2.11	0.8	ug/L
	Sr	88	16848.098	**20.039**	0.33	1.6	ug/L
	Mo	98	24314.312	**100.290**	2.00	2.0	ug/L
>	Rh	103	58850.393				ug/L
	Ag	107	53144.302	**100.035**	3.00	3.0	ug/L
	Cd	111	13373.707	**100.017**	0.40	0.4	ug/L
	Cd	114	35066.269	**100.326**	0.90	0.9	ug/L
>	In	115	99379.080				ug/L
	Sn	120	68418.299	**100.814**	2.01	2.0	ug/L
	Sb	121	52704.606	**100.547**	0.76	0.8	ug/L
	Ba	137	26847.931	**99.880**	1.42	1.4	ug/L
	Ba	138	176402.290	**99.999**	1.33	1.3	ug/L
>	Tb	159	149693.911				ug/L
	Tl	205	143622.789	**100.132**	0.99	1.0	ug/L
	Pb	208	269447.084	**249.966**	3.55	1.4	ug/L
	Hg	200	2358.973	**19.897**	0.59	3.0	ug/L
	Hg	201	1430.133	**20.187**	0.91	4.5	ug/L
>	Bi	209	90764.766				ug/L
	U	238	312496.618	**100.644**	0.80	0.8	ug/L
	C	13	373.343				ug/L
	W	184	8.664				ug/L
	Pd	106	-234.365				ug/L
	Kr	83	11.667				ug/L
	Na	23	3998450.947	**9975.499**	330.86	3.3	ug/L
	Mg	24	2636287.079	**9876.273**	299.05	3.0	ug/L

K	39	4848566.785	**9964.705**	180.20	1.8	ug/L
Ca	44	187525.469	**10015.916**	196.15	2.0	ug/L
Ti	47	53.334				ug/L
Sc-1	45	95482.953				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000233	0.000	0.999982	Linear Thru Zero
B	11.009	0.000395	0.000	0.999953	Linear Thru Zero
Al	26.982	0.004158	0.000	0.999388	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007445	0.000	0.999883	Linear Thru Zero
Cr	51.941	0.006096	0.000	0.999651	Linear Thru Zero
Cr	52.941	0.000569	0.000	0.996544	Linear Thru Zero
Mn	54.938	0.008958	0.000	0.999988	Linear Thru Zero
Co	58.933	0.005823	0.000	0.999987	Linear Thru Zero
Ni	59.933	0.001162	0.000	0.999979	Linear Thru Zero
Cu	62.930	0.004235	0.000	0.999991	Linear Thru Zero
Cu	64.928	0.001853	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.001104	0.000	0.999946	Linear Thru Zero
Zn	67.925	0.000765	0.000	0.999956	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001083	0.000	0.999945	Linear Thru Zero
Se	76.920	0.000093	0.000	0.999727	Linear Thru Zero
Se	81.917	0.000137	0.000	0.999955	Linear Thru Zero
Sr	87.906	0.015627	0.000	0.999989	Linear Thru Zero
Mo	97.906	0.004118	0.000	0.999971	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009031	0.000	0.999989	Linear Thru Zero
Cd	110.904	0.001345	0.000	0.999997	Linear Thru Zero
Cd	113.904	0.003516	0.000	0.999941	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006819	0.000	0.999816	Linear Thru Zero
Sb	120.904	0.005236	0.000	0.999913	Linear Thru Zero
Ba	136.905	0.001795	0.000	0.999992	Linear Thru Zero
Ba	137.905	0.011780	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009579	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.007201	0.000	0.999996	Linear Thru Zero
Hg	199.968	0.001305	0.000	0.999916	Linear Thru Zero
Hg	200.970	0.000779	0.000	0.999697	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.034209	0.000	0.999900	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	400.587223	0.000	0.999979	Linear Thru Zero
Mg	23.985	266.912140	0.000	0.999635	Linear Thru Zero
K	38.964	480.103650	0.000	0.999954	Linear Thru Zero
Ca	43.956	18.522040	0.000	0.999980	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, February 15, 2017 14:03:44
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.054
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2.667				ug/L
	B	11	184.669				ug/L
	Al	27	4797.497				ug/L
>	Sc	45	91455.134				ug/L
	V	51	8574.595				ug/L
	Cr	52	2958.235				ug/L
	Cr	53	14718.568				ug/L
	Mn	55	237.337				ug/L
	Co	59	21.000				ug/L
	Ni	60	231.003				ug/L
	Cu	63	76.000				ug/L
	Cu	65	42.333				ug/L
	Zn	66	138.335				ug/L
	Zn	68	137.001				ug/L
>	Ge	72	52581.509				ug/L
	As	75	54.304				ug/L
	Se	77	384.510				ug/L
	Se	82	5.391				ug/L
	Sr	88	53.000				ug/L
	Mo	98	15.342				ug/L
>	Rh	103	58545.970				ug/L
	Ag	107	9.333				ug/L
	Cd	111	1.187				ug/L
	Cd	114	5.893				ug/L
>	In	115	98008.757				ug/L
	Sn	120	89.924				ug/L
	Sb	121	282.005				ug/L
	Ba	137	12.304				ug/L
	Ba	138	63.304				ug/L
>	Tb	159	141692.516				ug/L
	Tl	205	32.667				ug/L
	Pb	208	33.667				ug/L
	Hg	200	3.979				ug/L
	Hg	201	2.000				ug/L
>	Bi	209	91461.196				ug/L
	U	238	6.667				ug/L
	C	13	360.009				ug/L
	W	184	3.332				ug/L
	Pd	106	1.544				ug/L
	Kr	83	12.500				ug/L
	Na	23	2060.276				ug/L
	Mg	24	180.002				ug/L

K	39	65053.952		ug/L
Ca	44	1623.508		ug/L
Ti	47	20.000		ug/L
Sc-1	45	91455.134		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000233	0.000	0.999982	Linear Thru Zero
B	11.009	0.000395	0.000	0.999953	Linear Thru Zero
Al	26.982	0.004158	0.000	0.999388	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007445	0.000	0.999883	Linear Thru Zero
Cr	51.941	0.006096	0.000	0.999651	Linear Thru Zero
Cr	52.941	0.000569	0.000	0.996544	Linear Thru Zero
Mn	54.938	0.008958	0.000	0.999988	Linear Thru Zero
Co	58.933	0.005823	0.000	0.999987	Linear Thru Zero
Ni	59.933	0.001162	0.000	0.999979	Linear Thru Zero
Cu	62.930	0.004235	0.000	0.999991	Linear Thru Zero
Cu	64.928	0.001853	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.001104	0.000	0.999946	Linear Thru Zero
Zn	67.925	0.000765	0.000	0.999956	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001083	0.000	0.999945	Linear Thru Zero
Se	76.920	0.000093	0.000	0.999727	Linear Thru Zero
Se	81.917	0.000137	0.000	0.999955	Linear Thru Zero
Sr	87.906	0.015627	0.000	0.999989	Linear Thru Zero
Mo	97.906	0.004118	0.000	0.999971	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009031	0.000	0.999989	Linear Thru Zero
Cd	110.904	0.001345	0.000	0.999997	Linear Thru Zero
Cd	113.904	0.003516	0.000	0.999941	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006819	0.000	0.999816	Linear Thru Zero
Sb	120.904	0.005236	0.000	0.999913	Linear Thru Zero
Ba	136.905	0.001795	0.000	0.999992	Linear Thru Zero
Ba	137.905	0.011780	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009579	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.007201	0.000	0.999996	Linear Thru Zero
Hg	199.968	0.001305	0.000	0.999916	Linear Thru Zero
Hg	200.970	0.000779	0.000	0.999697	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.034209	0.000	0.999900	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	400.587223	0.000	0.999979	Linear Thru Zero
Mg	23.985	266.912140	0.000	0.999635	Linear Thru Zero
K	38.964	480.103650	0.000	0.999954	Linear Thru Zero
Ca	43.956	18.522040	0.000	0.999980	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, February 15, 2017 14:07:12
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.054
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	29.333	**1.000**	0.36	35.7	ug/L
	B	11	965.394	**20.000**	0.97	4.8	ug/L
	Al	27	9771.536	**20.000**	0.61	3.1	ug/L
>	Sc	45	93055.474				ug/L
	V	51	10697.227	**3.000**	0.57	19.2	ug/L
	Cr	52	3577.165	**3.000**	0.63	21.0	ug/L
	Cr	53	14888.730	**3.000**	7.97	265.6	ug/L
	Mn	55	996.065	**1.000**	0.03	2.8	ug/L
	Co	59	559.354	**1.000**	0.02	2.5	ug/L
	Ni	60	390.343	**1.000**	0.05	4.7	ug/L
	Cu	63	504.350	**2.000**	0.10	4.9	ug/L
	Cu	65	224.670	**2.000**	0.11	5.4	ug/L
	Zn	66	354.008	**5.000**	0.72	14.5	ug/L
	Zn	68	276.005	**5.000**	0.20	3.9	ug/L
>	Ge	72	52852.016				ug/L
	As	75	125.276	**2.000**	0.75	37.7	ug/L
	Se	77	392.677	**2.000**	1.80	90.0	ug/L
	Se	82	19.242	**2.000**	1.15	57.4	ug/L
	Sr	88	207.336	**0.200**	0.03	17.4	ug/L
	Mo	98	235.606	**1.000**	0.08	8.1	ug/L
>	Rh	103	58191.346				ug/L
	Ag	107	574.688	**1.000**	0.11	11.4	ug/L
	Cd	111	146.050	**1.000**	0.05	4.8	ug/L
	Cd	114	375.992	**1.000**	0.04	4.1	ug/L
>	In	115	98407.076				ug/L
	Sn	120	691.330	**1.000**	0.06	5.7	ug/L
	Sb	121	1395.460	**2.000**	0.15	7.7	ug/L
	Ba	137	272.321	**1.000**	0.03	2.6	ug/L
	Ba	138	1748.848	**1.000**	0.03	2.6	ug/L
>	Tb	159	143535.040				ug/L
	Tl	205	1417.464	**1.000**	0.01	0.6	ug/L
	Pb	208	1062.740	**1.000**	0.04	4.0	ug/L
	Hg	200	32.650	**0.200**	0.07	37.1	ug/L
	Hg	201	22.000	**0.200**	0.06	27.8	ug/L
>	Bi	209	92068.132				ug/L
	U	238	3059.609	**1.000**	0.02	2.2	ug/L
	C	13	333.341				ug/L
	W	184	2.667				ug/L
	Pd	106	-4.844				ug/L
	Kr	83	10.500				ug/L
	Na	23	45272.841	**100.000**	0.87	0.9	ug/L
	Mg	24	28017.610	**100.000**	1.92	1.9	ug/L

K	39	115419.839	**100.000**	5.90	5.9	ug/L
Ca	44	3430.766	**100.000**	10.55	10.5	ug/L
Ti	47	26.667				ug/L
Sc-1	45	93055.474				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000286	0.000	1.000000	Linear Thru Zero
B	11.009	0.000418	0.000	1.000000	Linear Thru Zero
Al	26.982	0.002628	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007064	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.002032	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000312	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.008109	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005781	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001669	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004051	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001724	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000813	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000523	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000673	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000058	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000132	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.014581	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003787	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009732	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001471	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003761	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006111	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005652	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001810	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011741	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009644	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007167	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001549	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001088	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033163	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	432.125651	0.000	1.000000	Linear Thru Zero
Mg	23.985	278.376082	0.000	1.000000	Linear Thru Zero
K	38.964	503.658867	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.072582	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, February 15, 2017 14:10:40
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.054
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	229.337	**9.984**	0.41	4.1	ug/L
	B	11	4114.434	**100.085**	0.82	0.8	ug/L
	Al	27	13229.373	**28.085**	1.38	4.9	ug/L
>	Sc	45	91951.014				ug/L
	V	51	15485.162	**10.045**	0.50	5.0	ug/L
	Cr	52	7660.480	**10.522**	0.16	1.6	ug/L
	Cr	53	15275.155	**11.526**	3.07	26.7	ug/L
	Mn	55	21330.215	**25.005**	0.45	1.8	ug/L
	Co	59	5473.614	**10.002**	0.20	2.0	ug/L
	Ni	60	2904.215	**24.983**	0.56	2.2	ug/L
	Cu	63	5797.520	**25.009**	0.83	3.3	ug/L
	Cu	65	2519.413	**25.012**	0.98	3.9	ug/L
	Zn	66	1624.172	**25.263**	0.41	1.6	ug/L
	Zn	68	1158.087	**25.310**	1.78	7.0	ug/L
>	Ge	72	53197.058				ug/L
	As	75	1445.594	**25.057**	0.98	3.9	ug/L
	Se	77	482.848	**25.028**	3.42	13.7	ug/L
	Se	82	177.228	**24.997**	0.37	1.5	ug/L
	Sr	88	1739.197	**2.002**	0.04	2.2	ug/L
	Mo	98	2250.375	**10.002**	0.31	3.1	ug/L
>	Rh	103	58040.916				ug/L
	Ag	107	5271.139	**9.993**	0.33	3.3	ug/L
	Cd	111	1287.697	**9.988**	0.26	2.6	ug/L
	Cd	114	3476.749	**9.994**	0.37	3.7	ug/L
>	In	115	97714.927				ug/L
	Sn	120	6800.946	**10.011**	0.21	2.1	ug/L
	Sb	121	5369.207	**9.967**	0.31	3.1	ug/L
	Ba	137	2635.076	**10.001**	0.21	2.1	ug/L
	Ba	138	17063.545	**10.001**	0.14	1.4	ug/L
>	Tb	159	142915.139				ug/L
	Tl	205	13883.189	**10.000**	0.12	1.2	ug/L
	Pb	208	26278.817	**25.001**	0.25	1.0	ug/L
	Hg	200	242.649	**1.996**	0.29	14.6	ug/L
	Hg	201	129.334	**1.989**	0.29	14.7	ug/L
>	Bi	209	91761.859				ug/L
	U	238	30544.876	**10.000**	0.09	0.9	ug/L
	C	13	433.346				ug/L
	W	184	3.330				ug/L
	Pd	106	-16.851				ug/L
	Kr	83	12.333				ug/L
	Na	23	393141.585	**998.962**	29.88	3.0	ug/L
	Mg	24	275068.878	**999.874**	12.84	1.3	ug/L

K	39	565441.271	**999.935**	16.43	1.6	ug/L
Ca	44	20430.448	**1000.387**	35.92	3.6	ug/L
Ti	47	30.000				ug/L
Sc-1	45	91951.014				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000247	0.000	0.999873	Linear Thru Zero
B	11.009	0.000427	0.000	0.999991	Linear Thru Zero
Al	26.982	0.003255	0.000	0.988311	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007434	0.000	0.999889	Linear Thru Zero
Cr	51.941	0.004843	0.000	0.985175	Linear Thru Zero
Cr	52.941	0.000449	0.000	0.891367	Linear Thru Zero
Mn	54.938	0.009172	0.000	0.999989	Linear Thru Zero
Co	58.933	0.005928	0.000	0.999997	Linear Thru Zero
Ni	59.933	0.001163	0.000	0.999849	Linear Thru Zero
Cu	62.930	0.004299	0.000	0.999989	Linear Thru Zero
Cu	64.928	0.001862	0.000	0.999982	Linear Thru Zero
Zn	65.926	0.001104	0.000	0.998616	Linear Thru Zero
Zn	67.925	0.000758	0.000	0.998082	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001043	0.000	0.999596	Linear Thru Zero
Se	76.920	0.000071	0.000	0.999900	Linear Thru Zero
Se	81.917	0.000129	0.000	0.999999	Linear Thru Zero
Sr	87.906	0.015835	0.000	0.999969	Linear Thru Zero
Mo	97.906	0.003851	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009078	0.000	0.999974	Linear Thru Zero
Cd	110.904	0.001318	0.000	0.999933	Linear Thru Zero
Cd	113.904	0.003554	0.000	0.999983	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006861	0.000	0.999940	Linear Thru Zero
Sb	120.904	0.005225	0.000	0.999866	Linear Thru Zero
Ba	136.905	0.001834	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.011891	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009691	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007346	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001302	0.000	0.999820	Linear Thru Zero
Hg	200.970	0.000698	0.000	0.998438	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033278	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	391.487689	0.000	0.999946	Linear Thru Zero
Mg	23.985	274.923402	0.000	0.999999	Linear Thru Zero
K	38.964	500.419710	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.799669	0.000	0.999993	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Wednesday, February 15, 2017 14:14:08
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.054
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	451.013	**19.887**	0.87	4.4	ug/L
	B	11	7980.140	**199.047**	5.85	2.9	ug/L
	Al	27	22630.589	**52.167**	1.46	2.8	ug/L
>	Sc	45	93373.996				ug/L
	V	51	22894.315	**20.078**	0.17	0.8	ug/L
	Cr	52	13536.568	**20.618**	0.24	1.2	ug/L
	Cr	53	15971.233	**20.487**	4.32	21.1	ug/L
	Mn	55	42460.225	**49.857**	0.84	1.7	ug/L
	Co	59	10978.831	**19.958**	0.27	1.3	ug/L
	Ni	60	5696.442	**50.055**	1.45	2.9	ug/L
	Cu	63	11492.925	**50.230**	1.27	2.5	ug/L
	Cu	65	5024.975	**50.311**	0.56	1.1	ug/L
	Zn	66	3132.304	**50.456**	0.59	1.2	ug/L
	Zn	68	2153.301	**50.265**	1.29	2.6	ug/L
>	Ge	72	51888.482				ug/L
	As	75	2804.775	**50.168**	2.33	4.6	ug/L
	Se	77	623.025	**52.615**	5.08	9.7	ug/L
	Se	82	359.395	**50.548**	2.09	4.1	ug/L
	Sr	88	3355.399	**4.004**	0.11	2.7	ug/L
	Mo	98	4710.077	**20.268**	0.55	2.7	ug/L
>	Rh	103	56998.498				ug/L
	Ag	107	10597.302	**20.092**	0.56	2.8	ug/L
	Cd	111	2674.826	**20.129**	0.12	0.6	ug/L
	Cd	114	6775.380	**19.876**	0.27	1.4	ug/L
>	In	115	98189.650				ug/L
	Sn	120	13524.505	**19.988**	0.38	1.9	ug/L
	Sb	121	10728.145	**20.074**	0.48	2.4	ug/L
	Ba	137	5096.967	**19.873**	0.38	1.9	ug/L
	Ba	138	33823.492	**19.970**	0.41	2.0	ug/L
>	Tb	159	143005.054				ug/L
	Tl	205	27983.154	**20.034**	0.39	1.9	ug/L
	Pb	208	53159.796	**50.113**	1.16	2.3	ug/L
	Hg	200	469.326	**3.989**	0.17	4.2	ug/L
	Hg	201	280.005	**4.076**	0.58	14.2	ug/L
>	Bi	209	90526.066				ug/L
	U	238	59907.385	**19.977**	0.28	1.4	ug/L
	C	13	313.340				ug/L
	W	184	3.333				ug/L
	Pd	106	-33.174				ug/L
	Kr	83	13.167				ug/L
	Na	23	803113.172	**2009.141**	51.06	2.5	ug/L
	Mg	24	552651.080	**2001.917**	10.43	0.5	ug/L

K	39	1067471.323	**2000.635**	33.35	1.7	ug/L
Ca	44	38385.563	**1990.859**	42.85	2.2	ug/L
Ti	47	26.667				ug/L
Sc-1	45	93373.996				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000241	0.000	0.999910	Linear Thru Zero
B	11.009	0.000419	0.000	0.999954	Linear Thru Zero
Al	26.982	0.003640	0.000	0.994980	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007542	0.000	0.999949	Linear Thru Zero
Cr	51.941	0.005463	0.000	0.995723	Linear Thru Zero
Cr	52.941	0.000493	0.000	0.976787	Linear Thru Zero
Mn	54.938	0.009069	0.000	0.999981	Linear Thru Zero
Co	58.933	0.005880	0.000	0.999991	Linear Thru Zero
Ni	59.933	0.001168	0.000	0.999968	Linear Thru Zero
Cu	62.930	0.004379	0.000	0.999956	Linear Thru Zero
Cu	64.928	0.001909	0.000	0.999920	Linear Thru Zero
Zn	65.926	0.001144	0.000	0.999574	Linear Thru Zero
Zn	67.925	0.000774	0.000	0.999565	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001057	0.000	0.999899	Linear Thru Zero
Se	76.920	0.000089	0.000	0.994597	Linear Thru Zero
Se	81.917	0.000135	0.000	0.999761	Linear Thru Zero
Sr	87.906	0.015899	0.000	0.999992	Linear Thru Zero
Mo	97.906	0.004066	0.000	0.999646	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009246	0.000	0.999953	Linear Thru Zero
Cd	110.904	0.001353	0.000	0.999904	Linear Thru Zero
Cd	113.904	0.003469	0.000	0.999920	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006846	0.000	0.999987	Linear Thru Zero
Sb	120.904	0.005300	0.000	0.999947	Linear Thru Zero
Ba	136.905	0.001789	0.000	0.999920	Linear Thru Zero
Ba	137.905	0.011822	0.000	0.999995	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009756	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.007413	0.000	0.999990	Linear Thru Zero
Hg	199.968	0.001288	0.000	0.999948	Linear Thru Zero
Hg	200.970	0.000755	0.000	0.999009	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033129	0.000	0.999997	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	398.704263	0.000	0.999948	Linear Thru Zero
Mg	23.985	275.971016	0.000	0.999998	Linear Thru Zero
K	38.964	501.049631	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.465424	0.000	0.999957	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Wednesday, February 15, 2017 14:17:35
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.054
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	909.720	**39.996**	0.57	1.4	ug/L
	B	11	15464.197	**397.027**	6.85	1.7	ug/L
	Al	27	40693.375	**101.155**	1.40	1.4	ug/L
>	Sc	45	93944.192				ug/L
	V	51	36936.443	**39.928**	0.31	0.8	ug/L
	Cr	52	25090.023	**40.679**	0.59	1.4	ug/L
	Cr	53	17225.100	**41.192**	3.66	8.9	ug/L
	Mn	55	85104.307	**99.905**	1.44	1.4	ug/L
	Co	59	22026.172	**39.960**	0.84	2.1	ug/L
	Ni	60	11268.249	**100.116**	1.52	1.5	ug/L
	Cu	63	22169.907	**98.639**	0.68	0.7	ug/L
	Cu	65	9883.012	**99.166**	0.93	0.9	ug/L
	Zn	66	6032.033	**99.127**	2.90	2.9	ug/L
	Zn	68	4116.101	**99.087**	2.27	2.3	ug/L
>	Ge	72	53370.213				ug/L
	As	75	5700.316	**100.005**	2.05	2.0	ug/L
	Se	77	888.218	**101.070**	2.90	2.9	ug/L
	Se	82	715.268	**99.641**	2.07	2.1	ug/L
	Sr	88	6509.754	**7.903**	0.08	1.0	ug/L
	Mo	98	9236.075	**39.703**	0.94	2.4	ug/L
>	Rh	103	58476.186				ug/L
	Ag	107	20864.933	**39.657**	1.63	4.1	ug/L
	Cd	111	5389.929	**40.065**	0.55	1.4	ug/L
	Cd	114	14070.626	**40.233**	0.33	0.8	ug/L
>	In	115	98900.589				ug/L
	Sn	120	26421.959	**39.731**	0.24	0.6	ug/L
	Sb	121	21111.598	**39.937**	0.23	0.6	ug/L
	Ba	137	10516.114	**40.126**	0.21	0.5	ug/L
	Ba	138	68163.965	**39.946**	0.16	0.4	ug/L
>	Tb	159	144839.720				ug/L
	Tl	205	56411.783	**39.976**	0.16	0.4	ug/L
	Pb	208	106173.286	**99.722**	0.89	0.9	ug/L
	Hg	200	964.039	**8.051**	0.68	8.5	ug/L
	Hg	201	568.688	**8.064**	0.23	2.8	ug/L
>	Bi	209	90689.133				ug/L
	U	238	121357.155	**40.093**	0.40	1.0	ug/L
	C	13	373.343				ug/L
	W	184	3.333				ug/L
	Pd	106	-80.757				ug/L
	Kr	83	11.500				ug/L
	Na	23	1588566.956	**3995.010**	54.75	1.4	ug/L
	Mg	24	1083514.018	**3981.988**	22.39	0.6	ug/L

K	39	2072720.014	**4001.648**	63.02		1.6	ug/L
Ca	44	74135.533	**3982.325**	10.58		0.3	ug/L
Ti	47	50.000					ug/L
Sc-1	45	93944.192					ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000241	0.000	0.999979	Linear Thru Zero
B	11.009	0.000410	0.000	0.999901	Linear Thru Zero
Al	26.982	0.003763	0.000	0.998581	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007499	0.000	0.999982	Linear Thru Zero
Cr	51.941	0.005770	0.000	0.998619	Linear Thru Zero
Cr	52.941	0.000544	0.000	0.993893	Linear Thru Zero
Mn	54.938	0.009041	0.000	0.999994	Linear Thru Zero
Co	58.933	0.005861	0.000	0.999996	Linear Thru Zero
Ni	59.933	0.001173	0.000	0.999990	Linear Thru Zero
Cu	62.930	0.004197	0.000	0.999693	Linear Thru Zero
Cu	64.928	0.001859	0.000	0.999869	Linear Thru Zero
Zn	65.926	0.001114	0.000	0.999771	Linear Thru Zero
Zn	67.925	0.000752	0.000	0.999758	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001058	0.000	0.999976	Linear Thru Zero
Se	76.920	0.000092	0.000	0.998609	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999921	Linear Thru Zero
Sr	87.906	0.015306	0.000	0.999763	Linear Thru Zero
Mo	97.906	0.003972	0.000	0.999823	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008999	0.000	0.999871	Linear Thru Zero
Cd	110.904	0.001360	0.000	0.999973	Linear Thru Zero
Cd	113.904	0.003534	0.000	0.999927	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006701	0.000	0.999924	Linear Thru Zero
Sb	120.904	0.005273	0.000	0.999983	Linear Thru Zero
Ba	136.905	0.001807	0.000	0.999965	Linear Thru Zero
Ba	137.905	0.011771	0.000	0.999996	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009737	0.000	0.999998	Linear Thru Zero
Pb	207.977	0.007348	0.000	0.999985	Linear Thru Zero
Hg	199.968	0.001315	0.000	0.999924	Linear Thru Zero
Hg	200.970	0.000775	0.000	0.999672	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033376	0.000	0.999991	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	397.122089	0.000	0.999985	Linear Thru Zero
Mg	23.985	272.058584	0.000	0.999967	Linear Thru Zero
K	38.964	501.709800	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.208466	0.000	0.999958	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Wednesday, February 15, 2017 14:21:03
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.054
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2240.994	**99.723**	4.12	4.1	ug/L
	B	11	38048.616	**996.687**	28.94	2.9	ug/L
	Al	27	102898.715	**254.308**	6.91	2.7	ug/L
>	Sc	45	94195.241				ug/L
	V	51	80931.321	**100.355**	0.91	0.9	ug/L
	Cr	52	61726.508	**101.301**	0.28	0.3	ug/L
	Cr	53	21304.963	**102.978**	1.93	1.9	ug/L
	Mn	55	214479.018	**250.270**	1.90	0.8	ug/L
	Co	59	55581.760	**100.110**	0.49	0.5	ug/L
	Ni	60	27624.188	**249.632**	2.92	1.2	ug/L
	Cu	63	56090.463	**250.150**	1.25	0.5	ug/L
	Cu	65	24742.731	**249.950**	3.54	1.4	ug/L
	Zn	66	15041.694	**250.270**	3.90	1.6	ug/L
	Zn	68	10337.943	**250.846**	3.61	1.4	ug/L
>	Ge	72	53205.092				ug/L
	As	75	14630.912	**251.528**	2.29	0.9	ug/L
	Se	77	1642.175	**250.861**	2.64	1.1	ug/L
	Se	82	1837.136	**251.343**	4.12	1.6	ug/L
	Sr	88	16889.192	**20.114**	0.35	1.7	ug/L
	Mo	98	23951.554	**100.479**	2.28	2.3	ug/L
>	Rh	103	58611.122				ug/L
	Ag	107	53479.936	**100.237**	1.00	1.0	ug/L
	Cd	111	13567.110	**99.998**	1.87	1.9	ug/L
	Cd	114	35527.764	**100.127**	1.67	1.7	ug/L
>	In	115	99783.111				ug/L
	Sn	120	67978.977	**100.262**	0.89	0.9	ug/L
	Sb	121	53140.255	**100.079**	1.13	1.1	ug/L
	Ba	137	26595.085	**99.779**	0.37	0.4	ug/L
	Ba	138	174948.552	**99.955**	1.23	1.2	ug/L
>	Tb	159	148958.443				ug/L
	Tl	205	144593.780	**99.942**	1.04	1.0	ug/L
	Pb	208	272716.194	**249.849**	1.41	0.6	ug/L
	Hg	200	2480.336	**20.067**	0.80	4.0	ug/L
	Hg	201	1401.461	**19.922**	0.47	2.3	ug/L
>	Bi	209	92349.710				ug/L
	U	238	315196.309	**100.385**	0.73	0.7	ug/L
	C	13	306.674				ug/L
	W	184	9.998				ug/L
	Pd	106	-274.978				ug/L
	Kr	83	9.833				ug/L
	Na	23	4042733.021	**10029.932**	133.95	1.3	ug/L
	Mg	24	2669380.947	**9966.687**	155.03	1.6	ug/L

K	39	5093048.099	**10003.764**	57.00	0.6	ug/L
Ca	44	190001.693	**10058.344**	174.20	1.7	ug/L
Ti	47	40.000				ug/L
Sc-1	45	94195.241				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000238	0.000	0.999978	Linear Thru Zero
B	11.009	0.000403	0.000	0.999956	Linear Thru Zero
Al	26.982	0.004089	0.000	0.999101	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007628	0.000	0.999967	Linear Thru Zero
Cr	51.941	0.006150	0.000	0.999387	Linear Thru Zero
Cr	52.941	0.000634	0.000	0.997119	Linear Thru Zero
Mn	54.938	0.009088	0.000	0.999996	Linear Thru Zero
Co	58.933	0.005892	0.000	0.999996	Linear Thru Zero
Ni	59.933	0.001165	0.000	0.999993	Linear Thru Zero
Cu	62.930	0.004209	0.000	0.999946	Linear Thru Zero
Cu	64.928	0.001858	0.000	0.999977	Linear Thru Zero
Zn	65.926	0.001119	0.000	0.999958	Linear Thru Zero
Zn	67.925	0.000764	0.000	0.999932	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001089	0.000	0.999907	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999738	Linear Thru Zero
Se	81.917	0.000137	0.000	0.999918	Linear Thru Zero
Sr	87.906	0.015734	0.000	0.999883	Linear Thru Zero
Mo	97.906	0.004065	0.000	0.999916	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009102	0.000	0.999965	Linear Thru Zero
Cd	110.904	0.001360	0.000	0.999995	Linear Thru Zero
Cd	113.904	0.003556	0.000	0.999984	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006786	0.000	0.999971	Linear Thru Zero
Sb	120.904	0.005293	0.000	0.999996	Linear Thru Zero
Ba	136.905	0.001789	0.000	0.999982	Linear Thru Zero
Ba	137.905	0.011745	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009710	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.007327	0.000	0.999997	Linear Thru Zero
Hg	199.968	0.001336	0.000	0.999960	Linear Thru Zero
Hg	200.970	0.000761	0.000	0.999905	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033999	0.000	0.999963	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	402.861437	0.000	0.999976	Linear Thru Zero
Mg	23.985	267.812249	0.000	0.999968	Linear Thru Zero
K	38.964	502.610234	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.728549	0.000	0.999912	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, February 15, 2017 15:43:05
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2.667				ug/L
	B	11	196.002				ug/L
	Al	27	5930.286				ug/L
>	Sc	45	103010.530				ug/L
	V	51	9333.283				ug/L
	Cr	52	4140.114				ug/L
	Cr	53	19454.237				ug/L
	Mn	55	318.007				ug/L
	Co	59	15.667				ug/L
	Ni	60	312.340				ug/L
	Cu	63	107.667				ug/L
	Cu	65	50.667				ug/L
	Zn	66	214.670				ug/L
	Zn	68	206.003				ug/L
>	Ge	72	81584.609				ug/L
	As	75	63.852				ug/L
	Se	77	587.356				ug/L
	Se	82	11.384				ug/L
	Sr	88	109.334				ug/L
	Mo	98	14.867				ug/L
>	Rh	103	86776.913				ug/L
	Ag	107	16.667				ug/L
	Cd	111	5.794				ug/L
	Cd	114	14.536				ug/L
>	In	115	138156.934				ug/L
	Sn	120	133.882				ug/L
	Sb	121	646.694				ug/L
	Ba	137	16.951				ug/L
	Ba	138	112.618				ug/L
>	Tb	159	242506.789				ug/L
	Tl	205	32.333				ug/L
	Pb	208	40.667				ug/L
	Hg	200	8.633				ug/L
	Hg	201	7.333				ug/L
>	Bi	209	145422.811				ug/L
	U	238	6.000				ug/L
	C	13	393.344				ug/L
	W	184	5.330				ug/L
	Pd	106	1.951				ug/L
	Kr	83	13.333				ug/L
	Na	23	12096.237				ug/L
	Mg	24	436.680				ug/L

K	39	83888.439		ug/L
Ca	44	2600.445		ug/L
Ti	47	30.000		ug/L
Sc-1	45	103010.530		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000238	0.000	0.999978	Linear Thru Zero
B	11.009	0.000403	0.000	0.999956	Linear Thru Zero
Al	26.982	0.004089	0.000	0.999101	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007628	0.000	0.999967	Linear Thru Zero
Cr	51.941	0.006150	0.000	0.999387	Linear Thru Zero
Cr	52.941	0.000634	0.000	0.997119	Linear Thru Zero
Mn	54.938	0.009088	0.000	0.999996	Linear Thru Zero
Co	58.933	0.005892	0.000	0.999996	Linear Thru Zero
Ni	59.933	0.001165	0.000	0.999993	Linear Thru Zero
Cu	62.930	0.004209	0.000	0.999946	Linear Thru Zero
Cu	64.928	0.001858	0.000	0.999977	Linear Thru Zero
Zn	65.926	0.001119	0.000	0.999958	Linear Thru Zero
Zn	67.925	0.000764	0.000	0.999932	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001089	0.000	0.999907	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999738	Linear Thru Zero
Se	81.917	0.000137	0.000	0.999918	Linear Thru Zero
Sr	87.906	0.015734	0.000	0.999883	Linear Thru Zero
Mo	97.906	0.004065	0.000	0.999916	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009102	0.000	0.999965	Linear Thru Zero
Cd	110.904	0.001360	0.000	0.999995	Linear Thru Zero
Cd	113.904	0.003556	0.000	0.999984	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006786	0.000	0.999971	Linear Thru Zero
Sb	120.904	0.005293	0.000	0.999996	Linear Thru Zero
Ba	136.905	0.001789	0.000	0.999982	Linear Thru Zero
Ba	137.905	0.011745	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009710	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.007327	0.000	0.999997	Linear Thru Zero
Hg	199.968	0.001336	0.000	0.999960	Linear Thru Zero
Hg	200.970	0.000761	0.000	0.999905	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033999	0.000	0.999963	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	402.861437	0.000	0.999976	Linear Thru Zero
Mg	23.985	267.812249	0.000	0.999968	Linear Thru Zero
K	38.964	502.610234	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.728549	0.000	0.999912	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, February 15, 2017 15:46:33
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	29.333	**1.000**	0.19	18.6	ug/L
	B	11	948.725	**20.000**	1.32	6.6	ug/L
	Al	27	12274.465	**20.000**	1.17	5.8	ug/L
>	Sc	45	104367.451				ug/L
	V	51	11795.681	**3.000**	0.56	18.6	ug/L
	Cr	52	4939.586	**3.000**	0.14	4.6	ug/L
	Cr	53	19352.481	**3.000**	2.40	80.1	ug/L
	Mn	55	1400.127	**1.000**	0.03	3.4	ug/L
	Co	59	817.043	**1.000**	0.05	4.8	ug/L
	Ni	60	595.023	**1.000**	0.02	2.4	ug/L
	Cu	63	767.705	**2.000**	0.03	1.3	ug/L
	Cu	65	342.008	**2.000**	0.03	1.5	ug/L
	Zn	66	524.018	**5.000**	0.40	8.1	ug/L
	Zn	68	434.679	**5.000**	0.34	6.8	ug/L
>	Ge	72	82445.609				ug/L
	As	75	229.927	**2.000**	0.63	31.5	ug/L
	Se	77	633.193	**2.000**	1.54	77.2	ug/L
	Se	82	27.528	**2.000**	0.63	31.5	ug/L
	Sr	88	326.340	**0.200**	0.04	21.1	ug/L
	Mo	98	367.945	**1.000**	0.04	3.8	ug/L
>	Rh	103	87529.845				ug/L
	Ag	107	834.045	**1.000**	0.03	2.9	ug/L
	Cd	111	228.538	**1.000**	0.05	5.2	ug/L
	Cd	114	550.952	**1.000**	0.04	4.5	ug/L
>	In	115	140336.353				ug/L
	Sn	120	992.587	**1.000**	0.07	7.3	ug/L
	Sb	121	2146.299	**2.000**	0.01	0.4	ug/L
	Ba	137	430.316	**1.000**	0.04	3.8	ug/L
	Ba	138	2698.444	**1.000**	0.02	1.9	ug/L
>	Tb	159	245080.345				ug/L
	Tl	205	2248.662	**1.000**	0.03	2.7	ug/L
	Pb	208	1738.530	**1.000**	0.02	2.3	ug/L
	Hg	200	44.658	**0.200**	0.07	33.1	ug/L
	Hg	201	30.000	**0.200**	0.04	17.9	ug/L
>	Bi	209	145905.425				ug/L
	U	238	4603.378	**1.000**	0.02	2.5	ug/L
	C	13	480.016				ug/L
	W	184	1.333				ug/L
	Pd	106	-2.852				ug/L
	Kr	83	16.000				ug/L
	Na	23	64732.136	**100.000**	8.77	8.8	ug/L
	Mg	24	34537.394	**100.000**	2.57	2.6	ug/L

K	39	131929.165	**100.000**	8.90	8.9	ug/L
Ca	44	4638.074	**100.000**	23.57	23.6	ug/L
Ti	47	46.667				ug/L
Sc-1	45	104367.451				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000255	0.000	1.000000	Linear Thru Zero
B	11.009	0.000359	0.000	1.000000	Linear Thru Zero
Al	26.982	0.003001	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007486	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.002378	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001131	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010331	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007674	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002670	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003995	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001764	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000745	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000549	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000999	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000238	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000098	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.013097	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004032	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009337	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001587	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003822	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006105	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005307	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001686	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010546	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009041	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006926	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001233	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000776	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031507	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	526.358989	0.000	1.000000	Linear Thru Zero
Mg	23.985	341.007136	0.000	1.000000	Linear Thru Zero
K	38.964	480.407256	0.000	1.000000	Linear Thru Zero
Ca	43.956	20.376299	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, February 15, 2017 15:50:01
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	207.669	**9.968**	1.07	10.7	ug/L
	B	11	4027.057	**100.013**	6.07	6.1	ug/L
	Al	27	16395.460	**27.426**	0.36	1.3	ug/L
>	Sc	45	106056.885				ug/L
	V	51	18879.853	**10.120**	0.29	2.9	ug/L
	Cr	52	10447.593	**10.514**	0.22	2.1	ug/L
	Cr	53	20703.492	**12.975**	3.20	24.6	ug/L
	Mn	55	29064.140	**25.002**	0.26	1.0	ug/L
	Co	59	8112.275	**9.999**	0.13	1.3	ug/L
	Ni	60	4287.862	**24.969**	0.49	2.0	ug/L
	Cu	63	8686.235	**25.007**	0.63	2.5	ug/L
	Cu	65	3926.669	**25.010**	0.18	0.7	ug/L
	Zn	66	2434.052	**25.301**	0.56	2.2	ug/L
	Zn	68	1814.548	**25.288**	0.73	2.9	ug/L
>	Ge	72	82315.184				ug/L
	As	75	2390.562	**25.018**	1.48	5.9	ug/L
	Se	77	790.207	**24.767**	2.87	11.6	ug/L
	Se	82	292.031	**25.045**	1.07	4.3	ug/L
	Sr	88	2625.448	**2.003**	0.02	1.2	ug/L
	Mo	98	3536.828	**10.000**	0.16	1.6	ug/L
>	Rh	103	87579.861				ug/L
	Ag	107	7978.138	**9.997**	0.13	1.3	ug/L
	Cd	111	1983.312	**9.986**	0.33	3.3	ug/L
	Cd	114	5110.985	**9.993**	0.18	1.8	ug/L
>	In	115	142152.406				ug/L
	Sn	120	9485.051	**10.007**	0.12	1.2	ug/L
	Sb	121	8058.886	**9.992**	0.01	0.1	ug/L
	Ba	137	4056.332	**9.998**	0.11	1.1	ug/L
	Ba	138	25880.061	**10.000**	0.13	1.3	ug/L
>	Tb	159	243601.157				ug/L
	Tl	205	22806.101	**10.003**	0.18	1.8	ug/L
	Pb	208	42601.324	**25.000**	0.22	0.9	ug/L
	Hg	200	400.643	**2.001**	0.10	4.8	ug/L
	Hg	201	243.337	**2.001**	0.15	7.3	ug/L
>	Bi	209	147258.265				ug/L
	U	238	46779.514	**10.001**	0.14	1.4	ug/L
	C	13	386.676				ug/L
	W	184	5.332				ug/L
	Pd	106	-20.880				ug/L
	Kr	83	16.333				ug/L
	Na	23	510513.866	**999.445**	33.11	3.3	ug/L
	Mg	24	330669.047	**999.677**	17.51	1.8	ug/L

K	39	559736.936	**999.905**	28.18	2.8	ug/L
Ca	44	21516.738	**999.236**	36.43	3.6	ug/L
Ti	47	40.000				ug/L
Sc-1	45	106056.885				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000194	0.000	0.999499	Linear Thru Zero
B	11.009	0.000361	0.000	1.000000	Linear Thru Zero
Al	26.982	0.003537	0.000	0.992721	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008635	0.000	0.999204	Linear Thru Zero
Cr	51.941	0.005546	0.000	0.985631	Linear Thru Zero
Cr	52.941	0.000491	0.000	0.710086	Linear Thru Zero
Mn	54.938	0.010838	0.000	0.999998	Linear Thru Zero
Co	58.933	0.007635	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001498	0.000	0.999510	Linear Thru Zero
Cu	62.930	0.004168	0.000	0.999994	Linear Thru Zero
Cu	64.928	0.001882	0.000	0.999987	Linear Thru Zero
Zn	65.926	0.001065	0.000	0.998196	Linear Thru Zero
Zn	67.925	0.000772	0.000	0.998340	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001129	0.000	0.999958	Linear Thru Zero
Se	76.920	0.000097	0.000	0.993297	Linear Thru Zero
Se	81.917	0.000136	0.000	0.999744	Linear Thru Zero
Sr	87.906	0.015257	0.000	0.999900	Linear Thru Zero
Mo	97.906	0.004021	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009091	0.000	0.999996	Linear Thru Zero
Cd	110.904	0.001393	0.000	0.999903	Linear Thru Zero
Cd	113.904	0.003587	0.000	0.999979	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006571	0.000	0.999975	Linear Thru Zero
Sb	120.904	0.005205	0.000	0.999992	Linear Thru Zero
Ba	136.905	0.001658	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.010578	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009345	0.000	0.999995	Linear Thru Zero
Pb	207.977	0.006988	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001330	0.000	0.999973	Linear Thru Zero
Hg	200.970	0.000801	0.000	0.999995	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031759	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	498.694276	0.000	0.999985	Linear Thru Zero
Mg	23.985	330.339048	0.000	0.999995	Linear Thru Zero
K	38.964	475.893633	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.930749	0.000	0.999971	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Wednesday, February 15, 2017 15:53:29
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	435.346	**20.223**	1.53	7.5	ug/L
	B	11	7576.397	**198.666**	2.47	1.2	ug/L
	Al	27	27953.370	**52.218**	0.59	1.1	ug/L
>	Sc	45	105614.831				ug/L
	V	51	28571.270	**20.173**	0.63	3.1	ug/L
	Cr	52	18294.398	**20.738**	0.08	0.4	ug/L
	Cr	53	21577.559	**21.693**	1.86	8.6	ug/L
	Mn	55	57981.047	**50.073**	0.23	0.5	ug/L
	Co	59	16012.318	**19.967**	0.09	0.4	ug/L
	Ni	60	8441.296	**50.265**	0.47	0.9	ug/L
	Cu	63	17435.747	**50.046**	0.40	0.8	ug/L
	Cu	65	7791.947	**49.937**	0.60	1.2	ug/L
	Zn	66	4691.764	**50.159**	1.04	2.1	ug/L
	Zn	68	3353.731	**49.845**	1.64	3.3	ug/L
>	Ge	72	82748.114				ug/L
	As	75	4527.751	**49.532**	0.66	1.3	ug/L
	Se	77	977.229	**49.487**	3.56	7.2	ug/L
	Se	82	562.567	**49.784**	3.11	6.2	ug/L
	Sr	88	5189.083	**4.005**	0.03	0.7	ug/L
	Mo	98	7021.886	**20.020**	0.21	1.0	ug/L
>	Rh	103	86695.926				ug/L
	Ag	107	16184.350	**20.101**	0.28	1.4	ug/L
	Cd	111	4110.642	**20.117**	1.35	6.7	ug/L
	Cd	114	10349.525	**20.031**	0.43	2.1	ug/L
>	In	115	142971.954				ug/L
	Sn	120	19167.848	**20.050**	0.58	2.9	ug/L
	Sb	121	15624.523	**20.020**	0.13	0.7	ug/L
	Ba	137	8024.782	**19.946**	0.29	1.4	ug/L
	Ba	138	52316.628	**20.034**	0.28	1.4	ug/L
>	Tb	159	244653.894				ug/L
	Tl	205	45848.929	**20.008**	0.30	1.5	ug/L
	Pb	208	86106.034	**50.067**	0.56	1.1	ug/L
	Hg	200	838.003	**4.044**	0.16	3.9	ug/L
	Hg	201	436.679	**3.918**	0.64	16.4	ug/L
>	Bi	209	147539.421				ug/L
	U	238	94603.545	**20.038**	0.21	1.1	ug/L
	C	13	420.012				ug/L
	W	184	6.664				ug/L
	Pd	106	-90.418				ug/L
	Kr	83	14.000				ug/L
	Na	23	993960.721	**1993.645**	48.59	2.4	ug/L
	Mg	24	655405.231	**1996.491**	53.15	2.7	ug/L

K	39	1042273.263	**2002.779**	32.30	1.6	ug/L
Ca	44	41696.144	**2012.810**	82.23	4.1	ug/L
Ti	47	83.334				ug/L
Sc-1	45	105614.831				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000203	0.000	0.999662	Linear Thru Zero
B	11.009	0.000351	0.000	0.999914	Linear Thru Zero
Al	26.982	0.003966	0.000	0.995923	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008918	0.000	0.999703	Linear Thru Zero
Cr	51.941	0.006415	0.000	0.995187	Linear Thru Zero
Cr	52.941	0.000712	0.000	0.942238	Linear Thru Zero
Mn	54.938	0.010902	0.000	0.999995	Linear Thru Zero
Co	58.933	0.007585	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001530	0.000	0.999850	Linear Thru Zero
Cu	62.930	0.004184	0.000	0.999997	Linear Thru Zero
Cu	64.928	0.001873	0.000	0.999994	Linear Thru Zero
Zn	65.926	0.001078	0.000	0.999616	Linear Thru Zero
Zn	67.925	0.000763	0.000	0.999630	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001089	0.000	0.999817	Linear Thru Zero
Se	76.920	0.000093	0.000	0.998320	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999910	Linear Thru Zero
Sr	87.906	0.015326	0.000	0.999977	Linear Thru Zero
Mo	97.906	0.004037	0.000	0.999998	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009277	0.000	0.999949	Linear Thru Zero
Cd	110.904	0.001426	0.000	0.999913	Linear Thru Zero
Cd	113.904	0.003609	0.000	0.999991	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006636	0.000	0.999983	Linear Thru Zero
Sb	120.904	0.005225	0.000	0.999997	Linear Thru Zero
Ba	136.905	0.001641	0.000	0.999985	Linear Thru Zero
Ba	137.905	0.010650	0.000	0.999994	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009360	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.007026	0.000	0.999996	Linear Thru Zero
Hg	199.968	0.001390	0.000	0.999759	Linear Thru Zero
Hg	200.970	0.000741	0.000	0.999173	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032001	0.000	0.999993	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	492.497043	0.000	0.999977	Linear Thru Zero
Mg	23.985	328.059788	0.000	0.999993	Linear Thru Zero
K	38.964	478.527389	0.000	0.999996	Linear Thru Zero
Ca	43.956	19.423444	0.000	0.999913	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Wednesday, February 15, 2017 15:56:57
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	881.384	**40.132**	0.61	1.5	ug/L
	B	11	14602.529	**395.810**	11.14	2.8	ug/L
	Al	27	50833.414	**101.346**	1.49	1.5	ug/L
>	Sc	45	106922.121				ug/L
	V	51	46510.490	**39.659**	0.60	1.5	ug/L
	Cr	52	33813.172	**40.693**	0.29	0.7	ug/L
	Cr	53	23098.640	**39.549**	6.50	16.4	ug/L
	Mn	55	115944.914	**99.805**	1.76	1.8	ug/L
	Co	59	32181.191	**39.919**	0.43	1.1	ug/L
	Ni	60	16297.583	**99.436**	2.58	2.6	ug/L
	Cu	63	33905.916	**99.526**	1.13	1.1	ug/L
	Cu	65	15133.876	**99.449**	0.98	1.0	ug/L
	Zn	66	9082.025	**99.950**	0.73	0.7	ug/L
	Zn	68	6220.515	**98.927**	1.16	1.2	ug/L
>	Ge	72	82396.315				ug/L
	As	75	8963.245	**99.802**	1.28	1.3	ug/L
	Se	77	1330.949	**99.059**	5.03	5.1	ug/L
	Se	82	1081.458	**99.301**	2.84	2.9	ug/L
	Sr	88	10085.943	**7.976**	0.09	1.2	ug/L
	Mo	98	13834.703	**39.919**	1.20	3.0	ug/L
>	Rh	103	86344.010				ug/L
	Ag	107	31343.064	**39.785**	0.36	0.9	ug/L
	Cd	111	8017.580	**39.797**	0.64	1.6	ug/L
	Cd	114	20388.896	**39.844**	0.96	2.4	ug/L
>	In	115	143431.904				ug/L
	Sn	120	37535.242	**39.827**	0.53	1.3	ug/L
	Sb	121	30375.858	**39.913**	0.26	0.7	ug/L
	Ba	137	16044.952	**39.886**	0.36	0.9	ug/L
	Ba	138	103634.003	**39.840**	0.60	1.5	ug/L
>	Tb	159	247145.979				ug/L
	Tl	205	90937.482	**39.830**	0.18	0.4	ug/L
	Pb	208	170170.052	**99.513**	0.96	1.0	ug/L
	Hg	200	1558.086	**7.927**	0.59	7.4	ug/L
	Hg	201	924.722	**8.125**	0.34	4.2	ug/L
>	Bi	209	144751.086				ug/L
	U	238	187361.042	**40.106**	0.46	1.2	ug/L
	C	13	380.011				ug/L
	W	184	11.332				ug/L
	Pd	106	-108.753				ug/L
	Kr	83	13.833				ug/L
	Na	23	2141725.608	**4072.802**	55.10	1.4	ug/L
	Mg	24	1301762.198	**3992.017**	54.07	1.4	ug/L

K	39	2095509.509	**4046.777**	171.78	4.2	ug/L
Ca	44	78831.896	**3981.786**	31.27	0.8	ug/L
Ti	47	56.667				ug/L
Sc-1	45	106922.121				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000205	0.000	0.999904	Linear Thru Zero
B	11.009	0.000340	0.000	0.999804	Linear Thru Zero
Al	26.982	0.004124	0.000	0.998756	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008685	0.000	0.999810	Linear Thru Zero
Cr	51.941	0.006784	0.000	0.998486	Linear Thru Zero
Cr	52.941	0.000688	0.000	0.983852	Linear Thru Zero
Mn	54.938	0.010834	0.000	0.999993	Linear Thru Zero
Co	58.933	0.007536	0.000	0.999992	Linear Thru Zero
Ni	59.933	0.001503	0.000	0.999912	Linear Thru Zero
Cu	62.930	0.004121	0.000	0.999963	Linear Thru Zero
Cu	64.928	0.001841	0.000	0.999950	Linear Thru Zero
Zn	65.926	0.001076	0.000	0.999907	Linear Thru Zero
Zn	67.925	0.000738	0.000	0.999723	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001082	0.000	0.999950	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999433	Linear Thru Zero
Se	81.917	0.000131	0.000	0.999899	Linear Thru Zero
Sr	87.906	0.015178	0.000	0.999980	Linear Thru Zero
Mo	97.906	0.004011	0.000	0.999993	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009120	0.000	0.999941	Linear Thru Zero
Cd	110.904	0.001403	0.000	0.999938	Linear Thru Zero
Cd	113.904	0.003565	0.000	0.999974	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006546	0.000	0.999966	Linear Thru Zero
Sb	120.904	0.005189	0.000	0.999992	Linear Thru Zero
Ba	136.905	0.001626	0.000	0.999983	Linear Thru Zero
Ba	137.905	0.010515	0.000	0.999973	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009234	0.000	0.999971	Linear Thru Zero
Pb	207.977	0.006918	0.000	0.999961	Linear Thru Zero
Hg	199.968	0.001351	0.000	0.999806	Linear Thru Zero
Hg	200.970	0.000780	0.000	0.999431	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032275	0.000	0.999987	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	522.890417	0.000	0.999467	Linear Thru Zero
Mg	23.985	325.981990	0.000	0.999992	Linear Thru Zero
K	38.964	497.092170	0.000	0.999781	Linear Thru Zero
Ca	43.956	19.145039	0.000	0.999946	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Wednesday, February 15, 2017 16:00:25
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2120.294	**99.462**	7.44	7.5	ug/L
	B	11	35419.562	**994.889**	42.27	4.2	ug/L
	Al	27	126066.748	**253.812**	3.38	1.3	ug/L
>	Sc	45	106536.982				ug/L
	V	51	102759.334	**100.108**	0.63	0.6	ug/L
	Cr	52	80990.621	**101.018**	0.78	0.8	ug/L
	Cr	53	28205.456	**101.677**	4.81	4.7	ug/L
	Mn	55	288670.052	**249.972**	3.76	1.5	ug/L
	Co	59	79994.813	**99.938**	1.70	1.7	ug/L
	Ni	60	40310.691	**249.972**	5.12	2.0	ug/L
	Cu	63	84347.613	**250.085**	2.63	1.0	ug/L
	Cu	65	37432.536	**249.802**	2.18	0.9	ug/L
	Zn	66	22376.500	**250.395**	3.81	1.5	ug/L
	Zn	68	15490.584	**250.673**	1.89	0.8	ug/L
>	Ge	72	81616.470				ug/L
	As	75	22524.210	**250.740**	3.91	1.6	ug/L
	Se	77	2457.727	**250.587**	11.42	4.6	ug/L
	Se	82	2776.528	**251.519**	3.23	1.3	ug/L
	Sr	88	25071.815	**20.026**	0.21	1.1	ug/L
	Mo	98	35171.823	**100.406**	0.82	0.8	ug/L
>	Rh	103	85611.865				ug/L
	Ag	107	78474.929	**100.087**	1.77	1.8	ug/L
	Cd	111	19984.022	**100.020**	1.11	1.1	ug/L
	Cd	114	50801.418	**100.035**	1.45	1.4	ug/L
>	In	115	142182.239				ug/L
	Sn	120	95645.701	**100.445**	2.27	2.3	ug/L
	Sb	121	76779.294	**100.537**	1.07	1.1	ug/L
	Ba	137	40024.964	**99.683**	2.05	2.1	ug/L
	Ba	138	261745.548	**99.880**	2.17	2.2	ug/L
>	Tb	159	250585.973				ug/L
	Tl	205	228372.767	**99.769**	1.90	1.9	ug/L
	Pb	208	429143.727	**249.570**	2.96	1.2	ug/L
	Hg	200	4024.279	**20.108**	0.02	0.1	ug/L
	Hg	201	2303.678	**20.074**	0.04	0.2	ug/L
>	Bi	209	144054.198				ug/L
	U	238	484062.030	**100.690**	0.26	0.3	ug/L
	C	13	426.679				ug/L
	W	184	16.665				ug/L
	Pd	106	-383.303				ug/L
	Kr	83	16.833				ug/L
	Na	23	5219513.405	**9992.841**	223.65	2.2	ug/L
	Mg	24	3356024.115	**10049.798**	169.33	1.7	ug/L

K	39	5038074.759	**9994.138**	262.74	2.6	ug/L
Ca	44	197428.874	**10030.194**	215.05	2.1	ug/L
Ti	47	83.334				ug/L
Sc-1	45	106536.982				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000200	0.000	0.999913	Linear Thru Zero
B	11.009	0.000332	0.000	0.999902	Linear Thru Zero
Al	26.982	0.004436	0.000	0.999272	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008730	0.000	0.999964	Linear Thru Zero
Cr	51.941	0.007128	0.000	0.999515	Linear Thru Zero
Cr	52.941	0.000747	0.000	0.996906	Linear Thru Zero
Mn	54.938	0.010829	0.000	0.999999	Linear Thru Zero
Co	58.933	0.007514	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001502	0.000	0.999985	Linear Thru Zero
Cu	62.930	0.004128	0.000	0.999993	Linear Thru Zero
Cu	64.928	0.001834	0.000	0.999990	Linear Thru Zero
Zn	65.926	0.001085	0.000	0.999978	Linear Thru Zero
Zn	67.925	0.000747	0.000	0.999936	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001098	0.000	0.999971	Linear Thru Zero
Se	76.920	0.000091	0.000	0.999891	Linear Thru Zero
Se	81.917	0.000135	0.000	0.999896	Linear Thru Zero
Sr	87.906	0.015271	0.000	0.999993	Linear Thru Zero
Mo	97.906	0.004090	0.000	0.999960	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009158	0.000	0.999988	Linear Thru Zero
Cd	110.904	0.001405	0.000	0.999989	Linear Thru Zero
Cd	113.904	0.003571	0.000	0.999995	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006688	0.000	0.999947	Linear Thru Zero
Sb	120.904	0.005325	0.000	0.999930	Linear Thru Zero
Ba	136.905	0.001602	0.000	0.999973	Linear Thru Zero
Ba	137.905	0.010455	0.000	0.999992	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009134	0.000	0.999982	Linear Thru Zero
Pb	207.977	0.006862	0.000	0.999986	Linear Thru Zero
Hg	199.968	0.001386	0.000	0.999898	Linear Thru Zero
Hg	200.970	0.000794	0.000	0.999872	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033371	0.000	0.999885	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	521.114778	0.000	0.999905	Linear Thru Zero
Mg	23.985	333.896008	0.000	0.999940	Linear Thru Zero
K	38.964	495.709195	0.000	0.999961	Linear Thru Zero
Ca	43.956	19.424193	0.000	0.999969	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, February 15, 2017 16:56:33
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.099
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	4.333				ug/L
	B	11	166.002				ug/L
	Al	27	4600.709				ug/L
>	Sc	45	106728.226				ug/L
	V	51	13524.659				ug/L
	Cr	52	3556.489				ug/L
	Cr	53	21911.671				ug/L
	Mn	55	278.005				ug/L
	Co	59	21.333				ug/L
	Ni	60	262.338				ug/L
	Cu	63	81.000				ug/L
	Cu	65	43.000				ug/L
	Zn	66	150.335				ug/L
	Zn	68	163.335				ug/L
>	Ge	72	76283.567				ug/L
	As	75	57.089				ug/L
	Se	77	529.352				ug/L
	Se	82	5.987				ug/L
	Sr	88	99.001				ug/L
	Mo	98	11.867				ug/L
>	Rh	103	83209.107				ug/L
	Ag	107	10.667				ug/L
	Cd	111	9.262				ug/L
	Cd	114	17.081				ug/L
>	In	115	138459.403				ug/L
	Sn	120	119.942				ug/L
	Sb	121	420.678				ug/L
	Ba	137	16.949				ug/L
	Ba	138	81.949				ug/L
>	Tb	159	226077.927				ug/L
	Tl	205	31.333				ug/L
	Pb	208	35.333				ug/L
	Hg	200	5.286				ug/L
	Hg	201	6.667				ug/L
>	Bi	209	139385.944				ug/L
	U	238	7.333				ug/L
	C	13	386.676				ug/L
	W	184	7.330				ug/L
	Pd	106	6.487				ug/L
	Kr	83	20.667				ug/L
	Na	23	2373.705				ug/L
	Mg	24	216.670				ug/L

K	39	86362.433		ug/L
Ca	44	2423.717		ug/L
Ti	47	46.667		ug/L
Sc-1	45	106728.226		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000200	0.000	0.999913	Linear Thru Zero
B	11.009	0.000332	0.000	0.999902	Linear Thru Zero
Al	26.982	0.004436	0.000	0.999272	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008730	0.000	0.999964	Linear Thru Zero
Cr	51.941	0.007128	0.000	0.999515	Linear Thru Zero
Cr	52.941	0.000747	0.000	0.996906	Linear Thru Zero
Mn	54.938	0.010829	0.000	0.999999	Linear Thru Zero
Co	58.933	0.007514	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001502	0.000	0.999985	Linear Thru Zero
Cu	62.930	0.004128	0.000	0.999993	Linear Thru Zero
Cu	64.928	0.001834	0.000	0.999990	Linear Thru Zero
Zn	65.926	0.001085	0.000	0.999978	Linear Thru Zero
Zn	67.925	0.000747	0.000	0.999936	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001098	0.000	0.999971	Linear Thru Zero
Se	76.920	0.000091	0.000	0.999891	Linear Thru Zero
Se	81.917	0.000135	0.000	0.999896	Linear Thru Zero
Sr	87.906	0.015271	0.000	0.999993	Linear Thru Zero
Mo	97.906	0.004090	0.000	0.999960	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009158	0.000	0.999988	Linear Thru Zero
Cd	110.904	0.001405	0.000	0.999989	Linear Thru Zero
Cd	113.904	0.003571	0.000	0.999995	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006688	0.000	0.999947	Linear Thru Zero
Sb	120.904	0.005325	0.000	0.999930	Linear Thru Zero
Ba	136.905	0.001602	0.000	0.999973	Linear Thru Zero
Ba	137.905	0.010455	0.000	0.999992	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009134	0.000	0.999982	Linear Thru Zero
Pb	207.977	0.006862	0.000	0.999986	Linear Thru Zero
Hg	199.968	0.001386	0.000	0.999898	Linear Thru Zero
Hg	200.970	0.000794	0.000	0.999872	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033371	0.000	0.999885	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	521.114778	0.000	0.999905	Linear Thru Zero
Mg	23.985	333.896008	0.000	0.999940	Linear Thru Zero
K	38.964	495.709195	0.000	0.999961	Linear Thru Zero
Ca	43.956	19.424193	0.000	0.999969	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, February 15, 2017 17:00:01
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.099
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	33.000	**1.000**	0.08	7.7	ug/L
	B	11	912.721	**20.000**	0.59	3.0	ug/L
	Al	27	11471.223	**20.000**	1.06	5.3	ug/L
>	Sc	45	107546.651				ug/L
	V	51	15780.850	**3.000**	1.04	34.7	ug/L
	Cr	52	4833.852	**3.000**	0.13	4.4	ug/L
	Cr	53	21648.925	**3.000**	0.72	24.1	ug/L
	Mn	55	1432.133	**1.000**	0.03	2.9	ug/L
	Co	59	789.707	**1.000**	0.03	3.1	ug/L
	Ni	60	535.685	**1.000**	0.06	5.8	ug/L
	Cu	63	724.701	**2.000**	0.12	6.0	ug/L
	Cu	65	344.674	**2.000**	0.12	6.0	ug/L
	Zn	66	859.715	**5.000**	0.36	7.2	ug/L
	Zn	68	643.694	**5.000**	0.30	6.0	ug/L
>	Ge	72	75377.049				ug/L
	As	75	221.625	**2.000**	0.46	23.2	ug/L
	Se	77	525.351	**2.000**	4.69	234.7	ug/L
	Se	82	28.500	**2.000**	0.23	11.3	ug/L
	Sr	88	300.006	**0.200**	0.02	10.0	ug/L
	Mo	98	357.542	**1.000**	0.10	9.7	ug/L
>	Rh	103	82830.378				ug/L
	Ag	107	792.041	**1.000**	0.08	7.8	ug/L
	Cd	111	201.436	**1.000**	0.08	7.8	ug/L
	Cd	114	554.419	**1.000**	0.09	9.2	ug/L
>	In	115	136488.334				ug/L
	Sn	120	1011.982	**1.000**	0.02	2.2	ug/L
	Sb	121	1845.556	**2.000**	0.21	10.6	ug/L
	Ba	137	378.648	**1.000**	0.04	4.2	ug/L
	Ba	138	2563.066	**1.000**	0.04	4.4	ug/L
>	Tb	159	226337.771				ug/L
	Tl	205	2129.962	**1.000**	0.01	1.2	ug/L
	Pb	208	1628.839	**1.000**	0.02	1.8	ug/L
	Hg	200	30.616	**0.200**	0.08	39.1	ug/L
	Hg	201	20.000	**0.200**	0.11	57.0	ug/L
>	Bi	209	138982.753				ug/L
	U	238	4388.252	**1.000**	0.01	1.1	ug/L
	C	13	526.685				ug/L
	W	184	7.998				ug/L
	Pd	106	6.680				ug/L
	Kr	83	19.167				ug/L
	Na	23	52854.362	**100.000**	2.48	2.5	ug/L
	Mg	24	31879.399	**100.000**	5.76	5.8	ug/L

K	39	137091.245	**100.000**	6.25	6.2	ug/L
Ca	44	4698.101	**100.000**	1.78	1.8	ug/L
Ti	47	66.667				ug/L
Sc-1	45	107546.651				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000266	0.000	1.000000	Linear Thru Zero
B	11.009	0.000347	0.000	1.000000	Linear Thru Zero
Al	26.982	0.003177	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006689	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.003874	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001337	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010711	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007141	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002522	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004280	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002002	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001886	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001280	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001096	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000015	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000150	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.013385	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004180	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009431	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001409	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003939	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006548	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005241	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001597	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010966	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009273	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007042	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000909	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000484	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031516	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	504.806562	0.000	1.000000	Linear Thru Zero
Mg	23.985	316.627296	0.000	1.000000	Linear Thru Zero
K	38.964	507.288116	0.000	1.000000	Linear Thru Zero
Ca	43.956	22.743839	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, February 15, 2017 17:03:30
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.099
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	237.337	**9.976**	0.22	2.2	ug/L
	B	11	3842.960	**99.914**	1.13	1.1	ug/L
	Al	27	15555.719	**27.224**	0.55	2.0	ug/L
>	Sc	45	108363.465				ug/L
	V	51	22054.865	**10.108**	0.66	6.6	ug/L
	Cr	52	10231.971	**10.312**	0.16	1.6	ug/L
	Cr	53	22489.508	**23.795**	12.01	50.5	ug/L
	Mn	55	28469.295	**24.999**	0.54	2.2	ug/L
	Co	59	7549.372	**9.997**	0.20	2.0	ug/L
	Ni	60	3974.026	**24.966**	0.48	1.9	ug/L
	Cu	63	8028.189	**24.998**	0.27	1.1	ug/L
	Cu	65	3504.799	**24.987**	0.61	2.5	ug/L
	Zn	66	2175.975	**24.305**	0.80	3.3	ug/L
	Zn	68	1616.170	**24.391**	0.54	2.2	ug/L
>	Ge	72	74998.626				ug/L
	As	75	2111.966	**25.000**	0.98	3.9	ug/L
	Se	77	691.698	**25.134**	3.00	12.0	ug/L
	Se	82	255.860	**24.981**	1.28	5.1	ug/L
	Sr	88	2351.693	**2.002**	0.04	1.8	ug/L
	Mo	98	3220.241	**9.995**	0.32	3.2	ug/L
>	Rh	103	80544.854				ug/L
	Ag	107	7492.982	**9.999**	0.16	1.6	ug/L
	Cd	111	1946.840	**10.001**	0.31	3.1	ug/L
	Cd	114	4778.922	**9.988**	0.12	1.2	ug/L
>	In	115	135589.857				ug/L
	Sn	120	9174.796	**10.002**	0.21	2.1	ug/L
	Sb	121	7708.532	**10.010**	0.42	4.2	ug/L
	Ba	137	3809.893	**10.005**	0.19	1.9	ug/L
	Ba	138	24372.510	**9.998**	0.17	1.7	ug/L
>	Tb	159	225404.869				ug/L
	Tl	205	20848.223	**10.000**	0.17	1.7	ug/L
	Pb	208	39449.303	**25.000**	0.71	2.8	ug/L
	Hg	200	349.311	**2.006**	0.16	8.1	ug/L
	Hg	201	207.336	**2.007**	0.07	3.6	ug/L
>	Bi	209	135514.287				ug/L
	U	238	43991.782	**10.003**	0.10	1.0	ug/L
	C	13	406.678				ug/L
	W	184	4.664				ug/L
	Pd	106	-27.348				ug/L
	Kr	83	16.667				ug/L
	Na	23	449397.483	**998.722**	18.69	1.9	ug/L
	Mg	24	302632.078	**999.535**	31.96	3.2	ug/L

K	39	608147.863	**1000.275**	29.00	2.9	ug/L
Ca	44	23960.602	**999.445**	21.80	2.2	ug/L
Ti	47	56.667				ug/L
Sc-1	45	108363.465				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000216	0.000	0.999722	Linear Thru Zero
B	11.009	0.000339	0.000	0.999991	Linear Thru Zero
Al	26.982	0.003690	0.000	0.993874	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007597	0.000	0.999357	Linear Thru Zero
Cr	51.941	0.005924	0.000	0.994652	Linear Thru Zero
Cr	52.941	0.000093	0.000	0.212496	Linear Thru Zero
Mn	54.938	0.010404	0.000	0.999999	Linear Thru Zero
Co	58.933	0.006948	0.000	0.999996	Linear Thru Zero
Ni	59.933	0.001371	0.000	0.999436	Linear Thru Zero
Cu	62.930	0.004239	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001848	0.000	0.999978	Linear Thru Zero
Zn	65.926	0.001113	0.000	0.990473	Linear Thru Zero
Zn	67.925	0.000796	0.000	0.992658	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001097	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000091	0.000	0.997762	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999953	Linear Thru Zero
Sr	87.906	0.015012	0.000	0.999941	Linear Thru Zero
Mo	97.906	0.003985	0.000	0.999988	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009292	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001430	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003517	0.000	0.999928	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006679	0.000	0.999998	Linear Thru Zero
Sb	120.904	0.005377	0.000	0.999987	Linear Thru Zero
Ba	136.905	0.001682	0.000	0.999987	Linear Thru Zero
Ba	137.905	0.010778	0.000	0.999998	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009235	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006994	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001265	0.000	0.999605	Linear Thru Zero
Hg	200.970	0.000739	0.000	0.999407	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032453	0.000	0.999996	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	447.595884	0.000	0.999918	Linear Thru Zero
Mg	23.985	302.556120	0.000	0.999989	Linear Thru Zero
K	38.964	521.641892	0.000	0.999996	Linear Thru Zero
Ca	43.956	21.548835	0.000	0.999985	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Wednesday, February 15, 2017 17:06:57
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.099
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	448.346	**19.777**	0.60	3.0	ug/L
	B	11	7764.589	**201.176**	5.83	2.9	ug/L
	Al	27	26078.194	**50.919**	1.93	3.8	ug/L
>	Sc	45	108717.028				ug/L
	V	51	30852.136	**20.143**	0.94	4.7	ug/L
	Cr	52	17830.480	**20.408**	0.15	0.7	ug/L
	Cr	53	22978.950	**23.477**	4.45	19.0	ug/L
	Mn	55	56794.316	**49.992**	0.63	1.3	ug/L
	Co	59	14928.141	**19.946**	0.14	0.7	ug/L
	Ni	60	7642.796	**49.897**	0.55	1.1	ug/L
	Cu	63	16003.975	**50.151**	1.29	2.6	ug/L
	Cu	65	7020.537	**50.204**	1.26	2.5	ug/L
	Zn	66	4177.801	**49.781**	0.47	0.9	ug/L
	Zn	68	3015.258	**49.688**	0.81	1.6	ug/L
>	Ge	72	74011.777				ug/L
	As	75	4070.878	**49.888**	0.88	1.8	ug/L
	Se	77	844.046	**49.814**	0.98	2.0	ug/L
	Se	82	502.036	**50.043**	2.09	4.2	ug/L
	Sr	88	4620.722	**4.014**	0.09	2.3	ug/L
	Mo	98	6457.683	**20.008**	0.30	1.5	ug/L
>	Rh	103	80723.471				ug/L
	Ag	107	15076.097	**20.019**	0.81	4.0	ug/L
	Cd	111	3762.986	**19.898**	0.52	2.6	ug/L
	Cd	114	9527.522	**20.017**	0.61	3.0	ug/L
>	In	115	134652.462				ug/L
	Sn	120	17989.606	**19.975**	0.37	1.8	ug/L
	Sb	121	15035.361	**20.042**	0.82	4.1	ug/L
	Ba	137	7332.082	**19.890**	0.40	2.0	ug/L
	Ba	138	48831.787	**20.048**	0.03	0.2	ug/L
>	Tb	159	223485.193				ug/L
	Tl	205	41653.492	**20.033**	0.02	0.1	ug/L
	Pb	208	78516.713	**50.043**	0.30	0.6	ug/L
	Hg	200	694.660	**4.015**	0.13	3.3	ug/L
	Hg	201	430.679	**4.056**	0.30	7.3	ug/L
>	Bi	209	133741.833				ug/L
	U	238	87622.627	**20.038**	0.14	0.7	ug/L
	C	13	420.012				ug/L
	W	184	5.997				ug/L
	Pd	106	-85.685				ug/L
	Kr	83	17.000				ug/L
	Na	23	923649.862	**2011.481**	108.90	5.4	ug/L
	Mg	24	625888.204	**2013.337**	95.87	4.8	ug/L

K	39	1161117.442	**2011.877**	46.21	2.3	ug/L
Ca	44	45852.938	**2003.083**	27.47	1.4	ug/L
Ti	47	40.000				ug/L
Sc-1	45	108717.028				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000206	0.000	0.999693	Linear Thru Zero
B	11.009	0.000347	0.000	0.999932	Linear Thru Zero
Al	26.982	0.003863	0.000	0.997954	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007801	0.000	0.999776	Linear Thru Zero
Cr	51.941	0.006404	0.000	0.998253	Linear Thru Zero
Cr	52.941	0.000258	0.000	0.765953	Linear Thru Zero
Mn	54.938	0.010397	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006874	0.000	0.999985	Linear Thru Zero
Ni	59.933	0.001360	0.000	0.999877	Linear Thru Zero
Cu	62.930	0.004291	0.000	0.999982	Linear Thru Zero
Cu	64.928	0.001878	0.000	0.999963	Linear Thru Zero
Zn	65.926	0.001094	0.000	0.997907	Linear Thru Zero
Zn	67.925	0.000777	0.000	0.998323	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001087	0.000	0.999990	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999508	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999989	Linear Thru Zero
Sr	87.906	0.015229	0.000	0.999963	Linear Thru Zero
Mo	97.906	0.003992	0.000	0.999997	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009328	0.000	0.999998	Linear Thru Zero
Cd	110.904	0.001401	0.000	0.999948	Linear Thru Zero
Cd	113.904	0.003529	0.000	0.999984	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006645	0.000	0.999996	Linear Thru Zero
Sb	120.904	0.005420	0.000	0.999989	Linear Thru Zero
Ba	136.905	0.001646	0.000	0.999937	Linear Thru Zero
Ba	137.905	0.010881	0.000	0.999988	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009297	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.007018	0.000	0.999999	Linear Thru Zero
Hg	199.968	0.001284	0.000	0.999895	Linear Thru Zero
Hg	200.970	0.000782	0.000	0.999503	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032695	0.000	0.999992	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	458.008813	0.000	0.999919	Linear Thru Zero
Mg	23.985	310.763423	0.000	0.999910	Linear Thru Zero
K	38.964	534.205255	0.000	0.999929	Linear Thru Zero
Ca	43.956	21.681191	0.000	0.999992	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Wednesday, February 15, 2017 17:10:26
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.099
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	896.386	**40.051**	2.63	6.6	ug/L
	B	11	14744.130	**397.631**	7.48	1.9	ug/L
	Al	27	46859.018	**100.418**	0.44	0.4	ug/L
>	Sc	45	107552.225				ug/L
	V	51	49077.002	**40.522**	1.01	2.5	ug/L
	Cr	52	32711.097	**40.530**	0.72	1.8	ug/L
	Cr	53	24236.793	**45.324**	4.86	10.7	ug/L
	Mn	55	109418.094	**99.422**	1.36	1.4	ug/L
	Co	59	29520.220	**39.976**	0.45	1.1	ug/L
	Ni	60	14911.778	**100.040**	0.38	0.4	ug/L
	Cu	63	30999.342	**99.527**	1.30	1.3	ug/L
	Cu	65	13407.342	**99.221**	1.74	1.7	ug/L
	Zn	66	8094.592	**99.713**	0.52	0.5	ug/L
	Zn	68	5678.762	**99.185**	1.09	1.1	ug/L
>	Ge	72	73515.720				ug/L
	As	75	8028.567	**99.941**	0.72	0.7	ug/L
	Se	77	1174.590	**100.183**	6.69	6.7	ug/L
	Se	82	985.087	**99.878**	2.45	2.5	ug/L
	Sr	88	9082.359	**8.007**	0.10	1.2	ug/L
	Mo	98	12692.851	**40.079**	0.55	1.4	ug/L
>	Rh	103	78770.680				ug/L
	Ag	107	28977.817	**39.862**	0.32	0.8	ug/L
	Cd	111	7367.149	**39.888**	0.54	1.4	ug/L
	Cd	114	19009.952	**40.122**	0.50	1.3	ug/L
>	In	115	132842.894				ug/L
	Sn	120	35145.370	**39.924**	0.39	1.0	ug/L
	Sb	121	28253.797	**39.676**	0.41	1.0	ug/L
	Ba	137	14717.649	**40.219**	0.23	0.6	ug/L
	Ba	138	96494.049	**40.144**	0.38	0.9	ug/L
>	Tb	159	218206.156				ug/L
	Tl	205	80810.971	**39.958**	0.30	0.7	ug/L
	Pb	208	152981.045	**99.972**	0.68	0.7	ug/L
	Hg	200	1416.054	**8.086**	0.22	2.8	ug/L
	Hg	201	823.378	**7.988**	0.83	10.5	ug/L
>	Bi	209	131275.717				ug/L
	U	238	172294.350	**40.033**	0.26	0.6	ug/L
	C	13	500.016				ug/L
	W	184	11.998				ug/L
	Pd	106	-83.296				ug/L
	Kr	83	16.667				ug/L
	Na	23	1900308.142	**4033.395**	413.87	10.3	ug/L
	Mg	24	1230027.949	**3989.756**	158.60	4.0	ug/L

K	39	2331899.534	**4046.718**	131.73	3.3	ug/L
Ca	44	88408.482	**3991.808**	20.06	0.5	ug/L
Ti	47	56.667				ug/L
Sc-1	45	107552.225				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000207	0.000	0.999925	Linear Thru Zero
B	11.009	0.000341	0.000	0.999927	Linear Thru Zero
Al	26.982	0.003909	0.000	0.999453	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008135	0.000	0.999683	Linear Thru Zero
Cr	51.941	0.006682	0.000	0.999336	Linear Thru Zero
Cr	52.941	0.000443	0.000	0.947792	Linear Thru Zero
Mn	54.938	0.010208	0.000	0.999946	Linear Thru Zero
Co	58.933	0.006861	0.000	0.999996	Linear Thru Zero
Ni	59.933	0.001361	0.000	0.999970	Linear Thru Zero
Cu	62.930	0.004227	0.000	0.999960	Linear Thru Zero
Cu	64.928	0.001833	0.000	0.999894	Linear Thru Zero
Zn	65.926	0.001084	0.000	0.999475	Linear Thru Zero
Zn	67.925	0.000757	0.000	0.999471	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001085	0.000	0.999997	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999879	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999995	Linear Thru Zero
Sr	87.906	0.015270	0.000	0.999990	Linear Thru Zero
Mo	97.906	0.004017	0.000	0.999993	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009226	0.000	0.999981	Linear Thru Zero
Cd	110.904	0.001389	0.000	0.999975	Linear Thru Zero
Cd	113.904	0.003564	0.000	0.999981	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006605	0.000	0.999993	Linear Thru Zero
Sb	120.904	0.005284	0.000	0.999893	Linear Thru Zero
Ba	136.905	0.001675	0.000	0.999938	Linear Thru Zero
Ba	137.905	0.011008	0.000	0.999977	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009265	0.000	0.999997	Linear Thru Zero
Pb	207.977	0.007012	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001330	0.000	0.999794	Linear Thru Zero
Hg	200.970	0.000779	0.000	0.999877	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032782	0.000	0.999997	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	470.555064	0.000	0.999870	Linear Thru Zero
Mg	23.985	308.242259	0.000	0.999968	Linear Thru Zero
K	38.964	554.903224	0.000	0.999767	Linear Thru Zero
Ca	43.956	21.540306	0.000	0.999991	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Wednesday, February 15, 2017 17:13:54
Sample File: C:\Elandata\Sample\PE_EL2_170215.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.099
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170215.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2291.675	**100.464**	4.48	4.5	ug/L
	B	11	36381.922	**998.109**	40.42	4.0	ug/L
	Al	27	118976.110	**253.692**	7.17	2.8	ug/L
>	Sc	45	107432.344				ug/L
	V	51	102989.431	**100.387**	2.09	2.1	ug/L
	Cr	52	77778.458	**100.569**	1.47	1.5	ug/L
	Cr	53	28834.616	**105.474**	6.61	6.3	ug/L
	Mn	55	275717.599	**250.199**	3.54	1.4	ug/L
	Co	59	73021.985	**99.831**	1.06	1.1	ug/L
	Ni	60	36646.440	**249.786**	4.63	1.9	ug/L
	Cu	63	75402.137	**249.805**	2.15	0.9	ug/L
	Cu	65	33428.833	**250.756**	3.67	1.5	ug/L
	Zn	66	19985.604	**250.946**	2.48	1.0	ug/L
	Zn	68	14085.554	**251.173**	1.63	0.7	ug/L
>	Ge	72	71607.453				ug/L
	As	75	19658.352	**250.389**	3.25	1.3	ug/L
	Se	77	2193.980	**252.145**	6.51	2.6	ug/L
	Se	82	2454.259	**251.068**	6.47	2.6	ug/L
	Sr	88	22408.260	**20.070**	0.24	1.2	ug/L
	Mo	98	31481.565	**100.183**	0.80	0.8	ug/L
>	Rh	103	77525.440				ug/L
	Ag	107	70813.925	**99.821**	0.86	0.9	ug/L
	Cd	111	18619.540	**100.377**	1.75	1.7	ug/L
	Cd	114	46829.796	**100.037**	2.34	2.3	ug/L
>	In	115	131113.415				ug/L
	Sn	120	88336.301	**100.322**	1.38	1.4	ug/L
	Sb	121	72323.775	**100.645**	2.07	2.1	ug/L
	Ba	137	36814.704	**100.102**	0.81	0.8	ug/L
	Ba	138	241181.728	**100.050**	1.33	1.3	ug/L
>	Tb	159	218374.501				ug/L
	Tl	205	204138.761	**100.151**	0.40	0.4	ug/L
	Pb	208	381052.849	**249.800**	1.42	0.6	ug/L
	Hg	200	3438.009	**20.043**	0.85	4.3	ug/L
	Hg	201	2034.936	**20.073**	0.39	1.9	ug/L
>	Bi	209	127520.176				ug/L
	U	238	436658.537	**100.747**	0.67	0.7	ug/L
	C	13	333.341				ug/L
	W	184	14.662				ug/L
	Pd	106	-286.190				ug/L
	Kr	83	15.833				ug/L
	Na	23	4922917.948	**10076.441**	273.94	2.7	ug/L
	Mg	24	3172041.864	**10049.179**	452.28	4.5	ug/L

K	39	5528503.797	**9966.014**	284.55	2.9	ug/L
Ca	44	214670.898	**9974.251**	31.88	0.3	ug/L
Ti	47	70.000				ug/L
Sc-1	45	107432.344				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000212	0.000	0.999936	Linear Thru Zero
B	11.009	0.000338	0.000	0.999979	Linear Thru Zero
Al	26.982	0.004196	0.000	0.999412	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008287	0.000	0.999911	Linear Thru Zero
Cr	51.941	0.006867	0.000	0.999814	Linear Thru Zero
Cr	52.941	0.000598	0.000	0.987722	Linear Thru Zero
Mn	54.938	0.010247	0.000	0.999989	Linear Thru Zero
Co	58.933	0.006806	0.000	0.999992	Linear Thru Zero
Ni	59.933	0.001356	0.000	0.999993	Linear Thru Zero
Cu	62.930	0.004211	0.000	0.999992	Linear Thru Zero
Cu	64.928	0.001859	0.000	0.999960	Linear Thru Zero
Zn	65.926	0.001104	0.000	0.999878	Linear Thru Zero
Zn	67.925	0.000775	0.000	0.999860	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001093	0.000	0.999994	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999805	Linear Thru Zero
Se	81.917	0.000136	0.000	0.999956	Linear Thru Zero
Sr	87.906	0.015528	0.000	0.999969	Linear Thru Zero
Mo	97.906	0.004052	0.000	0.999991	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009148	0.000	0.999989	Linear Thru Zero
Cd	110.904	0.001414	0.000	0.999962	Linear Thru Zero
Cd	113.904	0.003570	0.000	0.999996	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006708	0.000	0.999974	Linear Thru Zero
Sb	120.904	0.005451	0.000	0.999884	Linear Thru Zero
Ba	136.905	0.001683	0.000	0.999987	Linear Thru Zero
Ba	137.905	0.011034	0.000	0.999995	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009333	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.006985	0.000	0.999998	Linear Thru Zero
Hg	199.968	0.001343	0.000	0.999954	Linear Thru Zero
Hg	200.970	0.000793	0.000	0.999947	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033990	0.000	0.999867	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	488.321662	0.000	0.999840	Linear Thru Zero
Mg	23.985	315.630293	0.000	0.999937	Linear Thru Zero
K	38.964	546.069997	0.000	0.999931	Linear Thru Zero
Ca	43.956	21.279511	0.000	0.999983	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, February 16, 2017 07:37:00
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.269
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	3.000				ug/L
	B	11	176.669				ug/L
	Al	27	3525.475				ug/L
>	Sc	45	83161.854				ug/L
	V	51	6579.126				ug/L
	Cr	52	1917.239				ug/L
	Cr	53	13281.963				ug/L
	Mn	55	138.001				ug/L
	Co	59	23.667				ug/L
	Ni	60	148.668				ug/L
	Cu	63	29.333				ug/L
	Cu	65	19.000				ug/L
	Zn	66	45.000				ug/L
	Zn	68	73.334				ug/L
>	Ge	72	57230.165				ug/L
	As	75	5.832				ug/L
	Se	77	457.347				ug/L
	Se	82	5.742				ug/L
	Sr	88	89.001				ug/L
	Mo	98	22.639				ug/L
>	Rh	103	69365.509				ug/L
	Ag	107	16.000				ug/L
	Cd	111	-1.382				ug/L
	Cd	114	9.778				ug/L
>	In	115	128865.082				ug/L
	Sn	120	117.942				ug/L
	Sb	121	674.696				ug/L
	Ba	137	19.962				ug/L
	Ba	138	80.629				ug/L
>	Tb	159	211460.833				ug/L
	Tl	205	209.336				ug/L
	Pb	208	20.000				ug/L
	Hg	200	5.291				ug/L
	Hg	201	2.667				ug/L
>	Bi	209	157644.834				ug/L
	U	238	15.000				ug/L
	C	13	273.339				ug/L
	W	184	6.666				ug/L
	Pd	106	1.935				ug/L
	Kr	83	10.500				ug/L
	Na	23	1200.094				ug/L
	Mg	24	80.000				ug/L

K	39	72803.209		ug/L
Ca	44	1743.533		ug/L
Ti	47	23.333		ug/L
Sc-1	45	83161.854		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, February 16, 2017 07:40:28
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.269
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	25.667	**1.000**	0.31	31.4	ug/L
	B	11	998.065	**20.000**	0.41	2.0	ug/L
	Al	27	13527.885	**20.000**	0.12	0.6	ug/L
>	Sc	45	86731.557				ug/L
	V	51	8766.224	**3.000**	0.22	7.4	ug/L
	Cr	52	3699.556	**3.000**	0.14	4.6	ug/L
	Cr	53	13348.071	**3.000**	0.36	12.0	ug/L
	Mn	55	1147.419	**1.000**	0.07	6.9	ug/L
	Co	59	664.029	**1.000**	0.09	8.7	ug/L
	Ni	60	392.677	**1.000**	0.14	14.1	ug/L
	Cu	63	623.025	**2.000**	0.06	2.9	ug/L
	Cu	65	273.338	**2.000**	0.13	6.3	ug/L
	Zn	66	483.015	**5.000**	0.40	8.0	ug/L
	Zn	68	372.009	**5.000**	0.39	7.8	ug/L
>	Ge	72	58698.795				ug/L
	As	75	228.210	**2.000**	0.21	10.5	ug/L
	Se	77	468.848	**2.000**	115.15	5757.3	ug/L
	Se	82	37.264	**2.000**	0.12	6.1	ug/L
	Sr	88	362.675	**0.200**	0.01	3.8	ug/L
	Mo	98	342.049	**1.000**	0.01	1.0	ug/L
>	Rh	103	72153.508				ug/L
	Ag	107	748.036	**1.000**	0.05	5.1	ug/L
	Cd	111	228.890	**1.000**	0.12	12.1	ug/L
	Cd	114	517.771	**1.000**	0.06	5.6	ug/L
>	In	115	132911.370				ug/L
	Sn	120	1173.979	**1.000**	0.05	5.4	ug/L
	Sb	121	2216.319	**2.000**	0.13	6.6	ug/L
	Ba	137	445.628	**1.000**	0.02	1.6	ug/L
	Ba	138	2998.535	**1.000**	0.06	5.5	ug/L
>	Tb	159	218478.192				ug/L
	Tl	205	3034.599	**1.000**	0.04	3.7	ug/L
	Pb	208	2234.325	**1.000**	0.04	3.9	ug/L
	Hg	200	59.308	**0.200**	0.05	26.3	ug/L
	Hg	201	26.667	**0.200**	0.03	13.4	ug/L
>	Bi	209	163618.845				ug/L
	U	238	6733.280	**1.000**	0.03	3.0	ug/L
	C	13	226.671				ug/L
	W	184	3.998				ug/L
	Pd	106	-5.193				ug/L
	Kr	83	8.000				ug/L
	Na	23	45373.462	**100.000**	2.10	2.1	ug/L
	Mg	24	30794.856	**100.000**	1.06	1.1	ug/L

K	39	138143.047	**100.000**	4.25	4.2	ug/L
Ca	44	3880.979	**100.000**	5.40	5.4	ug/L
Ti	47	16.667				ug/L
Sc-1	45	86731.557				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000260	0.000	1.000000	Linear Thru Zero
B	11.009	0.000469	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005679	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007322	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006533	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001936	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011567	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007370	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002741	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005051	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002161	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001489	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001011	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001894	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000002	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000267	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.023113	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004414	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010133	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001735	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003821	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007919	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005724	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001945	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.013339	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012902	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010130	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001643	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000731	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041061	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	441.733678	0.000	1.000000	Linear Thru Zero
Mg	23.985	307.148554	0.000	1.000000	Linear Thru Zero
K	38.964	653.398378	0.000	1.000000	Linear Thru Zero
Ca	43.956	21.374464	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, February 16, 2017 07:43:55
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.269
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	258.004	**10.012**	0.52	5.2	ug/L
	B	11	4363.239	**100.111**	6.25	6.2	ug/L
	Al	27	15017.320	**24.213**	0.22	0.9	ug/L
>	Sc	45	86572.029				ug/L
	V	51	13848.397	**10.079**	0.08	0.8	ug/L
	Cr	52	8051.547	**10.055**	0.09	0.9	ug/L
	Cr	53	13684.167	**5.288**	2.41	45.6	ug/L
	Mn	55	24428.073	**24.999**	0.21	0.8	ug/L
	Co	59	6097.083	**9.995**	0.08	0.8	ug/L
	Ni	60	3138.641	**24.961**	0.10	0.4	ug/L
	Cu	63	6468.387	**24.977**	0.27	1.1	ug/L
	Cu	65	2941.897	**24.988**	0.57	2.3	ug/L
	Zn	66	1930.576	**24.856**	0.68	2.8	ug/L
	Zn	68	1348.452	**24.850**	0.92	3.7	ug/L
>	Ge	72	58275.701				ug/L
	As	75	1846.403	**24.921**	1.34	5.4	ug/L
	Se	77	628.692	**25.163**	3.79	15.1	ug/L
	Se	82	251.581	**24.907**	0.81	3.2	ug/L
	Sr	88	2427.052	**1.997**	0.16	7.8	ug/L
	Mo	98	3193.449	**10.001**	0.13	1.3	ug/L
>	Rh	103	70826.695				ug/L
	Ag	107	7389.549	**10.003**	0.19	1.9	ug/L
	Cd	111	2016.387	**9.986**	0.16	1.6	ug/L
	Cd	114	5112.943	**10.001**	0.34	3.4	ug/L
>	In	115	132227.966				ug/L
	Sn	120	10634.628	**10.000**	0.33	3.3	ug/L
	Sb	121	8484.011	**10.011**	0.08	0.8	ug/L
	Ba	137	4270.115	**10.000**	0.37	3.7	ug/L
	Ba	138	27519.069	**9.994**	0.31	3.1	ug/L
>	Tb	159	219071.538				ug/L
	Tl	205	28292.288	**9.999**	0.20	2.0	ug/L
	Pb	208	53534.024	**24.999**	0.42	1.7	ug/L
	Hg	200	437.936	**1.995**	0.07	3.5	ug/L
	Hg	201	282.672	**2.003**	0.24	11.8	ug/L
>	Bi	209	162773.619				ug/L
	U	238	66250.483	**9.999**	0.27	2.7	ug/L
	C	13	266.673				ug/L
	W	184	11.995				ug/L
	Pd	106	-26.346				ug/L
	Kr	83	10.333				ug/L
	Na	23	440963.531	**999.956**	46.36	4.6	ug/L
	Mg	24	292572.231	**999.504**	24.84	2.5	ug/L

K	39	708019.190	**999.717**	11.93	1.2	ug/L
Ca	44	23057.862	**999.972**	33.73	3.4	ug/L
Ti	47	20.000				ug/L
Sc-1	45	86572.029				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000294	0.000	0.999930	Linear Thru Zero
B	11.009	0.000482	0.000	0.999985	Linear Thru Zero
Al	26.982	0.005413	0.000	0.999228	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008022	0.000	0.999657	Linear Thru Zero
Cr	51.941	0.006957	0.000	0.999833	Linear Thru Zero
Cr	52.941	-0.000311	0.000	-0.537071	Linear Thru Zero
Mn	54.938	0.011222	0.000	0.999999	Linear Thru Zero
Co	58.933	0.007019	0.000	0.999987	Linear Thru Zero
Ni	59.933	0.001381	0.000	0.999225	Linear Thru Zero
Cu	62.930	0.004423	0.000	0.999935	Linear Thru Zero
Cu	64.928	0.002006	0.000	0.999981	Linear Thru Zero
Zn	65.926	0.001301	0.000	0.999584	Linear Thru Zero
Zn	67.925	0.000879	0.000	0.999548	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001268	0.000	0.999223	Linear Thru Zero
Se	76.920	0.000111	0.000	0.996678	Linear Thru Zero
Se	81.917	0.000169	0.000	0.998926	Linear Thru Zero
Sr	87.906	0.020047	0.000	0.999883	Linear Thru Zero
Mo	97.906	0.004475	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010409	0.000	0.999996	Linear Thru Zero
Cd	110.904	0.001528	0.000	0.999909	Linear Thru Zero
Cd	113.904	0.003861	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007947	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005887	0.000	0.999985	Linear Thru Zero
Ba	136.905	0.001941	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012541	0.000	0.999980	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012821	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009775	0.000	0.999999	Linear Thru Zero
Hg	199.968	0.001333	0.000	0.999729	Linear Thru Zero
Hg	200.970	0.000859	0.000	0.999889	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040716	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	439.782944	0.000	1.000000	Linear Thru Zero
Mg	23.985	292.637342	0.000	0.999988	Linear Thru Zero
K	38.964	635.396005	0.000	0.999996	Linear Thru Zero
Ca	43.956	21.314925	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Thursday, February 16, 2017 07:47:23
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.269
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	526.018	**20.105**	1.16	5.8	ug/L
	B	11	8439.962	**199.531**	3.11	1.6	ug/L
	Al	27	25650.703	**49.067**	0.84	1.7	ug/L
>	Sc	45	86530.636				ug/L
	V	51	20888.871	**20.049**	0.25	1.2	ug/L
	Cr	52	14307.794	**20.095**	0.08	0.4	ug/L
	Cr	53	13947.303	**-169.377**	356.80	210.7	ug/L
	Mn	55	49254.548	**50.114**	0.79	1.6	ug/L
	Co	59	12121.878	**19.983**	0.27	1.3	ug/L
	Ni	60	6302.915	**50.285**	1.12	2.2	ug/L
	Cu	63	12814.001	**49.930**	0.64	1.3	ug/L
	Cu	65	5844.554	**49.977**	1.60	3.2	ug/L
	Zn	66	3707.895	**49.646**	1.28	2.6	ug/L
	Zn	68	2633.117	**50.003**	1.62	3.2	ug/L
>	Ge	72	58218.285				ug/L
	As	75	3624.543	**49.802**	1.54	3.1	ug/L
	Se	77	786.540	**49.904**	3.68	7.4	ug/L
	Se	82	499.107	**50.021**	1.94	3.9	ug/L
	Sr	88	4783.822	**4.004**	0.04	0.9	ug/L
	Mo	98	6567.517	**20.087**	0.34	1.7	ug/L
>	Rh	103	71556.063				ug/L
	Ag	107	15112.166	**20.054**	0.14	0.7	ug/L
	Cd	111	3980.921	**19.892**	0.42	2.1	ug/L
	Cd	114	10320.479	**19.991**	0.42	2.1	ug/L
>	In	115	133848.352				ug/L
	Sn	120	20957.095	**19.916**	0.53	2.7	ug/L
	Sb	121	16456.253	**20.000**	0.34	1.7	ug/L
	Ba	137	8609.072	**20.062**	0.36	1.8	ug/L
	Ba	138	55792.262	**20.077**	0.39	1.9	ug/L
>	Tb	159	217874.037				ug/L
	Tl	205	57035.000	**20.068**	0.19	0.9	ug/L
	Pb	208	107755.867	**50.117**	0.37	0.7	ug/L
	Hg	200	870.015	**3.995**	0.25	6.2	ug/L
	Hg	201	522.684	**3.938**	0.19	4.9	ug/L
>	Bi	209	163180.168				ug/L
	U	238	133023.117	**20.004**	0.06	0.3	ug/L
	C	13	220.003				ug/L
	W	184	5.333				ug/L
	Pd	106	-93.214				ug/L
	Kr	83	8.833				ug/L
	Na	23	873672.134	**1996.727**	22.62	1.1	ug/L
	Mg	24	588979.074	**2002.485**	60.41	3.0	ug/L

K	39	1340351.031	**1998.969**	8.53	0.4	ug/L
Ca	44	43643.479	**1993.001**	32.43	1.6	ug/L
Ti	47	40.000				ug/L
Sc-1	45	86530.636				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000301	0.000	0.999932	Linear Thru Zero
B	11.009	0.000478	0.000	0.999986	Linear Thru Zero
Al	26.982	0.005177	0.000	0.999330	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008095	0.000	0.999917	Linear Thru Zero
Cr	51.941	0.007081	0.000	0.999924	Linear Thru Zero
Cr	52.941	-0.000009	0.000	-0.031542	Linear Thru Zero
Mn	54.938	0.011325	0.000	0.999990	Linear Thru Zero
Co	58.933	0.006996	0.000	0.999996	Linear Thru Zero
Ni	59.933	0.001413	0.000	0.999787	Linear Thru Zero
Cu	62.930	0.004399	0.000	0.999983	Linear Thru Zero
Cu	64.928	0.002003	0.000	0.999996	Linear Thru Zero
Zn	65.926	0.001266	0.000	0.999813	Linear Thru Zero
Zn	67.925	0.000879	0.000	0.999907	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001249	0.000	0.999807	Linear Thru Zero
Se	76.920	0.000110	0.000	0.999312	Linear Thru Zero
Se	81.917	0.000169	0.000	0.999784	Linear Thru Zero
Sr	87.906	0.020132	0.000	0.999974	Linear Thru Zero
Mo	97.906	0.004553	0.000	0.999962	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010521	0.000	0.999985	Linear Thru Zero
Cd	110.904	0.001496	0.000	0.999923	Linear Thru Zero
Cd	113.904	0.003854	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007817	0.000	0.999965	Linear Thru Zero
Sb	120.904	0.005886	0.000	0.999997	Linear Thru Zero
Ba	136.905	0.001965	0.000	0.999981	Linear Thru Zero
Ba	137.905	0.012735	0.000	0.999966	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012996	0.000	0.999977	Linear Thru Zero
Pb	207.977	0.009867	0.000	0.999989	Linear Thru Zero
Hg	199.968	0.001327	0.000	0.999942	Linear Thru Zero
Hg	200.970	0.000809	0.000	0.999501	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040747	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	436.951068	0.000	0.999995	Linear Thru Zero
Mg	23.985	294.084204	0.000	0.999994	Linear Thru Zero
K	38.964	634.100920	0.000	0.999999	Linear Thru Zero
Ca	43.956	21.023546	0.000	0.999976	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Thursday, February 16, 2017 07:50:50
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.269
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	1023.735	**39.987**	0.96	2.4	ug/L
	B	11	16664.045	**401.302**	11.99	3.0	ug/L
	Al	27	49237.751	**100.937**	0.09	0.1	ug/L
>	Sc	45	85002.418				ug/L
	V	51	36314.440	**40.685**	1.20	3.0	ug/L
	Cr	52	27058.008	**40.397**	0.20	0.5	ug/L
	Cr	53	15413.429	**52.996**	5.88	11.1	ug/L
	Mn	55	99354.981	**100.712**	1.31	1.3	ug/L
	Co	59	24786.554	**40.378**	0.76	1.9	ug/L
	Ni	60	12376.616	**100.418**	0.55	0.5	ug/L
	Cu	63	25706.555	**100.345**	0.95	0.9	ug/L
	Cu	65	11473.886	**99.860**	0.69	0.7	ug/L
	Zn	66	7236.403	**99.687**	1.64	1.6	ug/L
	Zn	68	5069.337	**99.697**	1.73	1.7	ug/L
>	Ge	72	57534.752				ug/L
	As	75	7190.708	**100.007**	1.76	1.8	ug/L
	Se	77	1120.582	**100.914**	7.06	7.0	ug/L
	Se	82	968.320	**99.693**	1.95	2.0	ug/L
	Sr	88	9538.577	**8.037**	0.07	0.9	ug/L
	Mo	98	13019.576	**40.227**	0.58	1.4	ug/L
>	Rh	103	69683.581				ug/L
	Ag	107	29504.482	**40.053**	0.24	0.6	ug/L
	Cd	111	7819.224	**40.090**	1.31	3.3	ug/L
	Cd	114	20775.634	**40.373**	0.53	1.3	ug/L
>	In	115	129492.463				ug/L
	Sn	120	42744.364	**40.485**	0.44	1.1	ug/L
	Sb	121	32257.494	**40.335**	0.57	1.4	ug/L
	Ba	137	16917.146	**39.967**	0.90	2.3	ug/L
	Ba	138	111250.665	**40.111**	0.71	1.8	ug/L
>	Tb	159	215718.426				ug/L
	Tl	205	115672.698	**40.277**	1.00	2.5	ug/L
	Pb	208	218074.090	**100.576**	3.00	3.0	ug/L
	Hg	200	1935.517	**8.243**	0.22	2.7	ug/L
	Hg	201	1119.415	**8.149**	0.67	8.2	ug/L
>	Bi	209	159379.617				ug/L
	U	238	271463.184	**40.416**	0.66	1.6	ug/L
	C	13	246.671				ug/L
	W	184	9.331				ug/L
	Pd	106	-130.799				ug/L
	Kr	83	8.667				ug/L
	Na	23	1816858.861	**4035.967**	77.90	1.9	ug/L
	Mg	24	1181662.340	**4004.239**	91.17	2.3	ug/L

K	39	2510187.864	**3961.622**	79.77	2.0	ug/L
Ca	44	87909.544	**4023.067**	60.98	1.5	ug/L
Ti	47	46.667				ug/L
Sc-1	45	85002.418				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000300	0.000	0.999984	Linear Thru Zero
B	11.009	0.000483	0.000	0.999980	Linear Thru Zero
Al	26.982	0.005319	0.000	0.999710	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008555	0.000	0.999521	Linear Thru Zero
Cr	51.941	0.007309	0.000	0.999828	Linear Thru Zero
Cr	52.941	0.000408	0.000	0.832833	Linear Thru Zero
Mn	54.938	0.011589	0.000	0.999917	Linear Thru Zero
Co	58.933	0.007214	0.000	0.999856	Linear Thru Zero
Ni	59.933	0.001432	0.000	0.999923	Linear Thru Zero
Cu	62.930	0.004448	0.000	0.999977	Linear Thru Zero
Cu	64.928	0.001994	0.000	0.999996	Linear Thru Zero
Zn	65.926	0.001254	0.000	0.999939	Linear Thru Zero
Zn	67.925	0.000871	0.000	0.999963	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001249	0.000	0.999954	Linear Thru Zero
Se	76.920	0.000114	0.000	0.999712	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999932	Linear Thru Zero
Sr	87.906	0.020436	0.000	0.999959	Linear Thru Zero
Mo	97.906	0.004637	0.000	0.999940	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010566	0.000	0.999994	Linear Thru Zero
Cd	110.904	0.001507	0.000	0.999974	Linear Thru Zero
Cd	113.904	0.003972	0.000	0.999861	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008131	0.000	0.999758	Linear Thru Zero
Sb	120.904	0.006047	0.000	0.999888	Linear Thru Zero
Ba	136.905	0.001960	0.000	0.999994	Linear Thru Zero
Ba	137.905	0.012849	0.000	0.999980	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013291	0.000	0.999918	Linear Thru Zero
Pb	207.977	0.010052	0.000	0.999944	Linear Thru Zero
Hg	199.968	0.001469	0.000	0.998513	Linear Thru Zero
Hg	200.970	0.000861	0.000	0.999340	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042146	0.000	0.999828	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	449.869582	0.000	0.999870	Linear Thru Zero
Mg	23.985	295.082876	0.000	0.999997	Linear Thru Zero
K	38.964	615.249130	0.000	0.999853	Linear Thru Zero
Ca	43.956	21.417992	0.000	0.999941	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Thursday, February 16, 2017 07:54:18
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\DataSet\2017 FEB (12-18)\Blank.269
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	2593.771	**99.883**	1.14	1.1	ug/L
|	B	11	40899.150	**994.634**	7.21	0.7	ug/L
|	Al	27	114286.294	**248.039**	0.82	0.3	ug/L
| >	Sc	45	86872.553				ug/L
|	V	51	80164.833	**99.754**	1.02	1.0	ug/L
|	Cr	52	64329.811	**99.673**	0.74	0.7	ug/L
|	Cr	53	19242.710	**106.293**	1.52	1.4	ug/L
|	Mn	55	242774.404	**248.394**	2.34	0.9	ug/L
|	Co	59	60075.395	**99.248**	0.23	0.2	ug/L
⌊	Ni	60	29966.608	**248.132**	1.91	0.8	ug/L
⌈	Cu	63	61481.160	**248.237**	2.57	1.0	ug/L
|	Cu	65	28304.703	**249.393**	2.06	0.8	ug/L
|	Zn	66	17639.558	**248.906**	1.57	0.6	ug/L
|	Zn	68	12326.541	**249.029**	3.74	1.5	ug/L
| >	Ge	72	57537.908				ug/L
|	As	75	17701.396	**249.353**	3.46	1.4	ug/L
|	Se	77	2094.119	**249.934**	9.90	4.0	ug/L
|	Se	82	2416.285	**249.943**	5.10	2.0	ug/L
⌊	Sr	88	23531.282	**19.990**	0.40	2.0	ug/L
⌈	Mo	98	32500.921	**100.020**	0.37	0.4	ug/L
| >	Rh	103	69961.513				ug/L
⌊	Ag	107	72962.526	**99.771**	1.52	1.5	ug/L
⌈	Cd	111	19323.354	**99.639**	1.56	1.6	ug/L
|	Cd	114	51056.400	**99.678**	0.93	0.9	ug/L
| >	In	115	130908.152				ug/L
|	Sn	120	104840.900	**99.716**	1.45	1.4	ug/L
⌊	Sb	121	80404.038	**100.123**	0.76	0.8	ug/L
⌈	Ba	137	42093.986	**99.662**	2.32	2.3	ug/L
|	Ba	138	276033.809	**99.670**	2.29	2.3	ug/L
| >	Tb	159	218919.105				ug/L
|	Tl	205	283584.084	**99.541**	2.01	2.0	ug/L
⌊	Pb	208	532452.667	**248.573**	5.96	2.4	ug/L
⌈	Hg	200	4626.614	**19.971**	0.37	1.9	ug/L
|	Hg	201	2615.778	**19.847**	0.35	1.8	ug/L
| >	Bi	209	158594.898				ug/L
⌊	U	238	671181.981	**100.075**	1.65	1.6	ug/L
	C	13	240.004				ug/L
	W	184	17.329				ug/L
	Pd	106	-257.380				ug/L
	Kr	83	11.333				ug/L
⌈	Na	23	7810291.503	**10794.486**	444.09	4.1	ug/L
|	Mg	24	4096211.379	**10510.227**	204.26	1.9	ug/L

K	39	6134365.213	**9974.023**	186.13		1.9	ug/L
Ca	44	215891.222	**9999.739**	109.43		1.1	ug/L
Ti	47	86.667					ug/L
Sc-1	45	86872.553					ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000299	0.000	0.999994	Linear Thru Zero
B	11.009	0.000471	0.000	0.999928	Linear Thru Zero
Al	26.982	0.005133	0.000	0.999803	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008457	0.000	0.999900	Linear Thru Zero
Cr	51.941	0.007197	0.000	0.999944	Linear Thru Zero
Cr	52.941	0.000581	0.000	0.972824	Linear Thru Zero
Mn	54.938	0.011245	0.000	0.999886	Linear Thru Zero
Co	58.933	0.006965	0.000	0.999839	Linear Thru Zero
Ni	59.933	0.001383	0.000	0.999853	Linear Thru Zero
Cu	62.930	0.004303	0.000	0.999877	Linear Thru Zero
Cu	64.928	0.001971	0.000	0.999985	Linear Thru Zero
Zn	65.926	0.001228	0.000	0.999943	Linear Thru Zero
Zn	67.925	0.000855	0.000	0.999957	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001234	0.000	0.999976	Linear Thru Zero
Se	76.920	0.000114	0.000	0.999950	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999988	Linear Thru Zero
Sr	87.906	0.020389	0.000	0.999992	Linear Thru Zero
Mo	97.906	0.004642	0.000	0.999989	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010452	0.000	0.999986	Linear Thru Zero
Cd	110.904	0.001481	0.000	0.999964	Linear Thru Zero
Cd	113.904	0.003912	0.000	0.999950	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008023	0.000	0.999938	Linear Thru Zero
Sb	120.904	0.006083	0.000	0.999977	Linear Thru Zero
Ba	136.905	0.001929	0.000	0.999972	Linear Thru Zero
Ba	137.905	0.012650	0.000	0.999970	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013006	0.000	0.999935	Linear Thru Zero
Pb	207.977	0.009786	0.000	0.999912	Linear Thru Zero
Hg	199.968	0.001459	0.000	0.999733	Linear Thru Zero
Hg	200.970	0.000830	0.000	0.999737	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042296	0.000	0.999969	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	723.433386	0.000	0.985300	Linear Thru Zero
Mg	23.985	389.728163	0.000	0.993861	Linear Thru Zero
K	38.964	607.734933	0.000	0.999958	Linear Thru Zero
Ca	43.956	21.415329	0.000	0.999990	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, February 16, 2017 09:58:11
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.292
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2.667				ug/L
	B	11	196.002				ug/L
	Al	27	3525.475				ug/L
>	Sc	45	76509.329				ug/L
	V	51	6466.619				ug/L
	Cr	52	2207.150				ug/L
	Cr	53	12557.579				ug/L
	Mn	55	156.668				ug/L
	Co	59	16.333				ug/L
	Ni	60	125.334				ug/L
	Cu	63	36.333				ug/L
	Cu	65	19.333				ug/L
	Zn	66	98.001				ug/L
	Zn	68	94.001				ug/L
>	Ge	72	53150.793				ug/L
	As	75	20.190				ug/L
	Se	77	444.846				ug/L
	Se	82	5.891				ug/L
	Sr	88	86.667				ug/L
	Mo	98	16.265				ug/L
>	Rh	103	63918.499				ug/L
	Ag	107	10.000				ug/L
	Cd	111	-3.105				ug/L
	Cd	114	7.929				ug/L
>	In	115	119281.595				ug/L
	Sn	120	127.233				ug/L
	Sb	121	243.337				ug/L
	Ba	137	17.634				ug/L
	Ba	138	67.968				ug/L
>	Tb	159	189089.194				ug/L
	Tl	205	58.334				ug/L
	Pb	208	36.333				ug/L
	Hg	200	3.949				ug/L
	Hg	201	4.000				ug/L
>	Bi	209	148410.764				ug/L
	U	238	21.000				ug/L
	C	13	246.671				ug/L
	W	184	7.998				ug/L
	Pd	106	-0.326				ug/L
	Kr	83	12.500				ug/L
	Na	23	1573.494				ug/L
	Mg	24	143.335				ug/L

K	39	71457.121		ug/L
Ca	44	2143.634		ug/L
Ti	47	36.667		ug/L
Sc-1	45	76509.329		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, February 16, 2017 10:01:38
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.292
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	21.333	**1.000**	0.25	25.0	ug/L
	B	11	932.057	**20.000**	1.04	5.2	ug/L
	Al	27	11122.703	**20.000**	0.84	4.2	ug/L
>	Sc	45	77046.007				ug/L
	V	51	8044.629	**3.000**	1.32	44.1	ug/L
	Cr	52	3324.718	**3.000**	0.23	7.7	ug/L
	Cr	53	12802.480	**3.000**	1.96	65.4	ug/L
	Mn	55	1024.068	**1.000**	0.04	4.2	ug/L
	Co	59	585.689	**1.000**	0.03	3.3	ug/L
	Ni	60	326.340	**1.000**	0.06	6.3	ug/L
	Cu	63	537.686	**2.000**	0.12	5.8	ug/L
	Cu	65	234.004	**2.000**	0.20	10.2	ug/L
	Zn	66	392.010	**5.000**	0.19	3.8	ug/L
	Zn	68	314.006	**5.000**	0.09	1.9	ug/L
>	Ge	72	52473.801				ug/L
	As	75	170.927	**2.000**	0.62	31.1	ug/L
	Se	77	454.180	**2.000**	0.57	28.7	ug/L
	Se	82	25.910	**2.000**	0.66	32.9	ug/L
	Sr	88	302.673	**0.200**	0.01	4.9	ug/L
	Mo	98	300.567	**1.000**	0.10	9.7	ug/L
>	Rh	103	64184.021				ug/L
	Ag	107	690.031	**1.000**	0.05	4.5	ug/L
	Cd	111	197.133	**1.000**	0.08	8.4	ug/L
	Cd	114	472.493	**1.000**	0.07	6.6	ug/L
>	In	115	118888.500				ug/L
	Sn	120	1096.686	**1.000**	0.07	6.6	ug/L
	Sb	121	1748.199	**2.000**	0.07	3.6	ug/L
	Ba	137	396.308	**1.000**	0.04	3.6	ug/L
	Ba	138	2669.095	**1.000**	0.04	3.8	ug/L
>	Tb	159	189949.367				ug/L
	Tl	205	2663.795	**1.000**	0.04	3.6	ug/L
	Pb	208	2023.266	**1.000**	0.01	1.2	ug/L
	Hg	200	37.945	**0.200**	0.02	12.3	ug/L
	Hg	201	26.667	**0.200**	0.07	37.1	ug/L
>	Bi	209	148976.977				ug/L
	U	238	6060.053	**1.000**	0.01	0.7	ug/L
	C	13	266.671				ug/L
	W	184	8.663				ug/L
	Pd	106	-1.742				ug/L
	Kr	83	10.333				ug/L
	Na	23	41846.970	**100.000**	4.15	4.1	ug/L
	Mg	24	26746.425	**100.000**	1.50	1.5	ug/L

K	39	134630.318	**100.000**	11.91	11.9	ug/L
Ca	44	4201.158	**100.000**	24.36	24.4	ug/L
Ti	47	30.000				ug/L
Sc-1	45	77046.007				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000242	0.000	1.000000	Linear Thru Zero
B	11.009	0.000477	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004917	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006601	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.004772	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000681	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011241	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007387	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002596	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004777	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002049	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001125	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000843	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001434	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000142	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000190	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.020672	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004426	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010594	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001684	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003909	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008160	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.006334	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001994	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.013685	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013717	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010460	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001142	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000760	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040540	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	402.734761	0.000	1.000000	Linear Thru Zero
Mg	23.985	266.030907	0.000	1.000000	Linear Thru Zero
K	38.964	631.731967	0.000	1.000000	Linear Thru Zero
Ca	43.956	20.575242	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, February 16, 2017 10:05:06
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.292
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	246.671	**10.021**	0.63	6.2	ug/L
	B	11	4090.422	**100.130**	3.12	3.1	ug/L
	Al	27	13111.169	**24.793**	0.26	1.0	ug/L
>	Sc	45	78780.104				ug/L
	V	51	13055.317	**10.156**	0.78	7.7	ug/L
	Cr	52	7335.499	**10.217**	0.31	3.0	ug/L
	Cr	53	13347.408	**9.769**	4.93	50.5	ug/L
	Mn	55	22453.412	**25.000**	0.39	1.5	ug/L
	Co	59	5619.052	**9.996**	0.07	0.7	ug/L
	Ni	60	2899.547	**24.966**	0.80	3.2	ug/L
	Cu	63	6017.688	**24.991**	0.46	1.9	ug/L
	Cu	65	2737.488	**25.000**	0.79	3.2	ug/L
	Zn	66	1836.219	**25.137**	0.27	1.1	ug/L
	Zn	68	1307.445	**25.075**	0.59	2.3	ug/L
>	Ge	72	53098.227				ug/L
	As	75	1598.063	**24.967**	1.69	6.8	ug/L
	Se	77	585.022	**24.946**	4.25	17.0	ug/L
	Se	82	227.085	**24.977**	0.87	3.5	ug/L
	Sr	88	2124.293	**1.998**	0.09	4.5	ug/L
	Mo	98	2886.844	**10.001**	0.17	1.7	ug/L
>	Rh	103	64192.996				ug/L
	Ag	107	6745.623	**9.999**	0.41	4.1	ug/L
	Cd	111	1779.405	**9.985**	0.25	2.5	ug/L
	Cd	114	4712.207	**9.999**	0.10	1.0	ug/L
>	In	115	121944.338				ug/L
	Sn	120	9627.290	**9.995**	0.09	0.9	ug/L
	Sb	121	7703.194	**9.986**	0.23	2.3	ug/L
	Ba	137	3877.922	**9.999**	0.16	1.6	ug/L
	Ba	138	25428.588	**9.994**	0.12	1.2	ug/L
>	Tb	159	196308.180				ug/L
	Tl	205	25901.894	**9.996**	0.08	0.8	ug/L
	Pb	208	49467.632	**24.998**	0.25	1.0	ug/L
	Hg	200	438.637	**2.004**	0.16	7.7	ug/L
	Hg	201	240.671	**2.001**	0.34	16.8	ug/L
>	Bi	209	150538.309				ug/L
	U	238	60347.208	**9.999**	0.13	1.3	ug/L
	C	13	226.670				ug/L
	W	184	6.665				ug/L
	Pd	106	-21.325				ug/L
	Kr	83	9.833				ug/L
	Na	23	397555.653	**999.831**	47.96	4.8	ug/L
	Mg	24	264901.351	**999.952**	50.39	5.0	ug/L

K	39	678520.533	**999.598**	37.03	3.7	ug/L
Ca	44	21877.772	**999.578**	47.75	4.8	ug/L
Ti	47	43.333				ug/L
Sc-1	45	78780.104				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000309	0.000	0.999769	Linear Thru Zero
B	11.009	0.000493	0.000	0.999979	Linear Thru Zero
Al	26.982	0.004854	0.000	0.999946	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007988	0.000	0.998647	Linear Thru Zero
Cr	51.941	0.006288	0.000	0.997395	Linear Thru Zero
Cr	52.941	0.000542	0.000	0.997054	Linear Thru Zero
Mn	54.938	0.011317	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007113	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001408	0.000	0.999431	Linear Thru Zero
Cu	62.930	0.004510	0.000	0.999989	Linear Thru Zero
Cu	64.928	0.002048	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001303	0.000	0.999627	Linear Thru Zero
Zn	67.925	0.000911	0.000	0.999888	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001190	0.000	0.999865	Linear Thru Zero
Se	76.920	0.000106	0.000	0.999630	Linear Thru Zero
Se	81.917	0.000167	0.000	0.999936	Linear Thru Zero
Sr	87.906	0.019223	0.000	0.999972	Linear Thru Zero
Mo	97.906	0.004469	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010504	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001464	0.000	0.999887	Linear Thru Zero
Cd	113.904	0.003858	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007792	0.000	0.999989	Linear Thru Zero
Sb	120.904	0.006120	0.000	0.999976	Linear Thru Zero
Ba	136.905	0.001966	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.012927	0.000	0.999983	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013170	0.000	0.999991	Linear Thru Zero
Pb	207.977	0.010073	0.000	0.999999	Linear Thru Zero
Hg	199.968	0.001440	0.000	0.999787	Linear Thru Zero
Hg	200.970	0.000785	0.000	0.999995	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040081	0.000	0.999999	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	396.049016	0.000	0.999999	Linear Thru Zero
Mg	23.985	264.770619	0.000	1.000000	Linear Thru Zero
K	38.964	607.307655	0.000	0.999992	Linear Thru Zero
Ca	43.956	19.742466	0.000	0.999991	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Thursday, February 16, 2017 10:08:33
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.292
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	449.346	**19.648**	1.73	8.8	ug/L
	B	11	7620.440	**198.085**	5.45	2.8	ug/L
	Al	27	22061.597	**49.457**	1.07	2.2	ug/L
>	Sc	45	78823.922				ug/L
	V	51	19584.971	**20.111**	0.38	1.9	ug/L
	Cr	52	13045.053	**20.347**	0.25	1.2	ug/L
	Cr	53	13519.708	**18.184**	4.34	23.8	ug/L
	Mn	55	43593.203	**49.733**	0.59	1.2	ug/L
	Co	59	10890.037	**19.875**	0.30	1.5	ug/L
	Ni	60	5550.337	**49.762**	0.89	1.8	ug/L
	Cu	63	11458.531	**49.813**	0.71	1.4	ug/L
	Cu	65	5161.732	**49.729**	0.90	1.8	ug/L
	Zn	66	3393.415	**49.803**	0.73	1.5	ug/L
	Zn	68	2342.690	**49.548**	1.30	2.6	ug/L
>	Ge	72	51619.784				ug/L
	As	75	3285.595	**50.617**	2.29	4.5	ug/L
	Se	77	718.534	**50.443**	0.74	1.5	ug/L
	Se	82	450.085	**50.315**	2.30	4.6	ug/L
	Sr	88	4160.459	**4.022**	0.19	4.7	ug/L
	Mo	98	5815.061	**20.087**	0.09	0.5	ug/L
>	Rh	103	63478.926				ug/L
	Ag	107	13368.275	**20.009**	0.64	3.2	ug/L
	Cd	111	3660.505	**20.162**	0.73	3.6	ug/L
	Cd	114	9341.728	**20.027**	0.31	1.6	ug/L
>	In	115	120164.896				ug/L
	Sn	120	18967.298	**20.024**	0.35	1.7	ug/L
	Sb	121	14657.284	**19.916**	0.19	1.0	ug/L
	Ba	137	7514.590	**19.998**	0.08	0.4	ug/L
	Ba	138	50059.630	**20.055**	0.13	0.7	ug/L
>	Tb	159	190741.093				ug/L
	Tl	205	51095.145	**20.064**	0.27	1.4	ug/L
	Pb	208	97496.332	**50.145**	0.77	1.5	ug/L
	Hg	200	824.681	**3.972**	0.10	2.6	ug/L
	Hg	201	538.686	**4.111**	0.22	5.3	ug/L
>	Bi	209	147533.112				ug/L
	U	238	118945.568	**20.023**	0.21	1.0	ug/L
	C	13	280.005				ug/L
	W	184	4.664				ug/L
	Pd	106	-47.109				ug/L
	Kr	83	11.000				ug/L
	Na	23	776628.766	**1991.173**	37.25	1.9	ug/L
	Mg	24	521962.113	**1994.051**	19.25	1.0	ug/L

K	39	1268949.090	**1994.251**	39.45	2.0	ug/L
Ca	44	41481.552	**1998.494**	19.40	1.0	ug/L
Ti	47	26.667				ug/L
Sc-1	45	78823.922				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000289	0.000	0.999336	Linear Thru Zero
B	11.009	0.000475	0.000	0.999819	Linear Thru Zero
Al	26.982	0.004728	0.000	0.999840	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008154	0.000	0.999665	Linear Thru Zero
Cr	51.941	0.006717	0.000	0.998957	Linear Thru Zero
Cr	52.941	0.000406	0.000	0.984136	Linear Thru Zero
Mn	54.938	0.011080	0.000	0.999943	Linear Thru Zero
Co	58.933	0.006942	0.000	0.999921	Linear Thru Zero
Ni	59.933	0.001382	0.000	0.999836	Linear Thru Zero
Cu	62.930	0.004444	0.000	0.999970	Linear Thru Zero
Cu	64.928	0.002004	0.000	0.999942	Linear Thru Zero
Zn	65.926	0.001283	0.000	0.999891	Linear Thru Zero
Zn	67.925	0.000881	0.000	0.999818	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001251	0.000	0.999673	Linear Thru Zero
Se	76.920	0.000110	0.000	0.999774	Linear Thru Zero
Se	81.917	0.000171	0.000	0.999909	Linear Thru Zero
Sr	87.906	0.019653	0.000	0.999934	Linear Thru Zero
Mo	97.906	0.004548	0.000	0.999962	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010522	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001512	0.000	0.999849	Linear Thru Zero
Cd	113.904	0.003879	0.000	0.999996	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007829	0.000	0.999995	Linear Thru Zero
Sb	120.904	0.006023	0.000	0.999961	Linear Thru Zero
Ba	136.905	0.001965	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.013070	0.000	0.999982	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013338	0.000	0.999978	Linear Thru Zero
Pb	207.977	0.010191	0.000	0.999983	Linear Thru Zero
Hg	199.968	0.001401	0.000	0.999856	Linear Thru Zero
Hg	200.970	0.000882	0.000	0.998477	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040262	0.000	0.999997	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	389.245519	0.000	0.999961	Linear Thru Zero
Mg	23.985	261.687801	0.000	0.999982	Linear Thru Zero
K	38.964	600.471990	0.000	0.999982	Linear Thru Zero
Ca	43.956	19.683778	0.000	0.999997	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Thursday, February 16, 2017 10:12:01
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.292
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	957.060	**40.628**	1.33	3.3	ug/L
	B	11	14940.500	**400.292**	2.26	0.6	ug/L
	Al	27	43280.132	**102.121**	1.69	1.7	ug/L
>	Sc	45	77308.693				ug/L
	V	51	32989.532	**40.459**	0.36	0.9	ug/L
	Cr	52	24345.148	**40.596**	0.31	0.8	ug/L
	Cr	53	14477.121	**43.084**	4.19	9.7	ug/L
	Mn	55	87838.381	**100.549**	1.04	1.0	ug/L
	Co	59	22235.098	**40.326**	0.19	0.5	ug/L
	Ni	60	11177.788	**100.797**	1.05	1.0	ug/L
	Cu	63	22899.058	**100.022**	1.67	1.7	ug/L
	Cu	65	10395.363	**100.162**	1.93	1.9	ug/L
	Zn	66	6616.850	**99.714**	1.91	1.9	ug/L
	Zn	68	4575.695	**99.767**	0.23	0.2	ug/L
>	Ge	72	51413.085				ug/L
	As	75	6587.023	**100.486**	1.23	1.2	ug/L
	Se	77	1036.403	**101.591**	5.33	5.2	ug/L
	Se	82	885.143	**99.975**	0.29	0.3	ug/L
	Sr	88	8413.934	**8.058**	0.12	1.5	ug/L
	Mo	98	11761.137	**40.296**	0.65	1.6	ug/L
>	Rh	103	62581.615				ug/L
	Ag	107	27149.161	**40.286**	0.70	1.7	ug/L
	Cd	111	7218.299	**39.943**	1.76	4.4	ug/L
	Cd	114	19127.105	**40.242**	0.92	2.3	ug/L
>	In	115	120162.808				ug/L
	Sn	120	38163.078	**40.105**	1.06	2.6	ug/L
	Sb	121	29163.850	**39.992**	0.44	1.1	ug/L
	Ba	137	15577.645	**40.291**	0.25	0.6	ug/L
	Ba	138	101423.580	**40.097**	0.53	1.3	ug/L
>	Tb	159	191942.722				ug/L
	Tl	205	104874.988	**40.220**	0.87	2.2	ug/L
	Pb	208	198167.775	**100.299**	1.27	1.3	ug/L
	Hg	200	1796.830	**8.187**	0.28	3.4	ug/L
	Hg	201	1021.401	**7.993**	0.18	2.2	ug/L
>	Bi	209	144740.413				ug/L
	U	238	244149.812	**40.436**	0.11	0.3	ug/L
	C	13	220.003				ug/L
	W	184	7.331				ug/L
	Pd	106	-145.823				ug/L
	Kr	83	8.667				ug/L
	Na	23	1587031.111	**4017.205**	36.41	0.9	ug/L
	Mg	24	1060621.895	**4012.385**	99.74	2.5	ug/L

K	39	2348179.054	**3948.240**	88.17	2.2	ug/L
Ca	44	81843.220	**4011.576**	89.21	2.2	ug/L
Ti	47	40.000				ug/L
Sc-1	45	77308.693				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000304	0.000	0.999463	Linear Thru Zero
B	11.009	0.000476	0.000	0.999956	Linear Thru Zero
Al	26.982	0.005031	0.000	0.999325	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008459	0.000	0.999718	Linear Thru Zero
Cr	51.941	0.007047	0.000	0.999423	Linear Thru Zero
Cr	52.941	0.000536	0.000	0.988605	Linear Thru Zero
Mn	54.938	0.011278	0.000	0.999939	Linear Thru Zero
Co	58.933	0.007127	0.000	0.999876	Linear Thru Zero
Ni	59.933	0.001418	0.000	0.999861	Linear Thru Zero
Cu	62.930	0.004447	0.000	0.999993	Linear Thru Zero
Cu	64.928	0.002015	0.000	0.999982	Linear Thru Zero
Zn	65.926	0.001272	0.000	0.999960	Linear Thru Zero
Zn	67.925	0.000874	0.000	0.999947	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001271	0.000	0.999887	Linear Thru Zero
Se	76.920	0.000116	0.000	0.999547	Linear Thru Zero
Se	81.917	0.000171	0.000	0.999978	Linear Thru Zero
Sr	87.906	0.020116	0.000	0.999902	Linear Thru Zero
Mo	97.906	0.004658	0.000	0.999904	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010767	0.000	0.999919	Linear Thru Zero
Cd	110.904	0.001505	0.000	0.999960	Linear Thru Zero
Cd	113.904	0.003955	0.000	0.999941	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007895	0.000	0.999988	Linear Thru Zero
Sb	120.904	0.006019	0.000	0.999990	Linear Thru Zero
Ba	136.905	0.002012	0.000	0.999915	Linear Thru Zero
Ba	137.905	0.013171	0.000	0.999986	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013576	0.000	0.999947	Linear Thru Zero
Pb	207.977	0.010290	0.000	0.999982	Linear Thru Zero
Hg	199.968	0.001514	0.000	0.999095	Linear Thru Zero
Hg	200.970	0.000879	0.000	0.999633	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041712	0.000	0.999810	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	394.666850	0.000	0.999961	Linear Thru Zero
Mg	23.985	264.301291	0.000	0.999981	Linear Thru Zero
K	38.964	576.642190	0.000	0.999728	Linear Thru Zero
Ca	43.956	19.867400	0.000	0.999986	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Thursday, February 16, 2017 10:15:29
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.292
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2333.021	**100.104**	2.55	2.5	ug/L
	B	11	36264.696	**998.838**	21.80	2.2	ug/L
	Al	27	98873.561	**249.773**	1.01	0.4	ug/L
>	Sc	45	76209.128				ug/L
	V	51	72169.461	**100.334**	0.74	0.7	ug/L
	Cr	52	56816.665	**100.292**	0.62	0.6	ug/L
	Cr	53	17598.780	**103.562**	2.54	2.4	ug/L
	Mn	55	212977.606	**249.585**	0.83	0.3	ug/L
	Co	59	53619.269	**99.771**	0.59	0.6	ug/L
	Ni	60	26566.812	**249.063**	0.89	0.4	ug/L
	Cu	63	55254.797	**248.794**	3.22	1.3	ug/L
	Cu	65	24918.307	**248.585**	3.06	1.2	ug/L
	Zn	66	15601.149	**247.972**	0.65	0.3	ug/L
	Zn	68	10949.801	**248.775**	4.24	1.7	ug/L
>	Ge	72	51069.091				ug/L
	As	75	15715.390	**248.531**	1.95	0.8	ug/L
	Se	77	1887.232	**249.368**	4.56	1.8	ug/L
	Se	82	2138.541	**248.966**	3.83	1.5	ug/L
	Sr	88	20690.816	**20.010**	0.27	1.3	ug/L
	Mo	98	28910.886	**99.921**	0.52	0.5	ug/L
>	Rh	103	62318.854				ug/L
	Ag	107	64678.270	**99.350**	0.80	0.8	ug/L
	Cd	111	17968.627	**100.065**	1.89	1.9	ug/L
	Cd	114	46785.104	**99.906**	0.40	0.4	ug/L
>	In	115	118911.152				ug/L
	Sn	120	95423.688	**100.257**	0.84	0.8	ug/L
	Sb	121	72562.140	**100.179**	1.42	1.4	ug/L
	Ba	137	38384.963	**99.509**	1.45	1.5	ug/L
	Ba	138	251455.954	**99.526**	1.92	1.9	ug/L
>	Tb	159	196115.293				ug/L
	Tl	205	256493.082	**99.340**	1.73	1.7	ug/L
	Pb	208	483851.848	**248.162**	4.32	1.7	ug/L
	Hg	200	4209.101	**19.908**	0.82	4.1	ug/L
	Hg	201	2475.732	**19.950**	0.96	4.8	ug/L
>	Bi	209	142635.528				ug/L
	U	238	612156.483	**100.492**	1.32	1.3	ug/L
	C	13	233.337				ug/L
	W	184	7.998				ug/L
	Pd	106	-336.035				ug/L
	Kr	83	10.667				ug/L
	Na	23	6803297.208	**10786.075**	109.58	1.0	ug/L
	Mg	24	3674665.900	**10512.363**	229.26	2.2	ug/L

K	39	5584826.804	**9920.941**	151.55	1.5	ug/L
Ca	44	195378.421	**9951.366**	323.17	3.2	ug/L
Ti	47	43.333				ug/L
Sc-1	45	76209.128				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000305	0.000	0.999905	Linear Thru Zero
B	11.009	0.000474	0.000	0.999989	Linear Thru Zero
Al	26.982	0.005010	0.000	0.999877	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008595	0.000	0.999926	Linear Thru Zero
Cr	51.941	0.007146	0.000	0.999882	Linear Thru Zero
Cr	52.941	0.000645	0.000	0.995626	Linear Thru Zero
Mn	54.938	0.011190	0.000	0.999983	Linear Thru Zero
Co	58.933	0.007051	0.000	0.999965	Linear Thru Zero
Ni	59.933	0.001393	0.000	0.999942	Linear Thru Zero
Cu	62.930	0.004347	0.000	0.999943	Linear Thru Zero
Cu	64.928	0.001962	0.000	0.999920	Linear Thru Zero
Zn	65.926	0.001225	0.000	0.999836	Linear Thru Zero
Zn	67.925	0.000854	0.000	0.999933	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001236	0.000	0.999897	Linear Thru Zero
Se	76.920	0.000115	0.000	0.999904	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999955	Linear Thru Zero
Sr	87.906	0.020165	0.000	0.999982	Linear Thru Zero
Mo	97.906	0.004641	0.000	0.999982	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010444	0.000	0.999884	Linear Thru Zero
Cd	110.904	0.001510	0.000	0.999992	Linear Thru Zero
Cd	113.904	0.003937	0.000	0.999988	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007993	0.000	0.999982	Linear Thru Zero
Sb	120.904	0.006070	0.000	0.999991	Linear Thru Zero
Ba	136.905	0.001966	0.000	0.999927	Linear Thru Zero
Ba	137.905	0.012881	0.000	0.999944	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013163	0.000	0.999887	Linear Thru Zero
Pb	207.977	0.009942	0.000	0.999868	Linear Thru Zero
Hg	199.968	0.001481	0.000	0.999786	Linear Thru Zero
Hg	200.970	0.000869	0.000	0.999920	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042711	0.000	0.999911	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	630.602327	0.000	0.985609	Linear Thru Zero
Mg	23.985	349.542978	0.000	0.993809	Linear Thru Zero
K	38.964	555.730512	0.000	0.999800	Linear Thru Zero
Ca	43.956	19.417915	0.000	0.999941	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, February 16, 2017 11:34:41
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.309
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	3.667				ug/L
	B	11	176.002				ug/L
	Al	27	2405.044				ug/L
>	Sc	45	64514.332				ug/L
	V	51	5822.323				ug/L
	Cr	52	1675.516				ug/L
	Cr	53	11442.342				ug/L
	Mn	55	113.334				ug/L
	Co	59	17.333				ug/L
	Ni	60	105.001				ug/L
	Cu	63	27.000				ug/L
	Cu	65	18.333				ug/L
	Zn	66	56.000				ug/L
	Zn	68	74.000				ug/L
>	Ge	72	44134.745				ug/L
	As	75	10.966				ug/L
	Se	77	383.010				ug/L
	Se	82	0.401				ug/L
	Sr	88	85.667				ug/L
	Mo	98	10.676				ug/L
>	Rh	103	52923.565				ug/L
	Ag	107	8.667				ug/L
	Cd	111	9.468				ug/L
	Cd	114	6.559				ug/L
>	In	115	97805.801				ug/L
	Sn	120	81.266				ug/L
	Sb	121	209.336				ug/L
	Ba	137	12.635				ug/L
	Ba	138	63.968				ug/L
>	Tb	159	156449.577				ug/L
	Tl	205	45.000				ug/L
	Pb	208	23.000				ug/L
	Hg	200	10.637				ug/L
	Hg	201	7.333				ug/L
>	Bi	209	124769.728				ug/L
	U	238	23.667				ug/L
	C	13	226.670				ug/L
	W	184	4.663				ug/L
	Pd	106	5.820				ug/L
	Kr	83	11.333				ug/L
	Na	23	993.398				ug/L
	Mg	24	146.668				ug/L

K	39	68429.711		ug/L
Ca	44	2106.955		ug/L
Ti	47	13.333		ug/L
Sc-1	45	64514.332		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000305	0.000	0.999905	Linear Thru Zero
B	11.009	0.000474	0.000	0.999989	Linear Thru Zero
Al	26.982	0.005010	0.000	0.999877	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008595	0.000	0.999926	Linear Thru Zero
Cr	51.941	0.007146	0.000	0.999882	Linear Thru Zero
Cr	52.941	0.000645	0.000	0.995626	Linear Thru Zero
Mn	54.938	0.011190	0.000	0.999983	Linear Thru Zero
Co	58.933	0.007051	0.000	0.999965	Linear Thru Zero
Ni	59.933	0.001393	0.000	0.999942	Linear Thru Zero
Cu	62.930	0.004347	0.000	0.999943	Linear Thru Zero
Cu	64.928	0.001962	0.000	0.999920	Linear Thru Zero
Zn	65.926	0.001225	0.000	0.999836	Linear Thru Zero
Zn	67.925	0.000854	0.000	0.999933	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001236	0.000	0.999897	Linear Thru Zero
Se	76.920	0.000115	0.000	0.999904	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999955	Linear Thru Zero
Sr	87.906	0.020165	0.000	0.999982	Linear Thru Zero
Mo	97.906	0.004641	0.000	0.999982	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010444	0.000	0.999884	Linear Thru Zero
Cd	110.904	0.001510	0.000	0.999992	Linear Thru Zero
Cd	113.904	0.003937	0.000	0.999988	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007993	0.000	0.999982	Linear Thru Zero
Sb	120.904	0.006070	0.000	0.999991	Linear Thru Zero
Ba	136.905	0.001966	0.000	0.999927	Linear Thru Zero
Ba	137.905	0.012881	0.000	0.999944	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013163	0.000	0.999887	Linear Thru Zero
Pb	207.977	0.009942	0.000	0.999868	Linear Thru Zero
Hg	199.968	0.001481	0.000	0.999786	Linear Thru Zero
Hg	200.970	0.000869	0.000	0.999920	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042711	0.000	0.999911	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	630.602327	0.000	0.985609	Linear Thru Zero
Mg	23.985	349.542978	0.000	0.993809	Linear Thru Zero
K	38.964	555.730512	0.000	0.999800	Linear Thru Zero
Ca	43.956	19.417915	0.000	0.999941	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, February 16, 2017 11:38:09
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.309
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	23.667	**1.000**	0.26	26.4	ug/L
	B	11	815.377	**20.000**	1.20	6.0	ug/L
	Al	27	10278.196	**20.000**	0.61	3.0	ug/L
>	Sc	45	68121.673				ug/L
	V	51	7591.458	**3.000**	0.55	18.4	ug/L
	Cr	52	2967.406	**3.000**	0.22	7.3	ug/L
	Cr	53	11710.244	**3.000**	3.62	120.6	ug/L
	Mn	55	886.051	**1.000**	0.09	9.3	ug/L
	Co	59	518.684	**1.000**	0.02	1.6	ug/L
	Ni	60	328.674	**1.000**	0.09	8.8	ug/L
	Cu	63	534.685	**2.000**	0.14	6.8	ug/L
	Cu	65	238.004	**2.000**	0.20	10.0	ug/L
	Zn	66	378.009	**5.000**	0.11	2.3	ug/L
	Zn	68	321.673	**5.000**	0.34	6.8	ug/L
>	Ge	72	45956.901				ug/L
	As	75	133.133	**2.000**	1.28	63.9	ug/L
	Se	77	399.177	**2.000**	31.35	1567.5	ug/L
	Se	82	18.067	**2.000**	0.71	35.5	ug/L
	Sr	88	282.672	**0.200**	0.03	12.7	ug/L
	Mo	98	274.566	**1.000**	0.07	7.3	ug/L
>	Rh	103	56319.432				ug/L
	Ag	107	578.688	**1.000**	0.05	5.0	ug/L
	Cd	111	175.312	**1.000**	0.11	10.8	ug/L
	Cd	114	480.704	**1.000**	0.02	2.0	ug/L
>	In	115	106533.174				ug/L
	Sn	120	926.005	**1.000**	0.05	4.7	ug/L
	Sb	121	1520.150	**2.000**	0.06	2.9	ug/L
	Ba	137	348.961	**1.000**	0.04	3.9	ug/L
	Ba	138	2339.643	**1.000**	0.04	4.4	ug/L
>	Tb	159	165610.270				ug/L
	Tl	205	2296.676	**1.000**	0.01	1.1	ug/L
	Pb	208	1795.543	**1.000**	0.04	4.3	ug/L
	Hg	200	44.620	**0.200**	0.03	12.6	ug/L
	Hg	201	28.000	**0.200**	0.03	16.6	ug/L
>	Bi	209	131278.933				ug/L
	U	238	5444.259	**1.000**	0.03	2.6	ug/L
	C	13	246.671				ug/L
	W	184	7.331				ug/L
	Pd	106	-4.050				ug/L
	Kr	83	11.500				ug/L
	Na	23	37049.196	**100.000**	5.80	5.8	ug/L
	Mg	24	23582.772	**100.000**	2.18	2.2	ug/L

K	39	123734.216	**100.000**	5.04	5.0	ug/L
Ca	44	4211.155	**100.000**	12.61	12.6	ug/L
Ti	47	26.667				ug/L
Sc-1	45	68121.673				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000291	0.000	1.000000	Linear Thru Zero
B	11.009	0.000462	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005682	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007073	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005865	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001803	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011246	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007344	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.003199	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005508	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002379	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001392	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001065	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001318	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000005	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000192	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.021065	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004675	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010114	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001549	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.004444	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007864	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.006065	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.002025	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.013724	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013579	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010691	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001273	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000772	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041292	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	360.557973	0.000	1.000000	Linear Thru Zero
Mg	23.985	234.361040	0.000	1.000000	Linear Thru Zero
K	38.964	553.045047	0.000	1.000000	Linear Thru Zero
Ca	43.956	21.042002	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, February 16, 2017 11:41:37
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.309
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	222.670	**10.007**	0.52	5.2	ug/L
	B	11	3638.195	**100.227**	7.90	7.9	ug/L
	Al	27	11266.913	**23.579**	0.52	2.2	ug/L
>	Sc	45	70288.404				ug/L
	V	51	11637.979	**10.051**	0.67	6.7	ug/L
	Cr	52	6524.766	**10.103**	0.20	2.0	ug/L
	Cr	53	11927.576	**8.997**	1.61	17.9	ug/L
	Mn	55	20074.828	**25.000**	0.43	1.7	ug/L
	Co	59	4936.250	**9.995**	0.09	0.9	ug/L
	Ni	60	2683.468	**24.953**	0.47	1.9	ug/L
	Cu	63	5367.206	**24.964**	0.43	1.7	ug/L
	Cu	65	2429.051	**24.973**	0.83	3.3	ug/L
	Zn	66	1595.499	**24.928**	0.66	2.7	ug/L
	Zn	68	1122.415	**24.798**	0.98	4.0	ug/L
>	Ge	72	47458.296				ug/L
	As	75	1545.359	**24.997**	2.12	8.5	ug/L
	Se	77	560.187	**25.154**	1.60	6.3	ug/L
	Se	82	212.100	**24.988**	2.42	9.7	ug/L
	Sr	88	1977.921	**1.999**	0.05	2.3	ug/L
	Mo	98	2616.642	**9.995**	0.17	1.7	ug/L
>	Rh	103	58671.644				ug/L
	Ag	107	6240.531	**10.005**	0.10	1.0	ug/L
	Cd	111	1679.888	**9.997**	0.38	3.8	ug/L
	Cd	114	4304.675	**9.985**	0.30	3.0	ug/L
>	In	115	111289.140				ug/L
	Sn	120	9045.941	**10.002**	0.21	2.1	ug/L
	Sb	121	6758.301	**9.987**	0.30	3.0	ug/L
	Ba	137	3535.106	**9.997**	0.36	3.6	ug/L
	Ba	138	23228.313	**9.994**	0.25	2.5	ug/L
>	Tb	159	178359.493				ug/L
	Tl	205	24244.818	**10.000**	0.26	2.6	ug/L
	Pb	208	46317.096	**24.999**	0.88	3.5	ug/L
	Hg	200	419.952	**2.003**	0.14	7.1	ug/L
	Hg	201	222.670	**2.000**	0.08	3.8	ug/L
>	Bi	209	139979.622				ug/L
	U	238	56500.770	**9.998**	0.10	1.0	ug/L
	C	13	266.671				ug/L
	W	184	9.331				ug/L
	Pd	106	-27.787				ug/L
	Kr	83	8.000				ug/L
	Na	23	345741.164	**999.546**	20.56	2.1	ug/L
	Mg	24	235288.091	**1000.033**	15.22	1.5	ug/L

K	39	612527.417	**999.837**	34.85	3.5	ug/L
Ca	44	19855.625	**998.166**	48.27	4.8	ug/L
Ti	47	16.667				ug/L
Sc-1	45	70288.404				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000311	0.000	0.999979	Linear Thru Zero
B	11.009	0.000490	0.000	0.999936	Linear Thru Zero
Al	26.982	0.005218	0.000	0.997487	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007499	0.000	0.999855	Linear Thru Zero
Cr	51.941	0.006619	0.000	0.999416	Linear Thru Zero
Cr	52.941	-0.000853	0.000	-0.948364	Linear Thru Zero
Mn	54.938	0.011356	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007000	0.000	0.999988	Linear Thru Zero
Ni	59.933	0.001465	0.000	0.998881	Linear Thru Zero
Cu	62.930	0.004505	0.000	0.999842	Linear Thru Zero
Cu	64.928	0.002033	0.000	0.999907	Linear Thru Zero
Zn	65.926	0.001298	0.000	0.999895	Linear Thru Zero
Zn	67.925	0.000886	0.000	0.999182	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001292	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000124	0.000	0.997050	Linear Thru Zero
Se	81.917	0.000178	0.000	0.999983	Linear Thru Zero
Sr	87.906	0.019883	0.000	0.999982	Linear Thru Zero
Mo	97.906	0.004441	0.000	0.999986	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010616	0.000	0.999989	Linear Thru Zero
Cd	110.904	0.001500	0.000	0.999995	Linear Thru Zero
Cd	113.904	0.003868	0.000	0.999889	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008045	0.000	0.999997	Linear Thru Zero
Sb	120.904	0.005868	0.000	0.999978	Linear Thru Zero
Ba	136.905	0.001975	0.000	0.999997	Linear Thru Zero
Ba	137.905	0.012995	0.000	0.999984	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013569	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010385	0.000	0.999999	Linear Thru Zero
Hg	199.968	0.001457	0.000	0.999921	Linear Thru Zero
Hg	200.970	0.000766	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040360	0.000	0.999997	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	344.904302	0.000	0.999990	Linear Thru Zero
Mg	23.985	235.133696	0.000	1.000000	Linear Thru Zero
K	38.964	544.186294	0.000	0.999999	Linear Thru Zero
Ca	43.956	17.781277	0.000	0.999832	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Thursday, February 16, 2017 11:45:05
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.309
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	438.346	**20.058**	1.33	6.6	ug/L
	B	11	6983.169	**200.332**	1.17	0.6	ug/L
	Al	27	19537.447	**49.169**	0.26	0.5	ug/L
>	Sc	45	68827.904				ug/L
	V	51	17709.653	**20.447**	0.69	3.4	ug/L
	Cr	52	11426.984	**20.237**	0.33	1.7	ug/L
	Cr	53	12068.798	**7.721**	12.80	165.8	ug/L
	Mn	55	38449.865	**49.804**	0.31	0.6	ug/L
	Co	59	9558.603	**19.960**	0.30	1.5	ug/L
	Ni	60	4964.936	**49.615**	1.18	2.4	ug/L
	Cu	63	10259.172	**49.829**	0.64	1.3	ug/L
	Cu	65	4704.772	**49.982**	1.30	2.6	ug/L
	Zn	66	3030.597	**49.914**	1.01	2.0	ug/L
	Zn	68	2149.967	**50.139**	2.29	4.6	ug/L
>	Ge	72	46204.465				ug/L
	As	75	2829.108	**49.417**	2.67	5.4	ug/L
	Se	77	647.694	**48.430**	5.92	12.2	ug/L
	Se	82	395.241	**49.569**	2.54	5.1	ug/L
	Sr	88	3708.228	**3.988**	0.12	3.0	ug/L
	Mo	98	5196.874	**20.068**	0.25	1.3	ug/L
>	Rh	103	57400.721				ug/L
	Ag	107	11970.640	**19.924**	0.16	0.8	ug/L
	Cd	111	3257.422	**19.995**	0.56	2.8	ug/L
	Cd	114	8673.711	**20.131**	0.28	1.4	ug/L
>	In	115	108397.734				ug/L
	Sn	120	17360.221	**19.960**	0.25	1.2	ug/L
	Sb	121	13483.143	**20.167**	0.35	1.7	ug/L
	Ba	137	6955.401	**20.025**	0.41	2.0	ug/L
	Ba	138	45406.928	**19.995**	0.55	2.8	ug/L
>	Tb	159	174661.557				ug/L
	Tl	205	47074.955	**19.969**	0.53	2.7	ug/L
	Pb	208	89590.027	**49.875**	0.64	1.3	ug/L
	Hg	200	839.349	**4.031**	0.10	2.4	ug/L
	Hg	201	434.012	**4.013**	0.40	10.0	ug/L
>	Bi	209	136651.895				ug/L
	U	238	109596.906	**19.973**	0.32	1.6	ug/L
	C	13	253.338				ug/L
	W	184	4.666				ug/L
	Pd	106	-46.486				ug/L
	Kr	83	11.833				ug/L
	Na	23	685556.453	**1996.915**	29.25	1.5	ug/L
	Mg	24	459651.531	**1990.601**	6.97	0.4	ug/L

K	39	1146634.529	**1996.205**	14.30	0.7	ug/L
Ca	44	37980.243	**2003.499**	56.87	2.8	ug/L
Ti	47	36.667				ug/L
Sc-1	45	68827.904				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000315	0.000	0.999979	Linear Thru Zero
B	11.009	0.000493	0.000	0.999982	Linear Thru Zero
Al	26.982	0.005015	0.000	0.998871	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008169	0.000	0.999060	Linear Thru Zero
Cr	51.941	0.006920	0.000	0.999629	Linear Thru Zero
Cr	52.941	-0.000262	0.000	-0.615834	Linear Thru Zero
Mn	54.938	0.011181	0.000	0.999969	Linear Thru Zero
Co	58.933	0.006944	0.000	0.999989	Linear Thru Zero
Ni	59.933	0.001421	0.000	0.999643	Linear Thru Zero
Cu	62.930	0.004445	0.000	0.999944	Linear Thru Zero
Cu	64.928	0.002030	0.000	0.999981	Linear Thru Zero
Zn	65.926	0.001289	0.000	0.999972	Linear Thru Zero
Zn	67.925	0.000896	0.000	0.999820	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001235	0.000	0.999730	Linear Thru Zero
Se	76.920	0.000110	0.000	0.997298	Linear Thru Zero
Se	81.917	0.000173	0.000	0.999849	Linear Thru Zero
Sr	87.906	0.019644	0.000	0.999978	Linear Thru Zero
Mo	97.906	0.004502	0.000	0.999974	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010459	0.000	0.999969	Linear Thru Zero
Cd	110.904	0.001499	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003971	0.000	0.999894	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007982	0.000	0.999992	Linear Thru Zero
Sb	120.904	0.006063	0.000	0.999862	Linear Thru Zero
Ba	136.905	0.001985	0.000	0.999996	Linear Thru Zero
Ba	137.905	0.012983	0.000	0.999997	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013486	0.000	0.999995	Linear Thru Zero
Pb	207.977	0.010283	0.000	0.999987	Linear Thru Zero
Hg	199.968	0.001502	0.000	0.999868	Linear Thru Zero
Hg	200.970	0.000776	0.000	0.999978	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040150	0.000	0.999996	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	342.810270	0.000	0.999993	Linear Thru Zero
Mg	23.985	230.837277	0.000	0.999956	Linear Thru Zero
K	38.964	540.127304	0.000	0.999993	Linear Thru Zero
Ca	43.956	17.905322	0.000	0.999961	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Thursday, February 16, 2017 11:48:32
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.309
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	902.386	**39.952**	0.11	0.3	ug/L
	B	11	13667.467	**395.327**	9.22	2.3	ug/L
	Al	27	37613.761	**99.241**	2.38	2.4	ug/L
>	Sc	45	71718.793				ug/L
	V	51	29981.298	**40.032**	1.10	2.7	ug/L
	Cr	52	22102.209	**40.187**	0.71	1.8	ug/L
	Cr	53	13334.217	**86.292**	43.71	50.7	ug/L
	Mn	55	80727.403	**100.123**	1.44	1.4	ug/L
	Co	59	20445.803	**40.238**	0.45	1.1	ug/L
	Ni	60	10226.796	**99.807**	2.14	2.1	ug/L
	Cu	63	21255.008	**100.246**	2.24	2.2	ug/L
	Cu	65	9403.745	**99.477**	2.02	2.0	ug/L
	Zn	66	5978.323	**99.302**	2.28	2.3	ug/L
	Zn	68	4246.174	**99.626**	4.76	4.8	ug/L
>	Ge	72	47267.179				ug/L
	As	75	5939.220	**100.375**	3.69	3.7	ug/L
	Se	77	942.558	**100.484**	4.18	4.2	ug/L
	Se	82	807.467	**99.742**	1.42	1.4	ug/L
	Sr	88	7707.861	**8.048**	0.23	2.9	ug/L
	Mo	98	10617.704	**40.103**	0.57	1.4	ug/L
>	Rh	103	58264.509				ug/L
	Ag	107	25016.619	**40.242**	0.46	1.2	ug/L
	Cd	111	6859.169	**40.441**	0.77	1.9	ug/L
	Cd	114	17677.712	**40.193**	0.33	0.8	ug/L
>	In	115	109012.709				ug/L
	Sn	120	35895.491	**40.269**	0.54	1.3	ug/L
	Sb	121	27627.525	**40.341**	1.00	2.5	ug/L
	Ba	137	14415.092	**40.171**	0.19	0.5	ug/L
	Ba	138	94271.434	**40.172**	0.16	0.4	ug/L
>	Tb	159	178141.177				ug/L
	Tl	205	97736.500	**40.156**	0.81	2.0	ug/L
	Pb	208	187223.512	**100.516**	1.70	1.7	ug/L
	Hg	200	1735.470	**8.069**	0.24	3.0	ug/L
	Hg	201	941.391	**8.155**	0.33	4.1	ug/L
>	Bi	209	138201.017				ug/L
	U	238	231504.265	**40.398**	0.80	2.0	ug/L
	C	13	266.672				ug/L
	W	184	9.330				ug/L
	Pd	106	-99.501				ug/L
	Kr	83	8.833				ug/L
	Na	23	1446922.445	**4049.884**	184.88	4.6	ug/L
	Mg	24	975059.670	**4051.093**	47.66	1.2	ug/L

K	39	2173620.970	**3975.092**	48.30	1.2	ug/L
Ca	44	76262.919	**4032.870**	72.29	1.8	ug/L
Ti	47	33.333				ug/L
Sc-1	45	71718.793				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000314	0.000	0.999993	Linear Thru Zero
B	11.009	0.000475	0.000	0.999779	Linear Thru Zero
Al	26.982	0.004909	0.000	0.999611	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008189	0.000	0.999773	Linear Thru Zero
Cr	51.941	0.007023	0.000	0.999879	Linear Thru Zero
Cr	52.941	0.000099	0.000	0.354466	Linear Thru Zero
Mn	54.938	0.011225	0.000	0.999990	Linear Thru Zero
Co	58.933	0.007079	0.000	0.999941	Linear Thru Zero
Ni	59.933	0.001412	0.000	0.999908	Linear Thru Zero
Cu	62.930	0.004480	0.000	0.999977	Linear Thru Zero
Cu	64.928	0.001996	0.000	0.999952	Linear Thru Zero
Zn	65.926	0.001261	0.000	0.999916	Linear Thru Zero
Zn	67.925	0.000885	0.000	0.999934	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001250	0.000	0.999915	Linear Thru Zero
Se	76.920	0.000112	0.000	0.999336	Linear Thru Zero
Se	81.917	0.000171	0.000	0.999953	Linear Thru Zero
Sr	87.906	0.020029	0.000	0.999937	Linear Thru Zero
Mo	97.906	0.004539	0.000	0.999983	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010665	0.000	0.999934	Linear Thru Zero
Cd	110.904	0.001554	0.000	0.999805	Linear Thru Zero
Cd	113.904	0.004033	0.000	0.999938	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008157	0.000	0.999926	Linear Thru Zero
Sb	120.904	0.006232	0.000	0.999853	Linear Thru Zero
Ba	136.905	0.002012	0.000	0.999970	Linear Thru Zero
Ba	137.905	0.013163	0.000	0.999970	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013656	0.000	0.999975	Linear Thru Zero
Pb	207.977	0.010455	0.000	0.999955	Linear Thru Zero
Hg	199.968	0.001545	0.000	0.999850	Linear Thru Zero
Hg	200.970	0.000828	0.000	0.999393	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041467	0.000	0.999841	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	357.029778	0.000	0.999750	Linear Thru Zero
Mg	23.985	240.654296	0.000	0.999730	Linear Thru Zero
K	38.964	529.595565	0.000	0.999936	Linear Thru Zero
Ca	43.956	18.387888	0.000	0.999883	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Thursday, February 16, 2017 11:52:00
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.309
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	2092.285	**99.951**	1.83	1.8	ug/L
|	B	11	31792.924	**999.270**	21.17	2.1	ug/L
|	Al	27	85643.460	**250.630**	2.83	1.1	ug/L
|>	Sc	45	66800.155				ug/L
|	V	51	63531.877	**100.857**	1.58	1.6	ug/L
|	Cr	52	49792.477	**100.419**	2.02	2.0	ug/L
|	Cr	53	15819.083	**116.969**	9.34	8.0	ug/L
|	Mn	55	185769.779	**249.581**	3.24	1.3	ug/L
|	Co	59	46310.326	**99.631**	1.81	1.8	ug/L
⌊	Ni	60	23431.302	**249.517**	5.30	2.1	ug/L
⌈	Cu	63	48530.954	**248.911**	2.27	0.9	ug/L
|	Cu	65	21648.424	**248.953**	6.83	2.7	ug/L
|	Zn	66	13771.654	**249.100**	2.75	1.1	ug/L
|	Zn	68	9646.379	**248.864**	2.40	1.0	ug/L
|>	Ge	72	44400.806				ug/L
|	As	75	13521.414	**248.836**	3.52	1.4	ug/L
|	Se	77	1652.344	**250.762**	6.88	2.7	ug/L
|	Se	82	1851.761	**248.865**	4.16	1.7	ug/L
⌊	Sr	88	17497.882	**19.926**	0.10	0.5	ug/L
⌈	Mo	98	24977.998	**100.574**	1.02	1.0	ug/L
|>	Rh	103	53191.303				ug/L
⌊	Ag	107	56241.707	**99.843**	2.33	2.3	ug/L
⌈	Cd	111	15513.505	**99.746**	1.87	1.9	ug/L
|	Cd	114	40905.957	**100.025**	1.00	1.0	ug/L
|>	In	115	101272.958				ug/L
|	Sn	120	82070.801	**99.872**	1.77	1.8	ug/L
⌊	Sb	121	64240.510	**100.254**	2.48	2.5	ug/L
⌈	Ba	137	33301.438	**99.840**	1.28	1.3	ug/L
|	Ba	138	218695.730	**99.909**	1.24	1.2	ug/L
|>	Tb	159	166953.779				ug/L
|	Tl	205	224678.752	**99.742**	0.37	0.4	ug/L
⌊	Pb	208	425388.673	**248.885**	3.98	1.6	ug/L
⌈	Hg	200	3765.507	**19.913**	0.47	2.3	ug/L
|	Hg	201	2173.640	**20.168**	0.25	1.2	ug/L
|>	Bi	209	124570.254				ug/L
⌊	U	238	530316.069	**100.452**	0.32	0.3	ug/L
	C	13	353.342				ug/L
	W	184	12.664				ug/L
	Pd	106	-240.097				ug/L
	Kr	83	15.167				ug/L
⌈	Na	23	5813989.894	**10717.938**	409.67	3.8	ug/L
|	Mg	24	3171833.934	**10437.160**	118.07	1.1	ug/L

K	39	4974672.400	**9863.965**	135.48	1.4	ug/L
Ca	44	177511.815	**9916.819**	159.30	1.6	ug/L
Ti	47	50.000				ug/L
Sc-1	45	66800.155				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000313	0.000	0.999998	Linear Thru Zero
B	11.009	0.000474	0.000	0.999960	Linear Thru Zero
Al	26.982	0.004967	0.000	0.999918	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008536	0.000	0.999790	Linear Thru Zero
Cr	51.941	0.007165	0.000	0.999938	Linear Thru Zero
Cr	52.941	0.000509	0.000	0.919482	Linear Thru Zero
Mn	54.938	0.011137	0.000	0.999992	Linear Thru Zero
Co	58.933	0.006957	0.000	0.999957	Linear Thru Zero
Ni	59.933	0.001399	0.000	0.999975	Linear Thru Zero
Cu	62.930	0.004389	0.000	0.999951	Linear Thru Zero
Cu	64.928	0.001957	0.000	0.999950	Linear Thru Zero
Zn	65.926	0.001240	0.000	0.999954	Linear Thru Zero
Zn	67.925	0.000866	0.000	0.999939	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001223	0.000	0.999933	Linear Thru Zero
Se	76.920	0.000114	0.000	0.999866	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999942	Linear Thru Zero
Sr	87.906	0.019681	0.000	0.999956	Linear Thru Zero
Mo	97.906	0.004667	0.000	0.999919	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010586	0.000	0.999983	Linear Thru Zero
Cd	110.904	0.001535	0.000	0.999950	Linear Thru Zero
Cd	113.904	0.004038	0.000	0.999989	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008108	0.000	0.999983	Linear Thru Zero
Sb	120.904	0.006308	0.000	0.999960	Linear Thru Zero
Ba	136.905	0.001997	0.000	0.999989	Linear Thru Zero
Ba	137.905	0.013107	0.000	0.999993	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013490	0.000	0.999980	Linear Thru Zero
Pb	207.977	0.010238	0.000	0.999944	Linear Thru Zero
Hg	199.968	0.001514	0.000	0.999928	Linear Thru Zero
Hg	200.970	0.000862	0.000	0.999735	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042379	0.000	0.999925	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	542.361463	0.000	0.987937	Linear Thru Zero
Mg	23.985	303.884137	0.000	0.995454	Linear Thru Zero
K	38.964	497.390544	0.000	0.999547	Linear Thru Zero
Ca	43.956	17.687614	0.000	0.999813	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, February 16, 2017 13:12:49
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.334
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	3.000				ug/L
	B	11	222.670				ug/L
	Al	27	2069.612				ug/L
>	Sc	45	61450.489				ug/L
	V	51	5262.643				ug/L
	Cr	52	1630.173				ug/L
	Cr	53	10577.604				ug/L
	Mn	55	135.335				ug/L
	Co	59	16.667				ug/L
	Ni	60	107.001				ug/L
	Cu	63	25.333				ug/L
	Cu	65	13.333				ug/L
	Zn	66	79.000				ug/L
	Zn	68	92.001				ug/L
>	Ge	72	41855.958				ug/L
	As	75	27.702				ug/L
	Se	77	388.843				ug/L
	Se	82	4.583				ug/L
	Sr	88	79.667				ug/L
	Mo	98	14.046				ug/L
>	Rh	103	51703.906				ug/L
	Ag	107	4.667				ug/L
	Cd	111	2.206				ug/L
	Cd	114	10.923				ug/L
>	In	115	98315.590				ug/L
	Sn	120	80.591				ug/L
	Sb	121	222.670				ug/L
	Ba	137	11.634				ug/L
	Ba	138	55.968				ug/L
>	Tb	159	157827.435				ug/L
	Tl	205	40.000				ug/L
	Pb	208	20.667				ug/L
	Hg	200	9.291				ug/L
	Hg	201	6.667				ug/L
>	Bi	209	126114.800				ug/L
	U	238	12.000				ug/L
	C	13	200.003				ug/L
	W	184	6.664				ug/L
	Pd	106	1.008				ug/L
	Kr	83	9.667				ug/L
	Na	23	900.053				ug/L
	Mg	24	146.668				ug/L

K	39	62338.249		ug/L
Ca	44	1690.186		ug/L
Ti	47	6.667		ug/L
Sc-1	45	61450.489		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000313	0.000	0.999998	Linear Thru Zero
B	11.009	0.000474	0.000	0.999960	Linear Thru Zero
Al	26.982	0.004967	0.000	0.999918	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008536	0.000	0.999790	Linear Thru Zero
Cr	51.941	0.007165	0.000	0.999938	Linear Thru Zero
Cr	52.941	0.000509	0.000	0.919482	Linear Thru Zero
Mn	54.938	0.011137	0.000	0.999992	Linear Thru Zero
Co	58.933	0.006957	0.000	0.999957	Linear Thru Zero
Ni	59.933	0.001399	0.000	0.999975	Linear Thru Zero
Cu	62.930	0.004389	0.000	0.999951	Linear Thru Zero
Cu	64.928	0.001957	0.000	0.999950	Linear Thru Zero
Zn	65.926	0.001240	0.000	0.999954	Linear Thru Zero
Zn	67.925	0.000866	0.000	0.999939	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001223	0.000	0.999933	Linear Thru Zero
Se	76.920	0.000114	0.000	0.999866	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999942	Linear Thru Zero
Sr	87.906	0.019681	0.000	0.999956	Linear Thru Zero
Mo	97.906	0.004667	0.000	0.999919	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010586	0.000	0.999983	Linear Thru Zero
Cd	110.904	0.001535	0.000	0.999950	Linear Thru Zero
Cd	113.904	0.004038	0.000	0.999989	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008108	0.000	0.999983	Linear Thru Zero
Sb	120.904	0.006308	0.000	0.999960	Linear Thru Zero
Ba	136.905	0.001997	0.000	0.999989	Linear Thru Zero
Ba	137.905	0.013107	0.000	0.999993	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013490	0.000	0.999980	Linear Thru Zero
Pb	207.977	0.010238	0.000	0.999944	Linear Thru Zero
Hg	199.968	0.001514	0.000	0.999928	Linear Thru Zero
Hg	200.970	0.000862	0.000	0.999735	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042379	0.000	0.999925	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	542.361463	0.000	0.987937	Linear Thru Zero
Mg	23.985	303.884137	0.000	0.995454	Linear Thru Zero
K	38.964	497.390544	0.000	0.999547	Linear Thru Zero
Ca	43.956	17.687614	0.000	0.999813	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, February 16, 2017 13:16:17
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.334
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	23.667	**1.000**	0.13	13.4	ug/L
	B	11	828.711	**20.000**	1.08	5.4	ug/L
	Al	27	9814.262	**20.000**	1.53	7.6	ug/L
>	Sc	45	64251.329				ug/L
	V	51	7035.786	**3.000**	0.58	19.2	ug/L
	Cr	52	2773.000	**3.000**	0.26	8.7	ug/L
	Cr	53	10566.421	**3.000**	2.95	98.2	ug/L
	Mn	55	878.050	**1.000**	0.12	12.1	ug/L
	Co	59	454.680	**1.000**	0.07	6.6	ug/L
	Ni	60	264.005	**1.000**	0.33	32.9	ug/L
	Cu	63	501.350	**2.000**	0.07	3.5	ug/L
	Cu	65	230.003	**2.000**	0.14	7.2	ug/L
	Zn	66	376.343	**5.000**	0.40	8.0	ug/L
	Zn	68	282.339	**5.000**	0.37	7.5	ug/L
>	Ge	72	43066.587				ug/L
	As	75	146.968	**2.000**	0.42	21.0	ug/L
	Se	77	412.511	**2.000**	6.68	334.1	ug/L
	Se	82	20.591	**2.000**	0.68	33.8	ug/L
	Sr	88	283.339	**0.200**	0.01	7.0	ug/L
	Mo	98	249.346	**1.000**	0.07	6.6	ug/L
>	Rh	103	53472.555				ug/L
	Ag	107	537.352	**1.000**	0.01	1.5	ug/L
	Cd	111	157.675	**1.000**	0.05	5.2	ug/L
	Cd	114	429.488	**1.000**	0.09	9.1	ug/L
>	In	115	101813.665				ug/L
	Sn	120	914.003	**1.000**	0.06	6.0	ug/L
	Sb	121	1548.156	**2.000**	0.03	1.7	ug/L
	Ba	137	353.970	**1.000**	0.04	4.2	ug/L
	Ba	138	2407.005	**1.000**	0.03	2.7	ug/L
>	Tb	159	166025.996				ug/L
	Tl	205	2324.351	**1.000**	0.01	0.9	ug/L
	Pb	208	1848.889	**1.000**	0.00	0.4	ug/L
	Hg	200	43.962	**0.200**	0.11	55.3	ug/L
	Hg	201	27.333	**0.200**	0.05	24.9	ug/L
>	Bi	209	132283.673				ug/L
	U	238	5455.935	**1.000**	0.02	2.4	ug/L
	C	13	260.005				ug/L
	W	184	5.998				ug/L
	Pd	106	0.049				ug/L
	Kr	83	8.667				ug/L
	Na	23	34195.938	**100.000**	4.53	4.5	ug/L
	Mg	24	21667.162	**100.000**	3.36	3.4	ug/L

K	39	111706.002	**100.000**	8.60	8.6	ug/L
Ca	44	3594.173	**100.000**	6.27	6.3	ug/L
Ti	47	23.333				ug/L
Sc-1	45	64251.329				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000320	0.000	1.000000	Linear Thru Zero
B	11.009	0.000464	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005961	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007947	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005550	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.002518	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011471	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006812	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002378	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005521	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002509	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001371	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000872	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001375	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000138	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000185	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.023363	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004390	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009960	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001527	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.004107	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008159	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.006470	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.002058	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.014145	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013747	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011005	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001287	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000771	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041152	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	332.958850	0.000	1.000000	Linear Thru Zero
Mg	23.985	215.204935	0.000	1.000000	Linear Thru Zero
K	38.964	493.677533	0.000	1.000000	Linear Thru Zero
Ca	43.956	19.039872	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, February 16, 2017 13:19:44
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.334
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	205.669	**9.997**	0.96	9.6	ug/L
	B	11	3400.752	**100.170**	2.55	2.5	ug/L
	Al	27	10240.814	**23.126**	0.13	0.6	ug/L
>	Sc	45	65195.141				ug/L
	V	51	10613.428	**9.975**	0.59	6.0	ug/L
	Cr	52	6108.425	**10.145**	0.15	1.5	ug/L
	Cr	53	10967.316	**6.911**	3.79	54.8	ug/L
	Mn	55	18287.063	**24.999**	0.61	2.4	ug/L
	Co	59	4546.678	**10.002**	0.29	2.9	ug/L
	Ni	60	2439.053	**24.973**	0.29	1.2	ug/L
	Cu	63	4788.824	**24.956**	0.81	3.3	ug/L
	Cu	65	2166.305	**24.955**	0.08	0.3	ug/L
	Zn	66	1476.809	**24.920**	0.62	2.5	ug/L
	Zn	68	1038.070	**24.982**	0.31	1.2	ug/L
>	Ge	72	44033.405				ug/L
	As	75	1377.823	**24.981**	1.51	6.1	ug/L
	Se	77	542.853	**24.978**	2.47	9.9	ug/L
	Se	82	186.249	**24.981**	1.12	4.5	ug/L
	Sr	88	1789.875	**1.996**	0.01	0.4	ug/L
	Mo	98	2416.832	**10.001**	0.16	1.6	ug/L
>	Rh	103	54005.035				ug/L
	Ag	107	5736.805	**10.006**	0.26	2.6	ug/L
	Cd	111	1572.397	**9.999**	0.18	1.8	ug/L
	Cd	114	4128.242	**9.996**	0.22	2.2	ug/L
>	In	115	103888.899				ug/L
	Sn	120	8385.178	**9.998**	0.26	2.6	ug/L
	Sb	121	6500.746	**9.972**	0.13	1.3	ug/L
	Ba	137	3339.675	**9.997**	0.15	1.5	ug/L
	Ba	138	22252.765	**9.993**	0.09	0.9	ug/L
>	Tb	159	167256.784				ug/L
	Tl	205	22847.556	**9.999**	0.09	0.9	ug/L
	Pb	208	43638.793	**24.998**	0.49	1.9	ug/L
	Hg	200	415.960	**2.003**	0.19	9.3	ug/L
	Hg	201	230.670	**2.002**	0.03	1.6	ug/L
>	Bi	209	133142.940				ug/L
	U	238	53692.140	**9.998**	0.07	0.7	ug/L
	C	13	266.671				ug/L
	W	184	7.997				ug/L
	Pd	106	-29.645				ug/L
	Kr	83	10.000				ug/L
	Na	23	316307.433	**999.449**	21.28	2.1	ug/L
	Mg	24	214006.726	**999.938**	18.36	1.8	ug/L

K	39	558632.270	**1000.052**	23.13	2.3	ug/L
Ca	44	18275.038	**998.537**	43.07	4.3	ug/L
Ti	47	23.333				ug/L
Sc-1	45	65195.141				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000310	0.000	0.999995	Linear Thru Zero
B	11.009	0.000485	0.000	0.999964	Linear Thru Zero
Al	26.982	0.005336	0.000	0.995638	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007731	0.000	0.999965	Linear Thru Zero
Cr	51.941	0.006620	0.000	0.998826	Linear Thru Zero
Cr	52.941	-0.000568	0.000	-0.696727	Linear Thru Zero
Mn	54.938	0.011130	0.000	0.999999	Linear Thru Zero
Co	58.933	0.006944	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001428	0.000	0.999646	Linear Thru Zero
Cu	62.930	0.004336	0.000	0.999761	Linear Thru Zero
Cu	64.928	0.001959	0.000	0.999748	Linear Thru Zero
Zn	65.926	0.001270	0.000	0.999873	Linear Thru Zero
Zn	67.925	0.000856	0.000	0.999993	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001225	0.000	0.999953	Linear Thru Zero
Se	76.920	0.000121	0.000	0.999939	Linear Thru Zero
Se	81.917	0.000165	0.000	0.999953	Linear Thru Zero
Sr	87.906	0.019412	0.000	0.999793	Linear Thru Zero
Mo	97.906	0.004448	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010613	0.000	0.999981	Linear Thru Zero
Cd	110.904	0.001511	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003964	0.000	0.999994	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007991	0.000	0.999998	Linear Thru Zero
Sb	120.904	0.006048	0.000	0.999902	Linear Thru Zero
Ba	136.905	0.001990	0.000	0.999994	Linear Thru Zero
Ba	137.905	0.013279	0.000	0.999979	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013637	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010434	0.000	0.999998	Linear Thru Zero
Hg	199.968	0.001523	0.000	0.999881	Linear Thru Zero
Hg	200.970	0.000839	0.000	0.999967	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040322	0.000	0.999998	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	315.581157	0.000	0.999985	Linear Thru Zero
Mg	23.985	213.873373	0.000	1.000000	Linear Thru Zero
K	38.964	496.268115	0.000	1.000000	Linear Thru Zero
Ca	43.956	16.609159	0.000	0.999893	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Thursday, February 16, 2017 13:23:12
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.334
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	435.679	**20.181**	0.77	3.8	ug/L
	B	11	6835.705	**200.899**	7.28	3.6	ug/L
	Al	27	19335.611	**49.444**	1.14	2.3	ug/L
>	Sc	45	66551.319				ug/L
	V	51	16729.612	**20.292**	0.77	3.8	ug/L
	Cr	52	11056.441	**20.224**	0.34	1.7	ug/L
	Cr	53	11470.385	**-1.949**	46.53	2388.0	ug/L
	Mn	55	36818.583	**49.900**	0.57	1.2	ug/L
	Co	59	9279.598	**20.008**	0.62	3.1	ug/L
	Ni	60	4681.424	**49.593**	0.93	1.9	ug/L
	Cu	63	9949.432	**50.212**	0.67	1.3	ug/L
	Cu	65	4556.685	**50.340**	1.53	3.0	ug/L
	Zn	66	2849.528	**49.704**	0.28	0.6	ug/L
	Zn	68	2005.928	**49.945**	0.90	1.8	ug/L
>	Ge	72	44820.638				ug/L
	As	75	2737.401	**49.859**	1.51	3.0	ug/L
	Se	77	666.696	**49.121**	6.16	12.5	ug/L
	Se	82	361.596	**49.644**	1.21	2.4	ug/L
	Sr	88	3693.887	**4.030**	0.18	4.5	ug/L
	Mo	98	5096.364	**20.096**	0.20	1.0	ug/L
>	Rh	103	55756.022				ug/L
	Ag	107	11843.112	**20.002**	0.42	2.1	ug/L
	Cd	111	3163.650	**19.885**	0.16	0.8	ug/L
	Cd	114	8352.737	**19.910**	0.30	1.5	ug/L
>	In	115	107588.747				ug/L
	Sn	120	17316.042	**20.008**	0.31	1.5	ug/L
	Sb	121	13037.039	**19.931**	0.57	2.9	ug/L
	Ba	137	6823.294	**19.860**	0.45	2.2	ug/L
	Ba	138	44903.955	**19.806**	0.42	2.1	ug/L
>	Tb	159	177089.840				ug/L
	Tl	205	48059.008	**19.977**	0.49	2.4	ug/L
	Pb	208	90774.829	**49.822**	0.64	1.3	ug/L
	Hg	200	770.026	**3.922**	0.18	4.6	ug/L
	Hg	201	484.682	**4.029**	0.16	4.0	ug/L
>	Bi	209	137183.422				ug/L
	U	238	112125.348	**20.054**	0.25	1.2	ug/L
	C	13	193.336				ug/L
	W	184	1.997				ug/L
	Pd	106	-44.475				ug/L
	Kr	83	9.167				ug/L
	Na	23	660272.021	**2017.400**	14.02	0.7	ug/L
	Mg	24	448794.940	**2018.962**	17.49	0.9	ug/L

K	39	1110878.024	**2021.769**	1.31	0.1	ug/L
Ca	44	35789.735	**2010.474**	13.46	0.7	ug/L
Ti	47	40.000				ug/L
Sc-1	45	66551.319				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000322	0.000	0.999836	Linear Thru Zero
B	11.009	0.000493	0.000	0.999954	Linear Thru Zero
Al	26.982	0.005195	0.000	0.998506	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008168	0.000	0.999603	Linear Thru Zero
Cr	51.941	0.006903	0.000	0.999539	Linear Thru Zero
Cr	52.941	-0.000113	0.000	-0.299386	Linear Thru Zero
Mn	54.938	0.011042	0.000	0.999992	Linear Thru Zero
Co	58.933	0.006955	0.000	0.999999	Linear Thru Zero
Ni	59.933	0.001383	0.000	0.999792	Linear Thru Zero
Cu	62.930	0.004410	0.000	0.999918	Linear Thru Zero
Cu	64.928	0.002013	0.000	0.999860	Linear Thru Zero
Zn	65.926	0.001241	0.000	0.999905	Linear Thru Zero
Zn	67.925	0.000852	0.000	0.999996	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001212	0.000	0.999975	Linear Thru Zero
Se	76.920	0.000114	0.000	0.999372	Linear Thru Zero
Se	81.917	0.000160	0.000	0.999889	Linear Thru Zero
Sr	87.906	0.019996	0.000	0.999853	Linear Thru Zero
Mo	97.906	0.004535	0.000	0.999954	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010616	0.000	0.999996	Linear Thru Zero
Cd	110.904	0.001478	0.000	0.999934	Linear Thru Zero
Cd	113.904	0.003895	0.000	0.999958	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008005	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.005968	0.000	0.999956	Linear Thru Zero
Ba	136.905	0.001937	0.000	0.999901	Linear Thru Zero
Ba	137.905	0.012788	0.000	0.999809	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013576	0.000	0.999997	Linear Thru Zero
Pb	207.977	0.010288	0.000	0.999974	Linear Thru Zero
Hg	199.968	0.001413	0.000	0.999216	Linear Thru Zero
Hg	200.970	0.000864	0.000	0.999888	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040758	0.000	0.999985	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	326.842496	0.000	0.999847	Linear Thru Zero
Mg	23.985	222.217295	0.000	0.999822	Linear Thru Zero
K	38.964	518.624819	0.000	0.999765	Linear Thru Zero
Ca	43.956	16.960948	0.000	0.999925	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Thursday, February 16, 2017 13:26:39
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.334
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	866.049	**39.771**	2.12	5.3	ug/L
	B	11	13431.723	**397.379**	3.45	0.9	ug/L
	Al	27	35353.761	**97.970**	0.43	0.4	ug/L
>	Sc	45	68657.824				ug/L
	V	51	28787.882	**40.201**	0.06	0.2	ug/L
	Cr	52	21083.870	**40.152**	0.19	0.5	ug/L
	Cr	53	12708.659	**59.293**	4.31	7.3	ug/L
	Mn	55	76303.423	**100.104**	0.30	0.3	ug/L
	Co	59	19420.168	**40.147**	0.41	1.0	ug/L
	Ni	60	9687.102	**100.169**	1.55	1.5	ug/L
	Cu	63	20131.324	**99.485**	0.76	0.8	ug/L
	Cu	65	9059.676	**99.122**	1.99	2.0	ug/L
	Zn	66	5767.830	**99.571**	0.60	0.6	ug/L
	Zn	68	4029.723	**99.742**	0.52	0.5	ug/L
>	Ge	72	46580.731				ug/L
	As	75	5755.335	**100.339**	1.21	1.2	ug/L
	Se	77	943.725	**99.174**	3.02	3.1	ug/L
	Se	82	766.280	**100.452**	1.24	1.2	ug/L
	Sr	88	7451.946	**7.977**	0.13	1.7	ug/L
	Mo	98	10519.760	**40.115**	1.07	2.7	ug/L
>	Rh	103	57219.574				ug/L
	Ag	107	23928.557	**39.850**	0.97	2.4	ug/L
	Cd	111	6505.508	**40.022**	1.14	2.8	ug/L
	Cd	114	17318.466	**40.108**	0.57	1.4	ug/L
>	In	115	109811.288				ug/L
	Sn	120	34858.792	**39.893**	0.23	0.6	ug/L
	Sb	121	26664.171	**40.073**	0.90	2.3	ug/L
	Ba	137	14283.510	**40.174**	1.29	3.2	ug/L
	Ba	138	92836.332	**40.021**	0.21	0.5	ug/L
>	Tb	159	180981.480				ug/L
	Tl	205	97844.316	**39.951**	0.47	1.2	ug/L
	Pb	208	186367.389	**100.016**	0.84	0.8	ug/L
	Hg	200	1652.126	**8.080**	0.33	4.1	ug/L
	Hg	201	936.724	**7.932**	0.36	4.6	ug/L
>	Bi	209	139294.299				ug/L
	U	238	228501.120	**40.060**	0.31	0.8	ug/L
	C	13	240.004				ug/L
	W	184	7.998				ug/L
	Pd	106	-86.511				ug/L
	Kr	83	10.667				ug/L
	Na	23	1376361.517	**4047.783**	37.62	0.9	ug/L
	Mg	24	928828.054	**4041.313**	61.69	1.5	ug/L

K	39	2032416.661	**3950.075**	121.95	3.1	ug/L
Ca	44	72607.772	**4041.774**	56.43	1.4	ug/L
Ti	47	33.333				ug/L
Sc-1	45	68657.824				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000316	0.000	0.999907	Linear Thru Zero
B	11.009	0.000483	0.000	0.999920	Linear Thru Zero
Al	26.982	0.004912	0.000	0.998980	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008300	0.000	0.999867	Linear Thru Zero
Cr	51.941	0.006987	0.000	0.999869	Linear Thru Zero
Cr	52.941	0.000219	0.000	0.647624	Linear Thru Zero
Mn	54.938	0.011079	0.000	0.999996	Linear Thru Zero
Co	58.933	0.007038	0.000	0.999978	Linear Thru Zero
Ni	59.933	0.001391	0.000	0.999946	Linear Thru Zero
Cu	62.930	0.004339	0.000	0.999937	Linear Thru Zero
Cu	64.928	0.001958	0.000	0.999842	Linear Thru Zero
Zn	65.926	0.001225	0.000	0.999947	Linear Thru Zero
Zn	67.925	0.000845	0.000	0.999989	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001225	0.000	0.999976	Linear Thru Zero
Se	76.920	0.000111	0.000	0.999733	Linear Thru Zero
Se	81.917	0.000163	0.000	0.999942	Linear Thru Zero
Sr	87.906	0.019813	0.000	0.999951	Linear Thru Zero
Mo	97.906	0.004577	0.000	0.999976	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010490	0.000	0.999977	Linear Thru Zero
Cd	110.904	0.001480	0.000	0.999984	Linear Thru Zero
Cd	113.904	0.003928	0.000	0.999979	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007937	0.000	0.999988	Linear Thru Zero
Sb	120.904	0.006003	0.000	0.999984	Linear Thru Zero
Ba	136.905	0.001964	0.000	0.999947	Linear Thru Zero
Ba	137.905	0.012810	0.000	0.999954	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013523	0.000	0.999997	Linear Thru Zero
Pb	207.977	0.010293	0.000	0.999994	Linear Thru Zero
Hg	199.968	0.001460	0.000	0.999666	Linear Thru Zero
Hg	200.970	0.000841	0.000	0.999856	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040953	0.000	0.999993	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	339.806129	0.000	0.999739	Linear Thru Zero
Mg	23.985	229.796963	0.000	0.999790	Linear Thru Zero
K	38.964	498.744598	0.000	0.999691	Linear Thru Zero
Ca	43.956	17.546154	0.000	0.999809	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Thursday, February 16, 2017 13:30:07
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.334
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2250.996	**100.470**	1.15	1.1	ug/L
	B	11	33445.225	**998.838**	5.20	0.5	ug/L
	Al	27	87113.940	**249.919**	2.22	0.9	ug/L
>	Sc	45	69163.562				ug/L
	V	51	64547.407	**100.365**	1.08	1.1	ug/L
	Cr	52	50664.818	**100.181**	0.38	0.4	ug/L
	Cr	53	15616.673	**111.493**	3.93	3.5	ug/L
	Mn	55	191012.344	**249.836**	2.36	0.9	ug/L
	Co	59	47230.611	**99.463**	1.64	1.7	ug/L
	Ni	60	23669.703	**249.080**	2.52	1.0	ug/L
	Cu	63	48976.438	**249.304**	4.46	1.8	ug/L
	Cu	65	22118.100	**249.318**	1.35	0.5	ug/L
	Zn	66	14267.222	**250.432**	2.73	1.1	ug/L
	Zn	68	9810.252	**250.090**	6.51	2.6	ug/L
>	Ge	72	45868.430				ug/L
	As	75	14137.444	**250.179**	2.74	1.1	ug/L
	Se	77	1706.356	**250.412**	5.69	2.3	ug/L
	Se	82	1889.988	**250.435**	1.45	0.6	ug/L
	Sr	88	18568.384	**20.060**	0.57	2.8	ug/L
	Mo	98	26059.089	**100.170**	2.61	2.6	ug/L
>	Rh	103	56359.730				ug/L
	Ag	107	58426.425	**99.795**	2.75	2.8	ug/L
	Cd	111	15974.538	**99.977**	3.24	3.2	ug/L
	Cd	114	41995.453	**99.805**	1.36	1.4	ug/L
>	In	115	108071.963				ug/L
	Sn	120	87428.761	**100.314**	1.19	1.2	ug/L
	Sb	121	66793.469	**100.441**	1.64	1.6	ug/L
	Ba	137	34539.524	**99.763**	2.91	2.9	ug/L
	Ba	138	228085.828	**99.981**	3.21	3.2	ug/L
>	Tb	159	178246.542				ug/L
	Tl	205	240970.502	**99.992**	1.40	1.4	ug/L
	Pb	208	452650.517	**249.420**	3.02	1.2	ug/L
	Hg	200	3976.940	**19.996**	0.44	2.2	ug/L
	Hg	201	2336.355	**20.064**	1.28	6.4	ug/L
>	Bi	209	136005.561				ug/L
	U	238	575941.125	**100.576**	0.93	0.9	ug/L
	C	13	286.673				ug/L
	W	184	13.999				ug/L
	Pd	106	-282.736				ug/L
	Kr	83	9.167				ug/L
	Na	23	5968006.262	**10807.893**	341.96	3.2	ug/L
	Mg	24	3258411.013	**10539.306**	271.16	2.6	ug/L

K	39	4897712.391	**9945.693**	122.04	1.2	ug/L
Ca	44	177791.265	**10006.309**	90.21	0.9	ug/L
Ti	47	50.000				ug/L
Sc-1	45	69163.562				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000323	0.000	0.999932	Linear Thru Zero
B	11.009	0.000480	0.000	0.999983	Linear Thru Zero
Al	26.982	0.004905	0.000	0.999818	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008446	0.000	0.999946	Linear Thru Zero
Cr	51.941	0.007047	0.000	0.999970	Linear Thru Zero
Cr	52.941	0.000481	0.000	0.948068	Linear Thru Zero
Mn	54.938	0.011045	0.000	0.999998	Linear Thru Zero
Co	58.933	0.006862	0.000	0.999927	Linear Thru Zero
Ni	59.933	0.001367	0.000	0.999958	Linear Thru Zero
Cu	62.930	0.004282	0.000	0.999970	Linear Thru Zero
Cu	64.928	0.001933	0.000	0.999954	Linear Thru Zero
Zn	65.926	0.001235	0.000	0.999984	Linear Thru Zero
Zn	67.925	0.000847	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001229	0.000	0.999995	Linear Thru Zero
Se	76.920	0.000111	0.000	0.999948	Linear Thru Zero
Se	81.917	0.000164	0.000	0.999983	Linear Thru Zero
Sr	87.906	0.020097	0.000	0.999971	Linear Thru Zero
Mo	97.906	0.004614	0.000	0.999989	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010389	0.000	0.999986	Linear Thru Zero
Cd	110.904	0.001479	0.000	0.999997	Linear Thru Zero
Cd	113.904	0.003892	0.000	0.999987	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008057	0.000	0.999975	Linear Thru Zero
Sb	120.904	0.006132	0.000	0.999951	Linear Thru Zero
Ba	136.905	0.001942	0.000	0.999977	Linear Thru Zero
Ba	137.905	0.012798	0.000	0.999992	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013518	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.010180	0.000	0.999986	Linear Thru Zero
Hg	199.968	0.001458	0.000	0.999942	Linear Thru Zero
Hg	200.970	0.000854	0.000	0.999951	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042107	0.000	0.999920	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	552.106345	0.000	0.984803	Linear Thru Zero
Mg	23.985	309.153604	0.000	0.993130	Linear Thru Zero
K	38.964	486.177716	0.000	0.999873	Linear Thru Zero
Ca	43.956	17.599004	0.000	0.999966	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, February 16, 2017 13:36:18
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.340
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2.333				ug/L
	B	11	294.006				ug/L
	Al	27	2215.653				ug/L
>	Sc	45	68219.223				ug/L
	V	51	5369.358				ug/L
	Cr	52	1561.825				ug/L
	Cr	53	10664.563				ug/L
	Mn	55	115.334				ug/L
	Co	59	13.333				ug/L
	Ni	60	111.334				ug/L
	Cu	63	24.667				ug/L
	Cu	65	8.667				ug/L
	Zn	66	56.334				ug/L
	Zn	68	78.667				ug/L
>	Ge	72	46724.702				ug/L
	As	75	-19.244				ug/L
	Se	77	403.344				ug/L
	Se	82	8.084				ug/L
	Sr	88	84.000				ug/L
	Mo	98	21.785				ug/L
>	Rh	103	57116.755				ug/L
	Ag	107	8.000				ug/L
	Cd	111	-0.813				ug/L
	Cd	114	8.577				ug/L
>	In	115	109321.220				ug/L
	Sn	120	121.275				ug/L
	Sb	121	201.336				ug/L
	Ba	137	14.636				ug/L
	Ba	138	59.303				ug/L
>	Tb	159	174300.340				ug/L
	Tl	205	55.667				ug/L
	Pb	208	29.000				ug/L
	Hg	200	21.299				ug/L
	Hg	201	11.333				ug/L
>	Bi	209	141073.769				ug/L
	U	238	21.333				ug/L
	C	13	246.671				ug/L
	W	184	5.330				ug/L
	Pd	106	1.740				ug/L
	Kr	83	9.500				ug/L
	Na	23	993.399				ug/L
	Mg	24	133.335				ug/L

K	39	61652.873		ug/L
Ca	44	1450.137		ug/L
Ti	47	10.000		ug/L
Sc-1	45	68219.223		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, February 16, 2017 13:39:46
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.340
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	30.333	**1.000**	0.08	8.3	ug/L
	B	11	981.396	**20.000**	1.96	9.8	ug/L
	Al	27	10436.409	**20.000**	0.24	1.2	ug/L
>	Sc	45	70028.664				ug/L
	V	51	7083.296	**3.000**	0.46	15.3	ug/L
	Cr	52	2935.393	**3.000**	0.03	1.2	ug/L
	Cr	53	10826.781	**3.000**	2.29	76.4	ug/L
	Mn	55	966.061	**1.000**	0.01	1.5	ug/L
	Co	59	508.683	**1.000**	0.01	1.3	ug/L
	Ni	60	314.673	**1.000**	0.13	13.5	ug/L
	Cu	63	504.350	**2.000**	0.08	4.1	ug/L
	Cu	65	242.670	**2.000**	0.07	3.5	ug/L
	Zn	66	372.676	**5.000**	0.15	3.0	ug/L
	Zn	68	285.339	**5.000**	0.60	12.0	ug/L
>	Ge	72	47434.833				ug/L
	As	75	191.282	**2.000**	0.13	6.4	ug/L
	Se	77	420.678	**2.000**	1.25	62.3	ug/L
	Se	82	28.103	**2.000**	0.35	17.5	ug/L
	Sr	88	293.006	**0.200**	0.02	11.2	ug/L
	Mo	98	293.197	**1.000**	0.06	6.4	ug/L
>	Rh	103	58471.419				ug/L
	Ag	107	602.690	**1.000**	0.06	6.3	ug/L
	Cd	111	168.525	**1.000**	0.08	8.0	ug/L
	Cd	114	463.334	**1.000**	0.11	10.8	ug/L
>	In	115	112150.556				ug/L
	Sn	120	1038.652	**1.000**	0.08	7.5	ug/L
	Sb	121	1629.506	**2.000**	0.14	7.0	ug/L
	Ba	137	377.294	**1.000**	0.01	1.4	ug/L
	Ba	138	2495.022	**1.000**	0.00	0.4	ug/L
>	Tb	159	183067.124				ug/L
	Tl	205	2613.444	**1.000**	0.01	1.3	ug/L
	Pb	208	2018.932	**1.000**	0.04	3.9	ug/L
	Hg	200	45.966	**0.200**	0.08	39.7	ug/L
	Hg	201	31.333	**0.200**	0.08	40.7	ug/L
>	Bi	209	144505.196				ug/L
	U	238	5936.291	**1.000**	0.02	1.5	ug/L
	C	13	213.337				ug/L
	W	184	5.328				ug/L
	Pd	106	3.935				ug/L
	Kr	83	7.333				ug/L
	Na	23	37605.062	**100.000**	2.41	2.4	ug/L
	Mg	24	25187.838	**100.000**	0.67	0.7	ug/L

K	39	118160.792	**100.000**	3.65	3.7	ug/L
Ca	44	3414.092	**100.000**	8.66	8.7	ug/L
Ti	47	13.333				ug/L
Sc-1	45	70028.664				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000399	0.000	1.000000	Linear Thru Zero
B	11.009	0.000485	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005828	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007476	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006341	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000574	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.012105	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007068	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002859	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005050	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002465	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001330	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000867	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.002223	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000118	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000209	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.021870	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004636	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010161	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001511	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.004056	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008154	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.006341	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001977	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.013288	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013958	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010866	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000831	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000682	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040931	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	366.116627	0.000	1.000000	Linear Thru Zero
Mg	23.985	250.545036	0.000	1.000000	Linear Thru Zero
K	38.964	565.079183	0.000	1.000000	Linear Thru Zero
Ca	43.956	19.639549	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, February 16, 2017 13:43:13
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.340
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	249.337	**9.982**	0.20	2.0	ug/L
	B	11	4031.723	**100.189**	1.73	1.7	ug/L
	Al	27	12014.709	**24.053**	0.46	1.9	ug/L
>	Sc	45	72905.239				ug/L
	V	51	11676.057	**10.069**	0.53	5.3	ug/L
	Cr	52	6743.621	**10.074**	0.16	1.6	ug/L
	Cr	53	11762.487	**12.152**	1.80	14.8	ug/L
	Mn	55	20548.752	**24.997**	0.52	2.1	ug/L
	Co	59	5131.045	**9.999**	0.13	1.3	ug/L
	Ni	60	2729.485	**24.960**	0.87	3.5	ug/L
	Cu	63	5423.245	**24.976**	0.44	1.8	ug/L
	Cu	65	2501.407	**24.965**	1.00	4.0	ug/L
	Zn	66	1610.835	**24.946**	0.62	2.5	ug/L
	Zn	68	1154.087	**25.003**	0.92	3.7	ug/L
>	Ge	72	49271.015				ug/L
	As	75	1513.193	**24.876**	0.77	3.1	ug/L
	Se	77	562.521	**24.990**	0.62	2.5	ug/L
	Se	82	204.917	**24.950**	1.67	6.7	ug/L
	Sr	88	2054.941	**1.998**	0.01	0.5	ug/L
	Mo	98	2788.254	**9.998**	0.22	2.2	ug/L
>	Rh	103	61125.305				ug/L
	Ag	107	6493.406	**10.004**	0.13	1.3	ug/L
	Cd	111	1714.734	**9.997**	0.11	1.1	ug/L
	Cd	114	4697.721	**9.999**	0.05	0.5	ug/L
>	In	115	116999.949				ug/L
	Sn	120	9419.048	**9.997**	0.33	3.3	ug/L
	Sb	121	7314.811	**9.983**	0.10	1.0	ug/L
	Ba	137	3765.544	**9.998**	0.27	2.7	ug/L
	Ba	138	24793.183	**9.996**	0.21	2.1	ug/L
>	Tb	159	194021.215				ug/L
	Tl	205	26249.723	**9.997**	0.19	1.9	ug/L
	Pb	208	50231.187	**24.998**	0.38	1.5	ug/L
	Hg	200	439.325	**2.008**	0.17	8.2	ug/L
	Hg	201	226.670	**2.001**	0.14	7.2	ug/L
>	Bi	209	151251.423				ug/L
	U	238	61301.301	**9.999**	0.11	1.1	ug/L
	C	13	253.338				ug/L
	W	184	3.331				ug/L
	Pd	106	-15.970				ug/L
	Kr	83	9.833				ug/L
	Na	23	362269.003	**999.867**	16.27	1.6	ug/L
	Mg	24	244080.495	**999.732**	27.87	2.8	ug/L

K	39	624880.509	**999.967**	17.15	1.7	ug/L
Ca	44	20473.880	**999.680**	13.84	1.4	ug/L
Ti	47	33.333				ug/L
Sc-1	45	72905.239				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000339	0.000	0.999844	Linear Thru Zero
B	11.009	0.000509	0.000	0.999955	Linear Thru Zero
Al	26.982	0.005502	0.000	0.998882	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008093	0.000	0.999739	Linear Thru Zero
Cr	51.941	0.006910	0.000	0.999694	Linear Thru Zero
Cr	52.941	0.000413	0.000	0.812553	Linear Thru Zero
Mn	54.938	0.011209	0.000	0.999995	Linear Thru Zero
Co	58.933	0.007019	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001434	0.000	0.999211	Linear Thru Zero
Cu	62.930	0.004387	0.000	0.999927	Linear Thru Zero
Cu	64.928	0.002026	0.000	0.999850	Linear Thru Zero
Zn	65.926	0.001263	0.000	0.999942	Linear Thru Zero
Zn	67.925	0.000869	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001251	0.000	0.998072	Linear Thru Zero
Se	76.920	0.000111	0.000	0.999988	Linear Thru Zero
Se	81.917	0.000160	0.000	0.999693	Linear Thru Zero
Sr	87.906	0.019972	0.000	0.999955	Linear Thru Zero
Mo	97.906	0.004526	0.000	0.999997	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010607	0.000	0.999991	Linear Thru Zero
Cd	110.904	0.001467	0.000	0.999995	Linear Thru Zero
Cd	113.904	0.004008	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007943	0.000	0.999996	Linear Thru Zero
Sb	120.904	0.006078	0.000	0.999962	Linear Thru Zero
Ba	136.905	0.001933	0.000	0.999997	Linear Thru Zero
Ba	137.905	0.012752	0.000	0.999991	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013502	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.010350	0.000	0.999998	Linear Thru Zero
Hg	199.968	0.001370	0.000	0.999227	Linear Thru Zero
Hg	200.970	0.000708	0.000	0.999993	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040522	0.000	0.999999	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	361.323535	0.000	0.999999	Linear Thru Zero
Mg	23.985	244.012486	0.000	0.999996	Linear Thru Zero
K	38.964	563.245967	0.000	1.000000	Linear Thru Zero
Ca	43.956	19.029840	0.000	0.999995	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Thursday, February 16, 2017 13:46:41
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.340
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	459.680	**19.641**	1.02	5.2	ug/L
	B	11	7457.615	**198.068**	1.31	0.7	ug/L
	Al	27	21349.600	**49.068**	1.93	3.9	ug/L
>	Sc	45	73458.501				ug/L
	V	51	17855.959	**20.066**	0.43	2.1	ug/L
	Cr	52	12147.252	**20.129**	0.24	1.2	ug/L
	Cr	53	12458.082	**21.761**	2.60	11.9	ug/L
	Mn	55	41225.566	**49.983**	0.72	1.4	ug/L
	Co	59	10381.672	**20.021**	0.34	1.7	ug/L
	Ni	60	5343.856	**49.917**	0.49	1.0	ug/L
	Cu	63	10894.046	**50.058**	0.48	1.0	ug/L
	Cu	65	4780.487	**49.538**	0.94	1.9	ug/L
	Zn	66	3200.000	**50.093**	1.18	2.4	ug/L
	Zn	68	2232.324	**50.040**	1.56	3.1	ug/L
>	Ge	72	49275.461				ug/L
	As	75	3094.125	**50.111**	1.91	3.8	ug/L
	Se	77	708.699	**50.295**	3.96	7.9	ug/L
	Se	82	422.103	**50.488**	1.89	3.8	ug/L
	Sr	88	4057.070	**4.007**	0.07	1.8	ug/L
	Mo	98	5571.136	**19.997**	0.05	0.3	ug/L
>	Rh	103	61342.345				ug/L
	Ag	107	13240.064	**20.066**	0.51	2.5	ug/L
	Cd	111	3603.323	**20.163**	0.44	2.2	ug/L
	Cd	114	9246.606	**19.906**	0.45	2.2	ug/L
>	In	115	117947.742				ug/L
	Sn	120	19003.377	**20.029**	0.28	1.4	ug/L
	Sb	121	14639.262	**20.024**	0.49	2.5	ug/L
	Ba	137	7531.276	**20.058**	0.35	1.7	ug/L
	Ba	138	49924.756	**20.081**	0.41	2.0	ug/L
>	Tb	159	191673.784				ug/L
	Tl	205	52491.203	**20.052**	0.30	1.5	ug/L
	Pb	208	99896.352	**50.069**	0.59	1.2	ug/L
	Hg	200	887.983	**4.039**	0.25	6.1	ug/L
	Hg	201	529.352	**4.148**	0.17	4.1	ug/L
>	Bi	209	150188.512				ug/L
	U	238	123932.872	**20.072**	0.19	0.9	ug/L
	C	13	246.671				ug/L
	W	184	10.663				ug/L
	Pd	106	-36.545				ug/L
	Kr	83	8.667				ug/L
	Na	23	735048.871	**2006.286**	78.43	3.9	ug/L
	Mg	24	494997.052	**2005.587**	65.84	3.3	ug/L

K	39	1203100.642	**2005.297**	34.79	1.7	ug/L
Ca	44	39752.477	**2002.558**	39.47	2.0	ug/L
Ti	47	6.667				ug/L
Sc-1	45	73458.501				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000317	0.000	0.999328	Linear Thru Zero
B	11.009	0.000491	0.000	0.999811	Linear Thru Zero
Al	26.982	0.005263	0.000	0.999221	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008192	0.000	0.999926	Linear Thru Zero
Cr	51.941	0.007078	0.000	0.999861	Linear Thru Zero
Cr	52.941	0.000610	0.000	0.962724	Linear Thru Zero
Mn	54.938	0.011193	0.000	0.999999	Linear Thru Zero
Co	58.933	0.007048	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001425	0.000	0.999834	Linear Thru Zero
Cu	62.930	0.004407	0.000	0.999983	Linear Thru Zero
Cu	64.928	0.001955	0.000	0.999798	Linear Thru Zero
Zn	65.926	0.001272	0.000	0.999982	Linear Thru Zero
Zn	67.925	0.000872	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001262	0.000	0.999609	Linear Thru Zero
Se	76.920	0.000114	0.000	0.999928	Linear Thru Zero
Se	81.917	0.000166	0.000	0.999754	Linear Thru Zero
Sr	87.906	0.020106	0.000	0.999985	Linear Thru Zero
Mo	97.906	0.004523	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010747	0.000	0.999977	Linear Thru Zero
Cd	110.904	0.001516	0.000	0.999868	Linear Thru Zero
Cd	113.904	0.003935	0.000	0.999956	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007989	0.000	0.999995	Linear Thru Zero
Sb	120.904	0.006106	0.000	0.999990	Linear Thru Zero
Ba	136.905	0.001955	0.000	0.999983	Linear Thru Zero
Ba	137.905	0.012959	0.000	0.999966	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013644	0.000	0.999985	Linear Thru Zero
Pb	207.977	0.010407	0.000	0.999996	Linear Thru Zero
Hg	199.968	0.001425	0.000	0.999669	Linear Thru Zero
Hg	200.970	0.000830	0.000	0.997304	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041109	0.000	0.999974	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	365.877787	0.000	0.999980	Linear Thru Zero
Mg	23.985	246.742524	0.000	0.999984	Linear Thru Zero
K	38.964	569.216360	0.000	0.999986	Linear Thru Zero
Ca	43.956	19.126710	0.000	0.999996	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Thursday, February 16, 2017 13:50:08
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.340
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	877.717	**40.078**	0.92	2.3	ug/L
	B	11	13222.689	**396.141**	4.18	1.1	ug/L
	Al	27	35448.846	**97.817**	2.01	2.1	ug/L
>	Sc	45	68537.353				ug/L
	V	51	28709.544	**40.360**	1.43	3.6	ug/L
	Cr	52	21282.409	**40.152**	0.77	1.9	ug/L
	Cr	53	13002.652	**42.789**	7.81	18.3	ug/L
	Mn	55	76802.954	**99.990**	0.83	0.8	ug/L
	Co	59	19276.795	**39.971**	0.54	1.3	ug/L
	Ni	60	9811.922	**99.840**	0.55	0.6	ug/L
	Cu	63	20174.097	**99.980**	0.90	0.9	ug/L
	Cu	65	8885.797	**99.826**	2.21	2.2	ug/L
	Zn	66	5853.561	**99.914**	1.07	1.1	ug/L
	Zn	68	4050.400	**99.891**	0.32	0.3	ug/L
>	Ge	72	45766.829				ug/L
	As	75	5762.286	**100.040**	3.06	3.1	ug/L
	Se	77	924.222	**100.309**	1.77	1.8	ug/L
	Se	82	767.615	**99.947**	1.97	2.0	ug/L
	Sr	88	7348.510	**7.976**	0.20	2.5	ug/L
	Mo	98	10445.284	**40.102**	0.37	0.9	ug/L
>	Rh	103	56995.104				ug/L
	Ag	107	24138.502	**39.853**	0.43	1.1	ug/L
	Cd	111	6348.738	**39.672**	0.50	1.3	ug/L
	Cd	114	17031.762	**39.985**	1.08	2.7	ug/L
>	In	115	108344.184				ug/L
	Sn	120	34361.205	**39.893**	0.25	0.6	ug/L
	Sb	121	26881.564	**40.080**	0.28	0.7	ug/L
	Ba	137	14108.496	**40.111**	0.71	1.8	ug/L
	Ba	138	90586.266	**39.812**	0.85	2.1	ug/L
>	Tb	159	178161.979				ug/L
	Tl	205	96768.333	**39.948**	0.39	1.0	ug/L
	Pb	208	182619.485	**99.636**	1.25	1.2	ug/L
	Hg	200	1571.464	**7.981**	0.47	5.9	ug/L
	Hg	201	966.061	**8.087**	0.43	5.4	ug/L
>	Bi	209	137473.261				ug/L
	U	238	225555.884	**39.980**	0.60	1.5	ug/L
	C	13	180.002				ug/L
	W	184	4.667				ug/L
	Pd	106	-132.170				ug/L
	Kr	83	10.500				ug/L
	Na	23	1353419.083	**3923.159**	76.04	1.9	ug/L
	Mg	24	920162.016	**3931.783**	35.88	0.9	ug/L

K	39	2039939.569	**3861.041**	27.64	0.7	ug/L
Ca	44	73307.671	**3939.223**	33.77	0.9	ug/L
Ti	47	36.667				ug/L
Sc-1	45	68537.353				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000319	0.000	0.999836	Linear Thru Zero
B	11.009	0.000476	0.000	0.999804	Linear Thru Zero
Al	26.982	0.004956	0.000	0.999096	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008431	0.000	0.999856	Linear Thru Zero
Cr	51.941	0.007164	0.000	0.999945	Linear Thru Zero
Cr	52.941	0.000781	0.000	0.986816	Linear Thru Zero
Mn	54.938	0.011190	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007032	0.000	0.999999	Linear Thru Zero
Ni	59.933	0.001418	0.000	0.999956	Linear Thru Zero
Cu	62.930	0.004404	0.000	0.999996	Linear Thru Zero
Cu	64.928	0.001944	0.000	0.999947	Linear Thru Zero
Zn	65.926	0.001268	0.000	0.999994	Linear Thru Zero
Zn	67.925	0.000869	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001263	0.000	0.999907	Linear Thru Zero
Se	76.920	0.000115	0.000	0.999968	Linear Thru Zero
Se	81.917	0.000166	0.000	0.999941	Linear Thru Zero
Sr	87.906	0.019913	0.000	0.999982	Linear Thru Zero
Mo	97.906	0.004560	0.000	0.999989	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010623	0.000	0.999973	Linear Thru Zero
Cd	110.904	0.001477	0.000	0.999860	Linear Thru Zero
Cd	113.904	0.003930	0.000	0.999989	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007922	0.000	0.999987	Linear Thru Zero
Sb	120.904	0.006145	0.000	0.999991	Linear Thru Zero
Ba	136.905	0.001973	0.000	0.999984	Linear Thru Zero
Ba	137.905	0.012767	0.000	0.999956	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013587	0.000	0.999994	Linear Thru Zero
Pb	207.977	0.010287	0.000	0.999978	Linear Thru Zero
Hg	199.968	0.001414	0.000	0.999911	Linear Thru Zero
Hg	200.970	0.000860	0.000	0.999211	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041044	0.000	0.999993	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	344.728722	0.000	0.999406	Linear Thru Zero
Mg	23.985	233.997847	0.000	0.999532	Linear Thru Zero
K	38.964	512.371287	0.000	0.998074	Linear Thru Zero
Ca	43.956	18.241549	0.000	0.999630	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Thursday, February 16, 2017 13:53:36
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.340
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2256.664	**99.777**	1.54	1.5	ug/L
	B	11	34082.674	**998.246**	18.13	1.8	ug/L
	Al	27	89394.452	**249.131**	2.14	0.9	ug/L
>	Sc	45	71654.218				ug/L
	V	51	65647.543	**99.884**	1.36	1.4	ug/L
	Cr	52	52088.604	**99.697**	0.52	0.5	ug/L
	Cr	53	16243.469	**98.117**	4.03	4.1	ug/L
	Mn	55	195482.750	**248.878**	1.98	0.8	ug/L
	Co	59	48959.669	**99.492**	0.92	0.9	ug/L
	Ni	60	24454.811	**248.137**	2.19	0.9	ug/L
	Cu	63	50263.396	**249.036**	1.62	0.7	ug/L
	Cu	65	22634.925	**249.924**	0.38	0.2	ug/L
	Zn	66	14471.268	**248.880**	1.65	0.7	ug/L
	Zn	68	9956.441	**248.872**	2.30	0.9	ug/L
>	Ge	72	46642.670				ug/L
	As	75	14418.654	**249.123**	3.44	1.4	ug/L
	Se	77	1713.524	**248.907**	5.35	2.2	ug/L
	Se	82	1965.176	**250.453**	2.01	0.8	ug/L
	Sr	88	18765.863	**20.020**	0.35	1.8	ug/L
	Mo	98	26876.001	**100.441**	1.94	1.9	ug/L
>	Rh	103	57406.109				ug/L
	Ag	107	60490.295	**99.858**	1.68	1.7	ug/L
	Cd	111	16285.558	**99.865**	0.54	0.5	ug/L
	Cd	114	43490.290	**99.924**	1.14	1.1	ug/L
>	In	115	111127.619				ug/L
	Sn	120	89498.918	**100.263**	1.11	1.1	ug/L
	Sb	121	69298.792	**100.203**	0.73	0.7	ug/L
	Ba	137	35947.318	**100.168**	0.24	0.2	ug/L
	Ba	138	238236.933	**100.580**	1.51	1.5	ug/L
>	Tb	159	180378.594				ug/L
	Tl	205	245461.023	**100.026**	2.11	2.1	ug/L
	Pb	208	468627.057	**250.441**	4.09	1.6	ug/L
	Hg	200	4137.014	**20.183**	0.31	1.6	ug/L
	Hg	201	2381.702	**19.999**	0.67	3.3	ug/L
>	Bi	209	137931.346				ug/L
	U	238	582474.873	**100.490**	0.73	0.7	ug/L
	C	13	226.670				ug/L
	W	184	15.333				ug/L
	Pd	106	-279.574				ug/L
	Kr	83	8.833				ug/L
	Na	23	6090744.600	**10814.763**	219.08	2.0	ug/L
	Mg	24	3355302.700	**10554.465**	104.61	1.0	ug/L

K	39	5148697.890	**9987.501**	136.24	1.4	ug/L
Ca	44	186989.871	**10029.321**	276.17	2.8	ug/L
Ti	47	53.334				ug/L
Sc-1	45	71654.218				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000315	0.000	0.999959	Linear Thru Zero
B	11.009	0.000472	0.000	0.999958	Linear Thru Zero
Al	26.982	0.004878	0.000	0.999806	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008385	0.000	0.999971	Linear Thru Zero
Cr	51.941	0.007062	0.000	0.999968	Linear Thru Zero
Cr	52.941	0.000717	0.000	0.996400	Linear Thru Zero
Mn	54.938	0.010956	0.000	0.999952	Linear Thru Zero
Co	58.933	0.006866	0.000	0.999938	Linear Thru Zero
Ni	59.933	0.001369	0.000	0.999860	Linear Thru Zero
Cu	62.930	0.004325	0.000	0.999964	Linear Thru Zero
Cu	64.928	0.001941	0.000	0.999990	Linear Thru Zero
Zn	65.926	0.001242	0.000	0.999951	Linear Thru Zero
Zn	67.925	0.000851	0.000	0.999951	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001243	0.000	0.999954	Linear Thru Zero
Se	76.920	0.000113	0.000	0.999949	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999982	Linear Thru Zero
Sr	87.906	0.020010	0.000	0.999994	Linear Thru Zero
Mo	97.906	0.004658	0.000	0.999952	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010551	0.000	0.999990	Linear Thru Zero
Cd	110.904	0.001467	0.000	0.999971	Linear Thru Zero
Cd	113.904	0.003916	0.000	0.999997	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008022	0.000	0.999981	Linear Thru Zero
Sb	120.904	0.006205	0.000	0.999989	Linear Thru Zero
Ba	136.905	0.001989	0.000	0.999991	Linear Thru Zero
Ba	137.905	0.013129	0.000	0.999913	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013604	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.010374	0.000	0.999989	Linear Thru Zero
Hg	199.968	0.001479	0.000	0.999787	Linear Thru Zero
Hg	200.970	0.000859	0.000	0.999863	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042023	0.000	0.999942	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	563.096128	0.000	0.984530	Linear Thru Zero
Mg	23.985	317.890988	0.000	0.992720	Linear Thru Zero
K	38.964	509.341136	0.000	0.999657	Linear Thru Zero
Ca	43.956	18.499730	0.000	0.999917	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, February 16, 2017 15:17:43
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.367
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 1
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2.667				ug/L
	B	11	341.341				ug/L
	Al	27	2747.158				ug/L
>	Sc	45	78883.479				ug/L
	V	51	6020.695				ug/L
	Cr	52	2015.765				ug/L
	Cr	53	13100.149				ug/L
	Mn	55	156.668				ug/L
	Co	59	18.667				ug/L
	Ni	60	133.001				ug/L
	Cu	63	36.000				ug/L
	Cu	65	16.667				ug/L
	Zn	66	93.334				ug/L
	Zn	68	99.001				ug/L
>	Ge	72	56561.526				ug/L
	As	75	2.401				ug/L
	Se	77	497.516				ug/L
	Se	82	4.070				ug/L
	Sr	88	117.334				ug/L
	Mo	98	9.119				ug/L
>	Rh	103	65671.378				ug/L
	Ag	107	10.000				ug/L
	Cd	111	-1.831				ug/L
	Cd	114	10.705				ug/L
>	In	115	116440.362				ug/L
	Sn	120	110.574				ug/L
	Sb	121	168.669				ug/L
	Ba	137	13.954				ug/L
	Ba	138	64.621				ug/L
>	Tb	159	190289.191				ug/L
	Tl	205	32.667				ug/L
	Pb	208	20.667				ug/L
	Hg	200	9.269				ug/L
	Hg	201	14.667				ug/L
>	Bi	209	140925.501				ug/L
	U	238	10.667				ug/L
	C	13	266.672				ug/L
	W	184	9.998				ug/L
	Pd	106	0.406				ug/L
	Kr	83	11.167				ug/L
	Na	23	5515.334				ug/L
	Mg	24	200.003				ug/L

K	39	81819.728		ug/L
Ca	44	1800.211		ug/L
Ti	47	36.667		ug/L
Sc-1	45	78883.479		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000315	0.000	0.999959	Linear Thru Zero
B	11.009	0.000472	0.000	0.999958	Linear Thru Zero
Al	26.982	0.004878	0.000	0.999806	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008385	0.000	0.999971	Linear Thru Zero
Cr	51.941	0.007062	0.000	0.999968	Linear Thru Zero
Cr	52.941	0.000717	0.000	0.996400	Linear Thru Zero
Mn	54.938	0.010956	0.000	0.999952	Linear Thru Zero
Co	58.933	0.006866	0.000	0.999938	Linear Thru Zero
Ni	59.933	0.001369	0.000	0.999860	Linear Thru Zero
Cu	62.930	0.004325	0.000	0.999964	Linear Thru Zero
Cu	64.928	0.001941	0.000	0.999990	Linear Thru Zero
Zn	65.926	0.001242	0.000	0.999951	Linear Thru Zero
Zn	67.925	0.000851	0.000	0.999951	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001243	0.000	0.999954	Linear Thru Zero
Se	76.920	0.000113	0.000	0.999949	Linear Thru Zero
Se	81.917	0.000168	0.000	0.999982	Linear Thru Zero
Sr	87.906	0.020010	0.000	0.999994	Linear Thru Zero
Mo	97.906	0.004658	0.000	0.999952	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010551	0.000	0.999990	Linear Thru Zero
Cd	110.904	0.001467	0.000	0.999971	Linear Thru Zero
Cd	113.904	0.003916	0.000	0.999997	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008022	0.000	0.999981	Linear Thru Zero
Sb	120.904	0.006205	0.000	0.999989	Linear Thru Zero
Ba	136.905	0.001989	0.000	0.999991	Linear Thru Zero
Ba	137.905	0.013129	0.000	0.999913	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013604	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.010374	0.000	0.999989	Linear Thru Zero
Hg	199.968	0.001479	0.000	0.999787	Linear Thru Zero
Hg	200.970	0.000859	0.000	0.999863	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.042023	0.000	0.999942	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	563.096128	0.000	0.984530	Linear Thru Zero
Mg	23.985	317.890988	0.000	0.992720	Linear Thru Zero
K	38.964	509.341136	0.000	0.999657	Linear Thru Zero
Ca	43.956	18.499730	0.000	0.999917	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, February 16, 2017 15:21:11
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.367
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 2
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	31.667	**1.000**	0.22	22.1	ug/L
	B	11	1140.084	**20.000**	0.82	4.1	ug/L
	Al	27	12862.757	**20.000**	0.56	2.8	ug/L
>	Sc	45	80439.166				ug/L
	V	51	8142.886	**3.000**	1.29	43.0	ug/L
	Cr	52	3666.374	**3.000**	0.08	2.6	ug/L
	Cr	53	13060.916	**3.000**	0.83	27.5	ug/L
	Mn	55	1133.417	**1.000**	0.05	4.9	ug/L
	Co	59	634.026	**1.000**	0.02	2.3	ug/L
	Ni	60	370.676	**1.000**	0.05	4.8	ug/L
	Cu	63	630.359	**2.000**	0.10	4.9	ug/L
	Cu	65	300.006	**2.000**	0.16	8.1	ug/L
	Zn	66	478.015	**5.000**	0.10	2.1	ug/L
	Zn	68	382.009	**5.000**	0.11	2.3	ug/L
>	Ge	72	56952.725				ug/L
	As	75	178.023	**2.000**	0.83	41.5	ug/L
	Se	77	502.683	**2.000**	6.00	300.2	ug/L
	Se	82	31.065	**2.000**	0.39	19.3	ug/L
	Sr	88	335.007	**0.200**	0.00	2.4	ug/L
	Mo	98	333.496	**1.000**	0.06	5.8	ug/L
>	Rh	103	66082.803				ug/L
	Ag	107	662.029	**1.000**	0.06	5.9	ug/L
	Cd	111	182.002	**1.000**	0.09	9.1	ug/L
	Cd	114	508.944	**1.000**	0.03	3.2	ug/L
>	In	115	119437.631				ug/L
	Sn	120	1072.015	**1.000**	0.04	4.3	ug/L
	Sb	121	1627.506	**2.000**	0.03	1.4	ug/L
	Ba	137	394.628	**1.000**	0.04	4.3	ug/L
	Ba	138	2641.738	**1.000**	0.04	4.1	ug/L
>	Tb	159	194959.485				ug/L
	Tl	205	2572.430	**1.000**	0.01	1.4	ug/L
	Pb	208	1983.256	**1.000**	0.06	6.1	ug/L
	Hg	200	52.641	**0.200**	0.03	13.5	ug/L
	Hg	201	33.333	**0.200**	0.12	59.6	ug/L
>	Bi	209	146302.945				ug/L
	U	238	5894.926	**1.000**	0.04	3.7	ug/L
	C	13	286.672				ug/L
	W	184	3.992				ug/L
	Pd	106	-2.815				ug/L
	Kr	83	11.667				ug/L
	Na	23	48311.438	**100.000**	5.08	5.1	ug/L
	Mg	24	29877.944	**100.000**	2.87	2.9	ug/L

K	39	143526.699	**100.000**	2.25	2.3	ug/L
Ca	44	3674.211	**100.000**	2.16	2.2	ug/L
Ti	47	13.333				ug/L
Sc-1	45	80439.166				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000361	0.000	1.000000	Linear Thru Zero
B	11.009	0.000493	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006252	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008345	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006673	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001236	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.012112	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007645	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002921	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005222	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002492	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001349	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000992	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001540	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000017	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000237	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.019052	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004909	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009877	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001538	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.004169	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008026	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.006089	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001951	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.013212	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.013024	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010071	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001470	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000615	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040230	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	427.961044	0.000	1.000000	Linear Thru Zero
Mg	23.985	296.779411	0.000	1.000000	Linear Thru Zero
K	38.964	617.069709	0.000	1.000000	Linear Thru Zero
Ca	43.956	18.740001	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, February 16, 2017 15:24:38
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.367
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 3
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	280.338	**9.992**	0.23	2.3	ug/L
	B	11	4583.365	**100.110**	0.59	0.6	ug/L
	Al	27	14567.119	**23.918**	0.31	1.3	ug/L
>	Sc	45	83289.216				ug/L
	V	51	13932.981	**10.069**	0.54	5.4	ug/L
	Cr	52	8077.407	**10.055**	0.12	1.2	ug/L
	Cr	53	13763.476	**4.696**	13.30	283.2	ug/L
	Mn	55	25023.326	**24.999**	0.41	1.7	ug/L
	Co	59	6166.472	**9.996**	0.17	1.7	ug/L
	Ni	60	3184.326	**24.960**	0.26	1.0	ug/L
	Cu	63	6368.636	**24.965**	0.43	1.7	ug/L
	Cu	65	2893.879	**24.955**	0.88	3.5	ug/L
	Zn	66	1955.582	**24.930**	0.32	1.3	ug/L
	Zn	68	1413.797	**24.886**	0.40	1.6	ug/L
>	Ge	72	59115.053				ug/L
	As	75	1850.980	**24.963**	1.32	5.3	ug/L
	Se	77	658.862	**25.131**	6.38	25.4	ug/L
	Se	82	243.552	**24.926**	0.84	3.4	ug/L
	Sr	88	2369.032	**2.000**	0.04	1.9	ug/L
	Mo	98	3156.580	**9.994**	0.24	2.4	ug/L
>	Rh	103	68117.009				ug/L
	Ag	107	7161.999	**10.006**	0.24	2.4	ug/L
	Cd	111	1857.714	**9.998**	0.76	7.6	ug/L
	Cd	114	4963.932	**9.996**	0.25	2.5	ug/L
>	In	115	123680.435				ug/L
	Sn	120	9996.428	**10.000**	0.20	2.0	ug/L
	Sb	121	7565.053	**9.992**	0.13	1.3	ug/L
	Ba	137	3915.274	**9.999**	0.17	1.7	ug/L
	Ba	138	25613.208	**9.996**	0.19	1.9	ug/L
>	Tb	159	201977.501				ug/L
	Tl	205	25920.285	**9.998**	0.22	2.2	ug/L
	Pb	208	48554.158	**24.998**	0.40	1.6	ug/L
	Hg	200	471.280	**2.001**	0.13	6.2	ug/L
	Hg	201	274.005	**2.006**	0.14	7.0	ug/L
>	Bi	209	148561.580				ug/L
	U	238	59984.794	**10.000**	0.04	0.4	ug/L
	C	13	313.340				ug/L
	W	184	10.663				ug/L
	Pd	106	-28.656				ug/L
	Kr	83	13.667				ug/L
	Na	23	444987.952	**1000.259**	26.78	2.7	ug/L
	Mg	24	298668.635	**1000.056**	15.39	1.5	ug/L

K	39	724528.317	**1000.395**	23.28	2.3	ug/L
Ca	44	22512.926	**1000.944**	40.26	4.0	ug/L
Ti	47	66.667				ug/L
Sc-1	45	83289.216				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000333	0.000	0.999966	Linear Thru Zero
B	11.009	0.000506	0.000	0.999985	Linear Thru Zero
Al	26.982	0.005856	0.000	0.998539	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.009038	0.000	0.999735	Linear Thru Zero
Cr	51.941	0.007103	0.000	0.999835	Linear Thru Zero
Cr	52.941	-0.000179	0.000	-0.492284	Linear Thru Zero
Mn	54.938	0.011937	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007382	0.000	0.999994	Linear Thru Zero
Ni	59.933	0.001464	0.000	0.999209	Linear Thru Zero
Cu	62.930	0.004291	0.000	0.999849	Linear Thru Zero
Cu	64.928	0.001949	0.000	0.999752	Linear Thru Zero
Zn	65.926	0.001260	0.000	0.999902	Linear Thru Zero
Zn	67.925	0.000891	0.000	0.999742	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001252	0.000	0.999831	Linear Thru Zero
Se	76.920	0.000093	0.000	0.997857	Linear Thru Zero
Se	81.917	0.000162	0.000	0.999318	Linear Thru Zero
Sr	87.906	0.018997	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004622	0.000	0.999981	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010496	0.000	0.999983	Linear Thru Zero
Cd	110.904	0.001504	0.000	0.999997	Linear Thru Zero
Cd	113.904	0.004007	0.000	0.999992	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007987	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005976	0.000	0.999993	Linear Thru Zero
Ba	136.905	0.001932	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012651	0.000	0.999990	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012818	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.009611	0.000	0.999998	Linear Thru Zero
Hg	199.968	0.001552	0.000	0.999986	Linear Thru Zero
Hg	200.970	0.000869	0.000	0.999575	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040365	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	439.358643	0.000	0.999997	Linear Thru Zero
Mg	23.985	298.451908	0.000	1.000000	Linear Thru Zero
K	38.964	642.454738	0.000	0.999992	Linear Thru Zero
Ca	43.956	20.693183	0.000	0.999955	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 3

Sample Date/Time: Thursday, February 16, 2017 15:28:06
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.367
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 4
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	535.019	**19.927**	1.23	6.2	ug/L
	B	11	8369.889	**198.864**	3.99	2.0	ug/L
	Al	27	25120.971	**49.026**	0.30	0.6	ug/L
>	Sc	45	81321.055				ug/L
	V	51	20676.080	**19.933**	0.29	1.5	ug/L
	Cr	52	13871.498	**20.088**	0.15	0.8	ug/L
	Cr	53	14251.699	**28.489**	5.99	21.0	ug/L
	Mn	55	47250.092	**49.693**	0.51	1.0	ug/L
	Co	59	11780.024	**19.915**	0.44	2.2	ug/L
	Ni	60	6097.417	**50.011**	0.52	1.0	ug/L
	Cu	63	12562.922	**50.298**	0.42	0.8	ug/L
	Cu	65	5601.040	**50.111**	0.44	0.9	ug/L
	Zn	66	3656.204	**49.971**	1.52	3.0	ug/L
	Zn	68	2616.446	**49.968**	1.18	2.4	ug/L
>	Ge	72	56673.123				ug/L
	As	75	3404.060	**49.565**	1.94	3.9	ug/L
	Se	77	796.875	**51.185**	1.93	3.8	ug/L
	Se	82	456.091	**49.816**	1.68	3.4	ug/L
	Sr	88	4394.923	**3.994**	0.03	0.8	ug/L
	Mo	98	5944.343	**19.954**	0.50	2.5	ug/L
>	Rh	103	64925.528				ug/L
	Ag	107	13845.116	**20.060**	0.12	0.6	ug/L
	Cd	111	3612.788	**20.080**	0.81	4.0	ug/L
	Cd	114	9542.123	**20.038**	0.27	1.3	ug/L
>	In	115	117829.794				ug/L
	Sn	120	19104.997	**20.036**	0.16	0.8	ug/L
	Sb	121	14798.224	**20.155**	0.11	0.5	ug/L
	Ba	137	7552.641	**20.037**	0.18	0.9	ug/L
	Ba	138	49942.888	**20.078**	0.18	0.9	ug/L
>	Tb	159	193337.854				ug/L
	Tl	205	49761.836	**20.013**	0.40	2.0	ug/L
	Pb	208	94688.026	**50.188**	1.08	2.1	ug/L
	Hg	200	835.986	**3.939**	0.13	3.3	ug/L
	Hg	201	498.016	**3.975**	0.12	3.0	ug/L
>	Bi	209	143426.831				ug/L
	U	238	116372.130	**20.020**	0.24	1.2	ug/L
	C	13	200.003				ug/L
	W	184	9.332				ug/L
	Pd	106	-31.737				ug/L
	Kr	83	10.333				ug/L
	Na	23	868758.611	**1992.799**	36.71	1.8	ug/L
	Mg	24	579156.004	**1987.579**	19.41	1.0	ug/L

K	39	1355703.716	**1996.516**	85.33	4.3	ug/L
Ca	44	42849.021	**1996.690**	23.82	1.2	ug/L
Ti	47	40.000				ug/L
Sc-1	45	81321.055				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000329	0.000	0.999967	Linear Thru Zero
B	11.009	0.000496	0.000	0.999935	Linear Thru Zero
Al	26.982	0.005590	0.000	0.999071	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008928	0.000	0.999921	Linear Thru Zero
Cr	51.941	0.007220	0.000	0.999930	Linear Thru Zero
Cr	52.941	0.000321	0.000	0.731426	Linear Thru Zero
Mn	54.938	0.011651	0.000	0.999925	Linear Thru Zero
Co	58.933	0.007260	0.000	0.999963	Linear Thru Zero
Ni	59.933	0.001465	0.000	0.999842	Linear Thru Zero
Cu	62.930	0.004395	0.000	0.999900	Linear Thru Zero
Cu	64.928	0.001966	0.000	0.999941	Linear Thru Zero
Zn	65.926	0.001258	0.000	0.999979	Linear Thru Zero
Zn	67.925	0.000889	0.000	0.999946	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001210	0.000	0.999813	Linear Thru Zero
Se	76.920	0.000103	0.000	0.998532	Linear Thru Zero
Se	81.917	0.000160	0.000	0.999832	Linear Thru Zero
Sr	87.906	0.018893	0.000	0.999996	Linear Thru Zero
Mo	97.906	0.004581	0.000	0.999986	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010623	0.000	0.999979	Linear Thru Zero
Cd	110.904	0.001528	0.000	0.999968	Linear Thru Zero
Cd	113.904	0.004037	0.000	0.999991	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.008044	0.000	0.999994	Linear Thru Zero
Sb	120.904	0.006159	0.000	0.999883	Linear Thru Zero
Ba	136.905	0.001946	0.000	0.999993	Linear Thru Zero
Ba	137.905	0.012850	0.000	0.999968	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012852	0.000	0.999999	Linear Thru Zero
Pb	207.977	0.009757	0.000	0.999972	Linear Thru Zero
Hg	199.968	0.001464	0.000	0.999536	Linear Thru Zero
Hg	200.970	0.000848	0.000	0.999831	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040528	0.000	0.999998	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	433.181394	0.000	0.999974	Linear Thru Zero
Mg	23.985	291.287112	0.000	0.999924	Linear Thru Zero
K	38.964	638.053345	0.000	0.999992	Linear Thru Zero
Ca	43.956	20.558430	0.000	0.999985	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 4

Sample Date/Time: Thursday, February 16, 2017 15:31:33
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.367
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 5
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	1050.739	**39.982**	2.78	7.0	ug/L
	B	11	15560.395	**396.172**	3.65	0.9	ug/L
	Al	27	44238.251	**98.047**	2.46	2.5	ug/L
>	Sc	45	79844.468				ug/L
	V	51	34213.978	**39.870**	1.00	2.5	ug/L
	Cr	52	25310.248	**40.090**	0.83	2.1	ug/L
	Cr	53	15105.157	**44.819**	12.04	26.9	ug/L
	Mn	55	91533.443	**99.579**	1.86	1.9	ug/L
	Co	59	22937.154	**39.891**	0.64	1.6	ug/L
	Ni	60	11664.172	**99.661**	3.20	3.2	ug/L
	Cu	63	24073.964	**99.885**	0.48	0.5	ug/L
	Cu	65	10920.415	**100.215**	0.63	0.6	ug/L
	Zn	66	6899.093	**99.639**	1.12	1.1	ug/L
	Zn	68	4888.220	**99.545**	0.50	0.5	ug/L
>	Ge	72	54962.419				ug/L
	As	75	6870.435	**100.757**	0.99	1.0	ug/L
	Se	77	1080.743	**101.326**	5.14	5.1	ug/L
	Se	82	912.976	**100.779**	1.04	1.0	ug/L
	Sr	88	8360.546	**7.986**	0.14	1.7	ug/L
	Mo	98	11727.982	**39.981**	0.24	0.6	ug/L
>	Rh	103	64079.843				ug/L
	Ag	107	26286.172	**39.660**	0.96	2.4	ug/L
	Cd	111	6866.972	**39.677**	0.49	1.2	ug/L
	Cd	114	18144.839	**39.673**	0.86	2.2	ug/L
>	In	115	116187.495				ug/L
	Sn	120	36444.088	**39.726**	0.98	2.5	ug/L
	Sb	121	28192.906	**39.797**	0.76	1.9	ug/L
	Ba	137	14865.252	**40.138**	1.38	3.4	ug/L
	Ba	138	96971.375	**40.025**	1.36	3.4	ug/L
>	Tb	159	188173.151				ug/L
	Tl	205	97097.075	**40.038**	1.36	3.4	ug/L
	Pb	208	183587.969	**100.008**	3.48	3.5	ug/L
	Hg	200	1660.799	**8.003**	0.24	3.0	ug/L
	Hg	201	980.062	**8.022**	0.07	0.9	ug/L
>	Bi	209	140779.945				ug/L
	U	238	226580.943	**39.930**	0.64	1.6	ug/L
	C	13	273.338				ug/L
	W	184	7.331				ug/L
	Pd	106	-88.517				ug/L
	Kr	83	9.167				ug/L
	Na	23	1728541.683	**3994.638**	131.22	3.3	ug/L
	Mg	24	1130509.581	**3970.815**	118.02	3.0	ug/L

K	39	2421777.057	**3915.310**	128.62	3.3	ug/L
Ca	44	80990.830	**3963.679**	40.29	1.0	ug/L
Ti	47	20.000				ug/L
Sc-1	45	79844.468				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000328	0.000	0.999992	Linear Thru Zero
B	11.009	0.000481	0.000	0.999838	Linear Thru Zero
Al	26.982	0.005297	0.000	0.999190	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008837	0.000	0.999964	Linear Thru Zero
Cr	51.941	0.007272	0.000	0.999975	Linear Thru Zero
Cr	52.941	0.000517	0.000	0.942139	Linear Thru Zero
Mn	54.938	0.011496	0.000	0.999953	Linear Thru Zero
Co	58.933	0.007197	0.000	0.999979	Linear Thru Zero
Ni	59.933	0.001450	0.000	0.999943	Linear Thru Zero
Cu	62.930	0.004379	0.000	0.999974	Linear Thru Zero
Cu	64.928	0.001980	0.000	0.999979	Linear Thru Zero
Zn	65.926	0.001243	0.000	0.999974	Linear Thru Zero
Zn	67.925	0.000876	0.000	0.999954	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001240	0.000	0.999866	Linear Thru Zero
Se	76.920	0.000107	0.000	0.999398	Linear Thru Zero
Se	81.917	0.000164	0.000	0.999865	Linear Thru Zero
Sr	87.906	0.018784	0.000	0.999994	Linear Thru Zero
Mo	97.906	0.004574	0.000	0.999996	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010342	0.000	0.999879	Linear Thru Zero
Cd	110.904	0.001490	0.000	0.999888	Linear Thru Zero
Cd	113.904	0.003935	0.000	0.999891	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007872	0.000	0.999924	Linear Thru Zero
Sb	120.904	0.006062	0.000	0.999930	Linear Thru Zero
Ba	136.905	0.001968	0.000	0.999979	Linear Thru Zero
Ba	137.905	0.012875	0.000	0.999992	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012891	0.000	0.999998	Linear Thru Zero
Pb	207.977	0.009760	0.000	0.999993	Linear Thru Zero
Hg	199.968	0.001466	0.000	0.999889	Linear Thru Zero
Hg	200.970	0.000855	0.000	0.999949	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.040303	0.000	0.999995	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	431.334802	0.000	0.999991	Linear Thru Zero
Mg	23.985	284.654295	0.000	0.999896	Linear Thru Zero
K	38.964	597.642864	0.000	0.999283	Linear Thru Zero
Ca	43.956	19.979068	0.000	0.999865	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 5

Sample Date/Time: Thursday, February 16, 2017 15:35:01
Sample File: C:\Elandata\Sample\PE_EL2_170216.sam
Blank File: C:\Elandata\Dataset\2017 FEB (12-18)\Blank.367
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020 Bi (U, Hg, Th) Srspeedy.mth
Autosampler Position: 6
Report Filename PE_EL2_170216.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	2553.758	**99.553**	3.44	3.5	ug/L
	B	11	38255.602	**997.919**	6.99	0.7	ug/L
	Al	27	108220.330	**249.931**	2.75	1.1	ug/L
>	Sc	45	79750.089				ug/L
	V	51	76895.549	**100.081**	1.83	1.8	ug/L
	Cr	52	61079.723	**100.310**	2.39	2.4	ug/L
	Cr	53	18646.254	**104.289**	6.84	6.6	ug/L
	Mn	55	228934.650	**249.914**	4.43	1.8	ug/L
	Co	59	56429.623	**99.698**	1.14	1.1	ug/L
	Ni	60	28251.845	**248.789**	6.81	2.7	ug/L
	Cu	63	58496.197	**249.263**	6.19	2.5	ug/L
	Cu	65	26321.026	**249.046**	7.20	2.9	ug/L
	Zn	66	16897.886	**249.810**	2.94	1.2	ug/L
	Zn	68	11844.450	**249.480**	1.29	0.5	ug/L
>	Ge	72	54299.709				ug/L
	As	75	16642.925	**249.482**	3.63	1.5	ug/L
	Se	77	1957.916	**250.663**	9.60	3.8	ug/L
	Se	82	2214.068	**249.648**	2.67	1.1	ug/L
	Sr	88	20979.254	**20.078**	0.27	1.4	ug/L
	Mo	98	29591.517	**100.327**	1.84	1.8	ug/L
>	Rh	103	63462.129				ug/L
	Ag	107	65358.561	**99.929**	2.41	2.4	ug/L
	Cd	111	17259.443	**99.997**	1.31	1.3	ug/L
	Cd	114	45599.557	**99.996**	0.45	0.4	ug/L
>	In	115	115900.403				ug/L
	Sn	120	91799.196	**100.086**	0.90	0.9	ug/L
	Sb	121	71060.886	**100.156**	1.33	1.3	ug/L
	Ba	137	36741.076	**99.607**	0.69	0.7	ug/L
	Ba	138	241433.251	**99.690**	2.25	2.3	ug/L
>	Tb	159	190927.358				ug/L
	Tl	205	244332.938	**99.875**	1.13	1.1	ug/L
	Pb	208	461233.811	**249.569**	2.67	1.1	ug/L
	Hg	200	4172.343	**20.090**	0.45	2.2	ug/L
	Hg	201	2387.039	**20.010**	1.34	6.7	ug/L
>	Bi	209	138321.974				ug/L
	U	238	575993.368	**100.567**	1.75	1.7	ug/L
	C	13	300.006				ug/L
	W	184	19.331				ug/L
	Pd	106	-371.721				ug/L
	Kr	83	10.000				ug/L
	Na	23	7349452.560	**10771.774**	232.10	2.2	ug/L
	Mg	24	3946065.152	**10508.300**	185.34	1.8	ug/L

K	39	5825226.973	**9930.051**	202.85	2.0	ug/L
Ca	44	202997.225	**10012.151**	124.81	1.2	ug/L
Ti	47	43.333				ug/L
Sc-1	45	79750.089				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

Ti	47	
Sc-1	45	

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000321	0.000	0.999951	Linear Thru Zero
B	11.009	0.000476	0.000	0.999961	Linear Thru Zero
Al	26.982	0.005290	0.000	0.999855	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008871	0.000	0.999992	Linear Thru Zero
Cr	51.941	0.007380	0.000	0.999973	Linear Thru Zero
Cr	52.941	0.000649	0.000	0.988832	Linear Thru Zero
Mn	54.938	0.011477	0.000	0.999992	Linear Thru Zero
Co	58.933	0.007095	0.000	0.999975	Linear Thru Zero
Ni	59.933	0.001417	0.000	0.999934	Linear Thru Zero
Cu	62.930	0.004318	0.000	0.999975	Linear Thru Zero
Cu	64.928	0.001945	0.000	0.999961	Linear Thru Zero
Zn	65.926	0.001239	0.000	0.999994	Linear Thru Zero
Zn	67.925	0.000867	0.000	0.999982	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001228	0.000	0.999966	Linear Thru Zero
Se	76.920	0.000109	0.000	0.999881	Linear Thru Zero
Se	81.917	0.000163	0.000	0.999972	Linear Thru Zero
Sr	87.906	0.019138	0.000	0.999963	Linear Thru Zero
Mo	97.906	0.004646	0.000	0.999974	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010307	0.000	0.999978	Linear Thru Zero
Cd	110.904	0.001490	0.000	0.999981	Linear Thru Zero
Cd	113.904	0.003934	0.000	0.999981	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.007905	0.000	0.999985	Linear Thru Zero
Sb	120.904	0.006107	0.000	0.999982	Linear Thru Zero
Ba	136.905	0.001931	0.000	0.999959	Linear Thru Zero
Ba	137.905	0.012688	0.000	0.999976	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012815	0.000	0.999996	Linear Thru Zero
Pb	207.977	0.009680	0.000	0.999992	Linear Thru Zero
Hg	199.968	0.001498	0.000	0.999933	Linear Thru Zero
Hg	200.970	0.000857	0.000	0.999991	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.041421	0.000	0.999923	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	681.776022	0.000	0.986119	Linear Thru Zero
Mg	23.985	375.499861	0.000	0.993897	Linear Thru Zero
K	38.964	578.386489	0.000	0.999751	Linear Thru Zero
Ca	43.956	20.095284	0.000	0.999973	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Wednesday, February 15, 2017 09:41:16
Method File: C:\Elandata\Method\BC Methods\BC-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution - Retry 3.171
Tuning File: C:\Elandata\Tuning\default.tun
Number of Sweeps: 35
Number of Readings: 1
Number of Replicates: 5
Measurement Unit: cps

Instrument Tuning Report

File Name: default.tun
File Path: C:\Elandata\Tuning\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.077	1557	2094	0.682	
Mg	23.985	23.978	5658	2099	0.721	
Rh	102.905	102.879	24816	2262	0.720	
Ce	139.905	139.878	33777	2344	0.694	
Pb	207.977	207.978	50315	2504	0.689	
U	238.050	238.076	57611	2559	0.699	

Report Date/Time: Wednesday, February 15, 2017 09:43:00
Page 1

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Wednesday, February 15, 2017 09:54:41
Sample Description:
Method File: C:\Elandata\Method\BC Methods\BC_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.173
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 65
Current Dead Time (ns): 65

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	8330.1	8330.110	197.974	2.4
	In	114.9	40748.8	40748.832	719.556	1.8
	U	238.1	58784.4	58784.432	797.519	1.4
⌈>	Ba	137.9	36628.3	36628.333	536.120	1.5
⌊	Ba++	69.0	325.0	0.009	0.000	2.5
⌈>	Ce	139.9	44620.2	44620.245	349.739	0.8
⌊	CeO	155.9	970.9	0.022	0.001	5.0
	220	220.0	1.0	0.960	0.219	22.8
	8.5	8.5	2.6	2.640	1.004	38.0

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
15.00	Plasma Gas Flow
12.25	Lens Voltage
1100.00	ICP RF Power
-1900.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-10.00	Cell Rod Offset Std [CRO]
60.00	Discriminator Threshold
-21.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.98	DRC Mode NEB
-8.00	DRC Mode QRO
-2.00	DRC Mode CRO
-25.00	DRC Mode CPV
0.00	Cell Gas A
0.00	Cell Gas B
210.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
450.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	69	9.5	284.0

Co	59	69	11.3	7285.4
In	115	69	12.3	27693.8

Sample ID: Daily Performance Check
Report Date/Time: Wednesday, February 15, 2017 09:56:26
Page 2

Sample Information

Sample Date/Time: Thursday, February 16, 2017 05:49:09
Method File: C:\Elandata\Method\BC Methods\BC-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution.175
Tuning File: C:\Elandata\Tuning\default.tun
Number of Sweeps: 35
Number of Readings: 1
Number of Replicates: 5
Measurement Unit: cps

Instrument Tuning Report

File Name: default.tun
File Path: C:\Elandata\Tuning\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	6.928	1540	2084	0.702	
Mg	23.985	23.928	5664	2112	0.665	
Rh	102.905	102.829	24813	2268	0.677	
Ce	139.905	139.928	33786	2343	0.701	
Pb	207.977	208.029	50315	2502	0.678	
U	238.050	238.028	57605	2556	0.683	

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, February 16, 2017 06:01:04
Sample Description:
Method File: C:\Elandata\Method\BC Methods\BC_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.177
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 65
Current Dead Time (ns): 65

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	5800.6	5800.587	102.181	1.8
	In	114.9	353575.7	353575.721	4547.624	1.3
	U	238.1	755575.3	755575.317	7107.617	0.9
⌈>	Ba	137.9	324272.8	324272.832	3059.592	0.9
⌊	Ba++	69.0	1223.5	0.004	0.000	1.3
⌈>	Ce	139.9	33676.3	33676.288	503.996	1.5
⌊	CeO	155.9	838.0	0.025	0.001	2.6
	220	220.0	2.6	2.560	0.876	34.2
	8.5	8.5	3.5	3.520	1.368	38.9

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
15.00	Plasma Gas Flow
11.50	Lens Voltage
1100.00	ICP RF Power
-1900.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-10.00	Cell Rod Offset Std [CRO]
60.00	Discriminator Threshold
-21.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.98	DRC Mode NEB
-8.00	DRC Mode QRO
-2.00	DRC Mode CRO
-25.00	DRC Mode CPV
0.00	Cell Gas A
0.00	Cell Gas B
210.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
450.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	69	10.5	2656.5
Co	59	69	10.8	67155.9
In	115	69	11.5	289569.6

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:50:25AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements
For Data Validation of
GC Analysis

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Certifications: CA ELAP #1186; NV #CA00014; AK UST101; OR ELAP #4032; DoD ELAP #66175

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Case Narrative

Analyses Requested: 8015B-FFP
Submission # 17-03278

Instrument ID: GC-2
Model: HP-5890

Column Types
Primary: ZB-5 15M x 0.25 mm x 0.25 Film Thickness µm

Detector: FID

Samples were received refrigerated to <6.0°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and extractions took place within holding times.

Calibration: Initial calibration criteria were met. Frequency and accuracy criteria for initial calibration verification (ICV) were met. Frequency and accuracy criteria for continuing calibration verification (CCV) were met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL.
Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameters were met.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy and precision requirements were met.

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:40
Received By:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VSA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES		1			/					
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		A-F								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: M Date/Time: 2-6-17 2310
Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMPREC rev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ (W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received		
☒ YES ☐ NO	Emissivity: 0.97 Container: VOA Thermometer ID: 207 Temperature: (A) 1.5 °C / (C) 1.7 °C	Date/Time 2/6 2150 Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL			A	A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: _____ Date/Time: 2-6-17 2315

A = Actual / C = Corrected

Rev 21 05/23/2016
(S:\WP\Doc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES		1								
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Numbering Completed By: Date/Time: 2/6/17 0360

Actual / C = Corrected

Rev 21 05/23/2016

Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,PA								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RB								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **GC**
Method: **EPA-8015B/FFP**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: GC-2

Analyte	DL	LOD	LOQ	Units
TPH - Kerosene	11	30	40	ug/L
TPH - Diesel (FFP)	6.8	30	40	ug/L
TPH - Motor Oil	13	70	100	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

EB07_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-02	File ID:	15FEB009.D
Sampled:	02/06/17 14:30	Prepared:	02/10/17 22:40	Analyzed:	02/15/17 14:15
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 1 ml
Batch:	B[B1253	Sequence:	1702855	Calibration:	1702019
Instrument:	GC-2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
---	TPH - Kerosene	1	30	11	30	40	U
---	TPH - Diesel (FFP)	1	43	6.8	30	40	
---	TPH - Motor Oil	1	70	13	70	100	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	20.000	13.921	69.6	37 - 134	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

M051A_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-04	File ID:	15FEB010.D
Sampled:	02/06/17 11:30	Prepared:	02/10/17 22:40	Analyzed:	02/15/17 14:50
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 0.95 ml
Batch:	B[B1253	Sequence:	1702855	Calibration:	1702019
Instrument:	GC-2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
---	TPH - Kerosene	0.95	30	11	30	40	U
---	TPH - Diesel (FFP)	0.95	170	6.8	30	40	
---	TPH - Motor Oil	0.95	170	13	70	100	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	20.000	12.264	61.3	37 - 134	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B1253
Batch Matrix: Water
Preparation: EPA 3510B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	15FEB009.D	02/10/17 22:40	Jet Fuel, Diesel, motor oil
M051A_170206	1703278-04	15FEB010.D	02/10/17 22:40	Jet Fuel, Diesel, motor oil
Blank	B[B1253-BLK1	15FEB013.D	02/10/17 22:40	
LCS	B[B1253-BS1	21FEB004.D	02/10/17 22:40	
M051A_170206	B[B1253-MS1	15FEB014.D	02/10/17 22:40	
M051A_170206	B[B1253-MSD1	15FEB015.D	02/10/17 22:40	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8015B/FFP

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B1253-BLK1	File ID:	15FEB013.D
Prepared:	02/10/17 22:40	Preparation:	EPA 3510B	Initial/Final:	1000 ml / 0.99 ml
Analyzed:	02/15/17 16:49	Instrument:	GC-2		
Batch:	B[B1253	Sequence:	1702943	Calibration:	1702019

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
---	TPH - Kerosene	30	11	30	40	U
---	TPH - Diesel (FFP)	30	6.8	30	40	U
---	TPH - Motor Oil	70	13	70	100	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	20.000	15.421	77.1	37 - 134	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8015B/FFP

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B1253
Laboratory ID: B[B1253-MS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.96 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
TPH - Diesel (FFP)	500.00	172.71	711.67	108	50 - 127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
TPH - Diesel (FFP)	500.00	670.20	99.5	6.00	24	50 - 127

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Matrix:	Water		
Batch:	B[B1253	Laboratory ID:	B[B1253-BS1
Preparation:	EPA 3510B	Initial/Final:	1000 ml / 0.97 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
TPH - Diesel (FFP)	500.00	293.22	58.6	52 - 128

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702459	Instrument:	GC-2
Matrix:	Water	Calibration:	1702019

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1702459-CAL1	02FEB026.D	02/02/17 21:49
Cal Standard	1702459-CAL2	02FEB027.D	02/02/17 22:12
Cal Standard	1702459-CAL3	02FEB028.D	02/02/17 22:35
Cal Standard	1702459-CAL4	02FEB029.D	02/02/17 22:58
Cal Standard	1702459-CAL5	02FEB030.D	02/02/17 23:21
Cal Standard	1702459-CAL6	02FEB031.D	02/02/17 23:44
Initial Cal Check	1702459-ICV1	02FEB032.D	02/03/17 00:07
Initial Cal Blank	1702459-ICB1	02FEB033.D	02/03/17 00:30
Cal Standard	1702459-CALC	06FEB005.D	02/06/17 10:33
Cal Standard	1702459-CALB	06FEB006.D	02/06/17 11:18
Cal Standard	1702459-CALA	06FEB007.D	02/06/17 12:12
Cal Standard	1702459-CAL9	06FEB008.D	02/06/17 12:49
Cal Standard	1702459-CAL8	06FEB009.D	02/06/17 13:13
Cal Standard	1702459-CAL7	06FEB010.D	02/06/17 13:36
Initial Cal Check	1702459-ICV2	06FEB011.D	02/06/17 14:13
Initial Cal Blank	1702459-ICB2	06FEB012.D	02/06/17 14:36

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702855
Instrument: GC-2
Matrix: Water
Calibration: 1702019

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1702855-CCV2	15FEB007.D	02/15/17 12:35
Calibration Blank	1702855-CCB2	15FEB008.D	02/15/17 12:57
EB07_170206	1703278-02	15FEB009.D	02/15/17 14:15
M051A_170206	1703278-04	15FEB010.D	02/15/17 14:50
Calibration Check	1702855-CCV3	15FEB021.D	02/15/17 19:52
Calibration Blank	1702855-CCB3	15FEB022.D	02/15/17 20:15
Calibration Check	1702855-CCV4	15FEB029.D	02/15/17 22:55
Calibration Blank	1702855-CCB4	15FEB030.D	02/15/17 23:18

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702943	Instrument:	GC-2
Matrix:	Water	Calibration:	1702019

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1702943-CCV2	15FEB007.D	02/15/17 12:35
Calibration Blank	1702943-CCB2	15FEB008.D	02/15/17 12:57
Blank	B[B1253-BLK1	15FEB013.D	02/15/17 16:49
M051A_170206	B[B1253-MS1	15FEB014.D	02/15/17 17:12
M051A_170206	B[B1253-MSD1	15FEB015.D	02/15/17 17:34
Calibration Check	1702943-CCV3	15FEB021.D	02/15/17 19:52
Calibration Blank	1702943-CCB3	15FEB022.D	02/15/17 20:15

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702948	Instrument:	GC-2
Matrix:	Water	Calibration:	1702019

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1702948-CCV1	21FEB002.D	02/21/17 09:21
Calibration Blank	1702948-CCB1	21FEB003.D	02/21/17 09:44
LCS	B[B1253-BS1	21FEB004.D	02/21/17 10:07
Calibration Check	1702948-CCV2	21FEB006.D	02/21/17 11:28
Calibration Blank	1702948-CCB2	21FEB007.D	02/21/17 11:50

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	02FEB032.D	Calibration Date:	02/02/17 21:49
Sequence:	1702459	Injection Date:	02/03/17
Lab Sample ID:	1702459-ICV1	Injection Time:	00:07

	(1) CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Kerosene	A	500000	496240	28.97574	28.75788		-0.8	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	06FEB011.D	Calibration Date:	02/02/17 21:49
Sequence:	1702459	Injection Date:	02/06/17
Lab Sample ID:	1702459-ICV2	Injection Time:	14:13

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	482090	33.81912	32.60784		-3.6	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	1071100	24.59064	26.33932		7.1	15
TPH - Motor Oil	A	1000000	1071100	24.59064	26.33932		7.1	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	15FEB007.D	Calibration Date:	02/02/17 21:49
Sequence:	1702855	Injection Date:	02/15/17
Lab Sample ID:	1702855-CCV2	Injection Time:	12:35

	(1) CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	486190	33.81912	32.88478		-2.8	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	952360	24.59064	23.41909		-4.8	15
TPH - Motor Oil	A	1000000	952360	24.59064	23.41909		-4.8	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	15FEB021.D	Calibration Date:	02/02/17 21:49
Sequence:	1702855	Injection Date:	02/15/17
Lab Sample ID:	1702855-CCV3	Injection Time:	19:52

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	504100	33.81912	34.09608		0.8	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	1107200	24.59064	27.22612		10.7	15
TPH - Motor Oil	A	1000000	1107200	24.59064	27.22612		10.7	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
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CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	15FEB029.D	Calibration Date:	02/02/17 21:49
Sequence:	1702855	Injection Date:	02/15/17
Lab Sample ID:	1702855-CCV4	Injection Time:	22:55

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	509180	33.81912	34.43988		1.8	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	1045200	24.59064	25.70241		4.5	15
TPH - Motor Oil	A	1000000	1045200	24.59064	25.70241		4.5	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
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CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	15FEB007.D	Calibration Date:	02/02/17 21:49
Sequence:	1702943	Injection Date:	02/15/17
Lab Sample ID:	1702943-CCV2	Injection Time:	12:35

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	486190	33.81912	32.88478		-2.8	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	952360	24.59064	23.41909		-4.8	15
TPH - Motor Oil	A	1000000	952360	24.59064	23.41909		-4.8	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	15FEB021.D	Calibration Date:	02/02/17 21:49
Sequence:	1702943	Injection Date:	02/15/17
Lab Sample ID:	1702943-CCV3	Injection Time:	19:52

	(1) CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	504100	33.81912	34.09608		0.8	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	1107200	24.59064	27.22612		10.7	15
TPH - Motor Oil	A	1000000	1107200	24.59064	27.22612		10.7	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
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CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	21FEB002.D	Calibration Date:	02/02/17 21:49
Sequence:	1702948	Injection Date:	02/21/17
Lab Sample ID:	1702948-CCV1	Injection Time:	09:21

	(1) CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	488160	33.81912	33.01796		-2.4	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	973800	24.59064	23.9463		-2.6	15
TPH - Motor Oil	A	1000000	973800	24.59064	23.9463		-2.6	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project Number: 5023146096
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CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-2	Calibration:	1702019
Lab File ID:	21FEB006.D	Calibration Date:	02/02/17 21:49
Sequence:	1702948	Injection Date:	02/21/17
Lab Sample ID:	1702948-CCV2	Injection Time:	11:28

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	492930	33.81912	33.34076		-1.4	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	953470	24.59064	23.44641		-4.7	15
TPH - Motor Oil	A	1000000	953470	24.59064	23.44641		-4.7	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702459
Instrument: GC-2
Matrix: Water
Calibration: 1702019

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Blank (1702459-ICB1)			Lab File ID: 02FEB033.D		Analyzed: 02/03/17 00:30			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	
Cal Standard (1702459-CALC)			Lab File ID: 06FEB005.D		Analyzed: 02/06/17 10:33			
Tetracosane (Surrogate)	40000	106		9.55	9.541667	0.0083	+/-1.0	
Cal Standard (1702459-CALB)			Lab File ID: 06FEB006.D		Analyzed: 02/06/17 11:18			
Tetracosane (Surrogate)	30000	109		9.54	9.541667	-0.0017	+/-1.0	
Cal Standard (1702459-CALA)			Lab File ID: 06FEB007.D		Analyzed: 02/06/17 12:12			
Tetracosane (Surrogate)	20000	104		9.54	9.541667	-0.0017	+/-1.0	
Cal Standard (1702459-CAL9)			Lab File ID: 06FEB008.D		Analyzed: 02/06/17 12:49			
Tetracosane (Surrogate)	10000	108		9.54	9.541667	-0.0017	+/-1.0	
Cal Standard (1702459-CAL8)			Lab File ID: 06FEB009.D		Analyzed: 02/06/17 13:13			
Tetracosane (Surrogate)	5000.0	112		9.54	9.541667	-0.0017	+/-1.0	
Cal Standard (1702459-CAL7)			Lab File ID: 06FEB010.D		Analyzed: 02/06/17 13:36			
Tetracosane (Surrogate)	2000.0	101		9.54	9.541667	-0.0017	+/-1.0	
Initial Cal Check (1702459-ICV2)			Lab File ID: 06FEB011.D		Analyzed: 02/06/17 14:13			
Tetracosane (Surrogate)	20000	99.4	85 - 115	9.54	9.541667	-0.0017	+/-1.0	
Initial Cal Blank (1702459-ICB2)			Lab File ID: 06FEB012.D		Analyzed: 02/06/17 14:36			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702855
Instrument: GC-2
Matrix: Water
Calibration: 1702019

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (1702855-CCV2)			Lab File ID: 15FEB007.D		Analyzed: 02/15/17 12:35			
Tetracosane (Surrogate)	20000	100	85 - 115	9.54	9.541667	-0.0017	+/-1.0	
Calibration Blank (1702855-CCB2)			Lab File ID: 15FEB008.D		Analyzed: 02/15/17 12:57			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	
EB07_170206 (1703278-02)			Lab File ID: 15FEB009.D		Analyzed: 02/15/17 14:15			
Tetracosane (Surrogate)	20.000	69.6	37 - 134	9.54	9.541667	-0.0017	+/-1.0	
M051A_170206 (1703278-04)			Lab File ID: 15FEB010.D		Analyzed: 02/15/17 14:50			
Tetracosane (Surrogate)	20.000	61.3	37 - 134	9.54	9.541667	-0.0017	+/-1.0	
Calibration Check (1702855-CCV3)			Lab File ID: 15FEB021.D		Analyzed: 02/15/17 19:52			
Tetracosane (Surrogate)	20000	102	85 - 115	9.54	9.541667	-0.0017	+/-1.0	
Calibration Blank (1702855-CCB3)			Lab File ID: 15FEB022.D		Analyzed: 02/15/17 20:15			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	
Calibration Check (1702855-CCV4)			Lab File ID: 15FEB029.D		Analyzed: 02/15/17 22:55			
Tetracosane (Surrogate)	20000	106	85 - 115	9.54	9.541667	-0.0017	+/-1.0	
Calibration Blank (1702855-CCB4)			Lab File ID: 15FEB030.D		Analyzed: 02/15/17 23:18			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702943
Instrument: GC-2
Matrix: Water
Calibration: 1702019

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (1702943-CCV2)			Lab File ID: 15FEB007.D		Analyzed: 02/15/17 12:35			
Tetracosane (Surrogate)	20000	100	85 - 115	9.54	9.541667	-0.0017	+/-1.0	
Calibration Blank (1702943-CCB2)			Lab File ID: 15FEB008.D		Analyzed: 02/15/17 12:57			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	
Blank (B[B1253-BLK1)			Lab File ID: 15FEB013.D		Analyzed: 02/15/17 16:49			
Tetracosane (Surrogate)	20.000	77.1	37 - 134	9.54	9.541667	-0.0017	+/-1.0	
Matrix Spike (B[B1253-MS1)			Lab File ID: 15FEB014.D		Analyzed: 02/15/17 17:12			
Tetracosane (Surrogate)	20.000	74.5	37 - 134	9.54	9.541667	-0.0017	+/-1.0	
Matrix Spike Dup (B[B1253-MSD1)			Lab File ID: 15FEB015.D		Analyzed: 02/15/17 17:34			
Tetracosane (Surrogate)	20.000	78.6	37 - 134	9.54	9.541667	-0.0017	+/-1.0	
Calibration Check (1702943-CCV3)			Lab File ID: 15FEB021.D		Analyzed: 02/15/17 19:52			
Tetracosane (Surrogate)	20000	102	85 - 115	9.54	9.541667	-0.0017	+/-1.0	
Calibration Blank (1702943-CCB3)			Lab File ID: 15FEB022.D		Analyzed: 02/15/17 20:15			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	

AMEC Environmental & Infrastructure
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SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702948
Instrument: GC-2
Matrix: Water
Calibration: 1702019

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (1702948-CCV1)			Lab File ID: 21FEB002.D		Analyzed: 02/21/17 09:21			
Tetracosane (Surrogate)	20000	92.5	85 - 115	9.52	9.541667	-0.0217	+/-1.0	
Calibration Blank (1702948-CCB1)			Lab File ID: 21FEB003.D		Analyzed: 02/21/17 09:44			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	
LCS (B[B1253-BS1)			Lab File ID: 21FEB004.D		Analyzed: 02/21/17 10:07			
Tetracosane (Surrogate)	20.000	59.4	37 - 134	9.52	9.541667	-0.0217	+/-1.0	
Calibration Check (1702948-CCV2)			Lab File ID: 21FEB006.D		Analyzed: 02/21/17 11:28			
Tetracosane (Surrogate)	20000	98.3	85 - 115	9.53	9.541667	-0.0117	+/-1.0	
Calibration Blank (1702948-CCB2)			Lab File ID: 21FEB007.D		Analyzed: 02/21/17 11:50			
Tetracosane (Surrogate)			37 - 134		9.541667	Null Found	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION STANDARDS

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702459
Calibration: 1702019

SDG: 17-03278
Project: Alameda
Instrument: GC-2

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
6L02004	8015M FFP KERSENE IC1	1702459-CAL1	02FEB026.D	02/02/17 21:49
6L02016	8015M FFP KERSENE IC2	1702459-CAL2	02FEB027.D	02/02/17 22:12
6L02017	8015M FFP KERSENE IC3	1702459-CAL3	02FEB028.D	02/02/17 22:35
6L02018	8015M FFP KERSENE IC4	1702459-CAL4	02FEB029.D	02/02/17 22:58
6L02019	8015M FFP KERSENE IC5	1702459-CAL5	02FEB030.D	02/02/17 23:21
6L02020	8015M FFP KERSENE IC6	1702459-CAL6	02FEB031.D	02/02/17 23:44
6L02028	8015M Diesel/MOTOR OIL IC6	1702459-CALC	06FEB005.D	02/06/17 10:33
6L02027	8015M Diesel/MOTOR OIL IC5	1702459-CALB	06FEB006.D	02/06/17 11:18
6L02026	8015M Diesel/MOTOR OIL IC4	1702459-CALA	06FEB007.D	02/06/17 12:12
6L02025	8015M Diesel/MOTOR OIL IC3	1702459-CAL9	06FEB008.D	02/06/17 12:49
6L02024	8015M Diesel/MOTOR OIL IC2	1702459-CAL8	06FEB009.D	02/06/17 13:13
6L02023	8015M Diesel/MOTOR OIL IC1	1702459-CAL7	06FEB010.D	02/06/17 13:36

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702019
Instrument: GC-2
Matrix: Water
Calibration Date: 02/02/17 21:49

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
TPH - Kerosene	40000	30.32873	200000	28.08054	400000	28.57178	500000	29.7999	800000	28.74158	1000000	28.3319
TPH - Diesel (FFP)												
TPH - Hydraulic Oil / Motor Oil												
TPH - Motor Oil												
Tetracosane (Surrogate)												

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702019
Instrument: GC-2
Matrix: Water
Calibration Date: 02/02/17 21:49

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
TPH - Kerosene												
TPH - Diesel (FFP)	40000	39.00357	200000	34.8903	400000	32.104	500000	32.1653	800000	32.30655	1000000	32.44496
TPH - Hydraulic Oil / Motor Oil	100000	~~54.30882~~	500000	28.39012	800000	24.69642	1000000	23.45617	1500000	23.43379	2000000	22.9767
TPH - Motor Oil	100000	~~54.30882~~	500000	28.39012	800000	24.69642	1000000	23.45617	1500000	23.43379	2000000	22.9767
Tetracosane (Surrogate)	2000	31.776	5000	35.068	10000	33.9825	20000	32.7567	30000	34.25453	40000	33.14468

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702019
Instrument: GC-2
Matrix: Water
Calibration Date: 02/02/17 21:49

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
TPH - Kerosene	28.97574	3.065033	7.5	0			20	
TPH - Diesel (FFP)	33.81912	8.138637	7.62	1.739022E-02			20	
TPH - Hydraulic Oil / Motor Oil	24.59064	9.019521	11.89	2.546523E-02			20	
TPH - Motor Oil	24.59064	9.019521	11.89	2.546523E-02			20	
Tetracosane (Surrogate)	33.49707	3.509929	9.541667	4.025077E-02			20	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
EB07_170206	02/06/17 14:30	02/06/17 22:00	02/10/17 22:40	4.00	7.00	02/15/17 14:15	5.00	40.00	
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/10/17 22:40	4.00	7.00	02/15/17 14:50	5.00	40.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 9:55:10AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements
For Data Validation of
Semi-Volatiles Analysis

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Analyses Requested: **8270**
Submission#: 17-03278

Instrument ID: MS-B2
Model: GC5890/HP5972
Column Type: ZB-Semivolatiles with 5m Guardian 30m x 0.25mm x 0.25µm

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and extractions took place within holding times.

Calibration: Initial calibration criteria were met, except calibration 1702018 for Pentachlorophenol. Frequency and accuracy criteria for initial calibration verification (ICV) were met, except for Sequence 1702000 4-Nitroaniline and 4,6-Dinitro-2-methylphenol were outside QC limits. Frequency and accuracy criteria for continuing calibration verification (CCV) were met, except sequence 1702425 CCV1 4-Nitroaniline, 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, and sequence 1702536 CCV1 Benzyl alcohol were outside QC limits. The ending CCV fifty percent criteria was met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL. Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis. Batch ID B[B0982-BLK1 the method blank surrogate recovery for 2-Fluorobiphenyl and the internal standard recovery for Perylene-d12 were outside QC limits.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameters were within QC limits, except batch ID B[B0982-BS1 laboratory control sample recovery for 4-Chloroaniline was outside QC limits.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy and precision requirements were met, except batch ID B[B0982 the spike Relative Percent Difference for 4-Chloroaniline, 3 Chloroaniline, the matrix spike recovery for 4-Chloroaniline, and the internal standard recovery for Perylene-d12 were outside QC limits.
The matrix spike and matrix spike duplicate recoveries for 3,3-Dichlorobenzidine were not recovered.

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:40
Received By:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		A-F								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: M Date/Time: 2-6-17 2310
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ (W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received		
☒ YES ☐ NO	Emissivity: 0.97 Container: VOA Thermometer ID: 207 Temperature: (A) 1.5 °C / (C) 1.7 °C	Date/Time 2/6 2150 Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL				A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: _____ Date/Time: 2-6-17 2315

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Numbering Completed By: Date/Time: 2/6/17 0320
Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RB								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/10/2017 11:17:56AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**SVOA**
Method:	**EPA-8270C**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02RE1
M041E_170206	1703278-03
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MS-B2

Analyte	DL	LOD	LOQ	Units
Acenaphthene	0.24	1.0	4.0	ug/L
Acenaphthylene	0.28	1.0	4.0	ug/L
Anthracene	0.30	1.0	4.0	ug/L
Benzo[a]anthracene	0.38	1.0	4.0	ug/L
Benzo[b]fluoranthene	0.41	1.0	4.0	ug/L
Benzo[k]fluoranthene	0.31	1.0	4.0	ug/L
Benzo[a]pyrene	0.20	1.0	4.0	ug/L
Benzo[g,h,i]perylene	0.22	1.0	4.0	ug/L
Benzoic acid	5.8	6.0	20	ug/L
Benzyl alcohol	0.34	1.0	4.0	ug/L
Benzyl butyl phthalate	0.47	1.0	4.0	ug/L
bis(2-Chloroethoxy)methane	0.27	1.0	4.0	ug/L
bis(2-Chloroethyl) ether	0.68	1.0	4.0	ug/L
bis(2-Chloroisopropyl)ether	0.30	1.0	4.0	ug/L
bis(2-Ethylhexyl)phthalate	3.0	4.0	8.0	ug/L
4-Bromophenyl phenyl ether	0.23	1.0	4.0	ug/L
4-Chloroaniline	0.69	1.0	4.0	ug/L
2-Chloronaphthalene	0.34	1.0	4.0	ug/L
4-Chlorophenyl phenyl ether	0.23	1.0	4.0	ug/L
Chrysene	0.63	1.0	4.0	ug/L
Dibenzo[a,h]anthracene	0.26	2.0	6.0	ug/L
Dibenzofuran	0.21	1.0	4.0	ug/L
1,2-Dichlorobenzene	0.37	1.0	4.0	ug/L
1,3-Dichlorobenzene	0.35	1.0	4.0	ug/L
1,4-Dichlorobenzene	0.31	1.0	4.0	ug/L
3,3-Dichlorobenzidine	8.2	10	20	ug/L
Diethyl phthalate	0.33	1.0	4.0	ug/L
Dimethyl phthalate	0.39	1.0	4.0	ug/L
Di-n-butyl phthalate	0.39	1.0	4.0	ug/L
2,4-Dinitrotoluene	0.26	1.0	4.0	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MS-B2

Analyte	DL	LOD	LOQ	Units
2,6-Dinitrotoluene	0.41	1.0	4.0	ug/L
Di-n-octyl phthalate	0.46	1.0	4.0	ug/L
Fluoranthene	0.20	1.0	4.0	ug/L
Fluorene	0.28	1.0	4.0	ug/L
Hexachlorobenzene	0.20	1.0	4.0	ug/L
Hexachlorobutadiene	0.24	1.0	4.0	ug/L
Hexachlorocyclopentadiene	0.30	1.0	4.0	ug/L
Hexachloroethane	0.32	1.0	4.0	ug/L
Indeno[1,2,3-cd]pyrene	0.26	1.0	4.0	ug/L
Isophorone	0.31	1.0	4.0	ug/L
2-Methylnaphthalene	0.28	1.0	4.0	ug/L
Naphthalene	0.21	1.0	4.0	ug/L
2-Nitroaniline	0.33	1.0	4.0	ug/L
3-Nitroaniline	0.66	1.0	4.0	ug/L
4-Nitroaniline	0.87	3.0	10	ug/L
Nitrobenzene	0.26	1.0	4.0	ug/L
N-Nitrosodimethylamine	0.61	1.0	4.0	ug/L
N-Nitrosodi-N-propylamine	1.3	2.0	4.0	ug/L
N-Nitrosodiphenylamine	0.44	1.0	4.0	ug/L
Phenanthrene	0.20	1.0	4.0	ug/L
Pyrene	0.26	1.0	4.0	ug/L
1,2,4-Trichlorobenzene	0.27	1.0	4.0	ug/L
4-Chloro-3-methylphenol	0.40	3.0	10	ug/L
2-Chlorophenol	0.37	1.0	4.0	ug/L
2,4-Dichlorophenol	0.43	1.0	4.0	ug/L
2,4-Dimethylphenol	0.20	1.0	4.0	ug/L
4,6-Dinitro-2-methylphenol	0.34	6.0	20	ug/L
2,4-Dinitrophenol	0.20	6.0	20	ug/L
2-Methylphenol	1.0	1.0	4.0	ug/L
3- & 4-Methylphenol	1.6	2.0	4.0	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: MS-B2

Analyte	DL	LOD	LOQ	Units
2-Nitrophenol	0.28	1.0	4.0	ug/L
4-Nitrophenol	0.73	1.0	4.0	ug/L
Pentachlorophenol	0.79	6.0	20	ug/L
Phenol	0.20	1.0	4.0	ug/L
2,4,5-Trichlorophenol	0.31	3.0	10	ug/L
2,4,6-Trichlorophenol	0.60	3.0	10	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

EB07_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-02RE1	File ID:	13FEB021.D
Sampled:	02/06/17 14:30	Prepared:	02/08/17 22:00	Analyzed:	02/13/17 15:16
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 0.99 ml
Batch:	B[B0982	Sequence:	1702536	Calibration:	1702018
Instrument:	MS-B2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.99	1.0	0.24	1.0	4.0	U
208-96-8	Acenaphthylene	0.99	1.0	0.28	1.0	4.0	U
120-12-7	Anthracene	0.99	1.0	0.30	1.0	4.0	U
56-55-3	Benzo[a]anthracene	0.99	1.0	0.38	1.0	4.0	U
205-99-2	Benzo[b]fluoranthene	0.99	1.0	0.41	1.0	4.0	U
207-08-9	Benzo[k]fluoranthene	0.99	1.7	0.31	1.0	4.0	J
50-32-8	Benzo[a]pyrene	0.99	1.2	0.20	1.0	4.0	J
191-24-2	Benzo[g,h,i]perylene	0.99	2.9	0.22	1.0	4.0	J
65-85-0	Benzoic acid	0.99	6.0	5.8	6.0	20	U
85-68-7	Benzyl butyl phthalate	0.99	1.0	0.47	1.0	4.0	U
111-91-1	bis(2-Chloroethoxy)methane	0.99	1.0	0.27	1.0	4.0	U
111-44-4	bis(2-Chloroethyl) ether	0.99	1.0	0.68	1.0	4.0	U
39638-32-9	bis(2-Chloroisopropyl)ether	0.99	1.0	0.30	1.0	4.0	U
117-81-7	bis(2-Ethylhexyl)phthalate	0.99	4.0	3.0	4.0	8.0	U
101-55-3	4-Bromophenyl phenyl ether	0.99	1.0	0.23	1.0	4.0	U
106-47-8	4-Chloroaniline	0.99	1.0	0.69	1.0	4.0	U
91-58-7	2-Chloronaphthalene	0.99	1.0	0.34	1.0	4.0	U
7005-72-3	4-Chlorophenyl phenyl ether	0.99	1.0	0.23	1.0	4.0	U
218-01-9	Chrysene	0.99	1.0	0.63	1.0	4.0	U
53-70-3	Dibenzo[a,h]anthracene	0.99	2.3	0.26	2.0	6.0	J
132-64-9	Dibenzofuran	0.99	1.0	0.21	1.0	4.0	U
95-50-1	1,2-Dichlorobenzene	0.99	1.0	0.37	1.0	4.0	U
541-73-1	1,3-Dichlorobenzene	0.99	1.0	0.35	1.0	4.0	U
106-46-7	1,4-Dichlorobenzene	0.99	1.0	0.31	1.0	4.0	U
91-94-1	3,3-Dichlorobenzidine	0.99	10	8.2	10	20	U
84-66-2	Diethyl phthalate	0.99	1.0	0.33	1.0	4.0	U
131-11-3	Dimethyl phthalate	0.99	1.0	0.39	1.0	4.0	U
84-74-2	Di-n-butyl phthalate	0.99	1.0	0.39	1.0	4.0	U
121-14-2	2,4-Dinitrotoluene	0.99	1.0	0.26	1.0	4.0	U
606-20-2	2,6-Dinitrotoluene	0.99	1.0	0.41	1.0	4.0	U
117-84-0	Di-n-octyl phthalate	0.99	1.0	0.46	1.0	4.0	U
206-44-0	Fluoranthene	0.99	1.0	0.20	1.0	4.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

EB07_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-02RE1	File ID:	13FEB021.D
Sampled:	02/06/17 14:30	Prepared:	02/08/17 22:00	Analyzed:	02/13/17 15:16
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 0.99 ml
Batch:	B[B0982	Sequence:	1702536	Calibration:	1702018
Instrument:	MS-B2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
86-73-7	Fluorene	0.99	1.0	0.28	1.0	4.0	U
118-74-1	Hexachlorobenzene	0.99	1.0	0.20	1.0	4.0	U
87-68-3	Hexachlorobutadiene	0.99	1.0	0.24	1.0	4.0	U
77-47-4	Hexachlorocyclopentadiene	0.99	1.0	0.30	1.0	4.0	U
67-72-1	Hexachloroethane	0.99	1.0	0.32	1.0	4.0	U
193-39-5	Indeno[1,2,3-cd]pyrene	0.99	2.4	0.26	1.0	4.0	J
78-59-1	Isophorone	0.99	1.0	0.31	1.0	4.0	U
91-57-6	2-Methylnaphthalene	0.99	1.0	0.28	1.0	4.0	U
91-20-3	Naphthalene	0.99	1.0	0.21	1.0	4.0	U
88-74-4	2-Nitroaniline	0.99	1.0	0.33	1.0	4.0	U
99-09-2	3-Nitroaniline	0.99	1.0	0.66	1.0	4.0	U
100-01-6	4-Nitroaniline	0.99	3.0	0.87	3.0	10	U
98-95-3	Nitrobenzene	0.99	1.0	0.26	1.0	4.0	U
62-75-9	N-Nitrosodimethylamine	0.99	1.0	0.61	1.0	4.0	U
621-64-7	N-Nitrosodi-N-propylamine	0.99	2.0	1.3	2.0	4.0	U
86-30-6	N-Nitrosodiphenylamine	0.99	1.0	0.44	1.0	4.0	U
85-01-8	Phenanthrene	0.99	1.0	0.20	1.0	4.0	U
129-00-0	Pyrene	0.99	1.0	0.26	1.0	4.0	U
120-82-1	1,2,4-Trichlorobenzene	0.99	1.0	0.27	1.0	4.0	U
59-50-7	4-Chloro-3-methylphenol	0.99	3.0	0.40	3.0	10	U
95-57-8	2-Chlorophenol	0.99	1.0	0.37	1.0	4.0	U
120-83-2	2,4-Dichlorophenol	0.99	1.0	0.43	1.0	4.0	U
105-67-9	2,4-Dimethylphenol	0.99	1.0	0.20	1.0	4.0	U
534-52-1	4,6-Dinitro-2-methylphenol	0.99	6.0	0.34	6.0	20	U
51-28-5	2,4-Dinitrophenol	0.99	6.0	0.20	6.0	20	U
95-48-7	2-Methylphenol	0.99	1.0	1.0	1.0	4.0	U
15831-10-4	3- & 4-Methylphenol	0.99	2.0	1.6	2.0	4.0	U
88-75-5	2-Nitrophenol	0.99	1.0	0.28	1.0	4.0	U
100-02-7	4-Nitrophenol	0.99	1.0	0.73	1.0	4.0	U
87-86-5	Pentachlorophenol	0.99	6.0	0.79	6.0	20	U
108-95-2	Phenol	0.99	1.0	0.20	1.0	4.0	U
95-95-4	2,4,5-Trichlorophenol	0.99	3.0	0.31	3.0	10	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

EB07_170206

Laboratory:	BC Laboratories			SDG:	17-03278		
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda		
Matrix:	Water	Laboratory ID:	1703278-02RE1	File ID:	13FEB021.D		
Sampled:	02/06/17 14:30	Prepared:	02/08/17 22:00	Analyzed:	02/13/17 15:16		
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 0.99 ml		
Batch:	B[B0982	Sequence:	1702536	Calibration:	1702018	Instrument:	MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
88-06-2	2,4,6-Trichlorophenol	0.99	3.0	0.60	3.0	10	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorophenol (Surrogate)	40.000	9.3951	23.5	19 - 119	
Phenol-d5 (Surrogate)	40.000	7.1874	18.0	10 - 115	
Nitrobenzene-d5 (Surrogate)	40.000	25.483	63.7	44 - 120	
2-Fluorobiphenyl (Surrogate)	40.000	40.135	100	44 - 119	
2,4,6-Tribromophenol (Surrogate)	40.000	18.731	46.8	43 - 140	
p-Terphenyl-d14 (Surrogate)	20.000	12.642	63.2	50 - 134	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Phenanthrene-d10 (IS)	1463411	10.33	1046533	10.33	
Chrysene-d12 (IS)	436110	14.04	333612	14.04	
Acenaphthene-d10 (IS)	994092	8.85	805443	8.85	
1,4-Dichlorobenzene-d4 (IS)	724308	5.91	640898	5.91	
Perylene-d12 (IS)	170825	16.06	210278	16.06	
Naphthalene-d8 (IS)	2429144	7.13	2028070	7.14	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

M041E_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-03	File ID:	10FEB025.D
Sampled:	02/06/17 08:45	Prepared:	02/08/17 22:00	Analyzed:	02/10/17 18:55
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 1 ml
Batch:	B[B0982	Sequence:	1702425	Calibration:	1702018	Instrument:	MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	1.0	0.24	1.0	4.0	U
208-96-8	Acenaphthylene	1	1.0	0.28	1.0	4.0	U
120-12-7	Anthracene	1	1.0	0.30	1.0	4.0	U
56-55-3	Benzo[a]anthracene	1	1.0	0.38	1.0	4.0	U
205-99-2	Benzo[b]fluoranthene	1	1.0	0.41	1.0	4.0	U
207-08-9	Benzo[k]fluoranthene	1	1.0	0.31	1.0	4.0	U
50-32-8	Benzo[a]pyrene	1	1.0	0.20	1.0	4.0	U
191-24-2	Benzo[g,h,i]perylene	1	1.0	0.22	1.0	4.0	U
65-85-0	Benzoic acid	1	6.0	5.8	6.0	20	U
85-68-7	Benzyl butyl phthalate	1	1.0	0.47	1.0	4.0	U
111-91-1	bis(2-Chloroethoxy)methane	1	1.0	0.27	1.0	4.0	U
111-44-4	bis(2-Chloroethyl) ether	1	1.0	0.68	1.0	4.0	U
39638-32-9	bis(2-Chloroisopropyl)ether	1	1.0	0.30	1.0	4.0	U
117-81-7	bis(2-Ethylhexyl)phthalate	1	4.0	3.0	4.0	8.0	U
101-55-3	4-Bromophenyl phenyl ether	1	1.0	0.23	1.0	4.0	U
106-47-8	4-Chloroaniline	1	1.0	0.69	1.0	4.0	U
91-58-7	2-Chloronaphthalene	1	1.0	0.34	1.0	4.0	U
7005-72-3	4-Chlorophenyl phenyl ether	1	1.0	0.23	1.0	4.0	U
218-01-9	Chrysene	1	1.0	0.63	1.0	4.0	U
53-70-3	Dibenzo[a,h]anthracene	1	2.0	0.26	2.0	6.0	U
132-64-9	Dibenzofuran	1	1.0	0.21	1.0	4.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.37	1.0	4.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.35	1.0	4.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.31	1.0	4.0	U
91-94-1	3,3-Dichlorobenzidine	1	10	8.2	10	20	U
84-66-2	Diethyl phthalate	1	1.0	0.33	1.0	4.0	U
131-11-3	Dimethyl phthalate	1	1.0	0.39	1.0	4.0	U
84-74-2	Di-n-butyl phthalate	1	1.0	0.39	1.0	4.0	U
121-14-2	2,4-Dinitrotoluene	1	1.0	0.26	1.0	4.0	U
606-20-2	2,6-Dinitrotoluene	1	1.0	0.41	1.0	4.0	U
117-84-0	Di-n-octyl phthalate	1	1.0	0.46	1.0	4.0	U
206-44-0	Fluoranthene	1	1.0	0.20	1.0	4.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: 10FEB025.D
Sampled: 02/06/17 08:45
Prepared: 02/08/17 22:00
Analyzed: 02/10/17 18:55
Solids:
Preparation: EPA 3510B
Initial/Final: 1000 ml / 1 ml
Batch: B[B0982
Sequence: 1702425
Calibration: 1702018
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
86-73-7	Fluorene	1	1.0	0.28	1.0	4.0	U
118-74-1	Hexachlorobenzene	1	1.0	0.20	1.0	4.0	U
87-68-3	Hexachlorobutadiene	1	1.0	0.24	1.0	4.0	U
77-47-4	Hexachlorocyclopentadiene	1	1.0	0.30	1.0	4.0	U
67-72-1	Hexachloroethane	1	1.0	0.32	1.0	4.0	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	1.0	0.26	1.0	4.0	U
78-59-1	Isophorone	1	1.0	0.31	1.0	4.0	U
91-57-6	2-Methylnaphthalene	1	1.0	0.28	1.0	4.0	U
91-20-3	Naphthalene	1	1.0	0.21	1.0	4.0	U
88-74-4	2-Nitroaniline	1	1.0	0.33	1.0	4.0	U
99-09-2	3-Nitroaniline	1	1.0	0.66	1.0	4.0	U
100-01-6	4-Nitroaniline	1	3.0	0.87	3.0	10	U
98-95-3	Nitrobenzene	1	1.0	0.26	1.0	4.0	U
62-75-9	N-Nitrosodimethylamine	1	1.0	0.61	1.0	4.0	U
621-64-7	N-Nitrosodi-N-propylamine	1	2.0	1.3	2.0	4.0	U
86-30-6	N-Nitrosodiphenylamine	1	1.0	0.44	1.0	4.0	U
85-01-8	Phenanthrene	1	1.0	0.20	1.0	4.0	U
129-00-0	Pyrene	1	1.0	0.26	1.0	4.0	U
120-82-1	1,2,4-Trichlorobenzene	1	1.0	0.27	1.0	4.0	U
59-50-7	4-Chloro-3-methylphenol	1	3.0	0.40	3.0	10	U
95-57-8	2-Chlorophenol	1	1.0	0.37	1.0	4.0	U
120-83-2	2,4-Dichlorophenol	1	1.0	0.43	1.0	4.0	U
105-67-9	2,4-Dimethylphenol	1	1.0	0.20	1.0	4.0	U
534-52-1	4,6-Dinitro-2-methylphenol	1	6.0	0.34	6.0	20	U
51-28-5	2,4-Dinitrophenol	1	6.0	0.20	6.0	20	U
95-48-7	2-Methylphenol	1	1.0	1.0	1.0	4.0	U
15831-10-4	3- & 4-Methylphenol	1	2.0	1.6	2.0	4.0	U
88-75-5	2-Nitrophenol	1	1.0	0.28	1.0	4.0	U
100-02-7	4-Nitrophenol	1	1.0	0.73	1.0	4.0	U
87-86-5	Pentachlorophenol	1	6.0	0.79	6.0	20	U
108-95-2	Phenol	1	1.0	0.20	1.0	4.0	U
95-95-4	2,4,5-Trichlorophenol	1	3.0	0.31	3.0	10	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

M041E_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-03	File ID:	10FEB025.D
Sampled:	02/06/17 08:45	Prepared:	02/08/17 22:00	Analyzed:	02/10/17 18:55
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 1 ml
Batch:	B[B0982	Sequence:	1702425	Calibration:	1702018
Instrument:	MS-B2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
88-06-2	2,4,6-Trichlorophenol	1	3.0	0.60	3.0	10	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorophenol (Surrogate)	40.000	20.820	52.0	19 - 119	
Phenol-d5 (Surrogate)	40.000	16.760	41.9	10 - 115	
Nitrobenzene-d5 (Surrogate)	40.000	28.380	71.0	44 - 120	
2-Fluorobiphenyl (Surrogate)	40.000	40.950	102	44 - 119	
2,4,6-Tribromophenol (Surrogate)	40.000	27.840	69.6	43 - 140	
p-Terphenyl-d14 (Surrogate)	20.000	13.020	65.1	50 - 134	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Phenanthrene-d10 (IS)	1616857	10.33	1952836	10.34	
Chrysene-d12 (IS)	603869	14.04	950105	14.07	
Acenaphthene-d10 (IS)	1126624	8.85	1345279	8.86	
1,4-Dichlorobenzene-d4 (IS)	780239	5.91	805320	5.92	
Perylene-d12 (IS)	400780	16.06	694912	16.07	
Naphthalene-d8 (IS)	2647206	7.13	2880420	7.14	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: 10FEB026.D
Sampled: 02/06/17 11:30
Prepared: 02/08/17 22:00
Analyzed: 02/10/17 19:21
Solids:
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.97 ml
Batch: B[B0982
Sequence: 1702425
Calibration: 1702018
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.97	1.0	0.24	1.0	4.0	U
208-96-8	Acenaphthylene	0.97	1.0	0.28	1.0	4.0	U
120-12-7	Anthracene	0.97	1.0	0.30	1.0	4.0	U
56-55-3	Benzo[a]anthracene	0.97	1.0	0.38	1.0	4.0	U
205-99-2	Benzo[b]fluoranthene	0.97	1.0	0.41	1.0	4.0	U
207-08-9	Benzo[k]fluoranthene	0.97	1.0	0.31	1.0	4.0	U
50-32-8	Benzo[a]pyrene	0.97	1.0	0.20	1.0	4.0	U
191-24-2	Benzo[g,h,i]perylene	0.97	1.0	0.22	1.0	4.0	J
65-85-0	Benzoic acid	0.97	6.0	5.8	6.0	20	U
85-68-7	Benzyl butyl phthalate	0.97	1.0	0.47	1.0	4.0	U
111-91-1	bis(2-Chloroethoxy)methane	0.97	1.0	0.27	1.0	4.0	U
111-44-4	bis(2-Chloroethyl) ether	0.97	1.0	0.68	1.0	4.0	U
39638-32-9	bis(2-Chloroisopropyl)ether	0.97	1.0	0.30	1.0	4.0	U
117-81-7	bis(2-Ethylhexyl)phthalate	0.97	4.0	3.0	4.0	8.0	U
101-55-3	4-Bromophenyl phenyl ether	0.97	1.0	0.23	1.0	4.0	U
106-47-8	4-Chloroaniline	0.97	1.0	0.69	1.0	4.0	U
91-58-7	2-Chloronaphthalene	0.97	1.0	0.34	1.0	4.0	U
7005-72-3	4-Chlorophenyl phenyl ether	0.97	1.0	0.23	1.0	4.0	U
218-01-9	Chrysene	0.97	1.0	0.63	1.0	4.0	U
53-70-3	Dibenzo[a,h]anthracene	0.97	2.0	0.26	2.0	6.0	U
132-64-9	Dibenzofuran	0.97	1.0	0.21	1.0	4.0	U
95-50-1	1,2-Dichlorobenzene	0.97	1.0	0.37	1.0	4.0	J
541-73-1	1,3-Dichlorobenzene	0.97	1.0	0.35	1.0	4.0	U
106-46-7	1,4-Dichlorobenzene	0.97	1.0	0.31	1.0	4.0	U
91-94-1	3,3-Dichlorobenzidine	0.97	10	8.2	10	20	U
84-66-2	Diethyl phthalate	0.97	1.0	0.33	1.0	4.0	U
131-11-3	Dimethyl phthalate	0.97	1.0	0.39	1.0	4.0	U
84-74-2	Di-n-butyl phthalate	0.97	1.0	0.39	1.0	4.0	U
121-14-2	2,4-Dinitrotoluene	0.97	1.0	0.26	1.0	4.0	U
606-20-2	2,6-Dinitrotoluene	0.97	1.0	0.41	1.0	4.0	U
117-84-0	Di-n-octyl phthalate	0.97	1.0	0.46	1.0	4.0	U
206-44-0	Fluoranthene	0.97	1.0	0.20	1.0	4.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: 10FEB026.D
Sampled: 02/06/17 11:30
Prepared: 02/08/17 22:00
Analyzed: 02/10/17 19:21
Solids:
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.97 ml
Batch: B[B0982
Sequence: 1702425
Calibration: 1702018
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
86-73-7	Fluorene	0.97	1.0	0.28	1.0	4.0	U
118-74-1	Hexachlorobenzene	0.97	1.0	0.20	1.0	4.0	U
87-68-3	Hexachlorobutadiene	0.97	1.0	0.24	1.0	4.0	U
77-47-4	Hexachlorocyclopentadiene	0.97	1.0	0.30	1.0	4.0	U
67-72-1	Hexachloroethane	0.97	1.0	0.32	1.0	4.0	U
193-39-5	Indeno[1,2,3-cd]pyrene	0.97	1.0	0.26	1.0	4.0	U
78-59-1	Isophorone	0.97	1.0	0.31	1.0	4.0	U
91-57-6	2-Methylnaphthalene	0.97	1.0	0.28	1.0	4.0	U
91-20-3	Naphthalene	0.97	1.0	0.21	1.0	4.0	U
88-74-4	2-Nitroaniline	0.97	1.0	0.33	1.0	4.0	U
99-09-2	3-Nitroaniline	0.97	1.0	0.66	1.0	4.0	U
100-01-6	4-Nitroaniline	0.97	3.0	0.87	3.0	10	U
98-95-3	Nitrobenzene	0.97	1.0	0.26	1.0	4.0	U
62-75-9	N-Nitrosodimethylamine	0.97	1.0	0.61	1.0	4.0	U
621-64-7	N-Nitrosodi-N-propylamine	0.97	2.0	1.3	2.0	4.0	U
86-30-6	N-Nitrosodiphenylamine	0.97	1.0	0.44	1.0	4.0	U
85-01-8	Phenanthrene	0.97	1.0	0.20	1.0	4.0	U
129-00-0	Pyrene	0.97	1.0	0.26	1.0	4.0	U
120-82-1	1,2,4-Trichlorobenzene	0.97	1.0	0.27	1.0	4.0	U
59-50-7	4-Chloro-3-methylphenol	0.97	3.0	0.40	3.0	10	U
95-57-8	2-Chlorophenol	0.97	1.0	0.37	1.0	4.0	U
120-83-2	2,4-Dichlorophenol	0.97	1.0	0.43	1.0	4.0	U
105-67-9	2,4-Dimethylphenol	0.97	1.0	0.20	1.0	4.0	U
534-52-1	4,6-Dinitro-2-methylphenol	0.97	6.0	0.34	6.0	20	U
51-28-5	2,4-Dinitrophenol	0.97	6.0	0.20	6.0	20	U
95-48-7	2-Methylphenol	0.97	1.0	1.0	1.0	4.0	U
15831-10-4	3- & 4-Methylphenol	0.97	2.0	1.6	2.0	4.0	U
88-75-5	2-Nitrophenol	0.97	1.0	0.28	1.0	4.0	U
100-02-7	4-Nitrophenol	0.97	1.0	0.73	1.0	4.0	U
87-86-5	Pentachlorophenol	0.97	6.0	0.79	6.0	20	U
108-95-2	Phenol	0.97	1.0	0.20	1.0	4.0	U
95-95-4	2,4,5-Trichlorophenol	0.97	3.0	0.31	3.0	10	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

M051A_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-04	File ID:	10FEB026.D
Sampled:	02/06/17 11:30	Prepared:	02/08/17 22:00	Analyzed:	02/10/17 19:21
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 0.97 ml
Batch:	B[B0982	Sequence:	1702425	Calibration:	1702018
Instrument:	MS-B2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
88-06-2	2,4,6-Trichlorophenol	0.97	3.0	0.60	3.0	10	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorophenol (Surrogate)	40.000	16.150	40.4	19 - 119	
Phenol-d5 (Surrogate)	40.000	13.114	32.8	10 - 115	
Nitrobenzene-d5 (Surrogate)	40.000	28.450	71.1	44 - 120	
2-Fluorobiphenyl (Surrogate)	40.000	42.602	107	44 - 119	
2,4,6-Tribromophenol (Surrogate)	40.000	28.751	71.9	43 - 140	
p-Terphenyl-d14 (Surrogate)	20.000	13.852	69.3	50 - 134	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Phenanthrene-d10 (IS)	1653932	10.33	1952836	10.34	
Chrysene-d12 (IS)	677229	14.04	950105	14.07	
Acenaphthene-d10 (IS)	1212314	8.85	1345279	8.86	
1,4-Dichlorobenzene-d4 (IS)	877931	5.92	805320	5.92	
Perylene-d12 (IS)	428424	16.06	694912	16.07	
Naphthalene-d8 (IS)	2907078	7.13	2880420	7.14	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0982
Batch Matrix: Water
Preparation: EPA 3510B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02RE1	13FEB021.D	02/08/17 22:00	Added 2/14/2017 by MK1
M041E_170206	1703278-03	10FEB025.D	02/08/17 22:00	
M051A_170206	1703278-04	10FEB026.D	02/08/17 22:00	
Blank	B[B0982-BLK1	10FEB020.D	02/08/17 22:00	
LCS	B[B0982-BS1	10FEB021.D	02/08/17 22:00	
M051A_170206	B[B0982-MS1	10FEB022.D	02/08/17 22:00	
M051A_170206	B[B0982-MSD1	10FEB023.D	02/08/17 22:00	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0982-BLK1	File ID:	10FEB020.D
Prepared:	02/08/17 22:00	Preparation:	EPA 3510B	Initial/Final:	1000 ml / 1 ml
Analyzed:	02/10/17 16:51	Instrument:	MS-B2		
Batch:	B[B0982	Sequence:	1702425	Calibration:	1702018

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1.0	0.24	1.0	4.0	U
208-96-8	Acenaphthylene	1.0	0.28	1.0	4.0	U
120-12-7	Anthracene	1.0	0.30	1.0	4.0	U
56-55-3	Benzo[a]anthracene	1.0	0.38	1.0	4.0	U
205-99-2	Benzo[b]fluoranthene	1.0	0.41	1.0	4.0	U
207-08-9	Benzo[k]fluoranthene	1.0	0.31	1.0	4.0	U
50-32-8	Benzo[a]pyrene	1.0	0.20	1.0	4.0	U
191-24-2	Benzo[g,h,i]perylene	1.0	0.22	1.0	4.0	U
65-85-0	Benzoic acid	6.0	5.8	6.0	20	U
85-68-7	Benzyl butyl phthalate	1.0	0.47	1.0	4.0	U
111-91-1	bis(2-Chloroethoxy)methane	1.0	0.27	1.0	4.0	U
111-44-4	bis(2-Chloroethyl) ether	1.0	0.68	1.0	4.0	U
39638-32-9	bis(2-Chloroisopropyl)ether	1.0	0.30	1.0	4.0	U
117-81-7	bis(2-Ethylhexyl)phthalate	4.0	3.0	4.0	8.0	U
101-55-3	4-Bromophenyl phenyl ether	1.0	0.23	1.0	4.0	U
106-47-8	4-Chloroaniline	1.0	0.69	1.0	4.0	U
91-58-7	2-Chloronaphthalene	1.0	0.34	1.0	4.0	U
7005-72-3	4-Chlorophenyl phenyl ether	1.0	0.23	1.0	4.0	U
218-01-9	Chrysene	1.0	0.63	1.0	4.0	U
53-70-3	Dibenzo[a,h]anthracene	2.0	0.26	2.0	6.0	U
132-64-9	Dibenzofuran	1.0	0.21	1.0	4.0	U
95-50-1	1,2-Dichlorobenzene	1.0	0.37	1.0	4.0	U
541-73-1	1,3-Dichlorobenzene	1.0	0.35	1.0	4.0	U
106-46-7	1,4-Dichlorobenzene	1.0	0.31	1.0	4.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0982-BLK1	File ID:	10FEB020.D
Prepared:	02/08/17 22:00	Preparation:	EPA 3510B	Initial/Final:	1000 ml / 1 ml
Analyzed:	02/10/17 16:51	Instrument:	MS-B2		
Batch:	B[B0982	Sequence:	1702425	Calibration:	1702018

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
91-94-1	3,3-Dichlorobenzidine	10	8.2	10	20	U
84-66-2	Diethyl phthalate	1.0	0.33	1.0	4.0	U
131-11-3	Dimethyl phthalate	1.0	0.39	1.0	4.0	U
84-74-2	Di-n-butyl phthalate	1.0	0.39	1.0	4.0	U
121-14-2	2,4-Dinitrotoluene	1.0	0.26	1.0	4.0	U
606-20-2	2,6-Dinitrotoluene	1.0	0.41	1.0	4.0	U
117-84-0	Di-n-octyl phthalate	1.0	0.46	1.0	4.0	U
206-44-0	Fluoranthene	1.0	0.20	1.0	4.0	U
86-73-7	Fluorene	1.0	0.28	1.0	4.0	U
118-74-1	Hexachlorobenzene	1.0	0.20	1.0	4.0	U
87-68-3	Hexachlorobutadiene	1.0	0.24	1.0	4.0	U
77-47-4	Hexachlorocyclopentadiene	1.0	0.30	1.0	4.0	U
67-72-1	Hexachloroethane	1.0	0.32	1.0	4.0	U
193-39-5	Indeno[1,2,3-cd]pyrene	1.0	0.26	1.0	4.0	U
78-59-1	Isophorone	1.0	0.31	1.0	4.0	U
91-57-6	2-Methylnaphthalene	1.0	0.28	1.0	4.0	U
91-20-3	Naphthalene	1.0	0.21	1.0	4.0	U
88-74-4	2-Nitroaniline	1.0	0.33	1.0	4.0	U
99-09-2	3-Nitroaniline	1.0	0.66	1.0	4.0	U
100-01-6	4-Nitroaniline	3.0	0.87	3.0	10	U
98-95-3	Nitrobenzene	1.0	0.26	1.0	4.0	U
62-75-9	N-Nitrosodimethylamine	1.0	0.61	1.0	4.0	U
621-64-7	N-Nitrosodi-N-propylamine	2.0	1.3	2.0	4.0	U
86-30-6	N-Nitrosodiphenylamine	1.0	0.44	1.0	4.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0982-BLK1	File ID:	10FEB020.D
Prepared:	02/08/17 22:00	Preparation:	EPA 3510B	Initial/Final:	1000 ml / 1 ml
Analyzed:	02/10/17 16:51	Instrument:	MS-B2		
Batch:	B[B0982	Sequence:	1702425	Calibration:	1702018

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
85-01-8	Phenanthrene	1.0	0.20	1.0	4.0	U
129-00-0	Pyrene	1.0	0.26	1.0	4.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	0.27	1.0	4.0	U
59-50-7	4-Chloro-3-methylphenol	3.0	0.40	3.0	10	U
95-57-8	2-Chlorophenol	1.0	0.37	1.0	4.0	U
120-83-2	2,4-Dichlorophenol	1.0	0.43	1.0	4.0	U
105-67-9	2,4-Dimethylphenol	1.0	0.20	1.0	4.0	U
534-52-1	4,6-Dinitro-2-methylphenol	6.0	0.34	6.0	20	U
51-28-5	2,4-Dinitrophenol	6.0	0.20	6.0	20	U
95-48-7	2-Methylphenol	1.0	1.0	1.0	4.0	U
15831-10-4	3- & 4-Methylphenol	2.0	1.6	2.0	4.0	U
88-75-5	2-Nitrophenol	1.0	0.28	1.0	4.0	U
100-02-7	4-Nitrophenol	1.0	0.73	1.0	4.0	U
87-86-5	Pentachlorophenol	6.0	0.79	6.0	20	U
108-95-2	Phenol	1.0	0.20	1.0	4.0	U
95-95-4	2,4,5-Trichlorophenol	3.0	0.31	3.0	10	U
88-06-2	2,4,6-Trichlorophenol	3.0	0.60	3.0	10	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorophenol (Surrogate)	40.000	15.000	37.5	19 - 119	
Phenol-d5 (Surrogate)	40.000	11.260	28.2	10 - 115	
Nitrobenzene-d5 (Surrogate)	40.000	32.200	80.5	44 - 120	
2-Fluorobiphenyl (Surrogate)	40.000	49.240	123	44 - 119	*
2,4,6-Tribromophenol (Surrogate)	40.000	27.380	68.4	43 - 140	
p-Terphenyl-d14 (Surrogate)	20.000	15.090	75.4	50 - 134	

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Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0982-BLK1	File ID:	10FEB020.D
Prepared:	02/08/17 22:00	Preparation:	EPA 3510B	Initial/Final:	1000 ml / 1 ml
Analyzed:	02/10/17 16:51	Instrument:	MS-B2		
Batch:	B[B0982	Sequence:	1702425	Calibration:	1702018

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Phenanthrene-d10 (IS)	1235858	10.33	1952836	10.34	
Chrysene-d12 (IS)	577994	14.04	950105	14.07	
Acenaphthene-d10 (IS)	977484	8.85	1345279	8.86	
1,4-Dichlorobenzene-d4 (IS)	754204	5.91	805320	5.92	
Perylene-d12 (IS)	309489	16.06	694912	16.07	*
Naphthalene-d8 (IS)	2398593	7.13	2880420	7.14	

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Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-MS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.98 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Acenaphthene	50.000	ND	36.652	73.3	47 - 122
Acenaphthylene	50.000	ND	36.035	72.1	41 - 130
Anthracene	50.000	ND	38.749	77.5	57 - 123
Benzo[a]anthracene	50.000	ND	37.132	74.3	58 - 125
Benzo[b]fluoranthene	50.000	ND	41.954	83.9	53 - 131
Benzo[k]fluoranthene	50.000	ND	42.042	84.1	57 - 129
Benzo[a]pyrene	50.000	ND	39.053	78.1	54 - 128
Benzo[g,h,i]perylene	50.000	0.99910	32.752	63.5	50 - 134
Benzyl alcohol	50.000	ND	22.912	45.8	31 - 112
Benzyl butyl phthalate	50.000	ND	35.760	71.5	53 - 134
bis(2-Chloroethoxy)methane	50.000	ND	35.182	70.4	48 - 120
bis(2-Chloroethyl) ether	50.000	ND	39.298	78.6	43 - 118
bis(2-Chloroisopropyl)ether	50.000	ND	30.625	61.2	37 - 130
bis(2-Ethylhexyl)phthalate	50.000	ND	37.916	75.8	55 - 135
4-Bromophenyl phenyl ether	50.000	ND	34.780	69.6	55 - 124
4-Chloroaniline	50.000	ND	4.9000	9.80 *	33 - 117
2-Chloronaphthalene	50.000	ND	30.537	61.1	40 - 116
4-Chlorophenyl phenyl ether	50.000	ND	35.486	71.0	53 - 121
Chrysene	50.000	ND	35.153	70.3	59 - 123
Dibenzo[a,h]anthracene	50.000	0.56260	35.221	69.3	51 - 134
Dibenzofuran	50.000	0.29100	31.487	62.4	53 - 118
1,2-Dichlorobenzene	50.000	1.0185	27.793	53.5	32 - 111
1,3-Dichlorobenzene	50.000	ND	26.597	53.2	28 - 110
1,4-Dichlorobenzene	50.000	ND	26.274	52.5	29 - 112
3,3-Dichlorobenzidine	50.000	ND	ND	*	27 - 129

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Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-MS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.98 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Diethyl phthalate	50.000	ND	34.800	69.6	56 - 125
Dimethyl phthalate	50.000	ND	35.770	71.5	45 - 127
Di-n-butyl phthalate	50.000	ND	37.563	75.1	59 - 127
2,4-Dinitrotoluene	50.000	ND	39.318	78.6	57 - 128
2,6-Dinitrotoluene	50.000	ND	32.458	64.9	57 - 124
Di-n-octyl phthalate	50.000	ND	38.210	76.4	51 - 140
Fluoranthene	50.000	ND	38.681	77.4	57 - 128
Fluorene	50.000	ND	35.633	71.3	52 - 124
Hexachlorobenzene	50.000	ND	30.066	60.1	53 - 125
Hexachlorobutadiene	50.000	ND	24.079	48.2	22 - 124
Hexachloroethane	50.000	ND	31.919	63.8	21 - 115
Indeno[1,2,3-cd]pyrene	50.000	0.92150	34.819	67.8	52 - 134
Isophorone	50.000	ND	33.732	67.5	42 - 124
2-Methylnaphthalene	50.000	ND	27.695	55.4	40 - 121
Naphthalene	50.000	ND	36.054	72.1	40 - 121
2-Nitroaniline	50.000	ND	38.191	76.4	55 - 127
3-Nitroaniline	50.000	ND	20.894	41.8	41 - 128
4-Nitroaniline	50.000	ND	33.477	67.0	35 - 120
Nitrobenzene	50.000	ND	29.812	59.6	45 - 121
N-Nitrosodimethylamine	50.000	ND	30.292	60.6	25 - 110
N-Nitrosodi-N-propylamine	50.000	ND	31.703	63.4	49 - 119
N-Nitrosodiphenylamine	50.000	ND	36.142	72.3	51 - 123
Phenanthrene	50.000	ND	37.642	75.3	59 - 120
Pyrene	50.000	ND	38.592	77.2	57 - 126
1,2,4-Trichlorobenzene	50.000	ND	27.195	54.4	29 - 116

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-MS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.98 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
4-Chloro-3-methylphenol	100.00	ND	66.062	66.1	52 - 119
2-Chlorophenol	100.00	ND	71.011	71.0	38 - 117
2,4-Dichlorophenol	100.00	ND	69.423	69.4	47 - 121
2,4-Dimethylphenol	100.00	ND	70.570	70.6	31 - 124
4,6-Dinitro-2-methylphenol	100.00	ND	75.881	75.9	44 - 137
2,4-Dinitrophenol	100.00	ND	73.696	73.7	23 - 143
2-Methylphenol	100.00	ND	65.160	65.2	30 - 117
3- & 4-Methylphenol	200.00	ND	98.451	49.2	29 - 110
2-Nitrophenol	100.00	ND	74.137	74.1	47 - 123
4-Nitrophenol	100.00	ND	40.464	40.5	1 - 125
Pentachlorophenol	100.00	ND	72.853	72.9	35 - 138
Phenol	100.00	ND	43.551	43.6	1 - 115
2,4,5-Trichlorophenol	100.00	ND	71.579	71.6	53 - 123
2,4,6-Trichlorophenol	100.00	ND	67.747	67.7	50 - 125

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	50.000	35.897	71.8	2.08	30	47 - 122
Acenaphthylene	50.000	36.521	73.0	1.34	30	41 - 130
Anthracene	50.000	40.313	80.6	3.96	30	57 - 123
Benzo[a]anthracene	50.000	37.006	74.0	0.340	30	58 - 125
Benzo[b]fluoranthene	50.000	38.828	77.7	7.74	30	53 - 131
Benzo[k]fluoranthene	50.000	41.253	82.5	1.89	30	57 - 129
Benzo[a]pyrene	50.000	37.679	75.4	3.58	30	54 - 128
Benzo[g,h,i]perylene	50.000	28.621	55.2	13.5	30	50 - 134

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-MSD1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.99 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzyl alcohol	50.000	26.126	52.3	13.1	30	31 - 112
Benzyl butyl phthalate	50.000	37.105	74.2	3.69	30	53 - 134
bis(2-Chloroethoxy)methane	50.000	35.274	70.5	0.260	30	48 - 120
bis(2-Chloroethyl) ether	50.000	39.946	79.9	1.64	30	43 - 118
bis(2-Chloroisopropyl)ether	50.000	31.680	63.4	3.39	30	37 - 130
bis(2-Ethylhexyl)phthalate	50.000	40.689	81.4	7.06	30	55 - 135
4-Bromophenyl phenyl ether	50.000	34.561	69.1	0.633	30	55 - 124
4-Chloroaniline	50.000	17.701	35.4	113 *	30	33 - 117
2-Chloronaphthalene	50.000	29.235	58.5	4.36	30	40 - 116
4-Chlorophenyl phenyl ether	50.000	36.531	73.1	2.90	30	53 - 121
Chrysene	50.000	37.204	74.4	5.67	30	59 - 123
Dibenzo[a,h]anthracene	50.000	31.423	61.7	11.4	30	51 - 134
Dibenzofuran	50.000	31.423	62.3	0.206	30	53 - 118
1,2-Dichlorobenzene	50.000	26.918	51.8	3.20	30	32 - 111
1,3-Dichlorobenzene	50.000	25.136	50.3	5.65	30	28 - 110
1,4-Dichlorobenzene	50.000	25.443	50.9	3.21	30	29 - 112
3,3-Dichlorobenzidine	50.000	ND	*		30	27 - 129
Diethyl phthalate	50.000	37.620	75.2	7.79	30	56 - 125
Dimethyl phthalate	50.000	37.085	74.2	3.61	30	45 - 127
Di-n-butyl phthalate	50.000	38.075	76.2	1.35	30	59 - 127
2,4-Dinitrotoluene	50.000	40.610	81.2	3.23	30	57 - 128
2,6-Dinitrotoluene	50.000	34.937	69.9	7.36	30	57 - 124
Di-n-octyl phthalate	50.000	36.699	73.4	4.03	30	51 - 140
Fluoranthene	50.000	40.422	80.8	4.40	30	57 - 128
Fluorene	50.000	36.878	73.8	3.43	30	52 - 124
Hexachlorobenzene	50.000	30.957	61.9	2.92	30	53 - 125

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-MSD1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.99 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobutadiene	50.000	23.305	46.6	3.27	30	22 - 124
Hexachloroethane	50.000	28.918	57.8	9.86	30	21 - 115
Indeno[1,2,3-cd]pyrene	50.000	31.769	61.7	9.16	30	52 - 134
Isophorone	50.000	35.194	70.4	4.24	30	42 - 124
2-Methylnaphthalene	50.000	29.304	58.6	5.65	30	40 - 121
Naphthalene	50.000	34.462	68.9	4.52	30	40 - 121
2-Nitroaniline	50.000	41.679	83.4	8.74	30	55 - 127
3-Nitroaniline	50.000	33.284	66.6	45.7 *	30	41 - 128
4-Nitroaniline	50.000	33.284	66.6	0.578	30	35 - 120
Nitrobenzene	50.000	30.136	60.3	1.08	30	45 - 121
N-Nitrosodimethylamine	50.000	30.650	61.3	1.18	30	25 - 110
N-Nitrosodi-N-propylamine	50.000	32.918	65.8	3.76	30	49 - 119
N-Nitrosodiphenylamine	50.000	38.412	76.8	6.09	30	51 - 123
Phenanthrene	50.000	37.333	74.7	0.824	30	59 - 120
Pyrene	50.000	39.244	78.5	1.67	30	57 - 126
1,2,4-Trichlorobenzene	50.000	26.928	53.9	0.987	30	29 - 116
4-Chloro-3-methylphenol	100.00	75.181	75.2	12.9	30	52 - 119
2-Chlorophenol	100.00	72.735	72.7	2.40	30	38 - 117
2,4-Dichlorophenol	100.00	71.438	71.4	2.86	30	47 - 121
2,4-Dimethylphenol	100.00	72.656	72.7	2.91	30	31 - 124
4,6-Dinitro-2-methylphenol	100.00	83.417	83.4	9.46	30	44 - 137
2,4-Dinitrophenol	100.00	80.675	80.7	9.04	30	23 - 143
2-Methylphenol	100.00	69.429	69.4	6.34	30	30 - 117
3- & 4-Methylphenol	200.00	110.70	55.4	11.7	30	29 - 110
2-Nitrophenol	100.00	73.171	73.2	1.31	30	47 - 123
4-Nitrophenol	100.00	44.986	45.0	10.6	30	1 - 125

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-MSD1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.99 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Pentachlorophenol	100.00	76.012	76.0	4.24	30	35 - 138
Phenol	100.00	49.203	49.2	12.2	30	1 - 115
2,4,5-Trichlorophenol	100.00	73.438	73.4	2.56	30	53 - 123
2,4,6-Trichlorophenol	100.00	68.449	68.4	1.03	30	50 - 125

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

* Values outside of QC limits

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Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-BS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.95 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Acenaphthene	50.000	41.192	82.4	47 - 122
Acenaphthylene	50.000	41.857	83.7	41 - 130
Anthracene	50.000	42.646	85.3	57 - 123
Benzo[a]anthracene	50.000	36.622	73.2	58 - 125
Benzo[b]fluoranthene	50.000	36.100	72.2	53 - 131
Benzo[k]fluoranthene	50.000	38.256	76.5	57 - 129
Benzo[a]pyrene	50.000	35.967	71.9	54 - 128
Benzo[g,h,i]perylene	50.000	29.270	58.5	50 - 134
Benzyl alcohol	50.000	22.506	45.0	31 - 112
Benzyl butyl phthalate	50.000	36.993	74.0	53 - 134
bis(2-Chloroethoxy)methane	50.000	38.352	76.7	48 - 120
bis(2-Chloroethyl) ether	50.000	41.059	82.1	43 - 118
bis(2-Chloroisopropyl)ether	50.000	35.292	70.6	37 - 130
bis(2-Ethylhexyl)phthalate	50.000	32.424	64.8	55 - 135
4-Bromophenyl phenyl ether	50.000	38.912	77.8	55 - 124
4-Chloroaniline	50.000	7.2865	14.6 *	33 - 117
2-Chloronaphthalene	50.000	34.941	69.9	40 - 116
4-Chlorophenyl phenyl ether	50.000	39.662	79.3	53 - 121
Chrysene	50.000	35.302	70.6	59 - 123
Dibenzo[a,h]anthracene	50.000	30.324	60.6	51 - 134
Dibenzofuran	50.000	35.596	71.2	53 - 118
1,2-Dichlorobenzene	50.000	29.640	59.3	32 - 111
1,3-Dichlorobenzene	50.000	29.070	58.1	28 - 110
1,4-Dichlorobenzene	50.000	28.348	56.7	29 - 112

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LCS RECOVERY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-BS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.95 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
3,3-Dichlorobenzidine	50.000	29.650	59.3	27 - 129
Diethyl phthalate	50.000	39.168	78.3	56 - 125
Dimethyl phthalate	50.000	38.304	76.6	45 - 127
Di-n-butyl phthalate	50.000	39.159	78.3	59 - 127
2,4-Dinitrotoluene	50.000	42.228	84.5	57 - 128
2,6-Dinitrotoluene	50.000	36.955	73.9	57 - 124
Di-n-octyl phthalate	50.000	32.110	64.2	51 - 140
Fluoranthene	50.000	40.290	80.6	57 - 128
Fluorene	50.000	40.954	81.9	52 - 124
Hexachlorobenzene	50.000	32.281	64.6	53 - 125
Hexachlorobutadiene	50.000	22.572	45.1	22 - 124
Hexachloroethane	50.000	25.992	52.0	21 - 115
Indeno[1,2,3-cd]pyrene	50.000	31.170	62.3	52 - 134
Isophorone	50.000	36.993	74.0	42 - 124
2-Methylnaphthalene	50.000	32.471	64.9	40 - 121
Naphthalene	50.000	39.216	78.4	40 - 121
2-Nitroaniline	50.000	44.184	88.4	55 - 127
3-Nitroaniline	50.000	25.346	50.7	41 - 128
4-Nitroaniline	50.000	38.636	77.3	35 - 120
Nitrobenzene	50.000	32.300	64.6	45 - 121
N-Nitrosodimethylamine	50.000	26.239	52.5	25 - 110
N-Nitrosodi-N-propylamine	50.000	36.680	73.4	49 - 119
N-Nitrosodiphenylamine	50.000	41.553	83.1	51 - 123
Phenanthrene	50.000	39.986	80.0	59 - 120

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0982
Laboratory ID: B[B0982-BS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 0.95 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Pyrene	50.000	38.608	77.2	57 - 126
1,2,4-Trichlorobenzene	50.000	29.308	58.6	29 - 116
4-Chloro-3-methylphenol	100.00	69.027	69.0	52 - 119
2-Chlorophenol	100.00	67.136	67.1	38 - 117
2,4-Dichlorophenol	100.00	70.338	70.3	47 - 121
2,4-Dimethylphenol	100.00	66.168	66.2	31 - 124
4,6-Dinitro-2-methylphenol	100.00	80.503	80.5	44 - 137
2,4-Dinitrophenol	100.00	74.670	74.7	23 - 143
2-Methylphenol	100.00	59.632	59.6	30 - 117
3- & 4-Methylphenol	200.00	88.863	44.4	29 - 110
2-Nitrophenol	100.00	76.608	76.6	47 - 123
4-Nitrophenol	100.00	33.820	33.8	1 - 125
Pentachlorophenol	100.00	69.863	69.9	35 - 138
Phenol	100.00	31.778	31.8	1 - 115
2,4,5-Trichlorophenol	100.00	77.881	77.9	53 - 123
2,4,6-Trichlorophenol	100.00	74.993	75.0	50 - 125

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702000	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1702000-TUN1	08FEB001.D	02/08/17 07:04
Cal Standard	1702000-CAL5	08FEB003.D	02/08/17 12:04
Cal Standard	1702000-CAL4	08FEB004.D	02/08/17 12:29
Cal Standard	1702000-CAL3	08FEB005.D	02/08/17 12:55
Cal Standard	1702000-CAL2	08FEB006.D	02/08/17 13:20
Cal Standard	1702000-CAL1	08FEB007.D	02/08/17 13:46
Cal Standard	1702000-CAL6	08FEB008.D	02/08/17 14:11
MS Tune	1702000-TUN2	08FEB009.D	02/08/17 14:37
Initial Cal Check	1702000-ICV1	08FEB010.D	02/08/17 15:02
Initial Cal Blank	1702000-ICB1	08FEB011.D	02/08/17 15:28

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702425	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1702425-TUN1	10FEB002.D	02/10/17 09:14
Calibration Check	1702425-CCV1	10FEB003.D	02/10/17 09:40
Calibration Blank	1702425-CCB1	10FEB004.D	02/10/17 10:06
Blank	B[B0982-BLK1	10FEB020.D	02/10/17 16:51
LCS	B[B0982-BS1	10FEB021.D	02/10/17 17:15
M051A_170206	B[B0982-MS1	10FEB022.D	02/10/17 17:40
M051A_170206	B[B0982-MSD1	10FEB023.D	02/10/17 18:05
M041E_170206	1703278-03	10FEB025.D	02/10/17 18:55
M051A_170206	1703278-04	10FEB026.D	02/10/17 19:21
Calibration Check	1702425-CCV2	10FEB027.D	02/10/17 19:46
Calibration Blank	1702425-CCB2	10FEB028.D	02/10/17 20:11

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702536	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1702536-TUN1	13FEB001.D	02/13/17 06:43
Calibration Check	1702536-CCV1	13FEB002.D	02/13/17 07:10
Calibration Blank	1702536-CCB1	13FEB003.D	02/13/17 07:35
EB07_170206	1703278-02RE1	13FEB021.D	02/13/17 15:16
Calibration Check	1702536-CCV2	13FEB022.D	02/13/17 15:42
Calibration Blank	1702536-CCB2	13FEB023.D	02/13/17 16:07

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	08FEB001.D	Injection Date:	02/08/17
Instrument ID:	MS-B2	Injection Time:	07:04
Sequence:	1702000	Lab Sample ID:	1702000-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	46.3	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	65.4	PASS
Mass 70	Less than 2% of Mass 69	0.384	PASS
Mass 127	40 - 60% of Mass 198	46.5	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	5.39	PASS
Mass 275	10 - 30% of Mass 198	17.2	PASS
Mass 365	1 - 100% of Mass 198	1.73	PASS
Mass 441	0.01 - 100% of Mass 443	65.8	PASS
Mass 442	40 - 100% of Mass 198	55.4	PASS
Mass 443	17 - 23% of Mass 442	22.8	PASS

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Project Number: 5023146096
Project Manager: Kelli Miller

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	08FEB009.D	Injection Date:	02/08/17
Instrument ID:	MS-B2	Injection Time:	14:37
Sequence:	1702000	Lab Sample ID:	1702000-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	42.7	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	62.5	PASS
Mass 70	Less than 2% of Mass 69	0.47	PASS
Mass 127	40 - 60% of Mass 198	46.1	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	6.94	PASS
Mass 275	10 - 30% of Mass 198	17	PASS
Mass 365	1 - 100% of Mass 198	1.69	PASS
Mass 441	0.01 - 100% of Mass 443	79.8	PASS
Mass 442	40 - 100% of Mass 198	58.6	PASS
Mass 443	17 - 23% of Mass 442	19.4	PASS

AMEC Environmental & Infrastructure
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Project Number: 5023146096
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MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	10FEB002.D	Injection Date:	02/10/17
Instrument ID:	MS-B2	Injection Time:	09:14
Sequence:	1702425	Lab Sample ID:	1702425-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	45.1	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	65.3	PASS
Mass 70	Less than 2% of Mass 69	0	PASS
Mass 127	40 - 60% of Mass 198	45.1	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	6.77	PASS
Mass 275	10 - 30% of Mass 198	15.9	PASS
Mass 365	1 - 100% of Mass 198	1.41	PASS
Mass 441	0.01 - 100% of Mass 443	78.8	PASS
Mass 442	40 - 100% of Mass 198	49.1	PASS
Mass 443	17 - 23% of Mass 442	20.7	PASS

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Lab File ID:	13FEB001.D	Injection Date:	02/13/17
Instrument ID:	MS-B2	Injection Time:	06:43
Sequence:	1702536	Lab Sample ID:	1702536-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	46.4	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	70.7	PASS
Mass 70	Less than 2% of Mass 69	0.752	PASS
Mass 127	40 - 60% of Mass 198	50.3	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	7.25	PASS
Mass 275	10 - 30% of Mass 198	15	PASS
Mass 365	1 - 100% of Mass 198	1.35	PASS
Mass 441	0.01 - 100% of Mass 443	81.4	PASS
Mass 442	40 - 100% of Mass 198	50	PASS
Mass 443	17 - 23% of Mass 442	18.2	PASS

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	08FEB010.D	Calibration Date:	02/08/17 12:04
Sequence:	1702000	Injection Date:	02/08/17
Lab Sample ID:	1702000-ICV1	Injection Time:	15:02

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Acenaphthene	A	50000	54180	1.176551	1.274963		8.4	20
Acenaphthylene	A	50000	54690	1.827542	1.999103		9.4	20
Anthracene	A	50000	50550	0.9178026	0.9278432		1.1	20
Benzo[a]anthracene	A	50000	47620	1.170334	1.114683		-4.8	20
Benzo[b]fluoranthene	A	50000	48300	1.136499	1.097872		-3.4	20
Benzo[k]fluoranthene	A	50000	52220	1.005823	1.050444		4.4	20
Benzo[a]pyrene	A	50000	47620	0.9997622	0.9522434		-4.8	20
Benzo[g,h,i]perylene	L	50000	47770	0.9164535	0.8172081		-4.5	20
Benzyl alcohol	A	50000	49700	1.173642	1.166641		-0.6	20
Benzyl butyl phthalate	A	50000	45230	1.275387	1.15367		-9.5	20
bis(2-Chloroethoxy)methane	A	50000	50780	0.5678905	0.5767434		1.6	20
bis(2-Chloroethyl) ether	A	50000	52630	1.690645	1.779706		5.3	20
bis(2-Chloroisopropyl)ether	A	50000	50470	2.647084	2.671867		0.9	20
bis(2-Ethylhexyl)phthalate	A	50000	46000	1.622389	1.492524		-8.0	20
4-Bromophenyl phenyl ether	A	50000	48920	0.2102125	0.2056657		-2.2	20
4-Chloroaniline	A	50000	52500	0.3723063	0.3909344		5.0	20
2-Chloronaphthalene	A	50000	55830	1.114578	1.24452		11.7	20
4-Chlorophenyl phenyl ether	A	50000	53850	0.6135306	0.6607952		7.7	20
Chrysene	A	50000	50680	1.069676	1.084238		1.4	20
Dibenzo[a,h]anthracene	L	50000	46860	0.9435208	0.8276345		-6.3	20
Dibenzofuran	A	50000	54180	1.433713	1.553527		8.4	20
1,2-Dichlorobenzene	A	50000	50210	1.405525	1.411354		0.4	20
1,3-Dichlorobenzene	A	50000	50880	1.462336	1.48799		1.8	20

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CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	08FEB010.D	Calibration Date:	02/08/17 12:04
Sequence:	1702000	Injection Date:	02/08/17
Lab Sample ID:	1702000-ICV1	Injection Time:	15:02

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
1,4-Dichlorobenzene	A	50000	50930	1.510774	1.538938		1.9	20	
3,3-Dichlorobenzidine	Q	50000	54990	0.339073	0.3685786		10.0	20	
Diethyl phthalate	A	50000	54930	1.376383	1.512163		9.9	20	
Dimethyl phthalate	Q	50000	53480	1.909191	1.36439		7.0	20	
Di-n-butyl phthalate	A	50000	52280	1.454437	1.52072		4.6	20	
2,4-Dinitrotoluene	Q	50000	55710	0.3460065	0.3711863		11.4	20	
2,6-Dinitrotoluene	A	50000	54820	0.2851814	0.3126505		9.6	20	
Di-n-octyl phthalate	A	50000	49930	2.273762	2.270677		-0.1	20	
Fluoranthene	A	50000	53830	0.8209527	0.8838263		7.7	20	
Fluorene	A	50000	54220	1.152504	1.249661		8.4	20	
Hexachlorobenzene	A	50000	48240	0.2682213	0.2587991		-3.5	20	
Hexachlorobutadiene	A	50000	50830	0.1831598	0.1862142		1.7	20	
Hexachloroethane	A	50000	49770	0.6966021	0.6933725		-0.5	20	
Indeno[1,2,3-cd]pyrene	L	50000	46900	1.077617	0.9469965		-6.2	20	
Isophorone	A	50000	49380	0.8545704	0.8439166		-1.2	20	
2-Methylnaphthalene	A	50000	49590	0.6103452	0.6052948		-0.8	20	
Naphthalene	A	50000	52150	0.9435535	0.9840727		4.3	20	
2-Nitroaniline	A	50000	55710	0.4262861	0.4749584		11.4	20	
3-Nitroaniline	Q	50000	54460	0.2826496	0.3058209		8.9	20	
4-Nitroaniline	A	50000	61430	0.2176045	0.267343		22.9	20	*
Nitrobenzene	A	50000	51460	0.4300719	0.4426551		2.9	20	
N-Nitrosodimethylamine	Q	50000	56260	0.8400613	0.7596172		12.5	20	
N-Nitrosodi-N-propylamine	A	50000	49220	1.076653	1.05978	0.05	-1.6	20	

AMEC Environmental & Infrastructure
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Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	08FEB010.D	Calibration Date:	02/08/17 12:04
Sequence:	1702000	Injection Date:	02/08/17
Lab Sample ID:	1702000-ICV1	Injection Time:	15:02

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
N-Nitrosodiphenylamine	A	50000	53860	0.7419549	0.7992368		7.7	20
Phenanthrene	A	50000	50220	0.9937729	0.998244		0.4	20
Pyrene	A	50000	44720	2.138067	1.912481		-10.6	20
1,2,4-Trichlorobenzene	A	50000	51550	0.2869532	0.295857		3.1	20
4-Chloro-3-methylphenol	A	50000	50470	0.3177075	0.3207065		0.9	20
2-Chlorophenol	A	50000	50550	1.374604	1.389741		1.1	20
2,4-Dichlorophenol	A	50000	49490	0.2699675	0.267237		-1.0	20
2,4-Dimethylphenol	Q	50000	56070	0.3857059	0.4250326		12.1	20
4,6-Dinitro-2-methylphenol	Q	50000	61330	0.1761238	0.2355072		22.7	20 *
2,4-Dinitrophenol	Q	50000	58990	0.1462143	0.1940101	0.05	18.0	20
2-Methylphenol	A	50000	51040	1.371959	1.400375		2.1	20
3- & 4-Methylphenol	A	100000	100510	1.480258	1.487763		0.5	20
2-Nitrophenol	A	50000	50340	0.2071894	0.2085965		0.7	20
4-Nitrophenol	Q	50000	55190	0.1127797	0.1347563	0.05	10.4	20
Pentachlorophenol	Q	50000	54330	0.1230338	0.1411211		8.7	20
Phenol	A	50000	49490	2.058745	2.037557		-1.0	20
2,4,5-Trichlorophenol	A	50000	58220	0.3976562	0.4630526		16.4	20
2,4,6-Trichlorophenol	A	50000	51810	0.4103541	0.4251976		3.6	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	10FEB003.D	Calibration Date:	02/08/17 12:04
Sequence:	1702425	Injection Date:	02/10/17
Lab Sample ID:	1702425-CCV1	Injection Time:	09:40

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	50000	50220	1.176551	1.181781		0.4	20
Acenaphthylene	A	50000	50980	1.827542	1.863196		2.0	20
Anthracene	A	50000	49990	0.9178026	0.9176566		-0.02	20
Benzo[a]anthracene	A	50000	49180	1.170334	1.151029		-1.6	20
Benzo[b]fluoranthene	A	50000	48220	1.136499	1.095937		-3.6	20
Benzo[k]fluoranthene	A	50000	52190	1.005823	1.049843		4.4	20
Benzo[a]pyrene	A	50000	47340	0.9997622	0.9466292		-5.3	20
Benzo[g,h,i]perylene	L	50000	41480	0.9164535	0.7079699		-17.0	20
Benzyl alcohol	A	50000	49090	1.173642	1.152381		-1.8	20
Benzyl butyl phthalate	A	50000	41590	1.275387	1.060935		-16.8	20
bis(2-Chloroethoxy)methane	A	50000	48420	0.5678905	0.5499451		-3.2	20
bis(2-Chloroethyl) ether	A	50000	49470	1.690645	1.672705		-1.1	20
bis(2-Chloroisopropyl)ether	A	50000	44050	2.647084	2.332085		-11.9	20
bis(2-Ethylhexyl)phthalate	A	50000	43220	1.622389	1.402417		-13.6	20
4-Bromophenyl phenyl ether	A	50000	46790	0.2102125	0.1967133		-6.4	20
4-Chloroaniline	A	50000	49770	0.3723063	0.3705801		-0.5	20
2-Chloronaphthalene	A	50000	51180	1.114578	1.140976		2.4	20
4-Chlorophenyl phenyl ether	A	50000	49680	0.6135306	0.6096371		-0.6	20
Chrysene	A	50000	52080	1.069676	1.114207		4.2	20
Dibenzo[a,h]anthracene	L	50000	41330	0.9435208	0.7295727		-17.3	20
Dibenzofuran	A	50000	51330	1.433713	1.47183		2.7	20
1,2-Dichlorobenzene	A	50000	52560	1.405525	1.477535		5.1	20
1,3-Dichlorobenzene	A	50000	51510	1.462336	1.506474		3.0	20

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	10FEB003.D	Calibration Date:	02/08/17 12:04
Sequence:	1702425	Injection Date:	02/10/17
Lab Sample ID:	1702425-CCV1	Injection Time:	09:40

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
1,4-Dichlorobenzene	A	50000	51900	1.510774	1.568143		3.8	20	
3,3-Dichlorobenzidine	Q	50000	56860	0.339073	0.3855473		13.7	20	
Diethyl phthalate	A	50000	50920	1.376383	1.401757		1.8	20	
Dimethyl phthalate	Q	50000	53290	1.909191	1.359214		6.6	20	
Di-n-butyl phthalate	A	50000	45860	1.454437	1.33409		-8.3	20	
2,4-Dinitrotoluene	Q	50000	59190	0.3460065	0.4027084		18.4	20	
2,6-Dinitrotoluene	A	50000	53820	0.2851814	0.306949		7.6	20	
Di-n-octyl phthalate	A	50000	45380	2.273762	2.063538		-9.2	20	
Fluoranthene	A	50000	51250	0.8209527	0.8415179		2.5	20	
Fluorene	A	50000	51340	1.152504	1.183312		2.7	20	
Hexachlorobenzene	A	50000	47950	0.2682213	0.2572341		-4.1	20	
Hexachlorobutadiene	A	50000	49940	0.1831598	0.1829569		-0.1	20	
Hexachloroethane	A	50000	49220	0.6966021	0.6856991		-1.6	20	
Indeno[1,2,3-cd]pyrene	L	50000	41420	1.077617	0.8348695		-17.2	20	
Isophorone	A	50000	47200	0.8545704	0.8067201		-5.6	20	
2-Methylnaphthalene	A	50000	50910	0.6103452	0.6215121		1.8	20	
Naphthalene	A	50000	50450	0.9435535	0.951967		0.9	20	
2-Nitroaniline	A	50000	54220	0.4262861	0.4622773		8.4	20	
3-Nitroaniline	Q	50000	58730	0.2826496	0.3376097		17.5	20	
4-Nitroaniline	A	50000	65300	0.2176045	0.2841891		30.6	20	*
Nitrobenzene	A	50000	46610	0.4300719	0.4008801		-6.8	20	
N-Nitrosodimethylamine	Q	50000	52340	0.8400613	0.6936731		4.7	20	
N-Nitrosodi-N-propylamine	A	50000	45950	1.076653	0.9894402	0.05	-8.1	20	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	10FEB003.D	Calibration Date:	02/08/17 12:04
Sequence:	1702425	Injection Date:	02/10/17
Lab Sample ID:	1702425-CCV1	Injection Time:	09:40

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
N-Nitrosodiphenylamine	A	50000	52980	0.7419549	0.7861263		6.0	20
Phenanthrene	A	50000	48430	0.9937729	0.9625689		-3.1	20
Pyrene	A	50000	43100	2.138067	1.842969		-13.8	20
1,2,4-Trichlorobenzene	A	50000	49760	0.2869532	0.2855525		-0.5	20
4-Chloro-3-methylphenol	A	50000	52150	0.3177075	0.3313772		4.3	20
2-Chlorophenol	A	50000	53820	1.374604	1.479647		7.6	20
2,4-Dichlorophenol	A	50000	51800	0.2699675	0.2797092		3.6	20
2,4-Dimethylphenol	Q	50000	54430	0.3857059	0.4088557		8.9	20
4,6-Dinitro-2-methylphenol	Q	50000	66300	0.1761238	0.2638775		32.6	20 *
2,4-Dinitrophenol	Q	50000	65270	0.1462143	0.2274175	0.05	30.5	20 *
2-Methylphenol	A	50000	51000	1.371959	1.399347		2.0	20
3- & 4-Methylphenol	A	100000	104040	1.480258	1.540066		4.0	20
2-Nitrophenol	A	50000	49920	0.2071894	0.206849		-0.2	20
4-Nitrophenol	Q	50000	58900	0.1127797	0.1463286	0.05	17.8	20
Pentachlorophenol	Q	50000	56800	0.1230338	0.149876		13.6	20
Phenol	A	50000	48430	2.058745	1.994215		-3.1	20
2,4,5-Trichlorophenol	A	50000	53720	0.3976562	0.427244		7.4	20
2,4,6-Trichlorophenol	A	50000	50200	0.4103541	0.4120216		0.4	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	10FEB027.D	Calibration Date:	02/08/17 12:04
Sequence:	1702425	Injection Date:	02/10/17
Lab Sample ID:	1702425-CCV2	Injection Time:	19:46

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Acenaphthene	A	50000	50150	1.176551	1.18018		0.3	20	
Acenaphthylene	A	50000	50290	1.827542	1.838262		0.6	20	
Anthracene	A	50000	49620	0.9178026	0.9108582		-0.8	20	
Benzo[a]anthracene	A	50000	47860	1.170334	1.120198		-4.3	20	
Benzo[b]fluoranthene	A	50000	50880	1.136499	1.156525		1.8	20	
Benzo[k]fluoranthene	A	50000	53120	1.005823	1.068675		6.2	20	
Benzo[a]pyrene	A	50000	49030	0.9997622	0.9802855		-1.9	20	
Benzo[g,h,i]perylene	L	50000	38390	0.9164535	0.6542745		-23.2	20	*
Benzyl alcohol	A	50000	42170	1.173642	0.9899053		-15.7	20	
Benzyl butyl phthalate	A	50000	45590	1.275387	1.162867		-8.8	20	
bis(2-Chloroethoxy)methane	A	50000	48990	0.5678905	0.5564266		-2.0	20	
bis(2-Chloroethyl) ether	A	50000	52450	1.690645	1.773434		4.9	20	
bis(2-Chloroisopropyl)ether	A	50000	42310	2.647084	2.239965		-15.4	20	
bis(2-Ethylhexyl)phthalate	A	50000	47440	1.622389	1.539237		-5.1	20	
4-Bromophenyl phenyl ether	A	50000	46090	0.2102125	0.1937939		-7.8	20	
4-Chloroaniline	A	50000	49740	0.3723063	0.3704027		-0.5	20	
2-Chloronaphthalene	A	50000	50850	1.114578	1.133422		1.7	20	
4-Chlorophenyl phenyl ether	A	50000	51700	0.6135306	0.6343696		3.4	20	
Chrysene	A	50000	47430	1.069676	1.014784		-5.1	20	
Dibenzo[a,h]anthracene	L	50000	39460	0.9435208	0.696324		-21.1	20	*
Dibenzofuran	A	50000	51260	1.433713	1.469745		2.5	20	
1,2-Dichlorobenzene	A	50000	51480	1.405525	1.447263		3.0	20	
1,3-Dichlorobenzene	A	50000	52230	1.462336	1.527627		4.5	20	

AMEC Environmental & Infrastructure
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CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	10FEB027.D	Calibration Date:	02/08/17 12:04
Sequence:	1702425	Injection Date:	02/10/17
Lab Sample ID:	1702425-CCV2	Injection Time:	19:46

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
1,4-Dichlorobenzene	A	50000	51330	1.510774	1.550843		2.7	20	
3,3-Dichlorobenzidine	Q	50000	49200	0.339073	0.3182509		-1.6	20	
Diethyl phthalate	A	50000	49070	1.376383	1.350733		-1.9	20	
Dimethyl phthalate	Q	50000	49470	1.909191	1.254539		-1.1	20	
Di-n-butyl phthalate	A	50000	44800	1.454437	1.303173		-10.4	20	
2,4-Dinitrotoluene	Q	50000	58940	0.3460065	0.4004332		17.9	20	
2,6-Dinitrotoluene	A	50000	52700	0.2851814	0.3005816		5.4	20	
Di-n-octyl phthalate	A	50000	47340	2.273762	2.152643		-5.3	20	
Fluoranthene	A	50000	47620	0.8209527	0.7818557		-4.8	20	
Fluorene	A	50000	52280	1.152504	1.205047		4.6	20	
Hexachlorobenzene	A	50000	47020	0.2682213	0.2522507		-6.0	20	
Hexachlorobutadiene	A	50000	49620	0.1831598	0.1817639		-0.8	20	
Hexachloroethane	A	50000	49320	0.6966021	0.6871948		-1.4	20	
Indeno[1,2,3-cd]pyrene	L	50000	39430	1.077617	0.7939572		-21.1	20	*
Isophorone	A	50000	47130	0.8545704	0.805553		-5.7	20	
2-Methylnaphthalene	A	50000	50430	0.6103452	0.6155946		0.9	20	
Naphthalene	A	50000	51510	0.9435535	0.9720799		3.0	20	
2-Nitroaniline	A	50000	55560	0.4262861	0.4736611		11.1	20	
3-Nitroaniline	Q	50000	58870	0.2826496	0.338671		17.7	20	
4-Nitroaniline	A	50000	64880	0.2176045	0.2823591		29.8	20	*
Nitrobenzene	A	50000	48070	0.4300719	0.4134421		-3.9	20	
N-Nitrosodimethylamine	Q	50000	54110	0.8400613	0.7231152		8.2	20	
N-Nitrosodi-N-propylamine	A	50000	43460	1.076653	0.9357791	0.05	-13.1	20	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
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CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	10FEB027.D	Calibration Date:	02/08/17 12:04
Sequence:	1702425	Injection Date:	02/10/17
Lab Sample ID:	1702425-CCV2	Injection Time:	19:46

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
N-Nitrosodiphenylamine	A	50000	52110	0.7419549	0.7732019		4.2	20	
Phenanthrene	A	50000	48510	0.9937729	0.9641137		-3.0	20	
Pyrene	A	50000	50560	2.138067	2.16191		1.1	20	
1,2,4-Trichlorobenzene	A	50000	51500	0.2869532	0.2955511		3.0	20	
4-Chloro-3-methylphenol	A	50000	50610	0.3177075	0.3215972		1.2	20	
2-Chlorophenol	A	50000	53000	1.374604	1.456956		6.0	20	
2,4-Dichlorophenol	A	50000	49940	0.2699675	0.2696174		-0.1	20	
2,4-Dimethylphenol	Q	50000	54750	0.3857059	0.4119938		9.5	20	
4,6-Dinitro-2-methylphenol	Q	50000	62760	0.1761238	0.2435306		25.5	20	*
2,4-Dinitrophenol	Q	50000	62690	0.1462143	0.2133554	0.05	25.4	20	*
2-Methylphenol	A	50000	52790	1.371959	1.448646		5.6	20	
3- & 4-Methylphenol	A	100000	101260	1.480258	1.498877		1.3	20	
2-Nitrophenol	A	50000	51600	0.2071894	0.2138345		3.2	20	
4-Nitrophenol	Q	50000	54980	0.1127797	0.1341192	0.05	10.0	20	
Pentachlorophenol	Q	50000	52540	0.1230338	0.1349343		5.1	20	
Phenol	A	50000	52550	2.058745	2.163749		5.1	20	
2,4,5-Trichlorophenol	A	50000	52170	0.3976562	0.4148827		4.3	20	
2,4,6-Trichlorophenol	A	50000	49490	0.4103541	0.4061766		-1.0	20	

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	13FEB002.D	Calibration Date:	02/08/17 12:04
Sequence:	1702536	Injection Date:	02/13/17
Lab Sample ID:	1702536-CCV1	Injection Time:	07:10

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Acenaphthene	A	50000	54260	1.176551	1.2768		8.5	20	
Acenaphthylene	A	50000	53560	1.827542	1.957688		7.1	20	
Anthracene	A	50000	53830	0.9178026	0.9881695		7.7	20	
Benzo[a]anthracene	A	50000	50420	1.170334	1.180109		0.8	20	
Benzo[b]fluoranthene	A	50000	50990	1.136499	1.159064		2.0	20	
Benzo[k]fluoranthene	A	50000	59880	1.005823	1.20466		19.8	20	
Benzo[a]pyrene	A	50000	52030	0.9997622	1.040284		4.1	20	
Benzo[g,h,i]perylene	L	50000	43290	0.9164535	0.7393945		-13.4	20	
Benzyl alcohol	A	50000	34270	1.173642	0.8045286		-31.5	20	*
Benzyl butyl phthalate	A	50000	52460	1.275387	1.338067		4.9	20	
bis(2-Chloroethoxy)methane	A	50000	49270	0.5678905	0.5595763		-1.5	20	
bis(2-Chloroethyl) ether	A	50000	54460	1.690645	1.841419		8.9	20	
bis(2-Chloroisopropyl)ether	A	50000	42980	2.647084	2.275394		-14.0	20	
bis(2-Ethylhexyl)phthalate	A	50000	54810	1.622389	1.778428		9.6	20	
4-Bromophenyl phenyl ether	A	50000	52430	0.2102125	0.220433		4.9	20	
4-Chloroaniline	A	50000	46990	0.3723063	0.3498787		-6.0	20	
2-Chloronaphthalene	A	50000	55360	1.114578	1.233995		10.7	20	
4-Chlorophenyl phenyl ether	A	50000	50440	0.6135306	0.6189101		0.9	20	
Chrysene	A	50000	53250	1.069676	1.139242		6.5	20	
Dibenzo[a,h]anthracene	L	50000	43160	0.9435208	0.7621073		-13.7	20	
Dibenzofuran	A	50000	54220	1.433713	1.554608		8.4	20	
1,2-Dichlorobenzene	A	50000	51670	1.405525	1.452423		3.3	20	
1,3-Dichlorobenzene	A	50000	52390	1.462336	1.532188		4.8	20	

AMEC Environmental & Infrastructure
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CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	13FEB002.D	Calibration Date:	02/08/17 12:04
Sequence:	1702536	Injection Date:	02/13/17
Lab Sample ID:	1702536-CCV1	Injection Time:	07:10

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
1,4-Dichlorobenzene	A	50000	52550	1.510774	1.587919		5.1	20
3,3-Dichlorobenzidine	Q	50000	48560	0.339073	0.3128257		-2.9	20
Diethyl phthalate	A	50000	50160	1.376383	1.380854		0.3	20
Dimethyl phthalate	Q	50000	51040	1.909191	1.297253		2.1	20
Di-n-butyl phthalate	A	50000	50360	1.454437	1.464887		0.7	20
2,4-Dinitrotoluene	Q	50000	55950	0.3460065	0.3732952		11.9	20
2,6-Dinitrotoluene	A	50000	52970	0.2851814	0.3021105		5.9	20
Di-n-octyl phthalate	A	50000	54570	2.273762	2.481731		9.1	20
Fluoranthene	A	50000	49460	0.8209527	0.8120657		-1.1	20
Fluorene	A	50000	53070	1.152504	1.223179		6.1	20
Hexachlorobenzene	A	50000	51790	0.2682213	0.2778156		3.6	20
Hexachlorobutadiene	A	50000	50380	0.1831598	0.1845352		0.8	20
Hexachloroethane	A	50000	50070	0.6966021	0.6975163		0.1	20
Indeno[1,2,3-cd]pyrene	L	50000	44030	1.077617	0.8882869		-11.9	20
Isophorone	A	50000	46310	0.8545704	0.7915865		-7.4	20
2-Methylnaphthalene	A	50000	48590	0.6103452	0.5930785		-2.8	20
Naphthalene	A	50000	54180	0.9435535	1.022411		8.4	20
2-Nitroaniline	A	50000	56340	0.4262861	0.4803329		12.7	20
3-Nitroaniline	Q	50000	52700	0.2826496	0.2930561		5.4	20
4-Nitroaniline	A	50000	57400	0.2176045	0.2498064		14.8	20
Nitrobenzene	A	50000	47820	0.4300719	0.4113562		-4.4	20
N-Nitrosodimethylamine	Q	50000	54530	0.8400613	0.7301106		9.1	20
N-Nitrosodi-N-propylamine	A	50000	40240	1.076653	0.8664418	0.05	-19.5	20

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	13FEB002.D	Calibration Date:	02/08/17 12:04
Sequence:	1702536	Injection Date:	02/13/17
Lab Sample ID:	1702536-CCV1	Injection Time:	07:10

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
N-Nitrosodiphenylamine	A	50000	52670	0.7419549	0.7816061		5.3	20
Phenanthrene	A	50000	52500	0.9937729	1.043511		5.0	20
Pyrene	A	50000	56490	2.138067	2.415635		13.0	20
1,2,4-Trichlorobenzene	A	50000	51650	0.2869532	0.2963977		3.3	20
4-Chloro-3-methylphenol	A	50000	45880	0.3177075	0.2915024		-8.2	20
2-Chlorophenol	A	50000	51840	1.374604	1.425128		3.7	20
2,4-Dichlorophenol	A	50000	49010	0.2699675	0.2646039		-2.0	20
2,4-Dimethylphenol	Q	50000	55970	0.3857059	0.4241199		11.9	20
4,6-Dinitro-2-methylphenol	Q	50000	52490	0.1761238	0.1886495		5.0	20
2,4-Dinitrophenol	Q	50000	47840	0.1462143	0.1410722	0.05	-4.3	20
2-Methylphenol	A	50000	49970	1.371959	1.371		-0.07	20
3- & 4-Methylphenol	A	100000	92480	1.480258	1.368876		-7.5	20
2-Nitrophenol	A	50000	50190	0.2071894	0.207992		0.4	20
4-Nitrophenol	Q	50000	46650	0.1127797	0.1092825	0.05	-6.7	20
Pentachlorophenol	Q	50000	47680	0.1230338	0.1186478		-4.6	20
Phenol	A	50000	46520	2.058745	1.91558		-7.0	20
2,4,5-Trichlorophenol	A	50000	52720	0.3976562	0.419328		5.4	20
2,4,6-Trichlorophenol	A	50000	49440	0.4103541	0.4057236		-1.1	20

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	13FEB022.D	Calibration Date:	02/08/17 12:04
Sequence:	1702536	Injection Date:	02/13/17
Lab Sample ID:	1702536-CCV2	Injection Time:	15:42

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Acenaphthene	A	50000	52990	1.176551	1.246925		6.0	20	
Acenaphthylene	A	50000	53350	1.827542	1.949835		6.7	20	
Anthracene	A	50000	52930	0.9178026	0.9716745		5.9	20	
Benzo[a]anthracene	A	50000	48940	1.170334	1.145626		-2.1	20	
Benzo[b]fluoranthene	A	50000	54650	1.136499	1.242224		9.3	20	
Benzo[k]fluoranthene	A	50000	57980	1.005823	1.166306		16.0	20	
Benzo[a]pyrene	A	50000	52050	0.9997622	1.04077		4.1	20	
Benzo[g,h,i]perylene	L	50000	43330	0.9164535	0.7400982		-13.3	20	
Benzyl alcohol	A	50000	33380	1.173642	0.7835195		-33.2	20	*
Benzyl butyl phthalate	A	50000	47220	1.275387	1.204423		-5.6	20	
bis(2-Chloroethoxy)methane	A	50000	48590	0.5678905	0.5519253		-2.8	20	
bis(2-Chloroethyl) ether	A	50000	54850	1.690645	1.854731		9.7	20	
bis(2-Chloroisopropyl)ether	A	50000	44810	2.647084	2.37236		-10.4	20	
bis(2-Ethylhexyl)phthalate	A	50000	52310	1.622389	1.697369		4.6	20	
4-Bromophenyl phenyl ether	A	50000	49910	0.2102125	0.2098463		-0.2	20	
4-Chloroaniline	A	50000	49280	0.3723063	0.3669188		-1.4	20	
2-Chloronaphthalene	A	50000	56710	1.114578	1.264254		13.4	20	
4-Chlorophenyl phenyl ether	A	50000	51530	0.6135306	0.6323595		3.1	20	
Chrysene	A	50000	50550	1.069676	1.081433		1.1	20	
Dibenzo[a,h]anthracene	L	50000	42330	0.9435208	0.7473387		-15.3	20	
Dibenzofuran	A	50000	53280	1.433713	1.52784		6.6	20	
1,2-Dichlorobenzene	A	50000	53570	1.405525	1.505798		7.1	20	
1,3-Dichlorobenzene	A	50000	53760	1.462336	1.572317		7.5	20	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	13FEB022.D	Calibration Date:	02/08/17 12:04
Sequence:	1702536	Injection Date:	02/13/17
Lab Sample ID:	1702536-CCV2	Injection Time:	15:42

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
1,4-Dichlorobenzene	A	50000	53500	1.510774	1.616588		7.0	20
3,3-Dichlorobenzidine	Q	50000	47740	0.339073	0.3060204		-4.5	20
Diethyl phthalate	A	50000	47440	1.376383	1.305809		-5.1	20
Dimethyl phthalate	Q	50000	50370	1.909191	1.278985		0.7	20
Di-n-butyl phthalate	A	50000	49390	1.454437	1.436693		-1.2	20
2,4-Dinitrotoluene	Q	50000	56370	0.3460065	0.3770654		12.7	20
2,6-Dinitrotoluene	A	50000	54280	0.2851814	0.3096166		8.6	20
Di-n-octyl phthalate	A	50000	52790	2.273762	2.400464		5.6	20
Fluoranthene	A	50000	52490	0.8209527	0.861846		5.0	20
Fluorene	A	50000	51920	1.152504	1.196653		3.8	20
Hexachlorobenzene	A	50000	51040	0.2682213	0.2738066		2.1	20
Hexachlorobutadiene	A	50000	50760	0.1831598	0.1859441		1.5	20
Hexachloroethane	A	50000	50080	0.6966021	0.6977662		0.2	20
Indeno[1,2,3-cd]pyrene	L	50000	42400	1.077617	0.8547772		-15.2	20
Isophorone	A	50000	46730	0.8545704	0.7986007		-6.5	20
2-Methylnaphthalene	A	50000	51430	0.6103452	0.6278615		2.9	20
Naphthalene	A	50000	53860	0.9435535	1.01646		7.7	20
2-Nitroaniline	A	50000	55780	0.4262861	0.4755983		11.6	20
3-Nitroaniline	Q	50000	56300	0.2826496	0.3193892		12.6	20
4-Nitroaniline	A	50000	52520	0.2176045	0.2285739		5.0	20
Nitrobenzene	A	50000	46940	0.4300719	0.4037344		-6.1	20
N-Nitrosodimethylamine	Q	50000	53040	0.8400613	0.7052559		6.1	20
N-Nitrosodi-N-propylamine	A	50000	44000	1.076653	0.9474822	0.05	-12.0	20

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	MS-B2	Calibration:	1702018
Lab File ID:	13FEB022.D	Calibration Date:	02/08/17 12:04
Sequence:	1702536	Injection Date:	02/13/17
Lab Sample ID:	1702536-CCV2	Injection Time:	15:42

COMPOUND	(1) CAL TYPE	CONC. (ug/L) STD	CONC. (ug/L) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
N-Nitrosodiphenylamine	A	50000	51740	0.7419549	0.7677683		3.5	20	
Phenanthrene	A	50000	52030	0.9937729	1.034205		4.1	20	
Pyrene	A	50000	47180	2.138067	2.017505		-5.6	20	
1,2,4-Trichlorobenzene	A	50000	52260	0.2869532	0.2999402		4.5	20	
4-Chloro-3-methylphenol	A	50000	47660	0.3177075	0.3028438		-4.7	20	
2-Chlorophenol	A	50000	53810	1.374604	1.479294		7.6	20	
2,4-Dichlorophenol	A	50000	51210	0.2699675	0.2765245		2.4	20	
2,4-Dimethylphenol	Q	50000	54380	0.3857059	0.4083395		8.8	20	
4,6-Dinitro-2-methylphenol	Q	50000	53770	0.1761238	0.195152		7.5	20	
2,4-Dinitrophenol	Q	50000	51170	0.1462143	0.1560338	0.05	2.3	20	
2-Methylphenol	A	50000	53180	1.371959	1.459242		6.4	20	
3- & 4-Methylphenol	A	100000	102460	1.480258	1.516686		2.5	20	
2-Nitrophenol	A	50000	53450	0.2071894	0.2215013		6.9	20	
4-Nitrophenol	Q	50000	38970	0.1127797	8.779274E-02	0.05	-22.1	20	*
Pentachlorophenol	Q	50000	50910	0.1230338	0.1293885		1.8	20	
Phenol	A	50000	53330	2.058745	2.195858		6.7	20	
2,4,5-Trichlorophenol	A	50000	52430	0.3976562	0.4169935		4.9	20	
2,4,6-Trichlorophenol	A	50000	51830	0.4103541	0.4254125		3.7	20	

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

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702000
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-B2
Calibration: 1702018

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (1702000-CAL5)			Lab File ID: 08FEB003.D		Analyzed: 02/08/17 12:04			
2-Fluorophenol (Surrogate)	80000	96.8		4.74	4.726667	0.0133	+/-1.0	
Phenol-d5 (Surrogate)	80000	109		5.59	5.565	0.0250	+/-1.0	
Nitrobenzene-d5 (Surrogate)	80000	113		6.47	6.458333	0.0117	+/-1.0	
2-Fluorobiphenyl (Surrogate)	80000	102		8.2	8.186667	0.0133	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	80000	113		9.65	9.643333	0.0067	+/-1.0	
p-Terphenyl-d14 (Surrogate)	40000	108		12.15	12.14333	0.0067	+/-1.0	
Cal Standard (1702000-CAL4)			Lab File ID: 08FEB004.D		Analyzed: 02/08/17 12:29			
2-Fluorophenol (Surrogate)	50000	89.9		4.73	4.726667	0.0033	+/-1.0	
Phenol-d5 (Surrogate)	50000	101		5.57	5.565	0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	106		6.46	6.458333	0.0017	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	96.0		8.19	8.186667	0.0033	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	100		9.65	9.643333	0.0067	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	112		12.15	12.14333	0.0067	+/-1.0	
Cal Standard (1702000-CAL3)			Lab File ID: 08FEB005.D		Analyzed: 02/08/17 12:55			
2-Fluorophenol (Surrogate)	20000	93.4		4.72	4.726667	-0.0067	+/-1.0	
Phenol-d5 (Surrogate)	20000	105		5.55	5.565	-0.0150	+/-1.0	
Nitrobenzene-d5 (Surrogate)	20000	109		6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	20000	98.6		8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	20000	99.8		9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	10000	110		12.14	12.14333	-0.0033	+/-1.0	
Cal Standard (1702000-CAL2)			Lab File ID: 08FEB006.D		Analyzed: 02/08/17 13:20			
2-Fluorophenol (Surrogate)	10000	90.8		4.72	4.726667	-0.0067	+/-1.0	
Phenol-d5 (Surrogate)	10000	104		5.55	5.565	-0.0150	+/-1.0	
Nitrobenzene-d5 (Surrogate)	10000	105		6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	10000	92.0		8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	10000	89.2		9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	5000.0	107		12.14	12.14333	-0.0033	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702000	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (1702000-CAL1)			Lab File ID: 08FEB007.D		Analyzed: 02/08/17 13:46			
2-Fluorophenol (Surrogate)	2000.0	108		4.71	4.726667	-0.0167	+/-1.0	
Phenol-d5 (Surrogate)	2000.0	125		5.54	5.565	-0.0250	+/-1.0	
Nitrobenzene-d5 (Surrogate)	2000.0	127		6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	2000.0	114		8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	2000.0	106		9.63	9.643333	-0.0133	+/-1.0	
p-Terphenyl-d14 (Surrogate)	1000.0	125		12.13	12.14333	-0.0133	+/-1.0	
Cal Standard (1702000-CAL6)			Lab File ID: 08FEB008.D		Analyzed: 02/08/17 14:11			
2-Fluorophenol (Surrogate)	100000	119		4.74	4.726667	0.0133	+/-1.0	
Phenol-d5 (Surrogate)	100000	130		5.59	5.565	0.0250	+/-1.0	
Nitrobenzene-d5 (Surrogate)	100000	135		6.47	6.458333	0.0117	+/-1.0	
2-Fluorobiphenyl (Surrogate)	100000	126		8.19	8.186667	0.0033	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	100000	129		9.65	9.643333	0.0067	+/-1.0	
p-Terphenyl-d14 (Surrogate)	50000	122		12.15	12.14333	0.0067	+/-1.0	
Initial Cal Check (1702000-ICV1)			Lab File ID: 08FEB010.D		Analyzed: 02/08/17 15:02			
2-Fluorophenol (Surrogate)	50000	101	80 - 119	4.73	4.726667	0.0033	+/-1.0	
Phenol-d5 (Surrogate)	50000	101	80 - 115	5.56	5.565	-0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	98.7	80 - 120	6.46	6.458333	0.0017	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	109	80 - 119	8.19	8.186667	0.0033	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	102	80 - 120	9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	93.1	80 - 120	12.15	12.14333	0.0067	+/-1.0	
Initial Cal Blank (1702000-ICB1)			Lab File ID: 08FEB011.D		Analyzed: 02/08/17 15:28			
2-Fluorophenol (Surrogate)			19 - 119	0	4.726667	-4.7267	+/-1.0	
Phenol-d5 (Surrogate)			10 - 115	0	5.565	-5.5650	+/-1.0	
Nitrobenzene-d5 (Surrogate)			44 - 120	0	6.458333	-6.4583	+/-1.0	
2-Fluorobiphenyl (Surrogate)			44 - 119	0	8.186667	-8.1867	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			43 - 140	0	9.643333	-9.6433	+/-1.0	
p-Terphenyl-d14 (Surrogate)			50 - 134	0	12.14333	-12.1433	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702425
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-B2
Calibration: 1702018

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (1702425-CCV1)			Lab File ID: 10FEB003.D		Analyzed: 02/10/17 09:40			
2-Fluorophenol (Surrogate)	50000	104	80 - 119	4.72	4.726667	-0.0067	+/-1.0	
Phenol-d5 (Surrogate)	50000	102	80 - 115	5.57	5.565	0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	96.8	80 - 120	6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	98.7	80 - 119	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	104	80 - 120	9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	89.8	80 - 120	12.14	12.14333	-0.0033	+/-1.0	
Calibration Blank (1702425-CCB1)			Lab File ID: 10FEB004.D		Analyzed: 02/10/17 10:06			
2-Fluorophenol (Surrogate)			19 - 119	0	4.726667	-4.7267	+/-1.0	
Phenol-d5 (Surrogate)			10 - 115	0	5.565	-5.5650	+/-1.0	
Nitrobenzene-d5 (Surrogate)			44 - 120	0	6.458333	-6.4583	+/-1.0	
2-Fluorobiphenyl (Surrogate)			44 - 119	0	8.186667	-8.1867	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			43 - 140	0	9.643333	-9.6433	+/-1.0	
p-Terphenyl-d14 (Surrogate)			50 - 134	0	12.14333	-12.1433	+/-1.0	
Blank (B[B0982-BLK1)			Lab File ID: 10FEB020.D		Analyzed: 02/10/17 16:51			
2-Fluorophenol (Surrogate)	40.000	37.5	19 - 119	4.73	4.726667	0.0033	+/-1.0	
Phenol-d5 (Surrogate)	40.000	28.2	10 - 115	5.55	5.565	-0.0150	+/-1.0	
Nitrobenzene-d5 (Surrogate)	40.000	80.5	44 - 120	6.44	6.458333	-0.0183	+/-1.0	
2-Fluorobiphenyl (Surrogate)	40.000	123	44 - 119	8.17	8.186667	-0.0167	+/-1.0	*
2,4,6-Tribromophenol (Surrogate)	40.000	68.4	43 - 140	9.62	9.643333	-0.0233	+/-1.0	
p-Terphenyl-d14 (Surrogate)	20.000	75.4	50 - 134	12.13	12.14333	-0.0133	+/-1.0	
LCS (B[B0982-BS1)			Lab File ID: 10FEB021.D		Analyzed: 02/10/17 17:15			
2-Fluorophenol (Surrogate)	40.000	43.4	19 - 119	4.74	4.726667	0.0133	+/-1.0	
Phenol-d5 (Surrogate)	40.000	32.7	10 - 115	5.56	5.565	-0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	40.000	82.2	44 - 120	6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	40.000	107	44 - 119	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	40.000	78.7	43 - 140	9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	20.000	52.2	50 - 134	12.12	12.14333	-0.0233	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702425	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Matrix Spike (B[B0982-MS1)			Lab File ID: 10FEB022.D		Analyzed: 02/10/17 17:40			
2-Fluorophenol (Surrogate)	40.000	55.6	19 - 119	4.74	4.726667	0.0133	+/-1.0	
Phenol-d5 (Surrogate)	40.000	44.2	10 - 115	5.57	5.565	0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	40.000	67.6	44 - 120	6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	40.000	96.8	44 - 119	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	40.000	74.2	43 - 140	9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	20.000	67.6	50 - 134	12.12	12.14333	-0.0233	+/-1.0	
Matrix Spike Dup (B[B0982-MSD1)			Lab File ID: 10FEB023.D		Analyzed: 02/10/17 18:05			
2-Fluorophenol (Surrogate)	40.000	58.9	19 - 119	4.73	4.726667	0.0033	+/-1.0	
Phenol-d5 (Surrogate)	40.000	51.3	10 - 115	5.57	5.565	0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	40.000	72.0	44 - 120	6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	40.000	94.6	44 - 119	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	40.000	77.1	43 - 140	9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	20.000	78.7	50 - 134	12.13	12.14333	-0.0133	+/-1.0	
M041E_170206 (1703278-03)			Lab File ID: 10FEB025.D		Analyzed: 02/10/17 18:55			
2-Fluorophenol (Surrogate)	40.000	52.0	19 - 119	4.73	4.726667	0.0033	+/-1.0	
Phenol-d5 (Surrogate)	40.000	41.9	10 - 115	5.55	5.565	-0.0150	+/-1.0	
Nitrobenzene-d5 (Surrogate)	40.000	71.0	44 - 120	6.44	6.458333	-0.0183	+/-1.0	
2-Fluorobiphenyl (Surrogate)	40.000	102	44 - 119	8.17	8.186667	-0.0167	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	40.000	69.6	43 - 140	9.63	9.643333	-0.0133	+/-1.0	
p-Terphenyl-d14 (Surrogate)	20.000	65.1	50 - 134	12.13	12.14333	-0.0133	+/-1.0	
M051A_170206 (1703278-04)			Lab File ID: 10FEB026.D		Analyzed: 02/10/17 19:21			
2-Fluorophenol (Surrogate)	40.000	40.4	19 - 119	4.73	4.726667	0.0033	+/-1.0	
Phenol-d5 (Surrogate)	40.000	32.8	10 - 115	5.55	5.565	-0.0150	+/-1.0	
Nitrobenzene-d5 (Surrogate)	40.000	71.1	44 - 120	6.44	6.458333	-0.0183	+/-1.0	
2-Fluorobiphenyl (Surrogate)	40.000	107	44 - 119	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	40.000	71.9	43 - 140	9.63	9.643333	-0.0133	+/-1.0	
p-Terphenyl-d14 (Surrogate)	20.000	69.3	50 - 134	12.12	12.14333	-0.0233	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702425	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (1702425-CCV2)			Lab File ID: 10FEB027.D		Analyzed: 02/10/17 19:46			
2-Fluorophenol (Surrogate)	50000	105	50 - 200	4.72	4.726667	-0.0067	+/-1.0	
Phenol-d5 (Surrogate)	50000	102	50 - 200	5.57	5.565	0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	92.9	50 - 200	6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	96.7	50 - 200	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	101	50 - 200	9.64	9.643333	-0.0033	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	104	50 - 200	12.13	12.14333	-0.0133	+/-1.0	
Calibration Blank (1702425-CCB2)			Lab File ID: 10FEB028.D		Analyzed: 02/10/17 20:11			
2-Fluorophenol (Surrogate)			19 - 119	0	4.726667	-4.7267	+/-1.0	
Phenol-d5 (Surrogate)			10 - 115	0	5.565	-5.5650	+/-1.0	
Nitrobenzene-d5 (Surrogate)			44 - 120	0	6.458333	-6.4583	+/-1.0	
2-Fluorobiphenyl (Surrogate)			44 - 119	0	8.186667	-8.1867	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			43 - 140	0	9.643333	-9.6433	+/-1.0	
p-Terphenyl-d14 (Surrogate)			50 - 134	0	12.14333	-12.1433	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702536
Matrix: Water

SDG: 17-03278
Project: Alameda
Instrument: MS-B2
Calibration: 1702018

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (1702536-CCV1)			Lab File ID: 13FEB002.D		Analyzed: 02/13/17 07:10			
2-Fluorophenol (Surrogate)	50000	108	80 - 119	4.72	4.726667	-0.0067	+/-1.0	
Phenol-d5 (Surrogate)	50000	99.3	80 - 115	5.56	5.565	-0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	89.7	80 - 120	6.44	6.458333	-0.0183	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	109	80 - 119	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	100	80 - 120	9.63	9.643333	-0.0133	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	119	80 - 120	12.12	12.14333	-0.0233	+/-1.0	
Calibration Blank (1702536-CCB1)			Lab File ID: 13FEB003.D		Analyzed: 02/13/17 07:35			
2-Fluorophenol (Surrogate)			19 - 119	0	4.726667	-4.7267	+/-1.0	
Phenol-d5 (Surrogate)			10 - 115	0	5.565	-5.5650	+/-1.0	
Nitrobenzene-d5 (Surrogate)			44 - 120	0	6.458333	-6.4583	+/-1.0	
2-Fluorobiphenyl (Surrogate)			44 - 119	0	8.186667	-8.1867	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			43 - 140	0	9.643333	-9.6433	+/-1.0	
p-Terphenyl-d14 (Surrogate)			50 - 134	0	12.14333	-12.1433	+/-1.0	
EB07_170206 (1703278-02RE1)			Lab File ID: 13FEB021.D		Analyzed: 02/13/17 15:16			
2-Fluorophenol (Surrogate)	40.000	23.5	19 - 119	4.72	4.726667	-0.0067	+/-1.0	
Phenol-d5 (Surrogate)	40.000	18.0	10 - 115	5.55	5.565	-0.0150	+/-1.0	
Nitrobenzene-d5 (Surrogate)	40.000	63.7	44 - 120	6.44	6.458333	-0.0183	+/-1.0	
2-Fluorobiphenyl (Surrogate)	40.000	100	44 - 119	8.17	8.186667	-0.0167	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	40.000	46.8	43 - 140	9.63	9.643333	-0.0133	+/-1.0	
p-Terphenyl-d14 (Surrogate)	20.000	63.2	50 - 134	12.13	12.14333	-0.0133	+/-1.0	
Calibration Check (1702536-CCV2)			Lab File ID: 13FEB022.D		Analyzed: 02/13/17 15:42			
2-Fluorophenol (Surrogate)	50000	106	50 - 200	4.72	4.726667	-0.0067	+/-1.0	
Phenol-d5 (Surrogate)	50000	104	50 - 200	5.56	5.565	-0.0050	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	96.5	50 - 200	6.45	6.458333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	111	50 - 200	8.18	8.186667	-0.0067	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	103	50 - 200	9.63	9.643333	-0.0133	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	107	50 - 200	12.13	12.14333	-0.0133	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702536	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Blank (1702536-CCB2)			Lab File ID: 13FEB023.D		Analyzed: 02/13/17 16:07			
2-Fluorophenol (Surrogate)			19 - 119	0	4.726667	-4.7267	+/-1.0	
Phenol-d5 (Surrogate)			10 - 115	0	5.565	-5.5650	+/-1.0	
Nitrobenzene-d5 (Surrogate)			44 - 120	0	6.458333	-6.4583	+/-1.0	
2-Fluorobiphenyl (Surrogate)			44 - 119	0	8.186667	-8.1867	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			43 - 140	0	9.643333	-9.6433	+/-1.0	
p-Terphenyl-d14 (Surrogate)			50 - 134	0	12.14333	-12.1433	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702000
Instrument: MS-B2
Matrix: Water
Calibration: 1702018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (1702000-CAL5)			Lab File ID: 08FEB003.D			Analyzed: 02/08/17 12:04			
Phenanthrene-d10 (IS)	1450660	10.36	1414349	10.35	103	50 - 200	0.0100	+/-0.50	
Chrysene-d12 (IS)	635998	14.09	524185	14.07	121	50 - 200	0.0200	+/-0.50	
Acenaphthene-d10 (IS)	1171523	8.87	1088404	8.87	108	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	720621	5.93	679681	5.93	106	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	528021	16.08	401970	16.07	131	50 - 200	0.0100	+/-0.50	
Naphthalene-d8 (IS)	2574702	7.15	2325250	7.14	111	50 - 200	0.0100	+/-0.50	
Cal Standard (1702000-CAL4)			Lab File ID: 08FEB004.D			Analyzed: 02/08/17 12:29			
Phenanthrene-d10 (IS)	1414349	10.35	1414349	10.35	100	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	524185	14.07	524185	14.07	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (IS)	1088404	8.87	1088404	8.87	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	679681	5.93	679681	5.93	100	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	401970	16.07	401970	16.07	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2325250	7.14	2325250	7.14	100	50 - 200	0.0000	+/-0.50	
Cal Standard (1702000-CAL3)			Lab File ID: 08FEB005.D			Analyzed: 02/08/17 12:55			
Phenanthrene-d10 (IS)	1404587	10.34	1414349	10.35	99	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	518190	14.06	524185	14.07	99	50 - 200	-0.0100	+/-0.50	
Acenaphthene-d10 (IS)	1124193	8.86	1088404	8.87	103	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	735685	5.92	679681	5.93	108	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	447679	16.07	401970	16.07	111	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2531342	7.14	2325250	7.14	109	50 - 200	0.0000	+/-0.50	
Cal Standard (1702000-CAL2)			Lab File ID: 08FEB006.D			Analyzed: 02/08/17 13:20			
Phenanthrene-d10 (IS)	1497684	10.34	1414349	10.35	106	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	519693	14.05	524185	14.07	99	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	1178186	8.86	1088404	8.87	108	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	750876	5.92	679681	5.93	110	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	401528	16.07	401970	16.07	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2626065	7.14	2325250	7.14	113	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702000
Instrument: MS-B2
Matrix: Water
Calibration: 1702018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (1702000-CAL1)			Lab File ID: 08FEB007.D			Analyzed: 02/08/17 13:46			
Phenanthrene-d10 (IS)	1335496	10.34	1414349	10.35	94	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	459566	14.05	524185	14.07	88	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	1030433	8.86	1088404	8.87	95	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	648148	5.92	679681	5.93	95	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	370921	16.07	401970	16.07	92	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2262942	7.14	2325250	7.14	97	50 - 200	0.0000	+/-0.50	
Cal Standard (1702000-CAL6)			Lab File ID: 08FEB008.D			Analyzed: 02/08/17 14:11			
Phenanthrene-d10 (IS)	1052151	10.36	1414349	10.35	74	50 - 200	0.0100	+/-0.50	
Chrysene-d12 (IS)	430373	14.08	524185	14.07	82	50 - 200	0.0100	+/-0.50	
Acenaphthene-d10 (IS)	812381	8.87	1088404	8.87	75	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	538487	5.94	679681	5.93	79	50 - 200	0.0100	+/-0.50	
Perylene-d12 (IS)	342620	16.08	401970	16.07	85	50 - 200	0.0100	+/-0.50	
Naphthalene-d8 (IS)	1859447	7.15	2325250	7.14	80	50 - 200	0.0100	+/-0.50	
Initial Cal Check (1702000-ICV1)			Lab File ID: 08FEB010.D			Analyzed: 02/08/17 15:02			
Phenanthrene-d10 (IS)	1196703	10.35	1414349	10.35	85	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	573685	14.07	524185	14.07	109	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (IS)	832270	8.87	1088404	8.87	76	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	582724	5.93	679681	5.93	86	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	487304	16.08	401970	16.07	121	50 - 200	0.0100	+/-0.50	
Naphthalene-d8 (IS)	1982139	7.14	2325250	7.14	85	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (1702000-ICB1)			Lab File ID: 08FEB011.D			Analyzed: 02/08/17 15:28			
Phenanthrene-d10 (IS)	1310791	10.34	1196703	10.35	110	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	465332	14.05	573685	14.07	81	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	977821	8.86	832270	8.87	117	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	605735	5.92	582724	5.93	104	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	339675	16.07	487304	16.08	70	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2086133	7.15	1982139	7.14	105	50 - 200	0.0100	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702425
Instrument: MS-B2
Matrix: Water
Calibration: 1702018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1702425-CCV1)			Lab File ID: 10FEB003.D			Analyzed: 02/10/17 09:40			
Phenanthrene-d10 (IS)	1952836	10.34	1414349	10.35	138	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	950105	14.07	524185	14.07	181	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (IS)	1345279	8.86	1088404	8.87	124	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	805320	5.92	679681	5.93	118	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	694912	16.07	401970	16.07	173	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2880420	7.14	2325250	7.14	124	50 - 200	0.0000	+/-0.50	
Calibration Blank (1702425-CCB1)			Lab File ID: 10FEB004.D			Analyzed: 02/10/17 10:06			
Phenanthrene-d10 (IS)	1286794	10.33	1952836	10.34	66	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	642653	14.04	950105	14.07	68	50 - 200	-0.0300	+/-0.50	
Acenaphthene-d10 (IS)	1000254	8.85	1345279	8.86	74	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	700354	5.91	805320	5.92	87	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	547455	16.06	694912	16.07	79	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2289096	7.13	2880420	7.14	79	50 - 200	-0.0100	+/-0.50	
Blank (B[B0982-BLK1)			Lab File ID: 10FEB020.D			Analyzed: 02/10/17 16:51			
Phenanthrene-d10 (IS)	1235858	10.33	1952836	10.34	63	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	577994	14.04	950105	14.07	61	50 - 200	-0.0300	+/-0.50	
Acenaphthene-d10 (IS)	977484	8.85	1345279	8.86	73	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	754204	5.91	805320	5.92	94	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	309489	16.06	694912	16.07	45	50 - 200	-0.0100	+/-0.50	*
Naphthalene-d8 (IS)	2398593	7.13	2880420	7.14	83	50 - 200	-0.0100	+/-0.50	
LCS (B[B0982-BS1)			Lab File ID: 10FEB021.D			Analyzed: 02/10/17 17:15			
Phenanthrene-d10 (IS)	1591672	10.34	1952836	10.34	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	651481	14.05	950105	14.07	69	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	1200250	8.86	1345279	8.86	89	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	724174	5.92	805320	5.92	90	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	415043	16.06	694912	16.07	60	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2638958	7.14	2880420	7.14	92	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702425
Instrument: MS-B2
Matrix: Water
Calibration: 1702018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B[B0982-MS1)			Lab File ID: 10FEB022.D			Analyzed: 02/10/17 17:40			
Phenanthrene-d10 (IS)	1488049	10.34	1952836	10.34	76	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	580329	14.04	950105	14.07	61	50 - 200	-0.0300	+/-0.50	
Acenaphthene-d10 (IS)	1127315	8.86	1345279	8.86	84	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	794907	5.92	805320	5.92	99	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	325398	16.06	694912	16.07	47	50 - 200	-0.0100	+/-0.50	*
Naphthalene-d8 (IS)	2614088	7.14	2880420	7.14	91	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (B[B0982-MSD1)			Lab File ID: 10FEB023.D			Analyzed: 02/10/17 18:05			
Phenanthrene-d10 (IS)	1603369	10.34	1952836	10.34	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	630811	14.05	950105	14.07	66	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	1131466	8.85	1345279	8.86	84	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	671979	5.92	805320	5.92	83	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	383897	16.06	694912	16.07	55	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2365985	7.14	2880420	7.14	82	50 - 200	0.0000	+/-0.50	
M041E_170206 (1703278-03)			Lab File ID: 10FEB025.D			Analyzed: 02/10/17 18:55			
Phenanthrene-d10 (IS)	1616857	10.33	1952836	10.34	83	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	603869	14.04	950105	14.07	64	50 - 200	-0.0300	+/-0.50	
Acenaphthene-d10 (IS)	1126624	8.85	1345279	8.86	84	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	780239	5.91	805320	5.92	97	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	400780	16.06	694912	16.07	58	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2647206	7.13	2880420	7.14	92	50 - 200	-0.0100	+/-0.50	
M051A_170206 (1703278-04)			Lab File ID: 10FEB026.D			Analyzed: 02/10/17 19:21			
Phenanthrene-d10 (IS)	1653932	10.33	1952836	10.34	85	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	677229	14.04	950105	14.07	71	50 - 200	-0.0300	+/-0.50	
Acenaphthene-d10 (IS)	1212314	8.85	1345279	8.86	90	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	877931	5.92	805320	5.92	109	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	428424	16.06	694912	16.07	62	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2907078	7.13	2880420	7.14	101	50 - 200	-0.0100	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702425
Instrument: MS-B2
Matrix: Water
Calibration: 1702018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1702425-CCV2)			Lab File ID: 10FEB027.D			Analyzed: 02/10/17 19:46			
Phenanthrene-d10 (IS)	1741417	10.34	1414349	10.35	123	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	640222	14.06	524185	14.07	122	50 - 200	-0.0100	+/-0.50	
Acenaphthene-d10 (IS)	1214323	8.85	1088404	8.87	112	50 - 200	-0.0200	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	821104	5.92	679681	5.93	121	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	403125	16.06	401970	16.07	100	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2740280	7.14	2325250	7.14	118	50 - 200	0.0000	+/-0.50	
Calibration Blank (1702425-CCB2)			Lab File ID: 10FEB028.D			Analyzed: 02/10/17 20:11			
Phenanthrene-d10 (IS)	1237445	10.33	1741417	10.34	71	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	395142	14.04	640222	14.06	62	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	884903	8.85	1214323	8.85	73	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	709083	5.91	821104	5.92	86	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	220689	16.06	403125	16.06	55	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2233719	7.13	2740280	7.14	82	50 - 200	-0.0100	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702536
Instrument: MS-B2
Matrix: Water
Calibration: 1702018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1702536-CCV1)			Lab File ID: 13FEB002.D			Analyzed: 02/13/17 07:10			
Phenanthrene-d10 (IS)	1046533	10.33	1414349	10.35	74	50 - 200	-0.0200	+/-0.50	
Chrysene-d12 (IS)	333612	14.04	524185	14.07	64	50 - 200	-0.0300	+/-0.50	
Acenaphthene-d10 (IS)	805443	8.85	1088404	8.87	74	50 - 200	-0.0200	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	640898	5.91	679681	5.93	94	50 - 200	-0.0200	+/-0.50	
Perylene-d12 (IS)	210278	16.06	401970	16.07	52	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2028070	7.14	2325250	7.14	87	50 - 200	0.0000	+/-0.50	
Calibration Blank (1702536-CCB1)			Lab File ID: 13FEB003.D			Analyzed: 02/13/17 07:35			
Phenanthrene-d10 (IS)	1029725	10.33	1046533	10.33	98	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	365121	14.03	333612	14.04	109	50 - 200	-0.0100	+/-0.50	
Acenaphthene-d10 (IS)	733965	8.84	805443	8.85	91	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	631572	5.91	640898	5.91	99	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	239631	16.06	210278	16.06	114	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2045971	7.13	2028070	7.14	101	50 - 200	-0.0100	+/-0.50	
EB07_170206 (1703278-02RE1)			Lab File ID: 13FEB021.D			Analyzed: 02/13/17 15:16			
Phenanthrene-d10 (IS)	1463411	10.33	1046533	10.33	140	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	436110	14.04	333612	14.04	131	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (IS)	994092	8.85	805443	8.85	123	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	724308	5.91	640898	5.91	113	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	170825	16.06	210278	16.06	81	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	2429144	7.13	2028070	7.14	120	50 - 200	-0.0100	+/-0.50	
Calibration Check (1702536-CCV2)			Lab File ID: 13FEB022.D			Analyzed: 02/13/17 15:42			
Phenanthrene-d10 (IS)	1118857	10.34	1414349	10.35	79	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	439738	14.05	524185	14.07	84	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	862331	8.85	1088404	8.87	79	50 - 200	-0.0200	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	619302	5.92	679681	5.93	91	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	266169	16.06	401970	16.07	66	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	2162826	7.14	2325250	7.14	93	50 - 200	0.0000	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702536	Instrument:	MS-B2
Matrix:	Water	Calibration:	1702018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Blank (1702536-CCB2)			Lab File ID: 13FEB023.D			Analyzed: 02/13/17 16:07			
Phenanthrene-d10 (IS)	946188	10.33	1118857	10.34	85	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	300825	14.04	439738	14.05	68	50 - 200	-0.0100	+/-0.50	
Acenaphthene-d10 (IS)	718643	8.85	862331	8.85	83	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	598051	5.91	619302	5.92	97	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	169199	16.06	266169	16.06	64	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	1883044	7.13	2162826	7.14	87	50 - 200	-0.0100	+/-0.50	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION STANDARDS

EPA-8270C

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702000
Calibration: 1702018

SDG: 17-03278
Project: Alameda
Instrument: MS-B2

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
6I16060	8270 BNA IC5	1702000-CAL5	08FEB003.D	02/08/17 12:04
6I16061	8270 BNA IC4	1702000-CAL4	08FEB004.D	02/08/17 12:29
6I16062	8270 BNA IC3	1702000-CAL3	08FEB005.D	02/08/17 12:55
6I16063	8270 BNA IC2	1702000-CAL2	08FEB006.D	02/08/17 13:20
6I16064	8270 BNA IC1	1702000-CAL1	08FEB007.D	02/08/17 13:46
6I16059	8270 BNA IC6	1702000-CAL6	08FEB008.D	02/08/17 14:11

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702018
Instrument: MS-B2
Matrix: Water
Calibration Date: 02/08/17 12:04

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acenaphthene	100000	1.405467	80000	1.163538	50000	1.108075	20000	1.100343	10000	1.035612	2000	1.246272
Acenaphthylene	100000	2.065252	80000	1.776859	50000	1.744082	20000	1.756705	10000	1.671098	2000	1.951257
Aldrin	100000	0.1787614	80000	0.1611818	50000	0.1602727	20000	0.1606365	10000	0.1607896	2000	0.2073836
Aniline	100000	2.510033	80000	2.034443	50000	1.875652	20000	2.017929	10000	1.816018	2000	2.197585
Anthracene	100000	1.087813	80000	0.93024	50000	0.8698787	20000	0.8587293	10000	0.7933529	2000	0.9668018
Benzidine	100000	4.751789E-02	80000	4.033199E-02	50000	2.633466E-02	20000	0.0268093	10000	2.072533E-03	2000	3.976051E-02
Benzo[a]anthracene	100000	1.280249	80000	1.056797	50000	1.060507	20000	1.111102	10000	1.037697	2000	1.475653
Benzo[b]fluoranthene	100000	1.318252	80000	1.145616	50000	1.062055	20000	1.006471	10000	0.9857843	2000	1.300816
Benzo[k]fluoranthene	100000	1.056661	80000	0.939742	50000	0.9151469	20000	0.9533259	10000	0.8977705	2000	1.272292
Benzo[a]pyrene	100000	1.089671	80000	0.9817725	50000	0.8881598	20000	0.904054	10000	0.8785838	2000	1.256332
Benzo[g,h,i]perylene	100000	0.8911365	80000	0.8307141	50000	0.8161942	20000	0.8292638	10000	0.8179255	2000	1.313487
Benzoic acid	200000	0.3332974	160000	0.2864589	100000	0.2589181	40000	0.2419851	20000	0.2088638	4000	0.1873623
Benzyl alcohol	100000	1.300557	80000	1.177286	50000	1.071709	20000	1.145197	10000	1.08631	2000	1.260792
Benzyl butyl phthalate	100000	1.361384	80000	1.167905	50000	1.210292	20000	1.266555	10000	1.209568	2000	1.436616
alpha-BHC	100000	0.1758599	80000	0.1539996	50000	0.1442982	20000	0.1494361	10000	0.1397972	2000	0.1820297
beta-BHC	100000	0.1196129	80000	0.1096056	50000	9.984693E-02	20000	9.952392E-02	10000	9.886999E-02	2000	0.1287761
delta-BHC	100000	0.1149147	80000	0.1010316	50000	9.684173E-02	20000	9.922917E-02	10000	9.301562E-02	2000	0.1323403
gamma-BHC (Lindane)	100000	0.139545	80000	0.1278663	50000	0.116649	20000	0.1204824	10000	0.1103384	2000	0.1512397
bis(2-Chloroethoxy)methane	100000	0.630043	80000	0.5450279	50000	0.5371579	20000	0.5520969	10000	0.5246984	2000	0.618319
bis(2-Chloroethyl) ether	100000	1.768943	80000	1.63281	50000	1.467759	20000	1.540907	10000	1.640196	2000	2.093256
bis(2-Chloroisopropyl)ether	100000	2.888404	80000	2.526821	50000	2.407538	20000	2.590057	10000	2.531774	2000	2.937909
bis(2-Ethylhexyl)phthalate	100000	1.778217	80000	1.495027	50000	1.492327	20000	1.577078	10000	1.551909	2000	1.839779
4-Bromophenyl phenyl ether	100000	0.2457393	80000	0.202798	50000	0.1947355	20000	0.2006483	10000	0.1882854	2000	0.2290685
4-Chloroaniline	100000	0.4521942	80000	0.3832442	50000	0.3559493	20000	0.3531755	10000	0.3124904	2000	0.3767839
2-Chloronaphthalene	100000	1.343842	80000	1.086399	50000	1.045392	20000	1.055265	10000	1.000029	2000	1.156543

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702018
Instrument: MS-B2
Matrix: Water
Calibration Date: 02/08/17 12:04

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
4-Chlorophenyl phenyl ether	100000	0.7231769	80000	0.608679	50000	0.5818237	20000	0.5565165	10000	0.5379694	2000	0.673018
Chrysene	100000	1.215886	80000	1.015649	50000	1.015948	20000	1.009294	10000	0.9748525	2000	1.186424
4,4'-DDD	100000	0.7481808	80000	0.6078211	50000	0.6542667	20000	0.6952778	10000	0.6503301	2000	0.7607177
4,4'-DDE	100000	0.4084912	80000	0.3407031	50000	0.366962	20000	0.3770393	10000	0.3688177	2000	0.4753615
4,4'-DDT	100000	0.6144112	80000	0.5161997	50000	0.5307302	20000	0.5332832	10000	0.520592	2000	0.4721411
Dibenzo[a,h]anthracene	100000	0.8948725	80000	0.8865964	50000	0.836542	20000	0.9002835	10000	0.8467056	2000	1.296125
Dibenzofuran	100000	1.684368	80000	1.409614	50000	1.347095	20000	1.346166	10000	1.253208	2000	1.561829
1,2-Dichlorobenzene	100000	1.665683	80000	1.434044	50000	1.279153	20000	1.293437	10000	1.241398	2000	1.519437
1,3-Dichlorobenzene	100000	1.73479	80000	1.444697	50000	1.319259	20000	1.336251	10000	1.313682	2000	1.625339
1,4-Dichlorobenzene	100000	1.766995	80000	1.511688	50000	1.386778	20000	1.391862	10000	1.37245	2000	1.634874
3,3-Dichlorobenzidine	100000	0.4399254	80000	0.3709752	50000	0.3329313	20000	0.3256064	10000	0.2639327	2000	0.3010667
Dieldrin	100000	0.5497194	80000	0.4804363	50000	0.535936	20000	0.5640055	10000	0.5755552	2000	0.778256
Diethyl phthalate	100000	1.558762	80000	1.337002	50000	1.311549	20000	1.260668	10000	1.205175	2000	1.585139
Dimethyl phthalate	100000	1.459139	80000	1.300345	50000	1.305692	20000	1.47491	10000	1.60303	2000	4.312032
Di-n-butyl phthalate	100000	1.483984	80000	1.349283	50000	1.362319	20000	1.424584	10000	1.343645	2000	1.762806
2,4-Dinitrotoluene	100000	0.4341342	80000	0.3662886	50000	0.3337717	20000	0.304019	10000	0.2768901	2000	0.3609356
2,6-Dinitrotoluene	100000	0.3477063	80000	0.2901313	50000	0.2743694	20000	0.2674434	10000	0.2392695	2000	0.2921684
Di-n-octyl phthalate	100000	2.556637	80000	2.225851	50000	2.13625	20000	2.324568	10000	2.089172	2000	2.310093
1,2-Diphenylhydrazine	100000	1.891393	80000	1.577473	50000	1.472643	20000	1.589914	10000	1.540612	2000	1.895223
Endosulfan I	100000	7.218111E-02	80000	6.023525E-02	50000	6.612169E-02	20000	6.522704E-02	10000	7.305852E-02	2000	0.1050556
Endosulfan II	100000	7.240231E-02	80000	6.023525E-02	50000	6.612169E-02	20000	6.522704E-02	10000	7.497503E-02	2000	0.102488
Endosulfan sulfate	100000	0.1087085	80000	9.857814E-02	50000	9.994029E-02	20000	0.1033443	10000	0.1151218	2000	0.1480962
Endrin	100000	0.1661043	80000	0.150212	50000	0.1630478	20000	0.1687914	10000	0.1883497	2000	0.2769134
Endrin aldehyde	100000	0.1987058	80000	0.1692277	50000	0.1725284	20000	0.2023891	10000	0.1887268	2000	0.2622909
Fluoranthene	100000	0.9674448	80000	0.8295252	50000	0.7683948	20000	0.7470324	10000	0.722983	2000	0.8903359
Fluorene	100000	1.365979	80000	1.178585	50000	1.119893	20000	1.031698	10000	0.9914801	2000	1.227387

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702018
Instrument: MS-B2
Matrix: Water
Calibration Date: 02/08/17 12:04

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Heptachlor	100000	0.2469725	80000	0.22505	50000	0.209003	20000	0.2071997	10000	0.1949089	2000	0.2444186
Heptachlor epoxide	100000	5.817796E-02	80000	5.537066E-02	50000	5.338711E-02	20000	5.261903E-02	10000	4.886745E-02	2000	7.309644E-02
Hexachlorobenzene	100000	0.3080657	80000	0.2633884	50000	0.2491888	20000	0.2529626	10000	0.2426627	2000	0.2930597
Hexachlorobutadiene	100000	0.2224831	80000	0.18154	50000	0.1737764	20000	0.1731651	10000	0.167053	2000	0.1809414
Hexachlorocyclopentadiene	100000	0.4201915	80000	0.3348359	50000	0.2812125	20000	0.2848248	10000	0.2446405	2000	0.2667616
Hexachloroethane	100000	0.8228239	80000	0.6967761	50000	0.6301827	20000	0.6414702	10000	0.6173323	2000	0.7710276
Indeno[1,2,3-cd]pyrene	100000	1.038936	80000	1.005826	50000	0.9429559	20000	1.00292	10000	0.9640673	2000	1.510996
Isophorone	100000	0.9531186	80000	0.8175649	50000	0.7910723	20000	0.8091858	10000	0.7786829	2000	0.9777979
2-Methylnaphthalene	100000	0.7033358	80000	0.602139	50000	0.5883851	20000	0.5753241	10000	0.5413545	2000	0.6515324
Naphthalene	100000	1.051131	80000	0.8912542	50000	0.9050309	20000	0.8884781	10000	0.87612	2000	1.049307
2-Naphthylamine	100000	0.2396092	80000	0.195414	50000	0.1270991	20000	6.418115E-02	10000	0.1079626	2000	0.4500244
2-Nitroaniline	100000	0.5232215	80000	0.4474662	50000	0.4174869	20000	0.4053005	10000	0.3591691	2000	0.4050724
3-Nitroaniline	100000	0.3540398	80000	0.3200432	50000	0.2726554	20000	0.2442908	10000	0.2227153	2000	0.2821532
4-Nitroaniline	100000	0.260143	80000	0.2373176	50000	0.2177133	20000	0.1940236	10000	0.1717861	2000	0.2246434
Nitrobenzene	100000	0.4984962	80000	0.3971827	50000	0.3907262	20000	0.4118219	10000	0.3910383	2000	0.4911659
N-Nitrosodimethylamine	100000	0.8553967	80000	0.7174076	50000	0.6762102	20000	0.7213549	10000	0.7523053	2000	1.317693
N-Nitrosodi-N-propylamine	100000	1.21434	80000	1.06465	50000	0.9634084	20000	1.001168	10000	0.9699977	2000	1.246351
N-Nitrosodiphenylamine	100000	0.887231	80000	0.7388075	50000	0.7023561	20000	0.6737722	10000	0.6410091	2000	0.8085533
Phenanthrene	100000	1.14389	80000	0.9823701	50000	0.9191695	20000	0.9423724	10000	0.8790773	2000	1.095758
Pyrene	100000	2.285812	80000	1.917423	50000	2.095917	20000	2.071808	10000	2.016968	2000	2.440476
1,2,4-Trichlorobenzene	100000	0.3386861	80000	0.2814576	50000	0.2706111	20000	0.2722161	10000	0.2538795	2000	0.3048686
4-Chloro-3-methylphenol	100000	0.3719618	80000	0.3186825	50000	0.3104248	20000	0.3043974	10000	0.2725949	2000	0.3281834
2-Chlorophenol	100000	1.631072	80000	1.385381	50000	1.24699	20000	1.27697	10000	1.251125	2000	1.456087
2,4-Dichlorophenol	100000	0.3272474	80000	0.2774282	50000	0.2552245	20000	0.2459834	10000	0.2282137	2000	0.2857077
2,4-Dimethylphenol	100000	0.4882613	80000	0.4075555	50000	0.3826981	20000	0.3611776	10000	0.3118293	2000	0.3627137
4,6-Dinitro-2-methylphenol	100000	0.2513402	80000	0.2093766	50000	0.1818097	20000	0.1575139	10000	0.141139	2000	0.1155631

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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INITIAL CALIBRATION DATA
EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702018
Instrument: MS-B2
Matrix: Water
Calibration Date: 02/08/17 12:04

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
2,4-Dinitrophenol	100000	0.2327297	80000	0.187771	50000	0.1571791	20000	0.1247295	10000	9.809317E-02	2000	7.678326E-02
2-Methylphenol	100000	1.611832	80000	1.365758	50000	1.254139	20000	1.2802	10000	1.203597	2000	1.516228
3- & 4-Methylphenol	200000	1.751919	160000	1.499127	100000	1.352838	40000	1.391235	20000	1.332588	4000	1.553843
2-Nitrophenol	100000	0.2618131	80000	0.2170348	50000	0.193037	20000	0.1879177	10000	0.1797138	2000	0.2036199
4-Nitrophenol	100000	0.1475948	80000	0.1363832	50000	0.1190433	20000	0.1013118	10000	9.113671E-02	2000	8.120858E-02
Pentachlorophenol	100000	0.1700414	80000	0.1478151	50000	0.1277376	20000	0.1141375	10000	9.936943E-02	2000	0.0791017
Phenol	100000	2.449046	80000	2.076044	50000	1.779944	20000	1.866136	10000	1.876858	2000	2.304443
2,4,5-Trichlorophenol	100000	0.4951022	80000	0.407543	50000	0.3793635	20000	0.3885436	10000	0.3549151	2000	0.3604698
2,4,6-Trichlorophenol	100000	0.4951711	80000	0.4198799	50000	0.3823044	20000	0.3871826	10000	0.350892	2000	0.4266944
Carbazole	100000	0.8930745	80000	0.8278883	50000	0.7168341	20000	0.6703451	10000	0.6301783	2000	0.7827654
Methoxychlor	100000	0.9479684	80000	0.8000717	50000	0.7783786	20000	0.8229607	10000	0.7696236	2000	0.7203318
Pyridine	100000	1.605282	80000	1.383094	50000	1.415232	20000	1.263617	10000	1.541123	2000	1.963903
2-Fluorophenol (Surrogate)	100000	1.999678	80000	1.631086	50000	1.514096	20000	1.573024	10000	1.529296	2000	1.821467
Phenol-d5 (Surrogate)	100000	2.326384	80000	1.952038	50000	1.813594	20000	1.8865	10000	1.864041	2000	2.24782
Nitrobenzene-d5 (Surrogate)	100000	2.22296	80000	1.857283	50000	1.735468	20000	1.797351	10000	1.726746	2000	2.089924
2-Fluorobiphenyl (Surrogate)	100000	1.417564	80000	1.143411	50000	1.077062	20000	1.10562	10000	1.032102	2000	1.271291
2,4,6-Tribromophenol (Surrogate)	100000	0.2354316	80000	0.2068972	50000	0.1830077	20000	0.1821404	10000	0.1629182	2000	0.1947891
p-Terphenyl-d14 (Surrogate)	50000	1.701205	40000	1.505761	25000	1.565927	10000	1.544792	5000	1.501887	1000	1.745647

AMEC Environmental & Infrastructure
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INITIAL CALIBRATION DATA (Continued)

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702018
Instrument: MS-B2
Matrix: Water
Calibration Date: 02/08/17 12:04

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.176551	11.26252	8.898333	0.1102815			CCC (20)	
Acenaphthylene	1.827542	8.146896	8.725	9.665459E-02			15	
Aldrin	0.1715043	11.08031	11.16	5.465194E-02			15	
Aniline	2.075277	12.11374	5.625	9.697389E-02			15	
Anthracene	0.9178026	11.18943	10.42833	9.386374E-02			15	
Benzidine	3.047115E-02	53.14318	11.82167	0.3268326		0.9965613	0.99	
Benzo[a]anthracene	1.170334	14.86631	14.045	0.1259201			15	
Benzo[b]fluoranthene	1.136499	12.76796	15.63833	9.362932E-02			15	
Benzo[k]fluoranthene	1.005823	14.1031	15.67167	7.495212E-02			15	
Benzo[a]pyrene	0.9997622	14.87194	16.01	0.0776761			CCC (20)	
Benzo[g,h,i]perylene	0.9164535	21.43737	17.52	9.522557E-02	0.99831		0.99	
Benzoic acid	0.2528143	20.91516	6.965	1.343018		0.9982333	0.99	
Benzyl alcohol	1.173642	7.859395	6.06	0.2082106			15	
Benzyl butyl phthalate	1.275387	8.117376	12.97667	9.281965E-02			15	
alpha-BHC	0.1575701	11.00588	9.896667	0.1223944			15	
beta-BHC	0.1093726	11.41568	10.105	0.1367177			15	
delta-BHC	0.1062289	13.93706	10.42833	9.386374E-02			15	
gamma-BHC (Lindane)	0.1276868	11.98061	10.195	5.142942E-02			15	
bis(2-Chloroethoxy)methane	0.5678905	7.870335	6.895	0.1518417			15	
bis(2-Chloroethyl) ether	1.690645	13.12564	5.673333	0.2409497			15	
bis(2-Chloroisopropyl)ether	2.647084	8.123608	6.175	8.897551E-02			15	
bis(2-Ethylhexyl)phthalate	1.622389	9.212632	14.19833	7.115725E-02			15	
4-Bromophenyl phenyl ether	0.2102125	10.60412	9.878333	9.975379E-02			15	
4-Chloroaniline	0.3723063	12.44458	7.21	0.174836			15	
2-Chloronaphthalene	1.114578	11.1009	8.313334	6.262983E-02			15	
4-Chlorophenyl phenyl ether	0.6135306	11.6513	9.393333	8.674992E-02			15	

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INITIAL CALIBRATION DATA (Continued)

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702018
Instrument: MS-B2
Matrix: Water
Calibration Date: 02/08/17 12:04

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Chrysene	1.069676	9.665831	14.11833	0.1036223			15	
4,4'-DDD	0.686099	8.727222	12.58667	9.591288E-02			15	
4,4'-DDE	0.3895625	12.15186	12.05667	6.452464E-02			15	
4,4'-DDT	0.5312262	8.730196	13.125	0.0787426			15	
Dibenzo[a,h]anthracene	0.9435208	18.51717	17.24	7.397891E-02	0.99939		0.99	
Dibenzofuran	1.433713	11.14115	9.065	0.1156821			15	
1,2-Dichlorobenzene	1.405525	11.77459	6.083333	8.534847E-02			15	
1,3-Dichlorobenzene	1.462336	12.21674	5.873333	8.704164E-02			15	
1,4-Dichlorobenzene	1.510774	10.66066	5.94	0.1052039			CCC (20)	
3,3-Dichlorobenzidine	0.339073	17.93869	14.03	0.1495983		0.9973468	0.99	
Dieldrin	0.5806514	17.6221	12.21833	8.166799E-02		0.9924963	0.99	
Diethyl phthalate	1.376383	11.5013	9.28	0.1802596			15	
Dimethyl phthalate	1.909191	61.94565	8.586667	0.1901209		0.9975048	0.99	
Di-n-butyl phthalate	1.454437	11.02973	10.90833	8.935182E-02			15	
2,4-Dinitrotoluene	0.3460065	15.87749	9.05	0.1841042		0.9976807	0.99	
2,6-Dinitrotoluene	0.2851814	12.66451	8.655	0.1589028			15	
Di-n-octyl phthalate	2.273762	7.338155	15.23667	5.327565E-02			CCC (20)	
1,2-Diphenylhydrazine	1.66121	11.09793	9.548333	0.1025175			15	
Endosulfan I	7.364654E-02	21.8641	12.61833	7.757534E-02		0.9905499	0.99	
Endosulfan II	7.357489E-02	20.54522	12.61833	7.757534E-02		0.9902424	0.99	
Endosulfan sulfate	0.1122982	16.53279	13.14167	9.926172E-02	0.99729		0.99	
Endrin	0.1855698	25.0092	12.49167	5.861441E-02	0.99733		0.99	
Endrin aldehyde	0.1989781	16.9835	13.925	9.969539E-02		0.9928014	0.99	
Fluoranthene	0.8209527	11.44908	11.63167	6.309281E-02			CCC (20)	
Fluorene	1.152504	11.86184	9.4	9.423196E-02			15	
Heptachlor	0.2212588	9.596285	10.84	5.626528E-02			15	

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Laboratory: BC Laboratories
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Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
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Instrument: MS-B2
Matrix: Water
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Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Heptachlor epoxide	5.691977E-02	14.93812	11.51	5.241529E-02			15	
Hexachlorobenzene	0.2682213	9.83044	9.94	0.1263366			15	
Hexachlorobutadiene	0.1831598	10.92281	7.268333	5.906172E-02			CCC (20)	
Hexachlorocyclopentadiene	0.3054111	20.83046	7.98	1.012459E-02		0.995583	SPCC (0.05)	
Hexachloroethane	0.6966021	12.04586	6.406667	0.0798896			15	
Indeno[1,2,3-cd]pyrene	1.077617	19.94925	17.22	7.589232E-02	0.99883		0.99	
Isophorone	0.8545704	10.21706	6.708333	0.2732255			15	
2-Methylnaphthalene	0.6103452	9.519593	7.835	7.032883E-02			15	
Naphthalene	0.9435535	8.810762	7.166667	0.1144135			15	
2-Naphthylamine	0.1973817	70.30818	9.226667	0.1319527		0.9997195	0.99	
2-Nitroaniline	0.4262861	12.98402	8.42	0.197675			15	
3-Nitroaniline	0.2826496	17.08393	8.828334	0.2076963		0.9999171	0.99	
4-Nitroaniline	0.2176045	14.39068	9.436667	0.2975381			15	
Nitrobenzene	0.4300719	11.81089	6.476667	0.1871287			15	
N-Nitrosodimethylamine	0.8400613	28.76955	3.696667	1.53659		0.9959257	0.99	
N-Nitrosodi-N-propylamine	1.076653	11.58564	6.321667	0.4052324			SPCC (0.05)	
N-Nitrosodiphenylamine	0.7419549	12.34644	9.511667	0.1396196			CCC (20)	
Phenanthrene	0.9937729	10.49887	10.375	0.1003231			15	
Pyrene	2.138067	8.942857	11.93333	0.124103			15	
1,2,4-Trichlorobenzene	0.2869532	10.57659	7.083333	7.329928E-02			15	
4-Chloro-3-methylphenol	0.3177075	10.26657	7.668333	0.1285995			CCC (20)	
2-Chlorophenol	1.374604	10.96528	5.73	0.1570143			15	
2,4-Dichlorophenol	0.2699675	12.95964	7.003333	0.1948306			CCC (20)	
2,4-Dimethylphenol	0.3857059	15.37861	6.801667	0.2161071		0.9962946	0.99	
4,6-Dinitro-2-methylphenol	0.1761238	27.85428	9.456666	0.2082746		0.9980605	0.99	
2,4-Dinitrophenol	0.1462143	39.79731	8.926667	0.1826569		0.9976962	SPCC (0.05)	

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INITIAL CALIBRATION DATA (Continued)

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
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Project: Alameda
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Instrument: MS-B2
Matrix: Water
Calibration Date: 02/08/17 12:04

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
2-Methylphenol	1.371959	11.70936	6.141667	0.1908075			15	
3- & 4-Methylphenol	1.480258	10.70448	6.298333	0.2914271			15	
2-Nitrophenol	0.2071894	14.35025	6.775	8.187219E-02			CCC (20)	
4-Nitrophenol	0.1127797	23.13929	8.976667	0.2189139		0.9999948	SPCC (0.05)	
Pentachlorophenol	0.1230338	26.74823	10.14	0.0894594		0.9992445	CCC (20)	*
Phenol	2.058745	13.05009	5.576667	0.3523955			CCC (20)	
2,4,5-Trichlorophenol	0.3976562	12.9311	8.141667	9.195427E-02			15	
2,4,6-Trichlorophenol	0.4103541	12.1412	8.105	6.914686E-02			CCC (20)	
Carbazole	0.7535143	13.18307	10.58667	0.1146278			15	
Methoxychlor	0.8065558	9.587923	13.97333	0.1409594			15	
Pyridine	1.528708	16.01701	3.711667	0.955039		0.9956759	0.99	
2-Fluorophenol (Surrogate)	1.678108	11.50143	4.726667	0.256536			15	
Phenol-d5 (Surrogate)	2.015063	10.75858	5.565	0.3895552			15	
Nitrobenzene-d5 (Surrogate)	1.904955	10.74991	6.458333	0.1521518			15	
2-Fluorobiphenyl (Surrogate)	1.174508	12.27529	8.186667	0.1014648			15	
2,4,6-Tribromophenol (Surrogate)	0.1941974	12.84434	9.643333	8.259843E-02			15	
p-Terphenyl-d14 (Surrogate)	1.594203	6.516989	12.14333	6.914547E-02			15	

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HOLDING TIME SUMMARY

EPA-8270C

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
EB07_170206	02/06/17 14:30	02/06/17 22:00	02/08/17 22:00	2.00	7.00	02/13/17 15:16	5.00	40.00	
M041E_170206	02/06/17 08:45	02/06/17 22:00	02/08/17 22:00	2.00	7.00	02/10/17 18:55	2.00	40.00	
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/08/17 22:00	2.00	7.00	02/10/17 19:21	2.00	40.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:17:56AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements

For Data Validation of

Mercury Analysis
Metals Analysis (using ppb units)
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Certifications: CA ELAP #1186; NV #CA00014; AK UST101; OR ELAP #4032; DoD ELAP #66175

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Case Narrative

Analyses Requested: Metals
Submission Number: 17-03278

Method 7470A
Instrument ID: CETAC2
Sample Volume(s): 20ml
Digest Volume(s): 50ml

Method 6010B-PPB
Instrument ID: PE Optima 8300 (PE-OP3)
Sample Volume(s): 50ml
Digest Volume(s): 50ml

Method 6010B-PPM
Instrument ID: PE Optima 8300 (PE-OP3)
Sample Volume(s): 50ml
Digest Volume(s): 50ml

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and preparations took place within holding times.

Calibration: An initial calibration criterion was met. Frequency and accuracy criteria for initial calibration verification and continuing calibration verifications were met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL. Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameters were within QC limits.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy and precision requirements were met, except EPA Method 6010B-PPB batch ID B[B0863 the matrix spike recoveries for Iron and EPA Method 6010B-PPM batch ID B[B0863 for Calcium were outside QC limits. Sample concentration for Iron and Calcium were greater than four times the spike level

Chain of Custody and Cooler Receipt Form for 1703278 Page 1 of 6

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:60
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:60
Received By:	Date: 2/6/17	Time: 16:60
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		AF								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Date Numbering Completed By: M Date/Time: 2-6-17 2310
Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ (W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received		
☒ YES ☐ NO	Emissivity: 0.97 Container: VOA Thermometer ID: 207 Temperature: (A) 1.5 °C / (C) 1.7 °C	Date/Time 2/6 2150 Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL			A	A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: [illegible] Date/Time: 2-6-17 2315

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Numbering Completed By: Date/Time: 2/6/17 0360

Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RG								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/10/2017 11:23:48AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**HG**
Method:	**EPA-7470A**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M041E_170206	1703278-03
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: CETAC2

Analyte	DL	LOD	LOQ	Units
Mercury	0.03	0.05	0.2	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-7470A

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: 020917 R1 W-018
Sampled: 02/06/17 14:30
Prepared: 02/08/17 11:40
Analyzed: 02/09/17 09:49
Solids: 0.00
Preparation: EPA 7470A
Initial/Final: 20 ml / 50 ml
Batch: B[B0700
Sequence: 1702288
Calibration: UNASSIGNED
Instrument: CETAC2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7439-97-6	Mercury	0.050	0.030	0.050	0.20	1	U	EPA-7470A

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-7470A

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: 021017 R1 W-012
Sampled: 02/06/17 08:45
Prepared: 02/09/17 09:30
Analyzed: 02/10/17 09:22
Solids: 0.00
Preparation: EPA 7470A
Initial/Final: 20 ml / 50 ml
Batch: B[B0781
Sequence: 1702377
Calibration: UNASSIGNED
Instrument: CETAC2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7439-97-6	Mercury	0.050	0.030	0.050	0.20	1	U	EPA-7470A

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-7470A

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: 020917 R1 W-012
Sampled: 02/06/17 11:30
Prepared: 02/08/17 11:40
Analyzed: 02/09/17 09:36
Solids: 0.00
Preparation: EPA 7470A
Initial/Final: 20 ml / 50 ml
Batch: B[B0700
Sequence: 1702288
Calibration: UNASSIGNED
Instrument: CETAC2

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7439-97-6	Mercury	0.050	0.030	0.050	0.20	1	U	EPA-7470A

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0700
Batch Matrix: Water
Preparation: EPA 7470A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	020917 R1 W-018	02/08/17 11:40	
M051A_170206	1703278-04	020917 R1 W-012	02/08/17 11:40	
Blank	B[B0700-BLK1	020917 R1 W-010	02/08/17 11:40	
LCS	B[B0700-BS1	020917 R1 W-011	02/08/17 11:40	
M051A_170206	B[B0700-DUP1	020917 R1 W-013	02/08/17 11:40	
M051A_170206	B[B0700-MS1	020917 R1 W-014	02/08/17 11:40	
M051A_170206	B[B0700-MSD1	020917 R1 W-015	02/08/17 11:40	
M051A_170206	B[B0700-PS1	020917 R1 W-016	02/08/17 11:40	[Spk] 20ml->50ml; 25ml->25ml; Spiked 24.9ml

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0781
Batch Matrix: Water
Preparation: EPA 7470A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
M041E_170206	1703278-03	021017 R1 W-012	02/09/17 09:30	
Blank	B[B0781-BLK1	021017 R1 W-010	02/09/17 09:30	
LCS	B[B0781-BS1	021017 R1 W-011	02/09/17 09:30	
M041E_170206	B[B0781-DUP1	021017 R1 W-013	02/09/17 09:30	
M041E_170206	B[B0781-MS1	021017 R1 W-014	02/09/17 09:30	
M041E_170206	B[B0781-MSD1	021017 R1 W-015	02/09/17 09:30	
M041E_170206	B[B0781-PS1	021017 R1 W-016	02/09/17 09:30	[Spk] 20ml->50ml; 25ml->25ml; Spiked 24.9ml

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-7470A

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0700-BLK1	File ID:	020917 R1 W-010
Prepared:	02/08/17 11:40	Preparation:	EPA 7470A	Initial/Final:	20 ml / 50 ml
Analyzed:	02/09/17 09:32	Instrument:	CETAC2		
Batch:	B[B0700	Sequence:	1702288	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
7439-97-6	Mercury	0.050	0.030	0.050	0.20	U

AMEC Environmental & Infrastructure
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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-7470A

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0781-BLK1	File ID:	021017 R1 W-010
Prepared:	02/09/17 09:30	Preparation:	EPA 7470A	Initial/Final:	20 ml / 50 ml
Analyzed:	02/10/17 09:17	Instrument:	CETAC2		
Batch:	B[B0781	Sequence:	1702377	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
7439-97-6	Mercury	0.050	0.030	0.050	0.20	U

AMEC Environmental & Infrastructure
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M051A_170206

DUPLICATES

EPA-7470A

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0700
Preparation: EPA 7470A
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0700-DUP1
Lab Source ID: 1703278-04
Initial/Final: 20 ml / 50 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
Mercury	20	ND		ND				EPA-7470A

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
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Project Number: 5023146096
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M041E_170206

DUPLICATES

EPA-7470A

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0781
Preparation: EPA 7470A
Source Sample Name: M041E_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0781-DUP1
Lab Source ID: 1703278-03
Initial/Final: 20 ml / 50 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
Mercury	20	ND		ND				EPA-7470A

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-7470A

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0700
Laboratory ID: B[B0700-MS1
Preparation: EPA 7470A
Initial/Final: 20 ml / 50 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Mercury	1.0000	ND	1.0050	100	82 - 119

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Mercury	1.0000	1.0125	101	0.743	20	82 - 119

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-7470A

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0781
Laboratory ID: B[B0781-MS1
Preparation: EPA 7470A
Initial/Final: 20 ml / 50 ml
Source Sample Number: 1703278-03

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Mercury	1.0000	ND	0.93000	93.0	82 - 119

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Mercury	1.0000	0.92750	92.8	0.269	20	82 - 119

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-7470A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Matrix:	Water		
Batch:	B[B0700	Laboratory ID:	B[B0700-BS1
Preparation:	EPA 7470A	Initial/Final:	20 ml / 50 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Mercury	1.0000	1.0350	104	82 - 119

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-7470A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Matrix:	Water		
Batch:	B[B0781	Laboratory ID:	B[B0781-BS1
Preparation:	EPA 7470A	Initial/Final:	20 ml / 50 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Mercury	1.0000	1.0250	102	82 - 119

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-7470A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702288	Instrument:	CETAC2
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702288-ICV1	020917 R1 W-008	02/09/17 09:27
Initial Cal Blank	1702288-ICB1	020917 R1 W-009	02/09/17 09:29
Blank	B[B0700-BLK1	020917 R1 W-010	02/09/17 09:32
LCS	B[B0700-BS1	020917 R1 W-011	02/09/17 09:34
M051A_170206	1703278-04	020917 R1 W-012	02/09/17 09:36
M051A_170206	B[B0700-DUP1	020917 R1 W-013	02/09/17 09:38
M051A_170206	B[B0700-MS1	020917 R1 W-014	02/09/17 09:40
M051A_170206	B[B0700-MSD1	020917 R1 W-015	02/09/17 09:42
M051A_170206	B[B0700-PS1	020917 R1 W-016	02/09/17 09:44
EB07_170206	1703278-02	020917 R1 W-018	02/09/17 09:49
Calibration Check	1702288-CCV1	020917 R1 W-020	02/09/17 09:53
Calibration Blank	1702288-CCB1	020917 R1 W-021	02/09/17 09:55
Calibration Check	1702288-CCV2	020917 R1 W-028	02/09/17 10:10
Calibration Blank	1702288-CCB2	020917 R1 W-029	02/09/17 10:12

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702377
Instrument: CETAC2
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702377-ICV1	021017 R1 W-008	02/10/17 09:13
Initial Cal Blank	1702377-ICB1	021017 R1 W-009	02/10/17 09:15
Blank	B[B0781-BLK1	021017 R1 W-010	02/10/17 09:17
LCS	B[B0781-BS1	021017 R1 W-011	02/10/17 09:20
M041E_170206	1703278-03	021017 R1 W-012	02/10/17 09:22
M041E_170206	B[B0781-DUP1	021017 R1 W-013	02/10/17 09:24
M041E_170206	B[B0781-MS1	021017 R1 W-014	02/10/17 09:26
M041E_170206	B[B0781-MSD1	021017 R1 W-015	02/10/17 09:28
M041E_170206	B[B0781-PS1	021017 R1 W-016	02/10/17 09:30
Calibration Check	1702377-CCV1	021017 R1 W-020	02/10/17 09:39
Calibration Blank	1702377-CCB1	021017 R1 W-021	02/10/17 09:41
Calibration Check	1702377-CCV2	021017 R1 W-028	02/10/17 09:56
Calibration Blank	1702377-CCB2	021017 R1 W-029	02/10/17 09:58
Calibration Check	1702377-CCV3	021017 R1 W-039	02/10/17 10:22
Calibration Blank	1702377-CCB3	021017 R1 W-040	02/10/17 10:24
Calibration Check	1702377-CCV4	021017 R1 W-051	02/10/17 10:48
Calibration Blank	1702377-CCB4	021017 R1 W-052	02/10/17 10:51

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: CETAC2
Project: Alameda
Sequence: 1702288
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702288-ICB1	Mercury	0.0020000	0.012		0.080	ug/L	U	EPA-7470A
1702288-CCB1	Mercury	0.0090000	0.012		0.080	ug/L	U	EPA-7470A
1702288-CCB2	Mercury	0.0060000	0.012		0.080	ug/L	U	EPA-7470A

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: CETAC2
Project: Alameda
Sequence: 1702377
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702377-ICB1	Mercury	0.0070000	0.012		0.080	ug/L	U	EPA-7470A
1702377-CCB1	Mercury	0.0050000	0.012		0.080	ug/L	U	EPA-7470A
1702377-CCB2	Mercury	0.0030000	0.012		0.080	ug/L	U	EPA-7470A
1702377-CCB3	Mercury	-0.0020000	0.012		0.080	ug/L	U	EPA-7470A
1702377-CCB4	Mercury	0.0020000	0.012		0.080	ug/L	U	EPA-7470A

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-7470A

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: CETAC2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702288

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702288-ICV1	Mercury	0.40000	0.41300	103	ug/L	EPA-7470A
1702288-CCV1	Mercury	0.40000	0.40000	100	ug/L	EPA-7470A
1702288-CCV2	Mercury	0.40000	0.40000	100	ug/L	EPA-7470A

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-7470A

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: CETAC2
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702377

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702377-ICV1	Mercury	0.40000	0.40700	102	ug/L	EPA-7470A
1702377-CCV1	Mercury	0.40000	0.41900	105	ug/L	EPA-7470A
1702377-CCV2	Mercury	0.40000	0.41000	102	ug/L	EPA-7470A
1702377-CCV3	Mercury	0.40000	0.41200	103	ug/L	EPA-7470A
1702377-CCV4	Mercury	0.40000	0.41300	103	ug/L	EPA-7470A

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-7470A

M051A_170206

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0700
Preparation: EPA 7470A

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0700-PS1
Lab Source ID: 1703278-04
Initial/Final: 9.96 ml / 25 ml

Source Sample Name: M051A_170206
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Mercury	75 - 125	0.39600	0.0059760	0.40000	97.5

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-7470A

M041E_170206

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0781
Preparation: EPA 7470A

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0781-PS1
Lab Source ID: 1703278-03
Initial/Final: 9.96 ml / 25 ml

Source Sample Name: M041E_170206
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Mercury	75 - 125	0.37500	0.0049800	0.40000	92.5

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY

EPA-7470A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
EB07_170206	02/06/17 14:30	02/06/17 22:00	02/08/17 11:40	3.00	28.00	02/09/17 09:49	3.00	28.00	
M041E_170206	02/06/17 08:45	02/06/17 22:00	02/09/17 09:30	4.00	28.00	02/10/17 09:22	4.00	28.00	
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/08/17 11:40	3.00	28.00	02/09/17 09:36	3.00	28.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported:	3/10/2017 11:23:48AM
Project:	Alameda
Project Number:	5023146096
Project Manager:	Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**METALS-PPB**
Method:	**EPA-6010B**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M041E_170206	1703278-03
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: PE-OP3

Analyte	DL	LOD	LOQ	Units
Aluminum	23	50	50	ug/L
Iron	30	50	50	ug/L
Manganese	4	10	10	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6010B

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: PE3_170210-063
Sampled: 02/06/17 14:30
Prepared: 02/09/17 16:14
Analyzed: 02/10/17 11:45
Solids: 0.00
Preparation: 6010B/No Digestion
Initial/Final: 10 ml / 10 ml
Batch: B[B0863
Sequence: 1702404
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7429-90-5	Aluminum	50	23	50	50	1	U	EPA-6010B
7439-89-6	Iron	50	30	50	50	1	U	EPA-6010B
7439-96-5	Manganese	10	4.0	10	10	1	U	EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6010B

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: PE3_170210-064
Sampled: 02/06/17 08:45
Prepared: 02/09/17 16:14
Analyzed: 02/10/17 11:47
Solids: 0.00
Preparation: 6010B/No Digestion
Initial/Final: 10 ml / 10 ml
Batch: B[B0863
Sequence: 1702404
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7429-90-5	Aluminum	250	120	250	250	5	UD	EPA-6010B
7439-89-6	Iron	950	150	250	250	5	D	EPA-6010B
7439-96-5	Manganese	1600	20	50	50	5	D	EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6010B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: PE3_170210-058
Sampled: 02/06/17 11:30
Prepared: 02/09/17 16:14
Analyzed: 02/10/17 11:37
Solids: 0.00
Preparation: 6010B/No Digestion
Initial/Final: 10 ml / 10 ml
Batch: B[B0863
Sequence: 1702404
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (ug/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7429-90-5	Aluminum	50	23	50	50	1	U	EPA-6010B
7439-89-6	Iron	5600	30	50	50	1		EPA-6010B
7439-96-5	Manganese	620	4.0	10	10	1		EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0863
Batch Matrix: Water
Preparation: 6010B/No Digestion

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	PE3_170210-063	02/09/17 16:14	
M041E_170206	1703278-03	PE3_170210-064	02/09/17 16:14	
M051A_170206	1703278-04	PE3_170210-058	02/09/17 16:14	
Blank	B[B0863-BLK1	PE3_170210-056	02/09/17 16:14	
LCS	B[B0863-BS1	PE3_170210-057	02/09/17 16:14	
M051A_170206	B[B0863-DUP1	PE3_170210-059	02/09/17 16:14	
M051A_170206	B[B0863-MS1	PE3_170210-061	02/09/17 16:14	
M051A_170206	B[B0863-MSD1	PE3_170210-062	02/09/17 16:14	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-6010B

Laboratory:	BC Laboratories		SDG:	17-03278	
Client:	AMEC Environmental & Infrastructure $AMCN		Project:	Alameda	
Matrix:	Water	Laboratory ID:	B[B0863-BLK1	File ID:	PE3_170210-056
Prepared:	02/09/17 16:14	Preparation:	6010B/No Digestion	Initial/Final:	10 ml / 10 ml
Analyzed:	02/10/17 11:33	Instrument:	PE-OP3		
Batch:	B[B0863	Sequence:	1702404	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
7429-90-5	Aluminum	50	23	50	50	U
7439-89-6	Iron	50	30	50	50	U
7439-96-5	Manganese	10	4.0	10	10	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

M051A_170206

DUPLICATES
EPA-6010B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0863
Preparation: 6010B/No Digestion
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0863-DUP1
Lab Source ID: 1703278-04
Initial/Final: 10 ml / 10 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
Aluminum	20	ND		ND				EPA-6010B
Iron	20	5596.0		5557.0		0.700		EPA-6010B
Manganese	20	615.16		609.95		0.851		EPA-6010B

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6010B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0863
Laboratory ID: B[B0863-MS1
Preparation: 6010B/No Digestion
Initial/Final: 9.8 ml / 10 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Aluminum	1020.4	ND	1000.9	98.1	86 - 115
Iron	1020.4	5596.0	6323.0	71.2 *	87 - 115
Manganese	510.20	615.16	1100.2	95.1	90 - 114

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aluminum	1020.4	1024.7	100	2.35	20	86 - 115
Iron	1020.4	6305.9	69.6 *	0.271	20	87 - 115
Manganese	510.20	1100.8	95.2	0.0519	20	90 - 114

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0863
Laboratory ID: B[B0863-BS1
Preparation: 6010B/No Digestion
Initial/Final: 9.8 ml / 10 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Aluminum	1020.4	975.98	95.6	86 - 115
Iron	1020.4	1073.1	105	87 - 115
Manganese	510.20	490.05	96.1	90 - 114

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702404
Instrument: PE-OP3
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702404-ICV1	PE3_170210-007	02/10/17 08:52
Initial Cal Blank	1702404-ICB1	PE3_170210-008	02/10/17 08:55
MRL Check	1702404-CRL1	PE3_170210-011	02/10/17 09:09
Interference Check A	1702404-IFA1	PE3_170210-014	02/10/17 09:31
Interference Check B	1702404-IFB1	PE3_170210-017	02/10/17 09:43
Calibration Check	1702404-CCV1	PE3_170210-019	02/10/17 09:51
Calibration Blank	1702404-CCB1	PE3_170210-020	02/10/17 09:53
Calibration Check	1702404-CCV2	PE3_170210-054	02/10/17 11:29
Calibration Blank	1702404-CCB2	PE3_170210-055	02/10/17 11:31
Blank	B[B0863-BLK1	PE3_170210-056	02/10/17 11:33
LCS	B[B0863-BS1	PE3_170210-057	02/10/17 11:35
M051A_170206	1703278-04	PE3_170210-058	02/10/17 11:37
M051A_170206	B[B0863-DUP1	PE3_170210-059	02/10/17 11:39
M051A_170206	B[B0863-MS1	PE3_170210-061	02/10/17 11:42
M051A_170206	B[B0863-MSD1	PE3_170210-062	02/10/17 11:44
EB07_170206	1703278-02	PE3_170210-063	02/10/17 11:45
M041E_170206	1703278-03	PE3_170210-064	02/10/17 11:47
Calibration Check	1702404-CCV3	PE3_170210-066	02/10/17 11:54
Calibration Blank	1702404-CCB3	PE3_170210-067	02/10/17 11:55
Calibration Check	1702404-CCV4	PE3_170210-141	02/10/17 14:15
Calibration Blank	1702404-CCB4	PE3_170210-142	02/10/17 14:17
Calibration Check	1702404-CCV5	PE3_170210-151	02/10/17 14:32
Calibration Blank	1702404-CCB5	PE3_170210-152	02/10/17 14:34

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-OP3
Project: Alameda
Sequence: 1702404
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702404-ICB1	Aluminum	0.010195	0.023		0.050	mg/L	U	EPA-6010B
	Iron	0.027087	0.030		0.050	mg/L	U	EPA-6010B
	Manganese	0.00045712	0.0040		0.010	mg/L	U	EPA-6010B
1702404-CCB1	Aluminum	0.029033	0.023		0.050	mg/L	J	EPA-6010B
	Iron	0.045986	0.030		0.050	mg/L	J	EPA-6010B
	Manganese	0.00039172	0.0040		0.010	mg/L	U	EPA-6010B
1702404-CCB2	Aluminum	0.0023606	0.023		0.050	mg/L	U	EPA-6010B
	Iron	0.020469	0.030		0.050	mg/L	U	EPA-6010B
	Manganese	0.00033629	0.0040		0.010	mg/L	U	EPA-6010B
1702404-CCB3	Aluminum	-0.0047658	0.023		0.050	mg/L	U	EPA-6010B
	Iron	0.014454	0.030		0.050	mg/L	U	EPA-6010B
	Manganese	0.00029753	0.0040		0.010	mg/L	U	EPA-6010B
1702404-CCB4	Aluminum	-0.010599	0.023		0.050	mg/L	U	EPA-6010B
	Iron	0.029292	0.030		0.050	mg/L	U	EPA-6010B
	Manganese	0.00044716	0.0040		0.010	mg/L	U	EPA-6010B
1702404-CCB5	Aluminum	0.0016052	0.023		0.050	mg/L	U	EPA-6010B
	Iron	0.026422	0.030		0.050	mg/L	U	EPA-6010B
	Manganese	0.00039061	0.0040		0.010	mg/L	U	EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6010B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-OP3
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702404

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702404-ICV1	Aluminum	50.000	50.703	101	mg/L	EPA-6010B
	Iron	50.000	52.037	104	mg/L	EPA-6010B
	Manganese	2.5000	2.4725	98.9	mg/L	EPA-6010B
1702404-CCV1	Aluminum	50.000	49.633	99.3	mg/L	EPA-6010B
	Iron	50.000	53.409	107	mg/L	EPA-6010B
	Manganese	2.5000	2.5421	102	mg/L	EPA-6010B
1702404-CCV2	Aluminum	50.000	49.964	99.9	mg/L	EPA-6010B
	Iron	50.000	51.420	103	mg/L	EPA-6010B
	Manganese	2.5000	2.4854	99.4	mg/L	EPA-6010B
1702404-CCV3	Aluminum	50.000	47.100	94.2	mg/L	EPA-6010B
	Iron	50.000	50.374	101	mg/L	EPA-6010B
	Manganese	2.5000	2.4699	98.8	mg/L	EPA-6010B
1702404-CCV4	Aluminum	50.000	48.642	97.3	mg/L	EPA-6010B
	Iron	50.000	49.893	99.8	mg/L	EPA-6010B
	Manganese	2.5000	2.3985	95.9	mg/L	EPA-6010B
1702404-CCV5	Aluminum	50.000	48.027	96.1	mg/L	EPA-6010B
	Iron	50.000	49.897	99.8	mg/L	EPA-6010B
	Manganese	2.5000	2.4381	97.5	mg/L	EPA-6010B

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ICP INTERFERENCE CHECK SAMPLE

EPA-6010B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-OP3
Sequence: 1702404

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
1702404-IFA1	Aluminum	500.00	471.67	94.3	ug/L
	Iron	200.00	183.14	91.6	ug/L
	Manganese	0.0000	0.0029310		mg/L
1702404-IFB1	Aluminum	500.00	458.98	91.8	ug/L
	Iron	200.00	181.50	90.8	ug/L
	Manganese	0.50000	0.50	99.6	ug/L

* Values outside of QC limits

Raw Data From Instrument PE-OP3

Raw Data - Calibration Standards

==========

Analysis Begun

Start Time: 2/10/2017 8:44:57 AM
Logged In Analyst: Analyst
Spectrometer: Optima 8300 , S/N 078N1121901
Plasma On Time: 2/10/2017 7:21:23 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\PE3_170210.sif
Batch ID:
Results Data Set: PE3_170210
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1
Sample ID: Calib Blank @STD6H08040
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 9
Date Collected: 2/10/2017 8:45:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank @STD6H08040

Analyte	Back Pressure	Flow
All	204.0 kPa	0.65 L/min

Mean Data: Calib Blank @STD6H08040

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	642935.1	16348.78	2.54%	100.0	%
Sc 357.253 (R)	33920.8	257.67	0.76%	100.0	%
Ag 328.068†	-36.6	37.15	101.57%	[0.00]	mg/L
Al 308.215 (R)†	-2.2	3.83	174.23%	[0.00]	mg/L
As 188.979†	-3.1	0.44	14.45%	[0.00]	mg/L
B 249.677†	220.3	8.27	3.75%	[0.00]	mg/L
Ba 233.527 (R)†	0.6	2.33	365.30%	[0.00]	mg/L
Be 313.107 †	3975.0	50.94	1.28%	[0.00]	mg/L
Ca 315.887 (R)†	-87.7	5.41	6.17%	[0.00]	mg/L
Cd 228.802 †	98.0	5.40	5.51%	[0.00]	mg/L
Co 228.616†	-16.8	0.62	3.71%	[0.00]	mg/L
Cr 267.716†	-7.5	3.91	52.12%	[0.00]	mg/L
Cu 324.752†	349.6	28.02	8.02%	[0.00]	mg/L
Fe 238.204 (R)†	45.3	2.65	5.85%	[0.00]	mg/L
K 766.490 (R)†	-69.3	47.21	68.14%	[0.00]	mg/L
Li 670.784 (R)†	44.6	59.14	132.70%	[0.00]	mg/L
Mg 279.077 (R)†	4.9	1.85	38.10%	[0.00]	mg/L
Mn 257.610 †	390.7	11.24	2.88%	[0.00]	mg/L
Mo 202.031†	-10.7	2.07	19.31%	[0.00]	mg/L
Na 589.592 (R)†	652.1	23.46	3.60%	[0.00]	mg/L
Ni 231.604†	-123.5	5.98	4.84%	[0.00]	mg/L
Pb 220.353†	24.7	4.23	17.09%	[0.00]	mg/L
Sb 206.836†	0.5	2.27	422.34%	[0.00]	mg/L
Se 196.026†	4.7	2.53	53.31%	[0.00]	mg/L
Si 251.611 (R)†	27.3	1.40	5.12%	[0.00]	mg/L
Sn 189.927†	3.1	2.19	71.45%	[0.00]	mg/L
Sr 421.552 (R)†	7.1	25.53	361.90%	[0.00]	mg/L
Ti 334.940 (R)†	3.2	5.32	167.20%	[0.00]	mg/L
Tl 190.801†	-13.5	1.29	9.56%	[0.00]	mg/L
V 292.402†	-53.7	8.10	15.09%	[0.00]	mg/L
Zn 206.200 †	5.2	3.07	59.41%	[0.00]	mg/L

==========

Method Loaded
Method Name: 200.7_6010_151015 **Method Last Saved: 2/10/2017 8:28:51 AM**
IEC File: 170208.iec **MSF File: MSF_141211.msf**
Method Description: ICP-OES-PE3_200.7/6010_FAST Narrow

==========

Sequence No.: 2 **Autosampler Location: 10**
Sample ID: Calib Std 4@6H02008 **Date Collected: 2/10/2017 8:47:36 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Nebulizer Parameters: Calib Std 4@6H02008

Analyte	Back Pressure	Flow
All	204.0 kPa	0.65 L/min

Mean Data: Calib Std 4@6H02008

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	599538.1	8831.93	1.47%	93.25	%
Sc 357.253 (R)	34546.6	575.13	1.66%	101.8	%
Ag 328.068†	47508.0	951.22	2.00%	[0.5]	mg/L
Al 308.215 (R)†	27400.2	145.31	0.53%	[100]	mg/L
As 188.979†	676.6	10.36	1.53%	[1.0]	mg/L
B 249.677†	77121.9	2214.53	2.87%	[5.0]	mg/L
Ba 233.527 (R)†	16876.7	172.33	1.02%	[5.0]	mg/L
Be 313.107 †	3863075.2	40333.18	1.04%	[1.0]	mg/L
Ca 315.887 (R)†	233617.3	5629.98	2.41%	[100]	mg/L
Cd 228.802 †	109551.6	1824.24	1.67%	[5.0]	mg/L
Co 228.616†	16628.4	274.10	1.65%	[1.0]	mg/L
Cr 267.716†	35730.8	744.77	2.08%	[1.0]	mg/L
Cu 324.752†	162993.4	4018.62	2.47%	[1.0]	mg/L
Fe 238.204 (R)†	257483.2	6089.57	2.37%	[100]	mg/L
K 766.490 (R)†	114790.6	2018.74	1.76%	[100]	mg/L
Li 670.784 (R)†	409965.4	5134.98	1.25%	[5.0]	mg/L
Mg 279.077 (R)†	34734.3	384.71	1.11%	[100]	mg/L
Mn 257.610 †	1876923.6	21417.36	1.14%	[5.0]	mg/L
Mo 202.031†	76792.6	1461.72	1.90%	[5.0]	mg/L
Na 589.592 (R)†	826875.7	12543.29	1.52%	[100]	mg/L
Ni 231.604†	24588.0	476.67	1.94%	[1.0]	mg/L
Pb 220.353†	5508.7	108.91	1.98%	[1.0]	mg/L
Sb 206.836†	1146.5	15.34	1.34%	[1.0]	mg/L
Se 196.026†	679.5	9.70	1.43%	[1.0]	mg/L
Si 251.611 (R)†	4167.2	44.06	1.06%	[5.0]	mg/L
Sn 189.927†	2330.0	36.79	1.58%	[1.0]	mg/L
Sr 421.552 (R)†	1841309.6	28878.65	1.57%	[5.0]	mg/L
Ti 334.940 (R)†	132894.2	2803.53	2.11%	[5.0]	mg/L
Tl 190.801†	838.5	13.45	1.60%	[1.0]	mg/L
V 292.402†	107072.8	2235.03	2.09%	[1.0]	mg/L
Zn 206.200 †	85539.7	2123.46	2.48%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	95020	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	274.0	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	676.6	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	15420	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	3375	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3863000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	2336	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	21910	0.00000	1.000000	
Co 228.616	1	Lin, Calc Int	0.0	16630	0.00000	1.000000	
Cr 267.716	1	Lin, Calc Int	0.0	35730	0.00000	1.000000	
Cu 324.752	1	Lin, Calc Int	0.0	163000	0.00000	1.000000	
Fe 238.204 (R)	1	Lin, Calc Int	-0.0	2575	0.00000	1.000000	
K 766.490 (R)	1	Lin, Calc Int	0.0	1148	0.00000	1.000000	
Li 670.784 (R)	1	Lin, Calc Int	0.0	81990	0.00000	1.000000	
Mg 279.077 (R)	1	Lin, Calc Int	0.0	347.3	0.00000	1.000000	
Mn 257.610	1	Lin, Calc Int	0.0	375400	0.00000	1.000000	
Mo 202.031	1	Lin, Calc Int	0.0	15360	0.00000	1.000000	
Na 589.592 (R)	1	Lin, Calc Int	0.0	8269	0.00000	1.000000	
Ni 231.604	1	Lin, Calc Int	0.0	24590	0.00000	1.000000	

Pb 220.353	1	Lin, Calc Int	0.0	5509	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1146	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	679.5	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	833.4	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2330	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	368300	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	26580	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	838.5	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	107100	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	17110	0.00000	1.000000

==========

Method Loaded
Method Name: 200.7_6010_151015 **Method Last Saved: 2/10/2017 9:51:43 AM**
IEC File: 170208.iec **MSF File: MSF_141211.msf**
Method Description: ICP-OES-PE3_200.7/6010_FAST Narrow
User canceled analysis.

==========

Analysis Begun

Start Time: 2/10/2017 11:08:50 AM **Plasma On Time: 2/10/2017 7:21:23 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\PE3_170210.sif
Batch ID:
Results Data Set: PE3_170210
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 9**
Sample ID: Calib Blank @STD6H08040 **Date Collected: 2/10/2017 11:08:59 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Nebulizer Parameters: Calib Blank @STD6H08040

Analyte	Back Pressure	Flow
All	205.0 kPa	0.65 L/min

Mean Data: Calib Blank @STD6H08040

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	614023.7	3830.09	0.62%	95.50	%
Sc 357.253 (R)	30836.0	128.41	0.42%	90.91	%
Ag 328.068†	-27.7	56.60	204.66%	[0.00]	mg/L
Al 308.215 (R)†	0.9	0.10	11.01%	[0.00]	mg/L
As 188.979†	-3.0	3.23	106.14%	[0.00]	mg/L
B 249.677†	383.4	7.91	2.06%	[0.00]	mg/L
Ba 233.527 (R)†	-1.0	1.05	101.87%	[0.00]	mg/L
Be 313.107 †	4335.2	18.05	0.42%	[0.00]	mg/L
Ca 315.887 (R)†	-96.2	2.59	2.69%	[0.00]	mg/L
Cd 228.802 †	107.1	4.81	4.49%	[0.00]	mg/L
Co 228.616†	-16.9	8.01	47.41%	[0.00]	mg/L
Cr 267.716†	-21.9	11.73	53.65%	[0.00]	mg/L
Cu 324.752†	530.4	47.23	8.90%	[0.00]	mg/L
Fe 238.204 (R)†	73.4	2.09	2.85%	[0.00]	mg/L
K 766.490 (R)†	-71.7	85.47	119.24%	[0.00]	mg/L
Li 670.784 (R)†	149.5	30.31	20.28%	[0.00]	mg/L
Mg 279.077 (R)†	8.3	2.46	29.60%	[0.00]	mg/L
Mn 257.610 †	305.2	1.32	0.43%	[0.00]	mg/L
Mo 202.031†	8.1	6.10	75.03%	[0.00]	mg/L
Na 589.592 (R)†	789.3	78.34	9.93%	[0.00]	mg/L
Ni 231.604†	-104.3	4.10	3.93%	[0.00]	mg/L
Pb 220.353†	25.8	6.08	23.55%	[0.00]	mg/L
Sb 206.836†	2.3	1.81	79.66%	[0.00]	mg/L
Se 196.026†	4.7	3.90	82.61%	[0.00]	mg/L
Si 251.611 (R)†	35.6	2.09	5.88%	[0.00]	mg/L
Sn 189.927†	3.6	0.54	15.11%	[0.00]	mg/L
Sr 421.552 (R)†	35.5	63.44	178.89%	[0.00]	mg/L
Ti 334.940 (R)†	26.5	13.91	52.51%	[0.00]	mg/L
Tl 190.801†	-12.3	1.58	12.80%	[0.00]	mg/L
V 292.402†	-68.2	2.71	3.98%	[0.00]	mg/L
Zn 206.200 †	10.7	3.44	32.14%	[0.00]	mg/L

==========

Method Loaded
Method Name: 200.7_6010_151015 **Method Last Saved: 2/10/2017 9:51:43 AM**
IEC File: 170208.iec **MSF File: MSF_141211.msf**
Method Description: ICP-OES-PE3_200.7/6010_FAST Narrow

==========

Sequence No.: 2 **Autosampler Location: 10**
Sample ID: Calib Std 4@6H02008 **Date Collected: 2/10/2017 11:10:46 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Nebulizer Parameters: Calib Std 4@6H02008

Analyte	Back Pressure	Flow
All	205.0 kPa	0.65 L/min

Mean Data: Calib Std 4@6H02008

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	574060.5	4339.50	0.76%	89.29	%
Sc 357.253 (R)	32362.2	951.29	2.94%	95.41	%
Ag 328.068†	47583.3	762.33	1.60%	[0.5]	mg/L
Al 308.215 (R)†	27771.8	105.57	0.38%	[100]	mg/L
As 188.979†	688.4	18.29	2.66%	[1.0]	mg/L
B 249.677†	77307.6	1443.47	1.87%	[5.0]	mg/L
Ba 233.527 (R)†	18648.8	184.44	0.99%	[5.0]	mg/L
Be 313.107 †	4061666.6	76811.62	1.89%	[1.0]	mg/L
Ca 315.887 (R)†	252661.7	5979.59	2.37%	[100]	mg/L
Cd 228.802 †	110579.8	1381.55	1.25%	[5.0]	mg/L
Co 228.616†	17089.1	160.77	0.94%	[1.0]	mg/L
Cr 267.716†	36394.0	538.38	1.48%	[1.0]	mg/L
Cu 324.752†	170369.9	1599.62	0.94%	[1.0]	mg/L
Fe 238.204 (R)†	271700.8	5832.41	2.15%	[100]	mg/L
K 766.490 (R)†	126031.5	1991.02	1.58%	[100]	mg/L
Li 670.784 (R)†	441903.2	3552.58	0.80%	[5.0]	mg/L
Mg 279.077 (R)†	37907.6	277.34	0.73%	[100]	mg/L
Mn 257.610 †	1969910.8	30302.75	1.54%	[5.0]	mg/L
Mo 202.031†	80018.7	1358.59	1.70%	[5.0]	mg/L
Na 589.592 (R)†	886052.0	10751.58	1.21%	[100]	mg/L
Ni 231.604†	25007.5	294.03	1.18%	[1.0]	mg/L
Pb 220.353†	5814.6	62.26	1.07%	[1.0]	mg/L
Sb 206.836†	1159.5	12.51	1.08%	[1.0]	mg/L
Se 196.026†	710.6	9.36	1.32%	[1.0]	mg/L
Si 251.611 (R)†	4363.7	5.44	0.12%	[5.0]	mg/L
Sn 189.927†	2392.7	25.40	1.06%	[1.0]	mg/L
Sr 421.552 (R)†	2071032.3	29230.54	1.41%	[5.0]	mg/L
Ti 334.940 (R)†	141012.6	2134.25	1.51%	[5.0]	mg/L
Tl 190.801†	867.7	0.99	0.11%	[1.0]	mg/L
V 292.402†	108407.9	1559.34	1.44%	[1.0]	mg/L
Zn 206.200 †	89845.8	927.59	1.03%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	95170	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	277.7	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	688.4	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	15460	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	3730	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	4062000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	2527	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	22120	0.00000	1.000000	
Co 228.616	1	Lin, Calc Int	0.0	17090	0.00000	1.000000	
Cr 267.716	1	Lin, Calc Int	0.0	36390	0.00000	1.000000	
Cu 324.752	1	Lin, Calc Int	0.0	170400	0.00000	1.000000	
Fe 238.204 (R)	1	Lin, Calc Int	0.0	2717	0.00000	1.000000	
K 766.490 (R)	1	Lin, Calc Int	0.0	1260	0.00000	1.000000	
Li 670.784 (R)	1	Lin, Calc Int	0.0	88380	0.00000	1.000000	
Mg 279.077 (R)	1	Lin, Calc Int	0.0	379.1	0.00000	1.000000	
Mn 257.610	1	Lin, Calc Int	0.0	394000	0.00000	1.000000	
Mo 202.031	1	Lin, Calc Int	0.0	16000	0.00000	1.000000	
Na 589.592 (R)	1	Lin, Calc Int	0.0	8861	0.00000	1.000000	
Ni 231.604	1	Lin, Calc Int	0.0	25010	0.00000	1.000000	

Pb 220.353	1	Lin, Calc Int	0.0	5815	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1160	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	710.6	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	872.7	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2393	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	414200	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	28200	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	867.7	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	108400	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	17970	0.00000	1.000000

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **17-03278**
Class: **METALS-PPM**
Method: **EPA-6010B**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M041E_170206	1703278-03
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: PE-OP3

Analyte	DL	LOD	LOQ	Units
Calcium	0.016	0.05	0.1	mg/L
Magnesium	0.019	0.05	0.05	mg/L
Sodium	0.051	0.125	0.5	mg/L
Potassium	0.1	0.25	1	mg/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6010B

EB07_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-02
File ID: PE3_170210-063
Sampled: 02/06/17 14:30
Prepared: 02/09/17 16:14
Analyzed: 02/10/17 11:45
Solids: 0.00
Preparation: 6010B/No Digestion
Initial/Final: 10 ml / 10 ml
Batch: B[B0863
Sequence: 1702404
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-70-2	Calcium	0.050	0.016	0.050	0.10	1	U	EPA-6010B
7439-95-4	Magnesium	0.050	0.019	0.050	0.050	1	U	EPA-6010B
7440-23-5	Sodium	0.12	0.051	0.12	0.50	1	U	EPA-6010B
7440-09-7	Potassium	0.25	0.10	0.25	1.0	1	U	EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6010B

M041E_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-03
File ID: PE3_170210-064
Sampled: 02/06/17 08:45
Prepared: 02/09/17 16:14
Analyzed: 02/10/17 11:47
Solids: 0.00
Preparation: 6010B/No Digestion
Initial/Final: 10 ml / 10 ml
Batch: B[B0863
Sequence: 1702404
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-70-2	Calcium	79	0.080	0.25	0.50	5	D	EPA-6010B
7439-95-4	Magnesium	140	0.095	0.25	0.25	5	D	EPA-6010B
7440-23-5	Sodium	1900	0.26	0.62	2.5	5	D	EPA-6010B
7440-09-7	Potassium	78	0.50	1.2	5.0	5	D	EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INORGANIC ANALYSIS DATA SHEET
EPA-6010B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Laboratory ID: 1703278-04
File ID: PE3_170210-058
Sampled: 02/06/17 11:30
Prepared: 02/09/17 16:14
Analyzed: 02/10/17 11:37
Solids: 0.00
Preparation: 6010B/No Digestion
Initial/Final: 10 ml / 10 ml
Batch: B[B0863
Sequence: 1702404
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (mg/L)	DL	LOD	LOQ	Dilution Factor	Q	Method
7440-70-2	Calcium	160	0.016	0.050	0.10	1		EPA-6010B
7439-95-4	Magnesium	13	0.019	0.050	0.050	1		EPA-6010B
7440-23-5	Sodium	24	0.051	0.12	0.50	1		EPA-6010B
7440-09-7	Potassium	9.4	0.10	0.25	1.0	1		EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0863
Batch Matrix: Water
Preparation: 6010B/No Digestion

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	PE3_170210-063	02/09/17 16:14	
M041E_170206	1703278-03	PE3_170210-064	02/09/17 16:14	
M051A_170206	1703278-04	PE3_170210-058	02/09/17 16:14	
Blank	B[B0863-BLK1	PE3_170210-056	02/09/17 16:14	
LCS	B[B0863-BS1	PE3_170210-057	02/09/17 16:14	
M051A_170206	B[B0863-DUP1	PE3_170210-059	02/09/17 16:14	
M051A_170206	B[B0863-MS1	PE3_170210-061	02/09/17 16:14	
M051A_170206	B[B0863-MSD1	PE3_170210-062	02/09/17 16:14	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-6010B

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0863-BLK1	File ID:	PE3_170210-056
Prepared:	02/09/17 16:14	Preparation:	6010B/No Digestion	Initial/Final:	10 ml / 10 ml
Analyzed:	02/10/17 11:33	Instrument:	PE-OP3		
Batch:	B[B0863	Sequence:	1702404	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
7440-70-2	Calcium	0.050	0.016	0.050	0.10	U
7439-95-4	Magnesium	0.050	0.019	0.050	0.050	U
7440-23-5	Sodium	0.12	0.051	0.12	0.50	U
7440-09-7	Potassium	0.25	0.10	0.25	1.0	U

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

M051A_170206

DUPLICATES
EPA-6010B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Matrix: Water
Batch: B[B0863
Preparation: 6010B/No Digestion
Source Sample Name: M051A_170206

SDG: 17-03278
Project: Alameda
Laboratory ID: B[B0863-DUP1
Lab Source ID: 1703278-04
Initial/Final: 10 ml / 10 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Calcium	20	163.78		163.60		0.113		EPA-6010B
Magnesium	20	12.818		12.526		2.31		EPA-6010B
Sodium	20	24.272		23.917		1.47		EPA-6010B
Potassium	20	9.3576		9.1186		2.59		EPA-6010B

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6010B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0863
Laboratory ID: B[B0863-MS1
Preparation: 6010B/No Digestion
Initial/Final: 9.8 ml / 10 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Calcium	10.204	163.78	161.93	-18.1 *	87 - 113
Magnesium	10.204	12.818	21.906	89.1	85 - 113
Sodium	10.204	24.272	33.581	91.2	87 - 115
Potassium	10.204	9.3576	19.269	97.1	86 - 114

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Calcium	10.204	162.48	-12.8 *	0.335	20	87 - 113
Magnesium	10.204	22.540	95.3	2.85	20	85 - 113
Sodium	10.204	33.589	91.3	0.0240	20	87 - 115
Potassium	10.204	19.291	97.4	0.118	20	86 - 114

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0863
Laboratory ID: B[B0863-BS1
Preparation: 6010B/No Digestion
Initial/Final: 9.8 ml / 10 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Calcium	10.204	9.9109	97.1	87 - 113
Magnesium	10.204	9.9555	97.6	85 - 113
Sodium	10.204	10.021	98.2	87 - 115
Potassium	10.204	9.8099	96.1	86 - 114

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702404
Instrument: PE-OP3
Matrix: Water
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702404-ICV1	PE3_170210-007	02/10/17 08:52
Initial Cal Blank	1702404-ICB1	PE3_170210-008	02/10/17 08:55
MRL Check	1702404-CRL1	PE3_170210-011	02/10/17 09:09
Interference Check A	1702404-IFA1	PE3_170210-014	02/10/17 09:31
Interference Check B	1702404-IFB1	PE3_170210-017	02/10/17 09:43
Calibration Check	1702404-CCV1	PE3_170210-019	02/10/17 09:51
Calibration Blank	1702404-CCB1	PE3_170210-020	02/10/17 09:53
Calibration Check	1702404-CCV2	PE3_170210-054	02/10/17 11:29
Calibration Blank	1702404-CCB2	PE3_170210-055	02/10/17 11:31
Blank	B[B0863-BLK1	PE3_170210-056	02/10/17 11:33
LCS	B[B0863-BS1	PE3_170210-057	02/10/17 11:35
M051A_170206	1703278-04	PE3_170210-058	02/10/17 11:37
M051A_170206	B[B0863-DUP1	PE3_170210-059	02/10/17 11:39
M051A_170206	B[B0863-MS1	PE3_170210-061	02/10/17 11:42
M051A_170206	B[B0863-MSD1	PE3_170210-062	02/10/17 11:44
EB07_170206	1703278-02	PE3_170210-063	02/10/17 11:45
M041E_170206	1703278-03	PE3_170210-064	02/10/17 11:47
Calibration Check	1702404-CCV3	PE3_170210-066	02/10/17 11:54
Calibration Blank	1702404-CCB3	PE3_170210-067	02/10/17 11:55
Calibration Check	1702404-CCV4	PE3_170210-141	02/10/17 14:15
Calibration Blank	1702404-CCB4	PE3_170210-142	02/10/17 14:17
Calibration Check	1702404-CCV5	PE3_170210-151	02/10/17 14:32
Calibration Blank	1702404-CCB5	PE3_170210-152	02/10/17 14:34

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

BLANKS
EPA-6010B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-OP3
Project: Alameda
Sequence: 1702404
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	C	Method
1702404-ICB1	Calcium	0.0047682	0.016		0.10	mg/L	U	EPA-6010B
	Magnesium	0.013538	0.019		0.050	mg/L	U	EPA-6010B
	Sodium	0.056115	0.051		0.50	mg/L	J	EPA-6010B
	Potassium	0.078300	0.10		1.0	mg/L	U	EPA-6010B
1702404-CCB1	Calcium	0.0085647	0.016		0.10	mg/L	U	EPA-6010B
	Magnesium	0.0085868	0.019		0.050	mg/L	U	EPA-6010B
	Sodium	0.044384	0.051		0.50	mg/L	U	EPA-6010B
	Potassium	0.043620	0.10		1.0	mg/L	U	EPA-6010B
1702404-CCB2	Calcium	0.0086803	0.016		0.10	mg/L	U	EPA-6010B
	Magnesium	-0.0024432	0.019		0.050	mg/L	U	EPA-6010B
	Sodium	0.15994	0.051		0.50	mg/L	J	EPA-6010B
	Potassium	0.092552	0.10		1.0	mg/L	U	EPA-6010B
1702404-CCB3	Calcium	0.0093089	0.016		0.10	mg/L	U	EPA-6010B
	Magnesium	0.00080643	0.019		0.050	mg/L	U	EPA-6010B
	Sodium	0.053079	0.051		0.50	mg/L	J	EPA-6010B
	Potassium	0.065666	0.10		1.0	mg/L	U	EPA-6010B
1702404-CCB4	Calcium	0.015161	0.016		0.10	mg/L	U	EPA-6010B
	Magnesium	0.012507	0.019		0.050	mg/L	U	EPA-6010B
	Sodium	0.026315	0.051		0.50	mg/L	U	EPA-6010B
	Potassium	0.064088	0.10		1.0	mg/L	U	EPA-6010B
1702404-CCB5	Calcium	0.0091591	0.016		0.10	mg/L	U	EPA-6010B
	Magnesium	-0.0063815	0.019		0.050	mg/L	U	EPA-6010B
	Sodium	0.038171	0.051		0.50	mg/L	U	EPA-6010B
	Potassium	0.073094	0.10		1.0	mg/L	U	EPA-6010B

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6010B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-OP3
Control Limt: +/- 10.00%

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED
Sequence: 1702404

Lab Sample ID	Analyte	True	Found	%R	Units	Method
1702404-ICV1	Calcium	50.000	51.794	104	mg/L	EPA-6010B
	Magnesium	50.000	52.246	104	mg/L	EPA-6010B
	Sodium	50.000	50.988	102	mg/L	EPA-6010B
	Potassium	50.000	50.820	102	mg/L	EPA-6010B
1702404-CCV1	Calcium	50.000	53.024	106	mg/L	EPA-6010B
	Magnesium	50.000	52.203	104	mg/L	EPA-6010B
	Sodium	50.000	52.554	105	mg/L	EPA-6010B
	Potassium	50.000	52.442	105	mg/L	EPA-6010B
1702404-CCV2	Calcium	50.000	50.542	101	mg/L	EPA-6010B
	Magnesium	50.000	50.685	101	mg/L	EPA-6010B
	Sodium	50.000	51.315	103	mg/L	EPA-6010B
	Potassium	50.000	50.228	100	mg/L	EPA-6010B
1702404-CCV3	Calcium	50.000	49.663	99.3	mg/L	EPA-6010B
	Magnesium	50.000	47.291	94.6	mg/L	EPA-6010B
	Sodium	50.000	49.117	98.2	mg/L	EPA-6010B
	Potassium	50.000	48.347	96.7	mg/L	EPA-6010B
1702404-CCV4	Calcium	50.000	48.562	97.1	mg/L	EPA-6010B
	Magnesium	50.000	48.396	96.8	mg/L	EPA-6010B
	Sodium	50.000	48.757	97.5	mg/L	EPA-6010B
	Potassium	50.000	47.443	94.9	mg/L	EPA-6010B
1702404-CCV5	Calcium	50.000	48.689	97.4	mg/L	EPA-6010B
	Magnesium	50.000	48.063	96.1	mg/L	EPA-6010B
	Sodium	50.000	49.136	98.3	mg/L	EPA-6010B
	Potassium	50.000	48.662	97.3	mg/L	EPA-6010B

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ICP INTERFERENCE CHECK SAMPLE

EPA-6010B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Instrument ID: PE-OP3
Sequence: 1702404

SDG: 17-03278
Project: Alameda
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
1702404-IFA1	Calcium	500.00	493.84	98.8	mg/L
	Magnesium	500.00	491.51	98.3	mg/L
	Sodium	0.0000	0.060214		mg/L
	Potassium	0.0000	-0.0051566		mg/L
1702404-IFB1	Calcium	500.00	494.94	99.0	mg/L
	Magnesium	500.00	481.59	96.3	mg/L
	Sodium		0.059498		mg/L
	Potassium		-0.015663		mg/L

* Values outside of QC limits

Raw Data From Instrument PE-OP3

Raw Data - Calibration Standards

==========

Analysis Begun

Start Time: 2/10/2017 8:44:57 AM
Logged In Analyst: Analyst
Spectrometer: Optima 8300 , S/N 078N1121901
Plasma On Time: 2/10/2017 7:21:23 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\PE3_170210.sif
Batch ID:
Results Data Set: PE3_170210
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1
Sample ID: Calib Blank @STD6H08040
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 9
Date Collected: 2/10/2017 8:45:05 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank @STD6H08040

Analyte	Back Pressure	Flow
All	204.0 kPa	0.65 L/min

Mean Data: Calib Blank @STD6H08040

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	642935.1	16348.78	2.54%	100.0	%
Sc 357.253 (R)	33920.8	257.67	0.76%	100.0	%
Ag 328.068†	-36.6	37.15	101.57%	[0.00]	mg/L
Al 308.215 (R)†	-2.2	3.83	174.23%	[0.00]	mg/L
As 188.979†	-3.1	0.44	14.45%	[0.00]	mg/L
B 249.677†	220.3	8.27	3.75%	[0.00]	mg/L
Ba 233.527 (R)†	0.6	2.33	365.30%	[0.00]	mg/L
Be 313.107 †	3975.0	50.94	1.28%	[0.00]	mg/L
Ca 315.887 (R)†	-87.7	5.41	6.17%	[0.00]	mg/L
Cd 228.802 †	98.0	5.40	5.51%	[0.00]	mg/L
Co 228.616†	-16.8	0.62	3.71%	[0.00]	mg/L
Cr 267.716†	-7.5	3.91	52.12%	[0.00]	mg/L
Cu 324.752†	349.6	28.02	8.02%	[0.00]	mg/L
Fe 238.204 (R)†	45.3	2.65	5.85%	[0.00]	mg/L
K 766.490 (R)†	-69.3	47.21	68.14%	[0.00]	mg/L
Li 670.784 (R)†	44.6	59.14	132.70%	[0.00]	mg/L
Mg 279.077 (R)†	4.9	1.85	38.10%	[0.00]	mg/L
Mn 257.610 †	390.7	11.24	2.88%	[0.00]	mg/L
Mo 202.031†	-10.7	2.07	19.31%	[0.00]	mg/L
Na 589.592 (R)†	652.1	23.46	3.60%	[0.00]	mg/L
Ni 231.604†	-123.5	5.98	4.84%	[0.00]	mg/L
Pb 220.353†	24.7	4.23	17.09%	[0.00]	mg/L
Sb 206.836†	0.5	2.27	422.34%	[0.00]	mg/L
Se 196.026†	4.7	2.53	53.31%	[0.00]	mg/L
Si 251.611 (R)†	27.3	1.40	5.12%	[0.00]	mg/L
Sn 189.927†	3.1	2.19	71.45%	[0.00]	mg/L
Sr 421.552 (R)†	7.1	25.53	361.90%	[0.00]	mg/L
Ti 334.940 (R)†	3.2	5.32	167.20%	[0.00]	mg/L
Tl 190.801†	-13.5	1.29	9.56%	[0.00]	mg/L
V 292.402†	-53.7	8.10	15.09%	[0.00]	mg/L
Zn 206.200 †	5.2	3.07	59.41%	[0.00]	mg/L

==========

Method Loaded
Method Name: 200.7_6010_151015 **Method Last Saved: 2/10/2017 8:28:51 AM**
IEC File: 170208.iec **MSF File: MSF_141211.msf**
Method Description: ICP-OES-PE3_200.7/6010_FAST Narrow

==========

Sequence No.: 2 **Autosampler Location: 10**
Sample ID: Calib Std 4@6H02008 **Date Collected: 2/10/2017 8:47:36 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Nebulizer Parameters: Calib Std 4@6H02008

Analyte	Back Pressure	Flow
All	204.0 kPa	0.65 L/min

Mean Data: Calib Std 4@6H02008

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	599538.1	8831.93	1.47%	93.25	%
Sc 357.253 (R)	34546.6	575.13	1.66%	101.8	%
Ag 328.068†	47508.0	951.22	2.00%	[0.5]	mg/L
Al 308.215 (R)†	27400.2	145.31	0.53%	[100]	mg/L
As 188.979†	676.6	10.36	1.53%	[1.0]	mg/L
B 249.677†	77121.9	2214.53	2.87%	[5.0]	mg/L
Ba 233.527 (R)†	16876.7	172.33	1.02%	[5.0]	mg/L
Be 313.107 †	3863075.2	40333.18	1.04%	[1.0]	mg/L
Ca 315.887 (R)†	233617.3	5629.98	2.41%	[100]	mg/L
Cd 228.802 †	109551.6	1824.24	1.67%	[5.0]	mg/L
Co 228.616†	16628.4	274.10	1.65%	[1.0]	mg/L
Cr 267.716†	35730.8	744.77	2.08%	[1.0]	mg/L
Cu 324.752†	162993.4	4018.62	2.47%	[1.0]	mg/L
Fe 238.204 (R)†	257483.2	6089.57	2.37%	[100]	mg/L
K 766.490 (R)†	114790.6	2018.74	1.76%	[100]	mg/L
Li 670.784 (R)†	409965.4	5134.98	1.25%	[5.0]	mg/L
Mg 279.077 (R)†	34734.3	384.71	1.11%	[100]	mg/L
Mn 257.610 †	1876923.6	21417.36	1.14%	[5.0]	mg/L
Mo 202.031†	76792.6	1461.72	1.90%	[5.0]	mg/L
Na 589.592 (R)†	826875.7	12543.29	1.52%	[100]	mg/L
Ni 231.604†	24588.0	476.67	1.94%	[1.0]	mg/L
Pb 220.353†	5508.7	108.91	1.98%	[1.0]	mg/L
Sb 206.836†	1146.5	15.34	1.34%	[1.0]	mg/L
Se 196.026†	679.5	9.70	1.43%	[1.0]	mg/L
Si 251.611 (R)†	4167.2	44.06	1.06%	[5.0]	mg/L
Sn 189.927†	2330.0	36.79	1.58%	[1.0]	mg/L
Sr 421.552 (R)†	1841309.6	28878.65	1.57%	[5.0]	mg/L
Ti 334.940 (R)†	132894.2	2803.53	2.11%	[5.0]	mg/L
Tl 190.801†	838.5	13.45	1.60%	[1.0]	mg/L
V 292.402†	107072.8	2235.03	2.09%	[1.0]	mg/L
Zn 206.200 †	85539.7	2123.46	2.48%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	95020	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	274.0	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	676.6	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	15420	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	3375	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3863000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	2336	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	21910	0.00000	1.000000	
Co 228.616	1	Lin, Calc Int	0.0	16630	0.00000	1.000000	
Cr 267.716	1	Lin, Calc Int	0.0	35730	0.00000	1.000000	
Cu 324.752	1	Lin, Calc Int	0.0	163000	0.00000	1.000000	
Fe 238.204 (R)	1	Lin, Calc Int	-0.0	2575	0.00000	1.000000	
K 766.490 (R)	1	Lin, Calc Int	0.0	1148	0.00000	1.000000	
Li 670.784 (R)	1	Lin, Calc Int	0.0	81990	0.00000	1.000000	
Mg 279.077 (R)	1	Lin, Calc Int	0.0	347.3	0.00000	1.000000	
Mn 257.610	1	Lin, Calc Int	0.0	375400	0.00000	1.000000	
Mo 202.031	1	Lin, Calc Int	0.0	15360	0.00000	1.000000	
Na 589.592 (R)	1	Lin, Calc Int	0.0	8269	0.00000	1.000000	
Ni 231.604	1	Lin, Calc Int	0.0	24590	0.00000	1.000000	

Pb 220.353	1	Lin, Calc Int	0.0	5509	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1146	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	679.5	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	833.4	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2330	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	368300	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	26580	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	838.5	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	107100	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	17110	0.00000	1.000000

==========

Method Loaded
Method Name: 200.7_6010_151015 **Method Last Saved: 2/10/2017 9:51:43 AM**
IEC File: 170208.iec **MSF File: MSF_141211.msf**
Method Description: ICP-OES-PE3_200.7/6010_FAST Narrow
User canceled analysis.

==========

Analysis Begun

Start Time: 2/10/2017 11:08:50 AM **Plasma On Time: 2/10/2017 7:21:23 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\PE3_170210.sif
Batch ID:
Results Data Set: PE3_170210
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 9**
Sample ID: Calib Blank @STD6H08040 **Date Collected: 2/10/2017 11:08:59 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Nebulizer Parameters: Calib Blank @STD6H08040

Analyte	Back Pressure	Flow
All	205.0 kPa	0.65 L/min

Mean Data: Calib Blank @STD6H08040

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	614023.7	3830.09	0.62%	95.50	%
Sc 357.253 (R)	30836.0	128.41	0.42%	90.91	%
Ag 328.068†	-27.7	56.60	204.66%	[0.00]	mg/L
Al 308.215 (R)†	0.9	0.10	11.01%	[0.00]	mg/L
As 188.979†	-3.0	3.23	106.14%	[0.00]	mg/L
B 249.677†	383.4	7.91	2.06%	[0.00]	mg/L
Ba 233.527 (R)†	-1.0	1.05	101.87%	[0.00]	mg/L
Be 313.107 †	4335.2	18.05	0.42%	[0.00]	mg/L
Ca 315.887 (R)†	-96.2	2.59	2.69%	[0.00]	mg/L
Cd 228.802 †	107.1	4.81	4.49%	[0.00]	mg/L
Co 228.616†	-16.9	8.01	47.41%	[0.00]	mg/L
Cr 267.716†	-21.9	11.73	53.65%	[0.00]	mg/L
Cu 324.752†	530.4	47.23	8.90%	[0.00]	mg/L
Fe 238.204 (R)†	73.4	2.09	2.85%	[0.00]	mg/L
K 766.490 (R)†	-71.7	85.47	119.24%	[0.00]	mg/L
Li 670.784 (R)†	149.5	30.31	20.28%	[0.00]	mg/L
Mg 279.077 (R)†	8.3	2.46	29.60%	[0.00]	mg/L
Mn 257.610 †	305.2	1.32	0.43%	[0.00]	mg/L
Mo 202.031†	8.1	6.10	75.03%	[0.00]	mg/L
Na 589.592 (R)†	789.3	78.34	9.93%	[0.00]	mg/L
Ni 231.604†	-104.3	4.10	3.93%	[0.00]	mg/L
Pb 220.353†	25.8	6.08	23.55%	[0.00]	mg/L
Sb 206.836†	2.3	1.81	79.66%	[0.00]	mg/L
Se 196.026†	4.7	3.90	82.61%	[0.00]	mg/L
Si 251.611 (R)†	35.6	2.09	5.88%	[0.00]	mg/L
Sn 189.927†	3.6	0.54	15.11%	[0.00]	mg/L
Sr 421.552 (R)†	35.5	63.44	178.89%	[0.00]	mg/L
Ti 334.940 (R)†	26.5	13.91	52.51%	[0.00]	mg/L
Tl 190.801†	-12.3	1.58	12.80%	[0.00]	mg/L
V 292.402†	-68.2	2.71	3.98%	[0.00]	mg/L
Zn 206.200 †	10.7	3.44	32.14%	[0.00]	mg/L

==========

Method Loaded
Method Name: 200.7_6010_151015 **Method Last Saved: 2/10/2017 9:51:43 AM**
IEC File: 170208.iec **MSF File: MSF_141211.msf**
Method Description: ICP-OES-PE3_200.7/6010_FAST Narrow

==========

Sequence No.: 2 **Autosampler Location: 10**
Sample ID: Calib Std 4@6H02008 **Date Collected: 2/10/2017 11:10:46 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Nebulizer Parameters: Calib Std 4@6H02008

Analyte	Back Pressure	Flow
All	205.0 kPa	0.65 L/min

Mean Data: Calib Std 4@6H02008

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 357.253	574060.5	4339.50	0.76%	89.29	%
Sc 357.253 (R)	32362.2	951.29	2.94%	95.41	%
Ag 328.068†	47583.3	762.33	1.60%	[0.5]	mg/L
Al 308.215 (R)†	27771.8	105.57	0.38%	[100]	mg/L
As 188.979†	688.4	18.29	2.66%	[1.0]	mg/L
B 249.677†	77307.6	1443.47	1.87%	[5.0]	mg/L
Ba 233.527 (R)†	18648.8	184.44	0.99%	[5.0]	mg/L
Be 313.107 †	4061666.6	76811.62	1.89%	[1.0]	mg/L
Ca 315.887 (R)†	252661.7	5979.59	2.37%	[100]	mg/L
Cd 228.802 †	110579.8	1381.55	1.25%	[5.0]	mg/L
Co 228.616†	17089.1	160.77	0.94%	[1.0]	mg/L
Cr 267.716†	36394.0	538.38	1.48%	[1.0]	mg/L
Cu 324.752†	170369.9	1599.62	0.94%	[1.0]	mg/L
Fe 238.204 (R)†	271700.8	5832.41	2.15%	[100]	mg/L
K 766.490 (R)†	126031.5	1991.02	1.58%	[100]	mg/L
Li 670.784 (R)†	441903.2	3552.58	0.80%	[5.0]	mg/L
Mg 279.077 (R)†	37907.6	277.34	0.73%	[100]	mg/L
Mn 257.610 †	1969910.8	30302.75	1.54%	[5.0]	mg/L
Mo 202.031†	80018.7	1358.59	1.70%	[5.0]	mg/L
Na 589.592 (R)†	886052.0	10751.58	1.21%	[100]	mg/L
Ni 231.604†	25007.5	294.03	1.18%	[1.0]	mg/L
Pb 220.353†	5814.6	62.26	1.07%	[1.0]	mg/L
Sb 206.836†	1159.5	12.51	1.08%	[1.0]	mg/L
Se 196.026†	710.6	9.36	1.32%	[1.0]	mg/L
Si 251.611 (R)†	4363.7	5.44	0.12%	[5.0]	mg/L
Sn 189.927†	2392.7	25.40	1.06%	[1.0]	mg/L
Sr 421.552 (R)†	2071032.3	29230.54	1.41%	[5.0]	mg/L
Ti 334.940 (R)†	141012.6	2134.25	1.51%	[5.0]	mg/L
Tl 190.801†	867.7	0.99	0.11%	[1.0]	mg/L
V 292.402†	108407.9	1559.34	1.44%	[1.0]	mg/L
Zn 206.200 †	89845.8	927.59	1.03%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	95170	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	277.7	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	688.4	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	15460	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	3730	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	4062000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	2527	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	22120	0.00000	1.000000	
Co 228.616	1	Lin, Calc Int	0.0	17090	0.00000	1.000000	
Cr 267.716	1	Lin, Calc Int	0.0	36390	0.00000	1.000000	
Cu 324.752	1	Lin, Calc Int	0.0	170400	0.00000	1.000000	
Fe 238.204 (R)	1	Lin, Calc Int	0.0	2717	0.00000	1.000000	
K 766.490 (R)	1	Lin, Calc Int	0.0	1260	0.00000	1.000000	
Li 670.784 (R)	1	Lin, Calc Int	0.0	88380	0.00000	1.000000	
Mg 279.077 (R)	1	Lin, Calc Int	0.0	379.1	0.00000	1.000000	
Mn 257.610	1	Lin, Calc Int	0.0	394000	0.00000	1.000000	
Mo 202.031	1	Lin, Calc Int	0.0	16000	0.00000	1.000000	
Na 589.592 (R)	1	Lin, Calc Int	0.0	8861	0.00000	1.000000	
Ni 231.604	1	Lin, Calc Int	0.0	25010	0.00000	1.000000	

Pb 220.353	1	Lin, Calc Int	0.0	5815	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1160	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	710.6	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	872.7	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2393	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	414200	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	28200	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	867.7	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	108400	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	17970	0.00000	1.000000

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:23:48AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements
For Data Validation of
Pesticide Analysis

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Certifications: CA ELAP #1186; NV #CA00014; AK UST101; OR ELAP #4032; DoD ELAP #66175

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Case Narrative

Analyses Requested: 8081
Submission#: 17-03278

Instrument ID: GC-17
Model: HP6890 Series

Column Types
Primary: ZB-MultiResidue-1 30M x 0.32mm x 0.50µm
Confirmation: ZB-MultiResidue-2 30M x 0.32mm x 0.50µm

Detector: Dual ECD

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and extractions took place within holding times.

Calibration: Initial calibration criteria was met. Frequency and accuracy criteria for initial calibration verification (ICV) were met. Frequency and accuracy criteria for continuing calibration verifications (CCV) were met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL. Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameters were within QC limits.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy and precision requirements were met.

Discussion: Samples 17-03278-02 and 17-03278-03 surrogate recovery for Decachlorobiphenyl was outside QC limits.

Chain of Custody and Cooler Receipt Form for 1703278 Page 1 of 6

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:40
Received By:	Date: 2/6/17	Time: 16:40
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES		1			/					
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		A-F								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Vial Numbering Completed By: M Date/Time: 2-6-17 2310
Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMPREC.rev 20)

Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ (W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received		
☒ YES ☐ NO	Emissivity: 0.97 Container: VOA Thermometer ID: 207 Temperature: (A) 1.5 °C / (C) 1.7 °C	Date/Time 2/6 2150 Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL				A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: _____ Date/Time: 2-6-17 2315

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Numbering Completed By: Date/Time: 2/6/17 0360

Actual / C = Corrected

Rev 21 05/23/2016

Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RB								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported:	3/10/2017 11:42:14AM
Project:	Alameda
Project Number:	5023146096
Project Manager:	Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**PEST**
Method:	**EPA-8081A**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M041E_170206	1703278-03

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: GC-17

Analyte	DL	LOD	LOQ	Units
Aldrin	0.0013	0.0030	0.010	ug/L
alpha-BHC	0.0011	0.0030	0.010	ug/L
beta-BHC	0.0021	0.0030	0.010	ug/L
delta-BHC	0.0014	0.0030	0.010	ug/L
gamma-BHC (Lindane)	0.00094	0.0030	0.010	ug/L
alpha-Chlordane	0.0012	0.0030	0.010	ug/L
gamma-Chlordane	0.0026	0.0030	0.010	ug/L
Chlordane (Technical)	0.38	0.60	2.0	ug/L
4,4'-DDD	0.0017	0.0030	0.010	ug/L
4,4'-DDE	0.0019	0.0030	0.010	ug/L
4,4'-DDT	0.00076	0.0030	0.010	ug/L
Dieldrin	0.0012	0.0030	0.010	ug/L
Endosulfan I	0.0016	0.0030	0.010	ug/L
Endosulfan II	0.0014	0.0030	0.010	ug/L
Endosulfan sulfate	0.0026	0.0030	0.010	ug/L
Endrin	0.00082	0.0030	0.010	ug/L
Endrin aldehyde	0.0032	0.0060	0.020	ug/L
Endrin ketone	0.00056	0.0030	0.010	ug/L
Heptachlor	0.0012	0.0030	0.010	ug/L
Heptachlor epoxide	0.00099	0.0030	0.010	ug/L
Methoxychlor	0.0011	0.0030	0.010	ug/L
Toxaphene	0.42	1.0	4.0	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8081A

EB07_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-02	File ID:	15FEB023.D
Sampled:	02/06/17 14:30	Prepared:	02/09/17 11:40	Analyzed:	02/15/17 15:27
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 10 ml
Batch:	B[B0979	Sequence:	1702826	Calibration:	1702026
Instrument:	GC-17				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
309-00-2	Aldrin	1	0.0030	0.0013	0.0030	0.010	U
319-84-6	alpha-BHC	1	0.0030	0.0011	0.0030	0.010	U
319-85-7	beta-BHC	1	0.0030	0.0021	0.0030	0.010	U
319-86-8	delta-BHC	1	0.0030	0.0014	0.0030	0.010	U
58-89-9	gamma-BHC (Lindane)	1	0.0030	0.00094	0.0030	0.010	U
5103-71-9	alpha-Chlordane	1	0.0030	0.0012	0.0030	0.010	U
5566-34-7	gamma-Chlordane	1	0.0030	0.0026	0.0030	0.010	U
57-74-9	Chlordane (Technical)	1	0.60	0.38	0.60	2.0	U
72-54-8	4,4'-DDD	1	0.0030	0.0017	0.0030	0.010	U
72-55-9	4,4'-DDE	1	0.0030	0.0019	0.0030	0.010	U
50-29-3	4,4'-DDT	1	0.0030	0.00076	0.0030	0.010	U
60-57-1	Dieldrin	1	0.0030	0.0012	0.0030	0.010	U
959-98-8	Endosulfan I	1	0.0030	0.0016	0.0030	0.010	U
33213-65-9	Endosulfan II	1	0.0030	0.0014	0.0030	0.010	U
1031-07-8	Endosulfan sulfate	1	0.0030	0.0026	0.0030	0.010	U
72-20-8	Endrin	1	0.0030	0.00082	0.0030	0.010	U
7421-93-4	Endrin aldehyde	1	0.0060	0.0032	0.0060	0.020	U
53494-70-5	Endrin ketone	1	0.0030	0.00056	0.0030	0.010	U
76-44-8	Heptachlor	1	0.0030	0.0012	0.0030	0.010	U
1024-57-3	Heptachlor epoxide	1	0.0030	0.00099	0.0030	0.010	U
72-43-5	Methoxychlor	1	0.0030	0.0011	0.0030	0.010	U
8001-35-2	Toxaphene	1	1.0	0.42	1.0	4.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
TCMX (Surrogate)	0.30000	0.18318	61.1	44 - 124	
Decachlorobiphenyl (Surrogate)	0.60000	0.28668	47.8	50 - 130	*

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8081A

M041E_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-03	File ID:	15FEB022.D
Sampled:	02/06/17 08:45	Prepared:	02/09/17 11:40	Analyzed:	02/15/17 15:13
Solids:		Preparation:	EPA 3510B	Initial/Final:	1000 ml / 10 ml
Batch:	B[B0979	Sequence:	1702826	Calibration:	1702026
Instrument:	GC-17				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
309-00-2	Aldrin	1	0.0030	0.0013	0.0030	0.010	U
319-84-6	alpha-BHC	1	0.0030	0.0011	0.0030	0.010	U
319-85-7	beta-BHC	1	0.0030	0.0021	0.0030	0.010	U
319-86-8	delta-BHC	1	0.0030	0.0014	0.0030	0.010	U
58-89-9	gamma-BHC (Lindane)	1	0.0030	0.00094	0.0030	0.010	U
5103-71-9	alpha-Chlordane	1	0.0030	0.0012	0.0030	0.010	U
5566-34-7	gamma-Chlordane	1	0.0030	0.0026	0.0030	0.010	U
57-74-9	Chlordane (Technical)	1	0.60	0.38	0.60	2.0	U
72-54-8	4,4'-DDD	1	0.0030	0.0017	0.0030	0.010	U
72-55-9	4,4'-DDE	1	0.0030	0.0019	0.0030	0.010	U
50-29-3	4,4'-DDT	1	0.0030	0.00076	0.0030	0.010	U
60-57-1	Dieldrin	1	0.0030	0.0012	0.0030	0.010	U
959-98-8	Endosulfan I	1	0.0030	0.0016	0.0030	0.010	U
33213-65-9	Endosulfan II	1	0.0030	0.0014	0.0030	0.010	U
1031-07-8	Endosulfan sulfate	1	0.0030	0.0026	0.0030	0.010	U
72-20-8	Endrin	1	0.0030	0.00082	0.0030	0.010	U
7421-93-4	Endrin aldehyde	1	0.0060	0.0032	0.0060	0.020	U
53494-70-5	Endrin ketone	1	0.0030	0.00056	0.0030	0.010	U
76-44-8	Heptachlor	1	0.0030	0.0012	0.0030	0.010	U
1024-57-3	Heptachlor epoxide	1	0.0030	0.00099	0.0030	0.010	U
72-43-5	Methoxychlor	1	0.0030	0.0011	0.0030	0.010	U
8001-35-2	Toxaphene	1	1.0	0.42	1.0	4.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
TCMX (Surrogate)	0.30000	0.14256	47.5	44 - 124	
Decachlorobiphenyl (Surrogate)	0.60000	0.17870	29.8	50 - 130	*

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0979
Batch Matrix: Water
Preparation: EPA 3510B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	15FEB023.D	02/09/17 11:40	Full SAP List
M041E_170206	1703278-03	15FEB022.D	02/09/17 11:40	Full SAP List
Blank	B[B0979-BLK1	15FEB018.D	02/09/17 11:40	
LCS	B[B0979-BS1	16FEB009.D	02/09/17 11:40	
Matrix Spike	B[B0979-MS1	15FEB020.D	02/09/17 11:40	
Matrix Spike Dup	B[B0979-MSD1	15FEB021.D	02/09/17 11:40	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8081A

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0979-BLK1	File ID:	15FEB018.D
Prepared:	02/09/17 11:40	Preparation:	EPA 3510B	Initial/Final:	1000 ml / 10 ml
Analyzed:	02/15/17 14:15	Instrument:	GC-17		
Batch:	B[B0979	Sequence:	1702826	Calibration:	1702026

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
309-00-2	Aldrin	0.0030	0.0013	0.0030	0.010	U
319-84-6	alpha-BHC	0.0030	0.0011	0.0030	0.010	U
319-85-7	beta-BHC	0.0030	0.0021	0.0030	0.010	U
319-86-8	delta-BHC	0.0030	0.0014	0.0030	0.010	U
58-89-9	gamma-BHC (Lindane)	0.0030	0.00094	0.0030	0.010	U
5103-71-9	alpha-Chlordane	0.0030	0.0012	0.0030	0.010	U
5566-34-7	gamma-Chlordane	0.0030	0.0026	0.0030	0.010	U
57-74-9	Chlordane (Technical)	0.60	0.38	0.60	2.0	U
72-54-8	4,4'-DDD	0.0030	0.0017	0.0030	0.010	U
72-55-9	4,4'-DDE	0.0030	0.0019	0.0030	0.010	U
50-29-3	4,4'-DDT	0.0030	0.00076	0.0030	0.010	U
60-57-1	Dieldrin	0.0030	0.0012	0.0030	0.010	U
959-98-8	Endosulfan I	0.0030	0.0016	0.0030	0.010	U
33213-65-9	Endosulfan II	0.0030	0.0014	0.0030	0.010	U
1031-07-8	Endosulfan sulfate	0.0030	0.0026	0.0030	0.010	U
72-20-8	Endrin	0.0030	0.00082	0.0030	0.010	U
7421-93-4	Endrin aldehyde	0.0060	0.0032	0.0060	0.020	U
53494-70-5	Endrin ketone	0.0030	0.00056	0.0030	0.010	U
76-44-8	Heptachlor	0.0030	0.0012	0.0030	0.010	U
1024-57-3	Heptachlor epoxide	0.0030	0.00099	0.0030	0.010	U
72-43-5	Methoxychlor	0.0030	0.0011	0.0030	0.010	U
8001-35-2	Toxaphene	1.0	0.42	1.0	4.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
TCMX (Surrogate)	0.30000	0.21526	71.8	44 - 124	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8081A

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0979-BLK1	File ID:	15FEB018.D
Prepared:	02/09/17 11:40	Preparation:	EPA 3510B	Initial/Final:	1000 ml / 10 ml
Analyzed:	02/15/17 14:15	Instrument:	GC-17		
Batch:	B[B0979	Sequence:	1702826	Calibration:	1702026

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Decachlorobiphenyl (Surrogate)	0.60000	0.35865	59.8	50 - 130	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8081A

Matrix Spike

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0979
Laboratory ID: B[B0979-MS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 10 ml
Source Sample Number: 1701379-56

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Aldrin	0.15000	ND	0.099500	66.3	45 - 134
alpha-BHC	0.15000	ND	0.10558	70.4	54 - 138
beta-BHC	0.15000	ND	0.11283	75.2	56 - 136
delta-BHC	0.15000	ND	0.11246	75.0	52 - 142
gamma-BHC (Lindane)	0.15000	ND	0.11098	74.0	59 - 134
alpha-Chlordane	0.15000	ND	0.11149	74.3	60 - 129
gamma-Chlordane	0.15000	ND	0.12044	80.3	56 - 136
4,4'-DDD	0.15000	ND	0.12025	80.2	56 - 143
4,4'-DDE	0.15000	ND	0.11456	76.4	57 - 135
4,4'-DDT	0.15000	ND	0.12216	81.4	51 - 143
Dieldrin	0.15000	ND	0.12953	86.4	60 - 136
Endosulfan I	0.15000	ND	0.11456	76.4	62 - 126
Endosulfan II	0.15000	ND	0.13530	90.2	52 - 135
Endosulfan sulfate	0.15000	ND	0.14756	98.4	62 - 133
Endrin	0.15000	ND	0.13486	89.9	60 - 138
Endrin aldehyde	0.15000	ND	0.11923	79.5	51 - 132
Endrin ketone	0.15000	ND	0.13313	88.8	58 - 134
Heptachlor	0.15000	ND	0.10131	67.5	54 - 130
Heptachlor epoxide	0.15000	ND	0.12290	81.9	61 - 133
Methoxychlor	0.15000	ND	0.15473	103	54 - 145

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	0.15000	0.099900	66.6	0.401	30	45 - 134
alpha-BHC	0.15000	0.10787	71.9	2.15	30	54 - 138

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8081A

Matrix Spike Dup

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0979
Laboratory ID: B[B0979-MSD1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 10 ml
Source Sample Number: 1701379-56

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
beta-BHC	0.15000	0.11608	77.4	2.84	30	56 - 136
delta-BHC	0.15000	0.11505	76.7	2.28	30	52 - 142
gamma-BHC (Lindane)	0.15000	0.11357	75.7	2.31	30	59 - 134
alpha-Chlordane	0.15000	0.11056	73.7	0.838	30	60 - 129
gamma-Chlordane	0.15000	0.11966	79.8	0.650	30	56 - 136
4,4'-DDD	0.15000	0.11771	78.5	2.13	30	56 - 143
4,4'-DDE	0.15000	0.11383	75.9	0.639	30	57 - 135
4,4'-DDT	0.15000	0.11700	78.0	4.32	30	51 - 143
Dieldrin	0.15000	0.12708	84.7	1.91	30	60 - 136
Endosulfan I	0.15000	0.11383	75.9	0.639	30	62 - 126
Endosulfan II	0.15000	0.13176	87.8	2.65	30	52 - 135
Endosulfan sulfate	0.15000	0.14415	96.1	2.34	30	62 - 133
Endrin	0.15000	0.13242	88.3	1.83	30	60 - 138
Endrin aldehyde	0.15000	0.11557	77.0	3.12	30	51 - 132
Endrin ketone	0.15000	0.12716	84.8	4.59	30	58 - 134
Heptachlor	0.15000	0.10157	67.7	0.256	30	54 - 130
Heptachlor epoxide	0.15000	0.12204	81.4	0.702	30	61 - 133
Methoxychlor	0.15000	0.13758	91.7	11.7	30	54 - 145

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0979
Laboratory ID: B[B0979-BS1
Preparation: EPA 3510B
Initial/Final: 1000 ml / 10 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Aldrin	0.15000	0.069180	46.1	45 - 134
alpha-BHC	0.15000	0.12293	82.0	54 - 138
beta-BHC	0.15000	0.13072	87.1	56 - 136
delta-BHC	0.15000	0.13031	86.9	52 - 142
gamma-BHC (Lindane)	0.15000	0.12725	84.8	59 - 134
alpha-Chlordane	0.15000	0.12044	80.3	60 - 129
gamma-Chlordane	0.15000	0.12506	83.4	56 - 136
4,4'-DDD	0.15000	0.12979	86.5	56 - 143
4,4'-DDE	0.15000	0.12549	83.7	57 - 135
4,4'-DDT	0.15000	0.11279	75.2	51 - 143
Dieldrin	0.15000	0.13613	90.8	60 - 136
Endosulfan I	0.15000	0.12549	83.7	62 - 126
Endosulfan II	0.15000	0.12710	84.7	52 - 135
Endosulfan sulfate	0.15000	0.14121	94.1	62 - 133
Endrin	0.15000	0.14043	93.6	60 - 138
Endrin aldehyde	0.15000	0.10007	66.7	51 - 132
Endrin ketone	0.15000	0.11532	76.9	58 - 134
Heptachlor	0.15000	0.085520	57.0	54 - 130
Heptachlor epoxide	0.15000	0.13516	90.1	61 - 133
Methoxychlor	0.15000	0.12623	84.2	54 - 145

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702826	Instrument:	GC-17
Matrix:	Water	Calibration:	1702026

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1702826-CAL6	15FEB007.D	02/15/17 11:34
Cal Standard	1702826-CAL5	15FEB008.D	02/15/17 11:49
Cal Standard	1702826-CAL4	15FEB009.D	02/15/17 12:04
Cal Standard	1702826-CAL3	15FEB010.D	02/15/17 12:18
Cal Standard	1702826-CAL2	15FEB011.D	02/15/17 12:33
Cal Standard	1702826-CAL1	15FEB012.D	02/15/17 12:47
Initial Cal Check	1702826-ICV1	15FEB013.D	02/15/17 13:02
Initial Cal Blank	1702826-ICB1	15FEB014.D	02/15/17 13:16
Blank	B[B0979-BLK1	15FEB018.D	02/15/17 14:15
Matrix Spike	B[B0979-MS1	15FEB020.D	02/15/17 14:44
Matrix Spike Dup	B[B0979-MSD1	15FEB021.D	02/15/17 14:58
M041E_170206	1703278-03	15FEB022.D	02/15/17 15:13
EB07_170206	1703278-02	15FEB023.D	02/15/17 15:27
Calibration Check	1702826-CCV1	15FEB025.D	02/15/17 15:57
Calibration Blank	1702826-CCB1	15FEB026.D	02/15/17 16:11

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702920	Instrument:	GC-17
Matrix:	Water	Calibration:	1702026

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1702920-CCV1	16FEB007.D	02/16/17 07:49
Calibration Blank	1702920-CCB1	16FEB008.D	02/16/17 08:04
LCS	B[B0979-BS1	16FEB009.D	02/16/17 10:39
Calibration Check	1702920-CCV2	16FEB012.D	02/16/17 11:23
Calibration Blank	1702920-CCB2	16FEB013.D	02/16/17 11:37

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-17	Calibration:	1702026
Lab File ID:	15FEB013.D	Calibration Date:	02/15/17 11:34
Sequence:	1702826	Injection Date:	02/15/17
Lab Sample ID:	1702826-ICV1	Injection Time:	13:02

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aldrin	L	15.000	14.867	5.899779E+07	5.492667E+07		-0.9	15
alpha-BHC	A	15.000	14.035	7.19641E+07	6.733333E+07		-6.4	15
beta-BHC	L	15.000	14.764	2.870987E+07	2.522E+07		-1.6	15
delta-BHC	A	15.000	14.011	5.715333E+07	5.338667E+07		-6.6	15
gamma-BHC (Lindane)	A	15.000	13.862	6.129625E+07	5.664667E+07		-7.6	15
alpha-Chlordane	A	15.000	14.083	5.226782E+07	4.907333E+07		-6.1	15
gamma-Chlordane	L	15.000	14.973	5.804161E+07	5.085333E+07		-0.2	15
4,4'-DDD	A	15.000	14.278	3.977988E+07	3.786667E+07		-4.8	15
4,4'-DDE	A	15.000	14.367	9.733186E+07	9.322667E+07		-4.2	15
4,4'-DDT	A	15.000	14.672	4.040238E+07	3.952E+07		-2.2	15
Dieldrin	L	15.000	15.003	5.491021E+07	5.152667E+07		0.02	15
Endosulfan I	A	15.000	14.367	9.733186E+07	9.322667E+07		-4.2	15
Endosulfan II	L	15.000	14.678	4.352619E+07	4.035333E+07		-2.1	15
Endosulfan sulfate	L	15.000	15.039	3.872841E+07	3.253333E+07		0.3	15
Endrin	A	15.000	14.448	4.339935E+07	4.18E+07		-3.7	15
Endrin aldehyde	L	15.000	14.330	3.500724E+07	3.082E+07		-4.5	15
Endrin ketone	L	15.000	15.334	4.706951E+07	4.438E+07		2.2	15
Heptachlor	A	15.000	14.420	6.289311E+07	6.046E+07		-3.9	15
Heptachlor epoxide	L	15.000	14.862	5.334837E+07	4.861333E+07		-0.9	15
Methoxychlor	L	15.000	15.492	2.179753E+07	1.959333E+07		3.3	15

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/10/2017 11:42:14AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-17	Calibration:	1702026
Lab File ID:	15FEB025.D	Calibration Date:	02/15/17 11:34
Sequence:	1702826	Injection Date:	02/15/17
Lab Sample ID:	1702826-CCV1	Injection Time:	15:57

	(1)CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aldrin	L	15.000	16.058	5.899779E+07	5.92E+07		7.1	15
alpha-BHC	A	15.000	15.259	7.19641E+07	7.320667E+07		1.7	15
beta-BHC	L	15.000	16.284	2.870987E+07	2.768667E+07		8.6	15
delta-BHC	A	15.000	15.801	5.715333E+07	6.020667E+07		5.3	15
gamma-BHC (Lindane)	A	15.000	15.647	6.129625E+07	6.394E+07		4.3	15
alpha-Chlordane	A	15.000	15.169	5.226782E+07	5.286E+07		1.1	15
gamma-Chlordane	L	15.000	16.072	5.804161E+07	5.442E+07		7.1	15
4,4'-DDD	A	15.000	15.348	3.977988E+07	4.07E+07		2.3	15
4,4'-DDE	A	15.000	15.351	9.733186E+07	9.960667E+07		2.3	15
4,4'-DDT	A	15.000	15.460	4.040238E+07	4.164E+07		3.1	15
Dieldrin	L	15.000	15.989	5.491021E+07	5.482E+07		6.6	15
Endosulfan I	A	15.000	15.351	9.733186E+07	9.960667E+07		2.3	15
Endosulfan II	L	15.000	15.659	4.352619E+07	4.299333E+07		4.4	15
Endosulfan sulfate	L	15.000	15.805	3.872841E+07	3.408667E+07		5.4	15
Endrin	A	15.000	14.655	4.339935E+07	4.24E+07		-2.3	15
Endrin aldehyde	L	15.000	14.745	3.500724E+07	3.168667E+07		-1.7	15
Endrin ketone	L	15.000	16.119	4.706951E+07	4.656E+07		7.5	15
Heptachlor	A	15.000	15.540	6.289311E+07	6.515333E+07		3.6	15
Heptachlor epoxide	L	15.000	16.297	5.334837E+07	5.309333E+07		8.6	15
Methoxychlor	L	15.000	16.054	2.179753E+07	2.026667E+07		7.0	15

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/10/2017 11:42:14AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-17	Calibration:	1702026
Lab File ID:	16FEB007.D	Calibration Date:	02/15/17 11:34
Sequence:	1702920	Injection Date:	02/16/17
Lab Sample ID:	1702920-CCV1	Injection Time:	07:49

	(1)CAL	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aldrin	L	15.000	16.567	5.899779E+07	6.103333E+07		10.4	15
alpha-BHC	A	15.000	15.849	7.19641E+07	7.604E+07		5.7	15
beta-BHC	L	15.000	16.801	2.870987E+07	2.852667E+07		12.0	15
delta-BHC	A	15.000	16.732	5.715333E+07	6.375333E+07		11.5	15
gamma-BHC (Lindane)	A	15.000	15.720	6.129625E+07	6.424E+07		4.8	15
alpha-Chlordane	A	15.000	15.502	5.226782E+07	5.402E+07		3.4	15
gamma-Chlordane	L	15.000	16.423	5.804161E+07	5.556E+07		9.5	15
4,4'-DDD	A	15.000	16.608	3.977988E+07	4.404667E+07		10.7	15
4,4'-DDE	A	15.000	15.657	9.733186E+07	1.015933E+08		4.4	15
4,4'-DDT	A	15.000	15.163	4.040238E+07	4.084E+07		1.1	15
Dieldrin	L	15.000	16.317	5.491021E+07	5.591333E+07		8.8	15
Endosulfan I	A	15.000	15.657	9.733186E+07	1.015933E+08		4.4	15
Endosulfan II	L	15.000	16.013	4.352619E+07	4.394667E+07		6.8	15
Endosulfan sulfate	L	15.000	15.985	3.872841E+07	3.445333E+07		6.6	15
Endrin	A	15.000	14.185	4.339935E+07	4.104E+07		-5.4	15
Endrin aldehyde	L	15.000	14.825	3.500724E+07	3.185333E+07		-1.2	15
Endrin ketone	L	15.000	16.676	4.706951E+07	4.810667E+07		11.2	15
Heptachlor	A	15.000	15.739	6.289311E+07	6.598667E+07		4.9	15
Heptachlor epoxide	L	15.000	16.354	5.334837E+07	5.327333E+07		9.0	15
Methoxychlor	L	15.000	15.753	2.179753E+07	1.99E+07		5.0	15

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/10/2017 11:42:14AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-17	Calibration:	1702026
Lab File ID:	16FEB012.D	Calibration Date:	02/15/17 11:34
Sequence:	1702920	Injection Date:	02/16/17
Lab Sample ID:	1702920-CCV2	Injection Time:	11:23

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aldrin	L	15.000	16.955	5.899779E+07	6.242E+07		13.0	15
alpha-BHC	A	15.000	16.408	7.19641E+07	7.872E+07		9.4	15
beta-BHC	L	15.000	16.562	2.870987E+07	2.813333E+07		10.4	15
delta-BHC	A	15.000	16.718	5.715333E+07	6.37E+07		11.5	15
gamma-BHC (Lindane)	A	15.000	15.984	6.129625E+07	6.531333E+07		6.6	15
alpha-Chlordane	A	15.000	15.534	5.226782E+07	5.413333E+07		3.6	15
gamma-Chlordane	L	15.000	16.454	5.804161E+07	5.566E+07		9.7	15
4,4'-DDD	A	15.000	15.890	3.977988E+07	4.214E+07		5.9	15
4,4'-DDE	A	15.000	15.671	9.733186E+07	1.016867E+08		4.5	15
4,4'-DDT	A	15.000	15.133	4.040238E+07	4.076E+07		0.9	15
Dieldrin	L	15.000	16.330	5.491021E+07	5.596E+07		8.9	15
Endosulfan I	A	15.000	15.671	9.733186E+07	1.016867E+08		4.5	15
Endosulfan II	L	15.000	15.883	4.352619E+07	4.36E+07		5.9	15
Endosulfan sulfate	L	15.000	15.918	3.872841E+07	3.431333E+07		6.1	15
Endrin	A	15.000	13.394	4.339935E+07	3.875333E+07		-10.7	15
Endrin aldehyde	L	15.000	14.541	3.500724E+07	3.126E+07		-3.1	15
Endrin ketone	L	15.000	16.485	4.706951E+07	4.758E+07		9.9	15
Heptachlor	A	15.000	16.123	6.289311E+07	6.76E+07		7.5	15
Heptachlor epoxide	L	15.000	16.231	5.334837E+07	5.288667E+07		8.2	15
Methoxychlor	L	15.000	15.299	2.179753E+07	1.936E+07		2.0	15

AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/10/2017 11:42:14AM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702826
Instrument: GC-17
Matrix: Water
Calibration: 1702026

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (1702826-CAL6)			Lab File ID: 15FEB007.D		Analyzed: 02/15/17 11:34			
TCMX (Surrogate)	42.000	96.0		2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	84.000	93.8		5.78	5.781667	-0.0017	+/-1.0	
Cal Standard (1702826-CAL5)			Lab File ID: 15FEB008.D		Analyzed: 02/15/17 11:49			
TCMX (Surrogate)	36.000	94.8		2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	72.000	96.3		5.79	5.781667	0.0083	+/-1.0	
Cal Standard (1702826-CAL4)			Lab File ID: 15FEB009.D		Analyzed: 02/15/17 12:04			
TCMX (Surrogate)	30.000	105		2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	60.000	103		5.78	5.781667	-0.0017	+/-1.0	
Cal Standard (1702826-CAL3)			Lab File ID: 15FEB010.D		Analyzed: 02/15/17 12:18			
TCMX (Surrogate)	24.000	95.6		2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	48.000	95.3		5.78	5.781667	-0.0017	+/-1.0	
Cal Standard (1702826-CAL2)			Lab File ID: 15FEB011.D		Analyzed: 02/15/17 12:33			
TCMX (Surrogate)	18.000	110		2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	36.000	113		5.78	5.781667	-0.0017	+/-1.0	
Cal Standard (1702826-CAL1)			Lab File ID: 15FEB012.D		Analyzed: 02/15/17 12:47			
TCMX (Surrogate)	12.000	98.6		2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	24.000	98.6		5.78	5.781667	-0.0017	+/-1.0	
Initial Cal Check (1702826-ICV1)			Lab File ID: 15FEB013.D		Analyzed: 02/15/17 13:02			
TCMX (Surrogate)	30.000	98.1	85 - 115	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	60.000	102	85 - 115	5.78	5.781667	-0.0017	+/-1.0	
Initial Cal Blank (1702826-ICB1)			Lab File ID: 15FEB014.D		Analyzed: 02/15/17 13:16			
TCMX (Surrogate)			44 - 124		2.2	Null Found	+/-1.0	
Decachlorobiphenyl (Surrogate)			50 - 130		5.781667	Null Found	+/-1.0	
Blank (B[B0979-BLK1)			Lab File ID: 15FEB018.D		Analyzed: 02/15/17 14:15			
TCMX (Surrogate)	0.30000	71.8	44 - 124	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	0.60000	59.8	50 - 130	5.78	5.781667	-0.0017	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702826	Instrument:	GC-17
Matrix:	Water	Calibration:	1702026

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Matrix Spike (B[B0979-MS1)			Lab File ID: 15FEB020.D		Analyzed: 02/15/17 14:44			
TCMX (Surrogate)	0.30000	69.8	44 - 124	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	0.60000	70.8	50 - 130	5.79	5.781667	0.0083	+/-1.0	
Matrix Spike Dup (B[B0979-MSD1)			Lab File ID: 15FEB021.D		Analyzed: 02/15/17 14:58			
TCMX (Surrogate)	0.30000	71.6	44 - 124	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	0.60000	66.9	50 - 130	5.78	5.781667	-0.0017	+/-1.0	
M041E_170206 (1703278-03)			Lab File ID: 15FEB022.D		Analyzed: 02/15/17 15:13			
TCMX (Surrogate)	0.30000	47.5	44 - 124	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	0.60000	29.8	50 - 130	5.78	5.781667	-0.0017	+/-1.0	*
EB07_170206 (1703278-02)			Lab File ID: 15FEB023.D		Analyzed: 02/15/17 15:27			
TCMX (Surrogate)	0.30000	61.1	44 - 124	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	0.60000	47.8	50 - 130	5.78	5.781667	-0.0017	+/-1.0	*
Calibration Check (1702826-CCV1)			Lab File ID: 15FEB025.D		Analyzed: 02/15/17 15:57			
TCMX (Surrogate)	30.000	105	85 - 115	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	60.000	104	85 - 115	5.78	5.781667	-0.0017	+/-1.0	
Calibration Blank (1702826-CCB1)			Lab File ID: 15FEB026.D		Analyzed: 02/15/17 16:11			
TCMX (Surrogate)			44 - 124		2.2	Null Found	+/-1.0	
Decachlorobiphenyl (Surrogate)			50 - 130		5.781667	Null Found	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8081A

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702920	Instrument:	GC-17
Matrix:	Water	Calibration:	1702026

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (1702920-CCV1)			Lab File ID: 16FEB007.D		Analyzed: 02/16/17 07:49			
TCMX (Surrogate)	30.000	109	85 - 115	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	60.000	108	85 - 115	5.79	5.781667	0.0083	+/-1.0	
Calibration Blank (1702920-CCB1)			Lab File ID: 16FEB008.D		Analyzed: 02/16/17 08:04			
TCMX (Surrogate)			44 - 124		2.2	Null Found	+/-1.0	
Decachlorobiphenyl (Surrogate)			50 - 130		5.781667	Null Found	+/-1.0	
LCS (B[B0979-BS1)			Lab File ID: 16FEB009.D		Analyzed: 02/16/17 10:39			
TCMX (Surrogate)	0.30000	68.9	44 - 124	2.21	2.2	0.0100	+/-1.0	
Decachlorobiphenyl (Surrogate)	0.60000	66.6	50 - 130	5.8	5.781667	0.0183	+/-1.0	
Calibration Check (1702920-CCV2)			Lab File ID: 16FEB012.D		Analyzed: 02/16/17 11:23			
TCMX (Surrogate)	30.000	111	85 - 115	2.2	2.2	0.0000	+/-1.0	
Decachlorobiphenyl (Surrogate)	60.000	106	85 - 115	5.78	5.781667	-0.0017	+/-1.0	
Calibration Blank (1702920-CCB2)			Lab File ID: 16FEB013.D		Analyzed: 02/16/17 11:37			
TCMX (Surrogate)			44 - 124		2.2	Null Found	+/-1.0	
Decachlorobiphenyl (Surrogate)			50 - 130		5.781667	Null Found	+/-1.0	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION STANDARDS

EPA-8081A

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702826
Calibration: 1702026

SDG: 17-03278
Project: Alameda
Instrument: GC-17

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
7B10006	8081 Mix A IC-6	1702826-CAL6	15FEB007.D	02/15/17 11:34
7B10007	8081 Mix A IC-5	1702826-CAL5	15FEB008.D	02/15/17 11:49
7B10008	8081 Mix A IC-4	1702826-CAL4	15FEB009.D	02/15/17 12:04
7B10009	8081 Mix A IC-3	1702826-CAL3	15FEB010.D	02/15/17 12:18
7B10010	8081 Mix A IC-2	1702826-CAL2	15FEB011.D	02/15/17 12:33
7B10011	8081 Mix A IC-1	1702826-CAL1	15FEB012.D	02/15/17 12:47

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA
EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702026
Instrument: GC-17
Matrix: Water
Calibration Date: 02/15/17 11:34

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Aldrin	25	5.498E+07	20	5.3895E+07	15	5.710667E+07	10	5.461E+07	5	6.292E+07	0.5	7.047506E+07
alpha-BHC	25	6.8108E+07	20	6.6565E+07	15	7.134E+07	10	6.741E+07	5	7.654E+07	0.5	8.18216E+07
beta-BHC	25	2.488E+07	20	2.4635E+07	15	2.754E+07	10	2.543E+07	5	2.988E+07	0.5	3.989424E+07
delta-BHC	25	5.4332E+07	20	5.3475E+07	15	6.1E+07	10	5.362E+07	5	5.954E+07	0.5	6.0953E+07
gamma-BHC (Lindane)	25	5.6948E+07	20	5.7455E+07	15	6.316E+07	10	5.686E+07	5	6.548E+07	0.5	6.787452E+07
alpha-Chlordane	25	4.8728E+07	20	4.7665E+07	15	5.111334E+07	10	4.885E+07	5	5.638E+07	0.5	6.087058E+07
gamma-Chlordane	25	5.0124E+07	20	4.922E+07	15	5.294E+07	10	5.073E+07	5	5.95E+07	0.5	8.573568E+07
4,4'-DDD	25	3.7932E+07	20	3.715E+07	15	3.980667E+07	10	3.738E+07	5	4.272E+07	0.5	4.36906E+07
4,4'-DDE	25	9.2136E+07	20	9.0435E+07	15	9.699333E+07	10	9.259E+07	5	1.0588E+08	0.5	1.059568E+08
4,4'-DDT	25	3.83E+07	20	3.798E+07	15	4.029333E+07	10	3.775E+07	5	4.358E+07	0.5	4.451096E+07
Dieldrin	25	5.1116E+07	20	5.0005E+07	15	5.322667E+07	10	5.096E+07	5	5.844E+07	0.5	6.571358E+07
Endosulfan I	25	9.2136E+07	20	9.0435E+07	15	9.699333E+07	10	9.259E+07	5	1.0588E+08	0.5	1.059568E+08
Endosulfan II	25	4.1092E+07	20	4.0485E+07	15	4.197333E+07	10	3.984E+07	5	4.678E+07	0.5	5.098678E+07
Endosulfan sulfate	25	3.1668E+07	20	3.1205E+07	15	3.337333E+07	10	3.322E+07	5	4.022E+07	0.5	6.268412E+07
Endrin	25	4.2284E+07	20	4.1205E+07	15	4.138E+07	10	4.092E+07	5	4.744E+07	0.5	4.716708E+07
Endrin aldehyde	25	3.1908E+07	20	3.186E+07	15	3.249333E+07	10	3.166E+07	5	3.684E+07	0.5	4.528208E+07
Endrin ketone	25	4.2452E+07	20	4.229E+07	15	4.568666E+07	10	4.324E+07	5	5.042E+07	0.5	5.832838E+07
Heptachlor	25	5.8472E+07	20	5.8065E+07	15	6.243333E+07	10	5.959E+07	5	6.96E+07	0.5	6.91983E+07
Heptachlor epoxide	25	4.7512E+07	20	4.792E+07	15	5.232666E+07	10	4.841E+07	5	5.71E+07	0.5	6.682156E+07
Methoxychlor	25	1.8428E+07	20	1.8575E+07	15	1.977333E+07	10	1.903E+07	5	2.288E+07	0.5	3.209886E+07
TCMX (Surrogate)	42	4.34E+07	36	4.283889E+07	30	4.734334E+07	24	4.31875E+07	18	4.983889E+07	12	4.454167E+07
Decachlorobiphenyl (Surrogate)	84	2.540476E+07	72	2.608194E+07	60	2.780333E+07	48	2.581875E+07	36	3.07E+07	24	2.671667E+07

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702026
Instrument: GC-17
Matrix: Water
Calibration Date: 02/15/17 11:34

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aldrin	5.899779E+07	11.04006	3.35	2.235342E-02	0.99914		0.99	
alpha-BHC	7.19641E+07	8.412614	2.61	2.779896E-03			20	
beta-BHC	2.870987E+07	20.30143	2.895	0.1892222	0.99741		0.99	
delta-BHC	5.715333E+07	6.495293	3.01	2.124719E-02			20	
gamma-BHC (Lindane)	6.129625E+07	7.911762	2.83	1.343933E-02			20	
alpha-Chlordane	5.226782E+07	10.03843	3.89	1.387619E-02			20	
gamma-Chlordane	5.804161E+07	24.23216	3.81	1.739022E-02	0.99888		0.99	
4,4'-DDD	3.977988E+07	7.112781	4.31	8.468176E-03			20	
4,4'-DDE	9.733186E+07	7.186369	3.96	1.433547E-02			20	
4,4'-DDT	4.040238E+07	7.368377	4.47	1.151735E-02			20	
Dieldrin	5.491021E+07	11.10958	4.111667	0.1001546	0.99908		0.99	
Endosulfan I	9.733186E+07	7.186369	3.96	1.433547E-02			20	
Endosulfan II	4.352619E+07	10.14124	4.38	1.666568E-02	0.99927		0.99	
Endosulfan sulfate	3.872841E+07	31.44574	4.83	7.874393E-03	0.99877		0.99	
Endrin	4.339935E+07	7.049951	4.25	0			20	
Endrin aldehyde	3.500724E+07	15.43413	4.63	4.285375E-03	0.99956		0.99	
Endrin ketone	4.706951E+07	13.39391	5.05	1.556668E-02	0.99856		0.99	
Heptachlor	6.289311E+07	8.374834	3.151667	0.1295159			20	
Heptachlor epoxide	5.334837E+07	14.1411	3.73	1.215444E-02	0.99787		0.99	
Methoxychlor	2.179753E+07	24.34359	4.76	8.336674E-03	0.99877		0.99	
TCMX (Surrogate)	4.519171E+07	6.212493	2.2	1.191087E-02			20	
Decachlorobiphenyl (Surrogate)	2.708758E+07	7.22534	5.781667	6.933435E-02			20	

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

HOLDING TIME SUMMARY

EPA-8081A

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
EB07_170206	02/06/17 14:30	02/06/17 22:00	02/09/17 11:40	3.00	7.00	02/15/17 15:27	6.00	40.00	
M041E_170206	02/06/17 08:45	02/06/17 22:00	02/09/17 11:40	3.00	7.00	02/15/17 15:13	6.00	40.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

Raw Data From Instrument GC-17

Raw Data - Breakdown

Quantitation Report (QT Reviewed)

Signal #1 : D:\INSTRMNT\GC-17\DATA\2017\FEB\FEB15\15FEB001.D\ECD1A.CH Vial: 91
Signal #2 : D:\INSTRMNT\GC-17\DATA\2017\FEB\FEB15\15FEB001.D\ECD2B.CH
Acq On : 15 Feb 2017 8:25 am Operator: HKS
Sample : 8080 BREAKDOWN Inst : GC-17
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 21 8:35 2017 Quant Results File: 608.RES

Quant Method : C:\HPCHEM\4...\608.M (Chemstation Integrator)
Title : EPA 608 Pesticides
Last Update : Thu Feb 16 11:01:55 2017
Response via : Initial Calibration
DataAcq Meth : 608.M

Volume Inj. : 3uL
Signal #1 Phase : Rtx-440 30M x .32 Signal #2 Phase: Rtx CLPesticides2 30M x .32mm
Signal #1 Info : .32mm Signal #2 Info : .32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
		System Monitoring Compounds						
		Target Compounds						
12)	T	PP-DDE	3.95	4.64	50820578	65281596	0.522	1.099 #
14)	T	ENDRIN	4.25	4.93	2908.1E6	3364.2E6	67.007	62.918
15)	T	PP-DDD	4.31	5.00	43041670	76537223	1.082	1.530 #
17)	T	PP-DDT	4.47	5.20	2136.5E6	2355.9E6	52.881	50.965
18)	T	ENDRIN ALDEHYDE	4.63	5.29	6649982	34796865	N.D. m	0.416
21)	T	ENDRIN KETONE	5.06	5.90	92778022	52869821	1.590	N.D. m#

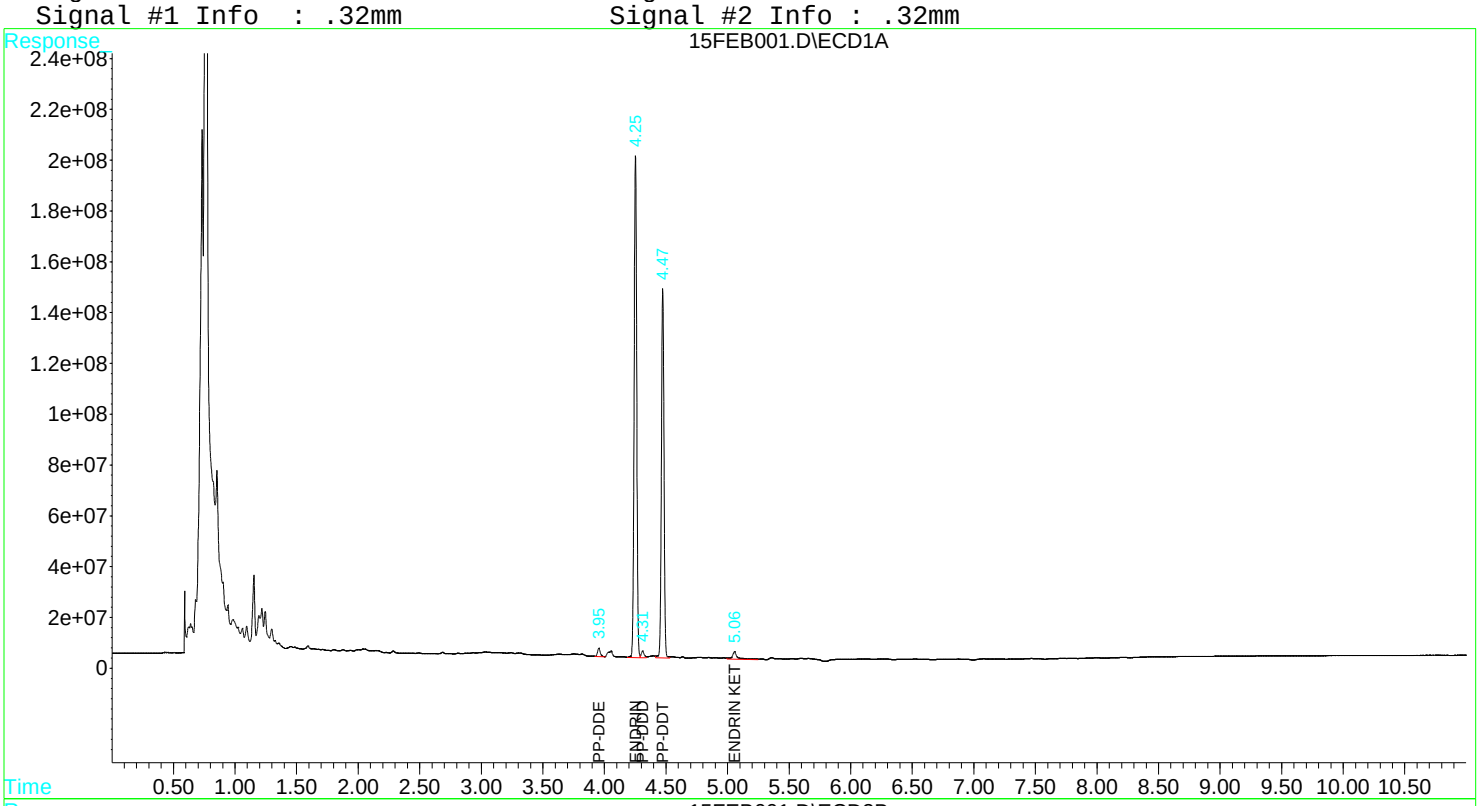
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

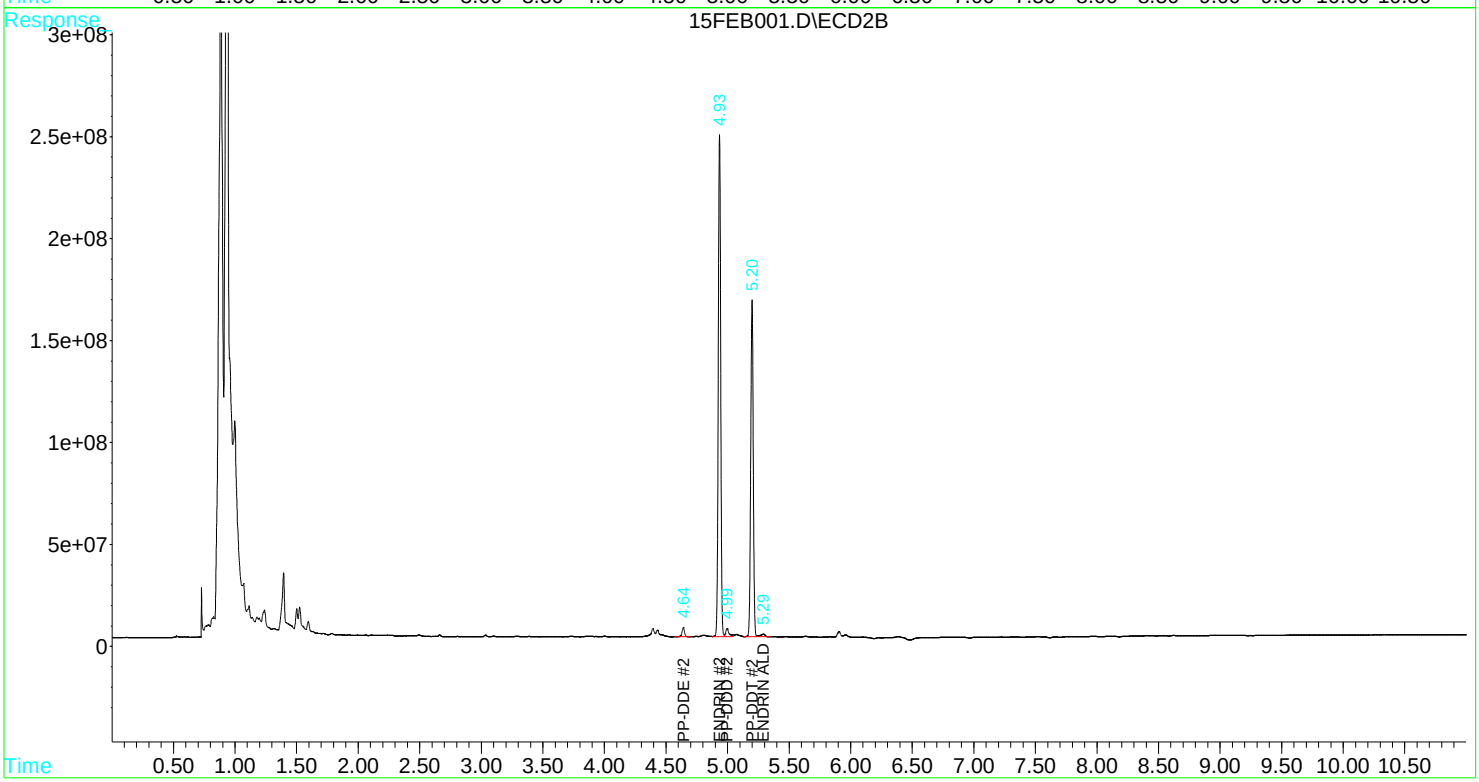
Quantitation Report (QT Reviewed)

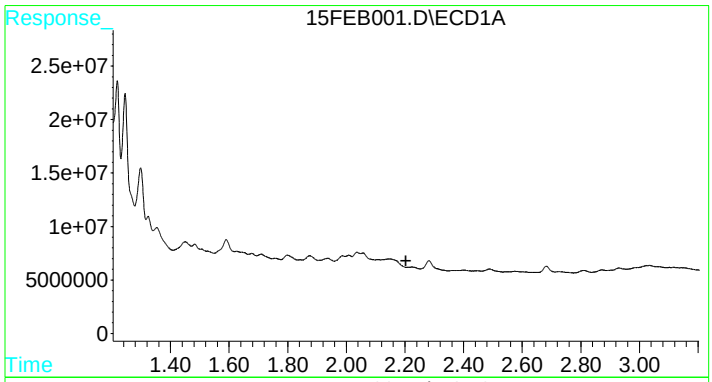
Signal #1 : D:\INSTRMNT\GC-17\DATA\2017\FEB\FEB15\15FEB001.D\ECD1A.CH Vial: 91
Signal #2 : D:\INSTRMNT\GC-17\DATA\2017\FEB\FEB15\15FEB001.D\ECD2B.CH
Acq On : 15 Feb 2017 8:25 am Operator: HKS
Sample : 8080 BREAKDOWN Inst : GC-17
Misc : Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 21 8:35 2017 Quant Results File: 608.RES

Quant Method : C:\HPCHEM\4...\608.M (Chemstation Integrator)
Title : EPA 608 Pesticides
Last Update : Thu Feb 16 11:01:55 2017
Response via : Multiple Level Calibration
DataAcq Meth : 608.M

Volume Inj. : 3uL
Signal #1 Phase : Rtx-440 30M x .32 Signal #2 Phase: Rtx CLPesticides2 30M x .32mm
Signal #1 Info : .32mm Signal #2 Info : .32mm

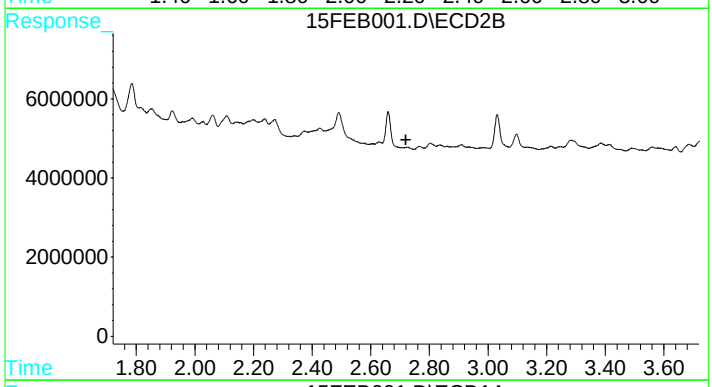






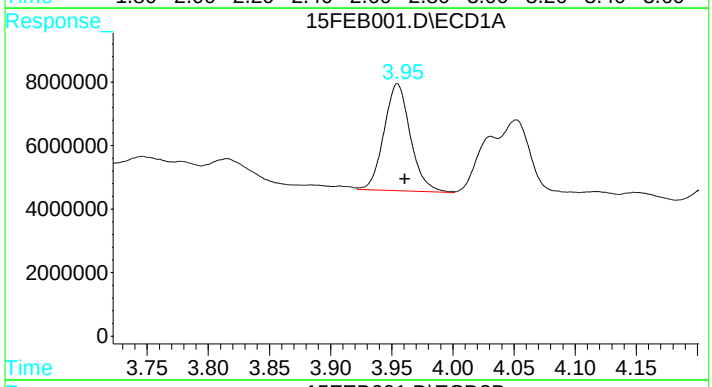
#1 TCMX (SURROGATE)

R.T.: 0.000 min
Exp R.T. : 2.203 min
Response: 0
Conc: N.D.



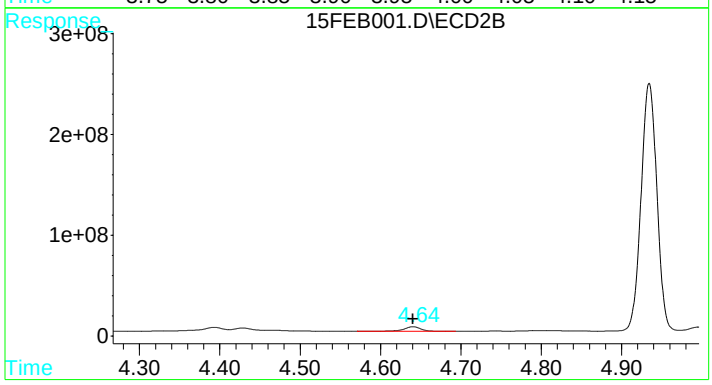
#1 TCMX (SURROGATE)

R.T.: 0.000 min
Exp R.T. : 2.720 min
Response: 0
Conc: N.D.



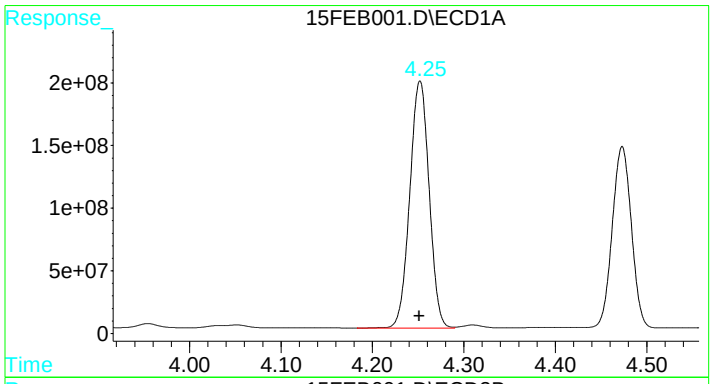
#12 PP-DDE

R.T.: 3.955 min
Delta R.T.: -0.006 min
Response: 50820578
Conc: 0.52 ng



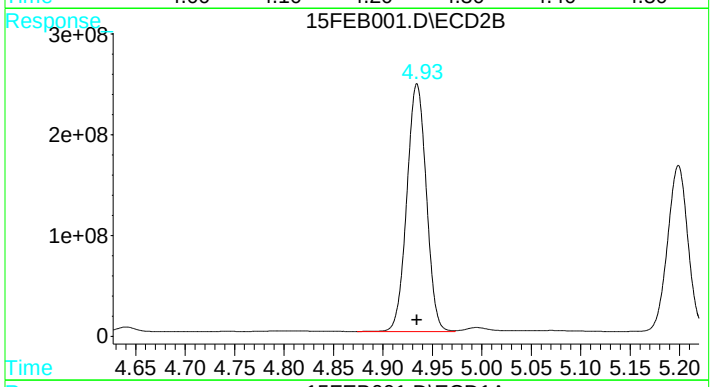
#12 PP-DDE

R.T.: 4.641 min
Delta R.T.: 0.000 min
Response: 65281596
Conc: 1.10 ng



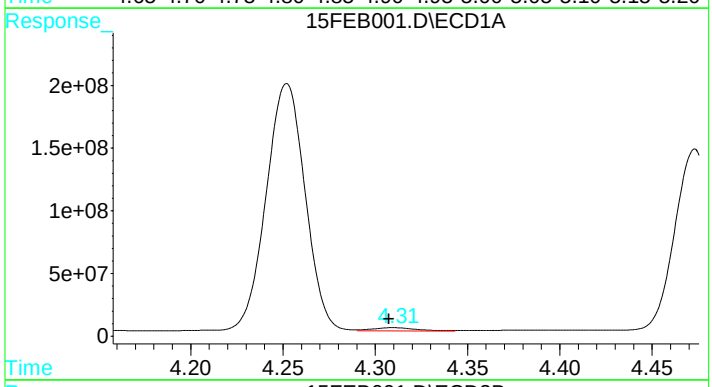
#14 ENDRIN

R.T.: 4.252 min
Delta R.T.: 0.001 min
Response: 2908098913
Conc: 67.01 ng



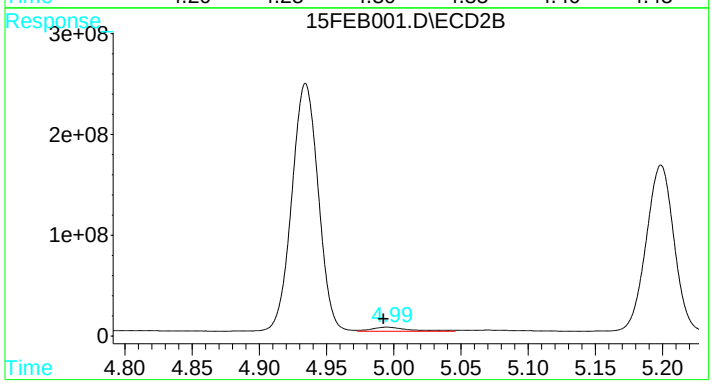
#14 ENDRIN

R.T.: 4.935 min
Delta R.T.: 0.000 min
Response: 3364215818
Conc: 62.92 ng



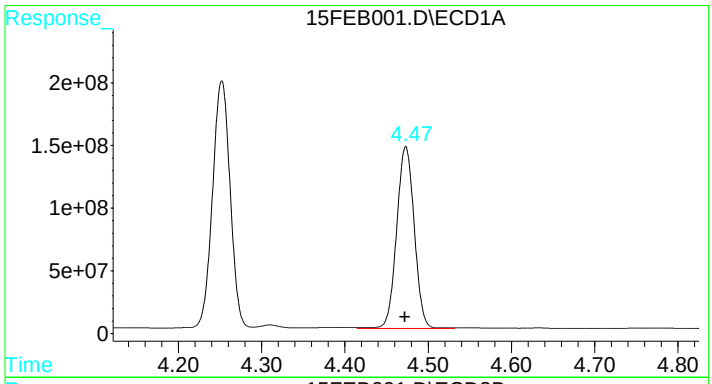
#15 PP-DDD

R.T.: 4.310 min
Delta R.T.: 0.002 min
Response: 43041670
Conc: 1.08 ng



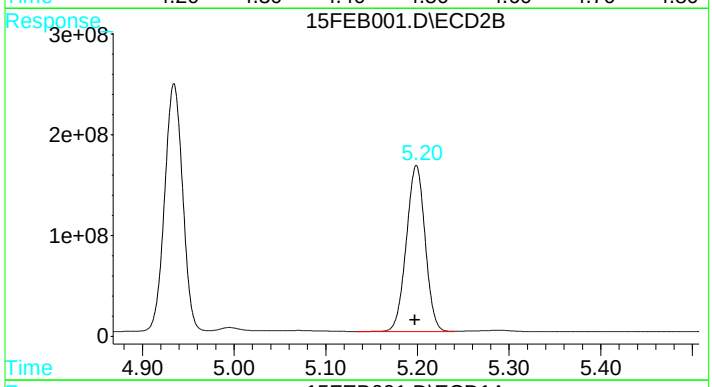
#15 PP-DDD

R.T.: 4.995 min
Delta R.T.: 0.003 min
Response: 76537223
Conc: 1.53 ng



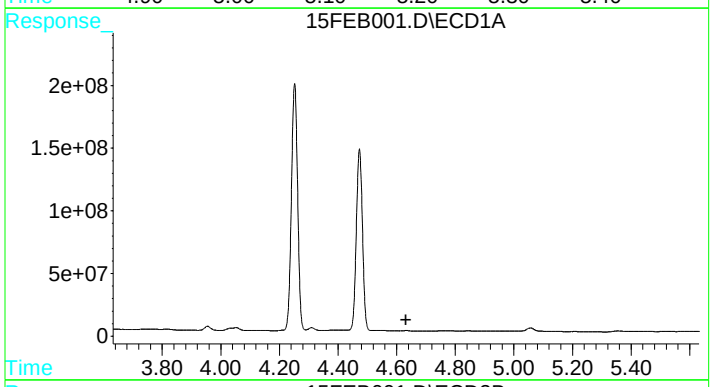
#17 PP-DDT

R.T.: 4.473 min
Delta R.T.: 0.001 min
Response: 2136471276
Conc: 52.88 ng



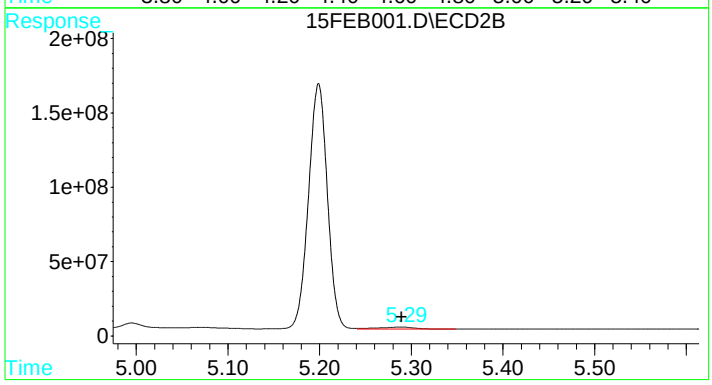
#17 PP-DDT

R.T.: 5.199 min
Delta R.T.: 0.002 min
Response: 2355918604
Conc: 50.97 ng



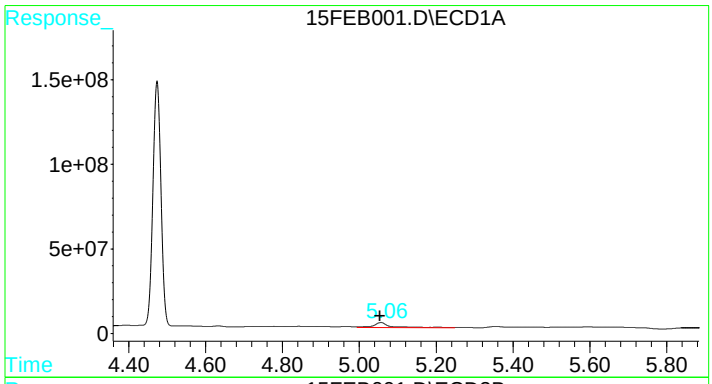
#18 ENDRIN ALDEHYDE

R.T.: 4.633 min
Delta R.T.: 0.001 min
Response: 6649982
Conc: N.D.



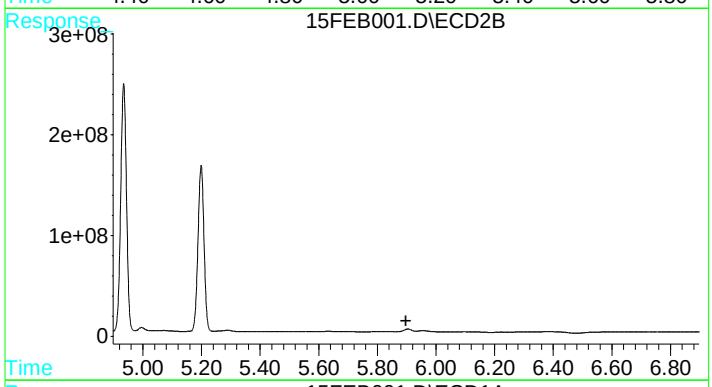
#18 ENDRIN ALDEHYDE

R.T.: 5.289 min
Delta R.T.: 0.000 min
Response: 34796865
Conc: 0.42 ng



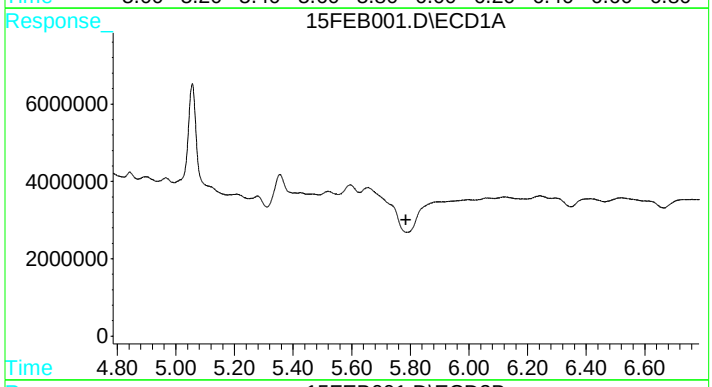
#21 ENDRIN KETONE

R.T.: 5.056 min
Delta R.T.: 0.002 min
Response: 92778022
Conc: 1.59 ng



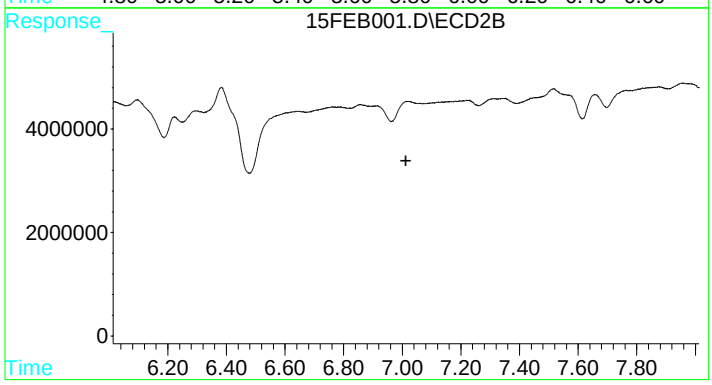
#21 ENDRIN KETONE

R.T.: 5.903 min
Delta R.T.: 0.005 min
Response: 52869821
Conc: N.D.



#23 DCB (SURROGATE)

R.T.: 0.000 min
Exp R.T. : 5.785 min
Response: 0
Conc: N.D.



#23 DCB (SURROGATE)

R.T.: 0.000 min
Exp R.T. : 7.012 min
Response: 0
Conc: N.D.

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 11:42:14AM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 1703278

Laboratory Documentation Requirements
For Data Validation of
GC Analysis

Prepared By

BC Laboratories

For AMEC Environmental & Infrastructure

5023146096

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Certifications: CA ELAP #1186; NV #CA00014; AK UST101; OR ELAP #4032; DoD ELAP #66175

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Case Narrative

Analyses Requested: 8015-TPH Gas
Submission # 17-03278

Instrument ID: GC-V9
Model: HP 5890 Series II

Column Types
Primary: DB-1 30m x 53mm

Detector: FID

Samples were received refrigerated to <6°C upon arrival at BC Laboratories, Inc. Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Holding Time: All analyses and extractions took place within holding times.

Calibration: Initial calibration criteria were met. Frequency and accuracy criteria for initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

Blanks: Method blank was prepared and analyzed at the required frequency. No detection of analytes of interest took place at or above the PQL.
Initial and continuing calibration blanks were analyzed at the required frequencies and on an as needed basis.

Laboratory Control Sample: Laboratory control sample analysis was performed at the required frequency. All parameter were within QC limits.

Matrix Spikes and Duplicates: Matrix spike analyses were performed at the required frequencies. All accuracy and precision requirements were met.

Chain of Custody and Cooler Receipt Form for 1703278 Page 1 of 6

MWEC Group
9177 Sky Park Court
San Diego, CA
(858) 278-3600

SHIP TO:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn:
Lab Phone#

CHAIN OF CUSTODY

17-03278

DATE: 2/6/2017
COC #: COC170206
PAGE: 1 OF 1

Project Name:	Alameda Basewide	Project Contact:	Marina Mitchell	Bill To:	Amec Foster Wheeler	Disposal Instructions:	LAB
Project Number:	5023146086	Phone Number:	(503) 639-3400		9210 Sky Park Court, Suite 200	Shipment Method:	FEDEX
Project Manager:	Kevin Cless	Project Phase:	03.****		San Diego, CA 92123	Waybill Number:	N/A

Sample Information / Methods for Analysis / RUSH

No.	Sample ID	Date & Time Sampled	Matrix	Sample Type	MS/MSD	VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TPH-E -D, JF, M, Oil (EPA 8015B)	TPH-P as Gasoline (EPA 8015B)	Pesticides (EPA 8081)	Diss Metals (EPA 6000s)	Cyanide (EPA 335.2)	Diss.Gas- RSK175	Anions- (EPA 300.0)	Cations - Na, K, Ca, Mg (EPA 6010)	Alkalinity (EPA 310.2)	Sulfide (EPA 376.2)	TDS (EPA 160.1)	TOC (EPA 415.1)	24 Hour	48 Hour	72 Hour	5 Days	TOTAL BOTTLES	HOLD All Analyses
1	DUP04_170206	02/06/17 09:25	WG	FD	N	X																			
2	EB07_170206	02/06/17 14:30	WQ	EB	N	X	X	X	X	X	X	X			X										
3	M041E_170206	02/06/17 08:45	WG	N	N	X	X			X	X	X													
4	M051A_170206	02/06/17 11:30	WG	N	Y	X	X	X	X		X		X	X	X	X	X	X	X						
5	M060A_170206	02/06/17 09:20	WG	N	N	X																			
6	T804_170206	02/06/17 12:00	WQ	TB	N	X																			
7																									
8																									
9																									
10																									
11																									
12																									

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

Sampler's Signature:	Date: 2/6/17	Time: 16:60
Relinquished By/Affiliation:	Date: 2/6/17	Time: 16:60
Received By:	Date: 2/6/17	Time: 16:60
Relinquished By/Affiliation:	Date: 2-6-17	Time: 1830
Received By:	Date: 2/6/17	Time: 18:30
Relinquished By/Affiliation:	Date: 2/6/17	Time: 2200
Received By (LAB):	Date: 2/6	Time: 2200

For Lab Use

Does COC match samples:	Y or N
Broken Container:	Y or N
COC seal intact:	Y or N
Other problems:	Y or N
WSDOT contacted:	Y or N
Date contacted:	
Cooler Temperature at receipt:	°C

Comments:
X=Analyze H=Hold Analysis Request

Report DL/LOD/LOQ with Navy NIRIS valid values

VOC short list is Benzene & Ethylbenzene only
Major Cations are Na, K, Ca, Mg

NUMBER OF COOLERS SENT:

Chain of Custody and Cooler Receipt Form for 1703278 Page 2 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 2.2 °C / (C) 2.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK						AB				
40ml VOA VIAL	ABC		ABC		ABC					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- ~~504~~ unpreserved		A-F								
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: M Date/Time: 2-6-17 2310
Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 5

Submission #: 17-03278

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ (W) / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received		
☒ YES ☐ NO	Emissivity: 0.97 Container: VOA Thermometer ID: 207 Temperature: (A) 1.5 °C / (C) 1.7 °C	Date/Time 2/6 2150 Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AB,AC,AD						
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL				A-R						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL ~~504~~ RSK				S-AA						
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M				AX,AY						
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: [illegible] Date/Time: 2-6-17 2315

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1703278 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 5

Submission #: 17-03278

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 0.1 °C / (C) 0.4 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			D							
PT CYANIDE			E							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080			PG							
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270			HI							
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Numbering Completed By: Date/Time: 2/6/17 0360

Actual / C = Corrected

Rev 21 05/23/2016
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Chain of Custody and Cooler Receipt Form for 1703278 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150

Temperature: (A) 1.5 °C / (C) 1.8 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES				AF-AJ	/					
2oz Cr^{+6}										
~~QT~~ INORGANIC CHEMICAL METALS PT		G		AN, AO, AP						
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				AK, AL, AM						
PT CYANIDE		H								
PT NITROGEN FORMS										
PT TOTAL SULFIDE				AQ, AR, AS						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080		IJ								
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		KL		AW,						
QT EPA 8270		MN								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: AA Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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Chain of Custody and Cooler Receipt Form for 1703278 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 Of 5

Submission #: 17-03278

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 207 Date/Time 2/6 2150
Temperature: (A) 1.4 °C / (C) 1.7 °C Analyst Init GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON		HT,PA,AY								
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		AZ-RG								
QT EPA 8270		BC-BH								
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 2-6-17 2340
A = Actual / C = Corrected

Rev 21 05/23/2016
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AMEC Environmental & Infrastructure 9210 Sky Park Court #200 San Diego, CA 92123	Reported: 3/10/2017 3:01:52PM Project: Alameda Project Number: 5023146096 Project Manager: Kelli Miller

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG:	**17-03278**
Class:	**GC**
Method:	**EPA-8015B**

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSES DATA PACKAGE COVER PAGE

EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Client Sample Id:	Lab Sample Id:
EB07_170206	1703278-02
M051A_170206	1703278-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-10-2017
Title: QA/QC Manager

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD DETECTION AND REPORTING LIMITS

EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Instrument: GC-V9

Analyte	DL	LOD	LOQ	Units
Gasoline Range Organics (C4 - C12)	15	25	50	ug/L

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8015B

EB07_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-02	File ID:	09FEB19.D
Sampled:	02/06/17 14:30	Prepared:	02/09/17 10:31	Analyzed:	02/09/17 17:10
Solids:		Preparation:	GC	Initial/Final:	5 ml / 5 ml
Batch:	B[B0792	Sequence:	1702306	Calibration:	1702015
Instrument:	GC-V9				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
---	Gasoline Range Organics (C4 - C12)	1	25	15	25	50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
a,a,a-Trifluorotoluene (FID Surrogate)	40.000	37.091	92.7	70 - 130	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ORGANIC ANALYSIS DATA SHEET
EPA-8015B

M051A_170206

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	1703278-04	File ID:	09FEB06.D
Sampled:	02/06/17 11:30	Prepared:	02/09/17 10:31	Analyzed:	02/09/17 11:22
Solids:		Preparation:	GC	Initial/Final:	5 ml / 5 ml
Batch:	B[B0792	Sequence:	1702306	Calibration:	1702015
Instrument:	GC-V9				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	DL	LOD	LOQ	Q
---	Gasoline Range Organics (C4 - C12)	1	540	15	25	50	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
a,a,a-Trifluorotoluene (FID Surrogate)	40.000	40.118	100	70 - 130	

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

PREPARATION BATCH SUMMARY

EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Batch: B[B0792
Batch Matrix: Water
Preparation: GC

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
EB07_170206	1703278-02	09FEB19.D	02/09/17 10:31	
M051A_170206	1703278-04	09FEB06.D	02/09/17 10:31	
Blank	B[B0792-BLK1	09FEB05.D	02/09/17 10:31	
LCS	B[B0792-BS1	09FEB14.D	02/09/17 10:31	
LCS	B[B0792-BS1	09FEB09.D	02/09/17 10:31	
M051A_170206	B[B0792-MS1	09FEB10.D	02/09/17 10:31	
M051A_170206	B[B0792-MS1	09FEB07.D	02/09/17 10:31	
M051A_170206	B[B0792-MSD1	09FEB11.D	02/09/17 10:31	
M051A_170206	B[B0792-MSD1	09FEB08.D	02/09/17 10:31	

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

METHOD BLANK DATA SHEET
EPA-8015B

Laboratory:	BC Laboratories			SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN			Project:	Alameda
Matrix:	Water	Laboratory ID:	B[B0792-BLK1	File ID:	09FEB05.D
Prepared:	02/09/17 10:31	Preparation:	GC	Initial/Final:	5 ml / 5 ml
Analyzed:	02/09/17 11:02	Instrument:	GC-V9		
Batch:	B[B0792	Sequence:	1702306	Calibration:	1702015

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
---	Gasoline Range Organics (C4 - C12)	25	15	25	50	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
a,a,a-Trifluorotoluene (FID Surrogate)	40.000	37.444	93.6	70 - 130	

AMEC Environmental & Infrastructure
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Project Number: 5023146096
Project Manager: Kelli Miller

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8015B

M051A_170206

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0792
Laboratory ID: B[B0792-MS1
Preparation: GC
Initial/Final: 5 ml / 5 ml
Source Sample Number: 1703278-04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC. #	QC LIMITS REC.
Gasoline Range Organics (C4 - C12)	1000.0	537.95	1338.0	80.0	70 - 130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Gasoline Range Organics (C4 - C12)	1000.0	1296.8	75.9	3.13	20	70 - 130

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

LCS RECOVERY
EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Matrix: Water
Batch: B[B0792
Laboratory ID: B[B0792-BS1
Preparation: GC
Initial/Final: 5 ml / 5 ml

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. #	QC LIMITS REC.
Gasoline Range Organics (C4 - C12)	1000.0	1123.3	112	85 - 115

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

* Values outside of QC limits

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702065	Instrument:	GC-V9
Matrix:	Water	Calibration:	1702015

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1702065-CAL1	06FEB20.D	02/06/17 14:33
Cal Standard	1702065-CAL2	06FEB22.D	02/06/17 15:13
Cal Standard	1702065-CAL3	06FEB23.D	02/06/17 15:34
Cal Standard	1702065-CAL4	06FEB24.D	02/06/17 15:54
Cal Standard	1702065-CAL5	06FEB25.D	02/06/17 16:14

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702207	Instrument:	GC-V9
Matrix:	Water	Calibration:	1702015

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1702207-CAL1	07FEB14.D	02/07/17 14:12
Cal Standard	1702207-CAL2	07FEB15.D	02/07/17 14:33
Cal Standard	1702207-CAL3	07FEB16.D	02/07/17 14:53
Cal Standard	1702207-CAL4	07FEB17.D	02/07/17 15:13
Cal Standard	1702207-CAL5	07FEB18.D	02/07/17 15:33

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702306	Instrument:	GC-V9
Matrix:	Water	Calibration:	1702015

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	1702306-ICV1	07FEB37.D	02/08/17 11:36
Initial Cal Check	1702306-ICV1	06FEB27.D	02/06/17 16:55
Initial Cal Blank	1702306-ICB1	06FEB28.D	02/06/17 17:16
Calibration Check	1702306-CCV1	09FEB02.D	02/09/17 09:27
Calibration Check	1702306-CCV1	09FEB03.D	02/09/17 09:48
Calibration Blank	1702306-CCB1	09FEB04.D	02/09/17 10:42
Blank	B[B0792-BLK1	09FEB05.D	02/09/17 11:02
M051A_170206	1703278-04	09FEB06.D	02/09/17 11:22
M051A_170206	B[B0792-MS1	09FEB07.D	02/09/17 11:49
M051A_170206	B[B0792-MS1	09FEB10.D	02/09/17 13:27
M051A_170206	B[B0792-MSD1	09FEB08.D	02/09/17 12:45
M051A_170206	B[B0792-MSD1	09FEB11.D	02/09/17 13:50
LCS	B[B0792-BS1	09FEB09.D	02/09/17 13:05
LCS	B[B0792-BS1	09FEB14.D	02/09/17 15:08
Calibration Check	1702306-CCV2	09FEB17.D	02/09/17 16:14
Calibration Check	1702306-CCV2	09FEB16.D	02/09/17 15:54
Calibration Blank	1702306-CCB2	09FEB18.D	02/09/17 16:34
EB07_170206	1703278-02	09FEB19.D	02/09/17 17:10
Calibration Check	1702306-CCV3	09FEB32.D	02/09/17 21:37
Calibration Check	1702306-CCV3	09FEB31.D	02/09/17 21:16
Calibration Blank	1702306-CCB3	09FEB33.D	02/09/17 21:57

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V9	Calibration:	1702015
Lab File ID:	07FEB37.D	Calibration Date:	02/06/17 14:33
Sequence:	1702306	Injection Date:	02/08/17
Lab Sample ID:	1702306-ICV1	Injection Time:	11:36

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Gasoline Range Organics (C4 - C12)	A	1000.0	996.74	3348.079	3337.172		-0.3	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V9	Calibration:	1702015
Lab File ID:	09FEB03.D	Calibration Date:	02/06/17 14:33
Sequence:	1702306	Injection Date:	02/09/17
Lab Sample ID:	1702306-CCV1	Injection Time:	09:48

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Gasoline Range Organics (C4 - C12)	A	1000.0	990.11	3348.079	3314.963		-1.0	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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Project: Alameda
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Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V9	Calibration:	1702015
Lab File ID:	09FEB17.D	Calibration Date:	02/06/17 14:33
Sequence:	1702306	Injection Date:	02/09/17
Lab Sample ID:	1702306-CCV2	Injection Time:	16:14

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Gasoline Range Organics (C4 - C12)	A	1000.0	1063.2	3348.079	3559.708		6.3	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

CONTINUING CALIBRATION CHECK

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Instrument ID:	GC-V9	Calibration:	1702015
Lab File ID:	09FEB32.D	Calibration Date:	02/06/17 14:33
Sequence:	1702306	Injection Date:	02/09/17
Lab Sample ID:	1702306-CCV3	Injection Time:	21:37

COMPOUND	(1) CAL TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Gasoline Range Organics (C4 - C12)	A	1000.0	879.19	3348.079	2943.608		-12.1	15

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

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AMEC Environmental & Infrastructure
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San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702065	Instrument:	GC-V9
Matrix:	Water	Calibration:	1702015

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (1702065-CAL1)			Lab File ID: 06FEB20.D		Analyzed: 02/06/17 14:33			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	98.1		4.23	4.23	0.0000	+/-1.0	
Cal Standard (1702065-CAL2)			Lab File ID: 06FEB22.D		Analyzed: 02/06/17 15:13			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	104		4.23	4.23	0.0000	+/-1.0	
Cal Standard (1702065-CAL3)			Lab File ID: 06FEB23.D		Analyzed: 02/06/17 15:34			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	103		4.23	4.23	0.0000	+/-1.0	
Cal Standard (1702065-CAL4)			Lab File ID: 06FEB24.D		Analyzed: 02/06/17 15:54			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	98.7		4.23	4.23	0.0000	+/-1.0	
Cal Standard (1702065-CAL5)			Lab File ID: 06FEB25.D		Analyzed: 02/06/17 16:14			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	99.2		4.23	4.23	0.0000	+/-1.0	

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SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Sequence: 1702306
Instrument: GC-V9
Matrix: Water
Calibration: 1702015

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (1702306-ICV1)			Lab File ID: 06FEB27.D		Analyzed: 02/06/17 16:55			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	94.8	85 - 115	4.23	4.23	0.0000	+/-1.0	
Initial Cal Blank (1702306-ICB1)			Lab File ID: 06FEB28.D		Analyzed: 02/06/17 17:16			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	87.8	70 - 130	4.23	4.23	0.0000	+/-1.0	
Calibration Check (1702306-CCV1)			Lab File ID: 09FEB02.D		Analyzed: 02/09/17 09:27			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	101	85 - 115	4.23	4.23	0.0000	+/-1.0	
Calibration Blank (1702306-CCB1)			Lab File ID: 09FEB04.D		Analyzed: 02/09/17 10:42			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	98.8	70 - 130	4.23	4.23	0.0000	+/-1.0	
Blank (B[B0792-BLK1)			Lab File ID: 09FEB05.D		Analyzed: 02/09/17 11:02			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	93.6	70 - 130	4.23	4.23	0.0000	+/-1.0	
M051A_170206 (1703278-04)			Lab File ID: 09FEB06.D		Analyzed: 02/09/17 11:22			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	100	70 - 130	4.23	4.23	0.0000	+/-1.0	
Matrix Spike (B[B0792-MS1)			Lab File ID: 09FEB07.D		Analyzed: 02/09/17 11:49			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	107	70 - 130	4.23	4.23	0.0000	+/-1.0	
Matrix Spike Dup (B[B0792-MSD1)			Lab File ID: 09FEB08.D		Analyzed: 02/09/17 12:45			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	109	70 - 130	4.23	4.23	0.0000	+/-1.0	
LCS (B[B0792-BS1)			Lab File ID: 09FEB09.D		Analyzed: 02/09/17 13:05			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	102	70 - 130	4.23	4.23	0.0000	+/-1.0	
Calibration Check (1702306-CCV2)			Lab File ID: 09FEB16.D		Analyzed: 02/09/17 15:54			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	101	85 - 115	4.23	4.23	0.0000	+/-1.0	
Calibration Blank (1702306-CCB2)			Lab File ID: 09FEB18.D		Analyzed: 02/09/17 16:34			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	96.4	70 - 130	4.23	4.23	0.0000	+/-1.0	
EB07_170206 (1703278-02)			Lab File ID: 09FEB19.D		Analyzed: 02/09/17 17:10			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	92.7	70 - 130	4.23	4.23	0.0000	+/-1.0	
Calibration Check (1702306-CCV3)			Lab File ID: 09FEB31.D		Analyzed: 02/09/17 21:16			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	87.9	85 - 115	4.23	4.23	0.0000	+/-1.0	

AMEC Environmental & Infrastructure
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Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Sequence:	1702306	Instrument:	GC-V9
Matrix:	Water	Calibration:	1702015

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Blank (1702306-CCB3)			Lab File ID: 09FEB33.D		Analyzed: 02/09/17 21:57			
a,a,a-Trifluorotoluene (FID Surrogate	40.000	85.4	70 - 130	4.23	4.23	0.0000	+/-1.0	

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION STANDARDS

EPA-8015B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702065
Calibration: 1702015

SDG: 17-03278
Project: Alameda
Instrument: GC-V9

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
6K16035	8015/8020 combo water-GCV9 CAL 1	1702065-CAL1	06FEB20.D	02/06/17 14:33
6K16036	8015/8020 combo water-GCV9 CAL 2	1702065-CAL2	06FEB22.D	02/06/17 15:13
6K16037	8015/8020 combo water-GCV9 CAL 3	1702065-CAL3	06FEB23.D	02/06/17 15:34
6K16038	8015/8020 combo water-GCV9 CAL 4	1702065-CAL4	06FEB24.D	02/06/17 15:54
6K16039	8015/8020 combo water-GCV9 CAL 5	1702065-CAL5	06FEB25.D	02/06/17 16:14

AMEC Environmental & Infrastructure
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San Diego, CA 92123

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Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION STANDARDS

EPA-8015B

Laboratory: BC Laboratories
Client: AMEC Environmental & Infrastructure $AMCN
Sequence: 1702207
Calibration: 1702015

SDG: 17-03278
Project: Alameda
Instrument: GC-V9

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
6K16035	8015/8020 combo water-GCV9 CAL 1	1702207-CAL1	07FEB14.D	02/07/17 14:12
6K16036	8015/8020 combo water-GCV9 CAL 2	1702207-CAL2	07FEB15.D	02/07/17 14:33
6K16037	8015/8020 combo water-GCV9 CAL 3	1702207-CAL3	07FEB16.D	02/07/17 14:53
6K16038	8015/8020 combo water-GCV9 CAL 4	1702207-CAL4	07FEB17.D	02/07/17 15:13
6K16039	8015/8020 combo water-GCV9 CAL 5	1702207-CAL5	07FEB18.D	02/07/17 15:33

AMEC Environmental & Infrastructure
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Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA

EPA-8015B

Laboratory:	BC Laboratories	SDG:	17-03278
Client:	AMEC Environmental & Infrastructure $AMCN	Project:	Alameda
Calibration:	1702015	Instrument:	GC-V9
Matrix:	Water	Calibration Date:	02/06/17 14:33

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Gasoline Range Organics (C4 - C1	50	3985.2	500	3110.056	1000	3012.454	1500	3200.5	2000	3432.184		
a,a,a-Trifluorotoluene (FID Surrog											40	2779.75

AMEC Environmental & Infrastructure
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Project: Alameda
Project Number: 5023146096
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INITIAL CALIBRATION DATA (Continued)

EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702015
Instrument: GC-V9
Matrix: Water
Calibration Date: 02/06/17 14:33

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Gasoline Range Organics (C4 - C1												
a,a,a-Trifluorotoluene (FID Surroga	40	2947.05	40	2923.575	40	2797.275	40	2810.625				

AMEC Environmental & Infrastructure
9210 Sky Park Court #200
San Diego, CA 92123

Reported: 3/10/2017 3:01:52PM
Project: Alameda
Project Number: 5023146096
Project Manager: Kelli Miller

INITIAL CALIBRATION DATA (Continued)

EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda
Calibration: 1702015
Instrument: GC-V9
Matrix: Water
Calibration Date: 02/06/17 14:33

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Gasoline Range Organics (C4 - C12)	3348.079	11.607	5.39	1.694303E-02			20	
a,a,a-Trifluorotoluene (FID Surrogate)	2851.655	2.721036	4.23	1.461036E-02			20	

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HOLDING TIME SUMMARY
EPA-8015B

Laboratory: BC Laboratories
SDG: 17-03278
Client: AMEC Environmental & Infrastructure $AMCN
Project: Alameda

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
EB07_170206	02/06/17 14:30	02/06/17 22:00	02/09/17 10:31	3.00	14.00	02/09/17 17:10	3.00	14.00	
M051A_170206	02/06/17 11:30	02/06/17 22:00	02/09/17 10:31	3.00	14.00	02/09/17 11:22	3.00	14.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

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Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.