N00174.AR.002012
NSWC INDIAN HEAD
5090.3a

VALIDATED DATA PACKAGE, 78007, NSWC INDIAN HEAD MD
12/22/2015
APPL LABS

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 74807

Summary Report

December 22, 2015

Tetra Tech
5700 Lake Wright Drive, Suite 309
Norfolk, Virginia 23502

Attn: Ed Corack

Title: Report of Data: Case 78007

Project: CTO JU11 112G02622 NSF Indian Head, MD

Contract #: Prime contract # for DoD: Navy CLEAN. N62470-08-D-1001
Subcontract: MSA # 1045497, Work Release # 08-JU11

Dear Mr. Corack:

Six waters and one soil sample were received November 21, 2015, at 3.5°C. Written results for the requested analyses are provided on this December 22, 2015.

The Corrosivity and Ignitability analyses were subcontracted to CALS Environmental, Kelso, WA. Their report is included.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, cclark@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

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. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/rp
Enclosure
cc: File

Number of pages in this report: 60

Sample receipt information

ARF: 78007

Project: CTO JU11 112G02622 NSF Indian Head, MD

Sample Receipt Information:

The samples were received on November 21, 2015, at 3.5°C. The samples were assigned Analytical Request Form (ARF) number 78007. The sample numbers and requested analyses were compared to the chain of custody. Sample ID discrepancies were noted and reported to the client. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
S67-MW13-112015	AZ25342	WATER	11/20/15	11/21/15
S67-MW23-112015	AZ25343	WATER	11/20/15	11/21/15
S67-MW22-112015	AZ25344	WATER	11/20/15	11/21/15
S67-MW22P-112015	AZ25345	WATER	11/20/15	11/21/15
S67-MW18-112015	AZ25346	WATER	11/20/15	11/21/15
S67-AQIDW-112015	AZ25347	WATER	11/20/15	11/21/15
S67-SOIDW-112015	AZ25348	SOIL	11/20/15	11/21/15

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

Laboratory control limits generated in house do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control limits generated for this project meet all control limits listed in the DoD QSM 4.2 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

EPA Method 8270D
TCLP Semi-Volatile Organic Compounds

Sample Preparation and Analysis Information:

There was less than 0.5% solid in the water sample; it was extracted according to EPA method 3510C. The soil sample was leached according to EPA method 1311 and the leachate was extracted according to EPA method 3510C. The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS. All holding times were met.

Quality Control/Assurance

Spike Recovery

Laboratory Control Spikes (LCS) were used for quality assurance. Pyridine recovered below the 48% lower control limit in the water and in TCLP extraction. The client was notified. All other LCS acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. All surrogate recoveries were within the control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met. Hexachlorobutadiene recovered at 21% in second source standard. There were no Hexachlorobutadiene detections in the samples.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Methods 6010C and 7470A
Total, Dissolved, and TCLP Metals

Digestion and Analysis Information:

The water samples were digested according to EPA methods 3010A and 7470A. The soil sample was leached according to EPA method 1311 and the leachate was digested according to EPA method 3010A and 7470A.

The samples were analyzed according to EPA method 6010C using a Perkin Elmer Optima 5300DV and according to EPA methods 7470A using a Perkin Elmer mercury analyzer FIMS 400. All holding times were met.

Quality Control/Assurance:

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Blanks:

No target metal was detected above one half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS), Matrix Spikes (MS/MSD), Post-Digestion Spikes (PDS), and Dilution Tests (DT) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW18-112015 was designated by the client for MS/MSD analysis. Sample S67-SOIDW-112015 was designated by the laboratory for MS/MSD analysis.

For sample S67-MW18-112015, iron recovered above the 120% upper control limit in MS/MSDs. In the PDS, one metal recovered below the 75% lower limit. All DT recoveries were acceptable.

. For sample S67-SOIDW-112015, one analyte exceeded the 10% deviation limit in the DT. All other MS/MSD, DT, and PDS acceptance criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

Inorganic Analysis

EPA Method 9040C

Sample Preparation Information:

The water sample was prepared according to the method.

Analysis Information:

Samples:

The sample was analyzed according to the method. The sample was received on a Saturday, and analyzed for pH on the next business day.

Calibrations:

Calibrations were performed according to the method for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Summary:

No analytical exception is noted.

APPL - Analysis Request Form 78007

Client: Tetra Tech
Address: 5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502
Attn: Ed Corack
Phone: 757-466-4908 Fax: 757-461-4148
Job: CTO JU11 112G02622 NSF Indian Head
PO #: MSA #1045497 Release #08-CTO JU11
Chain of Custody (Y/N): Y # 42666
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: STD

Received by: YL
Date Received: 11/21/15 Time: 11:15
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -4
Chest Temp(s): 3.5°C
Color: H-PURGRN/P-ORGGN/SUB
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Cynthia Clark
QC Report Type: DVP4/LEDD/MD
Due Date: 12/14/15

Comments:
login to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetratech.com.
Rush results to Ed; 21 calendar day TAT for final report
1HC DVP4 and summary report & 2 BOOKMARKED CDs of DVP4 and
Summary report (sample & QC results w/surrogate & blank summaries) to Amy Thomson (Pittsburgh)
Include original COC with report. NOTHING to Ed in VA office
EDD: TTEC LEDD to http://isg.applications.tetratech.com/LEDDChecker2010/
EDD: email confirm to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetratech.com
Guidance: DOD QSM v4.2: DOD Forms, LOD Database
corros/ignit sub to ALS-Kelso; label discrepancies, follow COC per Ed 11/23/15

Sample Distribution:
GC: 2-$TCLPSDOD
Extractions: 2-_SEP004, 2-_TCLP827
Metals: 5-$61C14W(TAL+B,Li), 5-$61C14WD(TAL+B,Li), 5-$HGDODDW, 5-$HGDODW, 2-$6010CTCLP(As,Ba,Cd,Cr,Pb,Se,Ag), 2-$TCLPGDODM(As,Ba,Cd,Cr,Pb,Se,Ag)
Wetlab: 1-$9040C
Other: 5-_M3010, 5-_M3010F, 5-_M7470, 5-_M7470F, 2-_M3010TCLP, 2-_M7470TCLP, 2-SUB-ALS

Charges:

Invoice To:
ACCOUNTS PAYABLE
661 Andersen Dr, Foster Plaza 7
Pittsburgh, PA 15220-2745
invoice in triplicate per SOW

	Client ID	APPL ID	Sampled	Analyses Requested
1.	S67-MW13-112015	AZ25342W	11/20/15 10:50	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
2.	S67-MW23-112015	AZ25343W	11/20/15 10:55	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
3.	S67-MW22-112015	AZ25344W	11/20/15 12:45	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
4.	S67-MW22P-112015	AZ25345W	11/20/15 12:45	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -4 UTC
Page 1 Client Code: TTECNUS-JU11 *Printed 11/25/15 8:46:05 AM* Computer: BLADE-01 **# 78007**

5.	S67-MW18-112015	ms/msd AZ25346W	11/20/15	12:32	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
6.	S67-AQIDW-112015	AZ25347W	11/20/15	13:50	$6010CTCLP(As,Ba,Cd,Cr,Pb,Se,Ag), $9040C, $TCLPGDODM(As,Ba,Cd,Cr,Pb,Se,Ag), $TCLPSDOD, SUB-ALS
7.	S67-SOIDW-112015	AZ25348S	11/20/15	13:40	$6010CTCLP(As,Ba,Cd,Cr,Pb,Se,Ag), $TCLPGDODM(As,Ba,Cd,Cr,Pb,Se,Ag), $TCLPSDOD, SUB-ALS

T8001

3.5°C

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
Phone: (559) 275-2175
Fax: (559) 275-4422

CHAIN OF CUSTODY RECORD

C.O.C. 42666

Report to: PLEASE PRINT
Company Name: Tetra Tech Phone: 757-466-4908
Address: 5700 Lake Wright Dr. Suite 309
Norfolk, VA 23502 Fax:
Attn: Ed Corack

Invoice to: PLEASE PRINT
Company Name: See Contract Phone:
Address: Fax:
Attn:

Project Name/Number: NSF-Indian Head Site 67 112G02622
Purchase Order Number:
Sampler (Print): Jacob Birkett
Sampler (Signature):

Date Shipped: 11-20-15
Carrier: FedEx
Waybill No.: 8744-3755
Comments: 5678

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	Total TAL metals	Dissolved TAL Metals		TCLP Mtls	TCLP SVOCs Lqid/Flash point		TCLP Metals TCLP SVOCs	Corrosivity (pH)	Corrosivity (Steel)	Lqid/Flash		Comments
S67-MW13-112015	MW13	11-20-15		ET	2	X			1	1										
S67-MW23-112015	MW23		1055		2	X			1	1										
S67-MW22-112015	MW22		1245		2	X			1	1										
S67-MW22P-112015	MW22		1245		2	X			1	1										
S67-MW18-112015	MW18				6	X			3	3										Run MS/MSD
S67-AQIDW-112015	—		1350		7	X									7 →			→		Aqueous IDW
S67-SOIDW-112015	—		1340	↓	3			X				3 →								Soil IDW

11-20-15

Shuttle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:
	11-2015		FedEx
Relinquished by:	Date	Time	Received by:

Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received at lab by:
	4/21/15	11:15	

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

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COOLER RECEIPT FORM **ARF: 78007**

1) Project: CTO JU11 112G02622 NSF Indian Head Date Received: 11/21/15

2) Coolers: Number of Coolers: 1

3) YES Were custody seals present and intact?
How many? 2 Name/Date on seal? 10/20/15

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 3.5 2: 3: 4: 5: 6:
7: 8: 9: 10: 11: 12:

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) No Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea:
Smaller than a pea:

Preservation Hold time:

18) NA Was a sufficient amount of holding time remaining to analyze the samples?

19) NA Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) NA Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number:
Lab notified if pH was not adequate:

Notes/Deficiencies:
Sample ID discrepancies for samples MW23,MW22 and MW22P. All container IDs had a 0 in front for the #

Personnel receiving samples: cm Second reviewer:
Personnel labeling samples: cm
Project manager notified: C. Clark Date/Time of notification 0852 11/23/15
Name of client notified: Date/Time of notification

Revision: 22, November 5, 2013

TCLP Semivolatile 8270D

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-AQIDW-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25347
QCG: #TCLPS-151202A-203103

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D/T	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
EPA 8270D/T	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/02/15	12/10/15
EPA 8270D/T	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/02/15	12/10/15
EPA 8270D/T	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
EPA 8270D/T	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/02/15	12/10/15
EPA 8270D/T	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/02/15	12/10/15
EPA 8270D/T	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
EPA 8270D/T	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/02/15	12/10/15
EPA 8270D/T	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/02/15	12/10/15
EPA 8270D/T	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/02/15	12/10/15
EPA 8270D/T	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/02/15	12/10/15
EPA 8270D/T	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
EPA 8270D/T	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: 2,4,6-TRIBROMOPHEN	87.8	40-125			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUORBIPHENYL (S)	83.7	50-110			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUOROPHENOL (S)	53.9	20-110			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: NITROBENZENE-D5 (S)	81.6	40-110			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: PHENOL (S)	37.8	10-115			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: TERPHENYL-D14 (S)	99.1	50-135			%	12/02/15	12/10/15

Quant Method: Y1209.M
Run #: 1209Y031
Instrument: Yoda
Sequence: Y151209
Dilution Factor: 1
Initials: MA

Printed: 12/12/15 3:14:12 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

TCLP Semivolatile 8270D

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SOIDW-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25348
QCG: #TCLPS-151204A-203104

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D/T	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
EPA 8270D/T	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/04/15	12/10/15
EPA 8270D/T	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/04/15	12/10/15
EPA 8270D/T	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
EPA 8270D/T	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/04/15	12/10/15
EPA 8270D/T	4-METHYLPHENOL	2.9 J	10.0	5.00	1.70	ug/L	12/04/15	12/10/15
EPA 8270D/T	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
EPA 8270D/T	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/04/15	12/10/15
EPA 8270D/T	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/04/15	12/10/15
EPA 8270D/T	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/04/15	12/10/15
EPA 8270D/T	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/04/15	12/10/15
EPA 8270D/T	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
EPA 8270D/T	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: 2,4,6-TRIBROMOPHEN	80.6	40-125			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUORBIPHENYL (S)	75.6	50-110			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUOROPHENOL (S)	45.8	20-110			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: NITROBENZENE-D5 (S)	74.1	40-110			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: PHENOL (S)	28.9	10-115			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: TERPHENYL-D14 (S)	91.7	50-135			%	12/04/15	12/10/15

J = Estimated value.

Quant Method: Y1209.M
Run #: 1209Y071
Instrument: Yoda
Sequence: Y151209
Dilution Factor: 1
Initials: MA

Printed: 12/12/15 3:14:12 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Method Blank

TCLP Semivolatile 8270D

Blank Name/QCG: **151202W-25347 - 203103**
Batch ID: #TCLPS-151202A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/02/15	12/10/15
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/02/15	12/10/15
BLANK	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
BLANK	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/02/15	12/10/15
BLANK	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/02/15	12/10/15
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/02/15	12/10/15
BLANK	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/02/15	12/10/15
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
BLANK	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/02/15	12/10/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	75.0	40-125			%	12/02/15	12/10/15
BLANK	SURROGATE: 2-FLUORBIPHENY	69.1	50-110			%	12/02/15	12/10/15
BLANK	SURROGATE: 2-FLUOROPHENO	48.5	20-110			%	12/02/15	12/10/15
BLANK	SURROGATE: NITROBENZENE-	71.8	40-110			%	12/02/15	12/10/15
BLANK	SURROGATE: PHENOL (S)	31.5	10-115			%	12/02/15	12/10/15
BLANK	SURROGATE: TERPHENYL-D14 (	88.9	50-135			%	12/02/15	12/10/15

Quant Method: Y1209.M
Run #: 1209Y028
Instrument: Yoda
Sequence: Y151209
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/12/15 3:14:07 PM

Method Blank
TCLP Semivolatile 8270D

Blank Name/QCG: **151204S-25348 - 203104**
Batch ID: #TCLPS-151204A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/04/15	12/10/15
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/04/15	12/10/15
BLANK	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
BLANK	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/04/15	12/10/15
BLANK	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/04/15	12/10/15
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/04/15	12/10/15
BLANK	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/04/15	12/10/15
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
BLANK	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/04/15	12/10/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	84.7	40-125			%	12/04/15	12/10/15
BLANK	SURROGATE: 2-FLUORBIPHENY	78.0	50-110			%	12/04/15	12/10/15
BLANK	SURROGATE: 2-FLUOROPHENO	47.4	20-110			%	12/04/15	12/10/15
BLANK	SURROGATE: NITROBENZENE-	77.5	40-110			%	12/04/15	12/10/15
BLANK	SURROGATE: PHENOL (S)	30.1	10-115			%	12/04/15	12/10/15
BLANK	SURROGATE: TERPHENYL-D14 (	96.0	50-135			%	12/04/15	12/10/15

Quant Method: Y1209.M
Run #: 1209Y069
Instrument: Yoda
Sequence: Y151209
Initials: MA

GC SC-Blank-REG MDLs-DOD
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Laboratory Control Spike Recovery

TCLP Semivolatile 8270D

APPL ID: **151202W-25347 LCS - 203103**
Batch ID: #TCLPS-151202A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,4-DCB	50.0	23.0	46.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	40.3	80.6	50-110
2,4,6-TRICHLOROPHENOL	50.0	40.5	81.0	50-115
2,4-DNT	50.0	42.1	84.2	50-120
2-METHYLPHENOL	50.0	35.9	71.8	40-110
4-METHYLPHENOL	100	67.5	67.5	30-110
HEXACHLOROBENZENE	50.0	41.3	82.6	50-110
HEXACHLOROBUTADIENE	50.0	23.0	46.0	25-105
HEXACHLOROETHANE	50.0	20.2	40.4	30-95
NITROBENZENE	50.0	39.6	79.2	45-110
PENTACHLOROPHENOL	50.0	38.6	77.2	40-115
PHENOL	50.0	19.7	39.4	10-115
PYRIDINE	50.0	18.7	37.4 #	48-108
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	166	83.0	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	72.6	72.6	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	98.9	49.5	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	74.3	74.3	40-110
SURROGATE: PHENOL (S)	200	65.2	32.6	10-115
SURROGATE: TERPHENYL-D14 (S)	100	94.6	94.6	50-135

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y1209.M
Extraction Date :	12/02/15
Analysis Date :	12/10/15
Instrument :	Yoda
Run :	1209Y029
Initials :	MA

Printed: 12/14/15 9:06:34 AM
APPL Standard LCS

Laboratory Control Spike Recovery

TCLP Semivolatile 8270D

APPL ID: **151204S-25348 LCS - 203104**
Batch ID: #TCLPS-151204A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,4-DCB	50.0	33.5	67.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	44.8	89.6	50-110
2,4,6-TRICHLOROPHENOL	50.0	45.0	90.0	50-115
2,4-DNT	50.0	44.3	88.6	50-120
2-METHYLPHENOL	50.0	36.7	73.4	40-110
4-METHYLPHENOL	100	67.2	67.2	30-110
HEXACHLOROBENZENE	50.0	43.7	87.4	50-110
HEXACHLOROBUTADIENE	50.0	36.3	72.6	25-105
HEXACHLOROETHANE	50.0	30.5	61.0	30-95
NITROBENZENE	50.0	41.6	83.2	45-110
PENTACHLOROPHENOL	50.0	45.5	91.0	40-115
PHENOL	50.0	18.7	37.4	10-115
PYRIDINE	50.0	22.4	44.8 #	48-108
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	176	88.0	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	80.4	80.4	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	94.5	47.3	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	76.8	76.8	40-110
SURROGATE: PHENOL (S)	200	60.4	30.2	10-115
SURROGATE: TERPHENYL-D14 (S)	100	93.5	93.5	50-135

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y1209.M
Extraction Date :	12/04/15
Analysis Date :	12/10/15
Instrument :	Yoda
Run :	1209Y070
Initials :	MA

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APPL Standard LCS

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151202A-BLK	Blank	40-125	75.0		50-110	69.1	
151202A-LCS	Lab Control Spike	40-125	83.0		50-110	72.6	
AZ25347	S67-AQIDW-112015	40-125	87.8		50-110	83.7	

Comments: Batch: #TCLPS-151202A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151202A-BLK	Blank	20-110	48.5		40-110	71.8	
151202A-LCS	Lab Control Spike	20-110	49.5		40-110	74.3	
AZ25347	S67-AQIDW-112015	20-110	53.9		40-110	81.6	

Comments: Batch: #TCLPS-151202A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151202A-BLK	Blank	10-115	31.5		50-135	88.9	
151202A-LCS	Lab Control Spike	10-115	32.6		50-135	94.6	
AZ25347	S67-AQIDW-112015	10-115	37.8		50-135	99.1	

Comments: Batch: #TCLPS-151202A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151204A-BLK	Blank	40-125	84.7		50-110	78.0	
151204A-LCS	Lab Control Spike	40-125	88.0		50-110	80.4	
AZ25348	S67-SOIDW-112015	40-125	80.6		50-110	75.6	

Comments: Batch: #TCLPS-151204A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151204A-BLK	Blank	20-110	47.4		40-110	77.5	
151204A-LCS	Lab Control Spike	20-110	47.3		40-110	76.8	
AZ25348	S67-SOIDW-112015	20-110	45.8		40-110	74.1	

Comments: Batch: #TCLPS-151204A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151204A-BLK	Blank	10-115	30.1		50-135	96.0	
151204A-LCS	Lab Control Spike	10-115	30.2		50-135	93.5	
AZ25348	S67-SOIDW-112015	10-115	28.9		50-135	91.7	

Comments: Batch: #TCLPS-151204A

EPA 8270D/TC

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

Blank ID: 151204A-BLK Time Analyzed: 2131

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151204A-BLK	Blank	1209Y069	12/10/15 2131
151204A-LCS	Lab Control Spike	1209Y070	12/10/15 2200
AZ25348	S67-SOIDW-112015	1209Y071	12/10/15 2229

Comments: Batch: #TCLPS-151204A

Printed: 12/12/15 3:14:11 PM

Form 4, Blank Summary

EPA 8270D/TC

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

Blank ID: 151202A-BLK Time Analyzed: 0147

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151202A-BLK	Blank	1209Y028	12/10/15 0147
151202A-LCS	Lab Control Spike	1209Y029	12/10/15 0216
AZ25347	S67-AQIDW-112015	1209Y031	12/10/15 0314

Comments: Batch: #TCLPS-151202A

Printed: 12/14/15 9:08:41 AM
Form 4, Blank Summary

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW13-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25342

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL) (DISSOLVE	5460	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	16.0	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	2.2	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	146	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVE	13.4	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	46900	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	29.5	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	277	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	21700	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	15.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	9460	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	537	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	25.9 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	5570	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	1.0 J	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	49200	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	2.4 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	3960	600	80.0	55.0	ug/L	4	12/08/15	12/09/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW13-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25342

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	5490	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	15.5	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	2.2	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	149	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	13.2	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	47500	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	28.4	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	274	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	21400	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	14.8	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	9630	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	539	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	25.2 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	5540	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	48700	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	2.6 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	3860	600	80.0	55.0	ug/L	4	12/08/15	12/09/15

J = Estimated value.

Printed: 12/22/15 3:12:31 PM

APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW23-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25343

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL) (DISSOLVE	5120	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	19.3	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.6 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	140	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVE	14.7	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	46600	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	36.1	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	807	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	20800	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	22.5	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	8590	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	532	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	29.1 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	7600	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	73200	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	6640	600	80.0	55.0	ug/L	4	12/08/15	12/09/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW23-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25343

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	9270	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	30.6	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.8 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	152	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	14.9	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	48100	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	8.8 J	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	37.9	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	852	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	26200	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	2.6 J	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	26.5	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	9350	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	558	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	31.2 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	8650	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	76000	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	11.2 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	7070	600	80.0	55.0	ug/L	4	12/08/15	12/09/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW22-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25344

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL) (DISSOLVE	30.7 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	59.5	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	145	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVE	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	17000	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	6.6 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	4.00 U	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	27000	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	1.2	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	6160	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	624	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	1.7 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	4880	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	104000	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	77.9 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW22-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25344

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	50.0 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	61.4	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	139	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	16200	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	7.1 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	6.3 J	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	28700	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	18.3	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	1.0	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	6250	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	640	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	1.7 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	4710	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	91900	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	88.6 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW22P-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25345

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL) (DISSOLVE	41.8 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	60.9	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	142	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVE	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	16800	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	6.7 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	4.00 U	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	27700	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	1.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	6190	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	638	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	2.0 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	4800	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	99600	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	76.1 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW22P-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25345

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	57.5 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	63.3	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	137	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	16400	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	7.3 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	7.0 J	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	29900	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	20.6	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	1.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	6420	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	659	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	1.8 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	4730	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	94000	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	93.3 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW18-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25346

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL) (DISSOLVE	1270	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	8.3 J	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	14.8	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.3 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	196	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVE	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	17400	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	9.9 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	28.1	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	18800	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	36.2	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	6330	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	368	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	19.3 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	6550	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	74300	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	1.0 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	417	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW18-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25346

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	1320	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	8.6 J	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	15.1	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.4 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	202	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	18100	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	10.5 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	31.5	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	20200	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	37.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	6580	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	392	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	20.3 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	6690	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	74600	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	1.0 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	430	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-AQIDW-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25347

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C-TCLP	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	1	12/14/15	12/18/15
6010C-TCLP	BARIUM (BA)	302	50.0	4.00	0.75	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	1	12/14/15	12/18/15
6010C-TCLP	LEAD (PB)	2.2 J	100.0	4.00	1.58	ug/L	1	12/14/15	12/18/15
7470A/TCLP	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	1	12/14/15	12/15/15
6010C-TCLP	SELENIUM (SE)	5.00 U	50.0	5.00	3.17	ug/L	1	12/14/15	12/18/15
6010C-TCLP	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	1	12/14/15	12/18/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SOIDW-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25348

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C-TCLP	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	1	12/14/15	12/18/15
6010C-TCLP	BARIUM (BA)	342	50.0	4.00	0.75	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CADMIUM (CD)	1.5 J	50.0	3.00	0.51	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CHROMIUM (CR)	2.0 J	50.0	4.00	1.37	ug/L	1	12/14/15	12/18/15
6010C-TCLP	LEAD (PB)	12.6 J	100.0	4.00	1.58	ug/L	1	12/14/15	12/18/15
7470A/TCLP	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	1	12/14/15	12/15/15
6010C-TCLP	SELENIUM (SE)	4.9 J	50.0	5.00	3.17	ug/L	1	12/14/15	12/18/15
6010C-TCLP	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	1	12/14/15	12/18/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL) (DI	80.0 U	300	80.0	27.4	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ANTIMONY (SB) (DI	5.00 U	20.0	5.00	2.90	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ARSENIC (AS) (DIS	10.00 U	25.0	10.00	4.30	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BARIUM (BA) (DISS	4.00 U	10.0	4.00	0.75	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BERYLLIUM (BE) (D	1.00 U	2.0	1.00	0.45	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BORON (B) (DISSO	40.00 U	50.0	40.00	21.80	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	CADMIUM (CD) (DIS	3.00 U	5.0	3.00	0.51	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	CALCIUM (CA) (DIS	49.9 J	1000	75.0	27.5	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	CHROMIUM (CR) (D	4.00 U	15.0	4.00	1.37	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	COBALT (CO) (DISS	3.00 U	15.0	3.00	0.63	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	COPPER (CU) (DIS	4.00 U	15.0	4.00	1.71	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	IRON (FE) (DISSOL	25.0 U	100	25.0	21.0	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	LEAD (PB) (DISSOL	4.00 U	15.0	4.00	1.58	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	LITHIUM (LI) (DISSO	0.80 U	1.0	0.80	0.40	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	MAGNESIUM (MG) (	30.0 U	500	30.0	12.9	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	MANGANESE (MN) (	4.00 U	10.0	4.00	1.23	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	NICKEL (NI) (DISSO	3.00 U	40.0	3.00	0.42	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	POTASSIUM (K) (DI	500.0 U	3000	500.0	220.0	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SELENIUM (SE) (DI	10.00 U	22.0	10.00	4.60	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SILVER (AG) (DISS	0.90 U	15.0	0.90	0.85	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SODIUM (NA) (DISS	500.0 U	5000	500.0	111.1	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	THALLIUM (TL) (DIS	10.00 U	40.0	10.00	4.80	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	VANADIUM (V) (DIS	4.00 U	15.0	4.00	0.97	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ZINC (ZN) (DISSOL	20.0 U	150	20.0	13.7	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
7470A	MERCURY (HG) (DI	0.15 U	0.2	0.15	0.06	ug/L	12/11/15	12/14/15	#HGDOD-151211A-AZ25346

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	80.0 U	300	80.0	27.4	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BARIUM (BA)	4.00 U	10.0	4.00	0.75	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BERYLLIUM (BE)	1.00 U	2.0	1.00	0.45	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BORON (B)	40.00 U	50.0	40.00	21.80	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CALCIUM (CA)	31.2 J	1000	75.0	27.5	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	COBALT (CO)	3.00 U	15.0	3.00	0.63	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	COPPER (CU)	4.00 U	15.0	4.00	1.71	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	IRON (FE)	25.0 U	100	25.0	21.0	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	LEAD (PB)	4.00 U	15.0	4.00	1.58	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	LITHIUM (LI)	0.80 U	1.0	0.80	0.40	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	NICKEL (NI)	3.00 U	40.0	3.00	0.42	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	VANADIUM (V)	4.00 U	15.0	4.00	0.97	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ZINC (ZN)	20.0 U	150	20.0	13.7	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	12/05/15	12/07/15	HGDOD-151205B1-AZ25346

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C-TC	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	BARIUM (BA)	4.00 U	50.0	4.00	0.75	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	LEAD (PB)	4.00 U	100.0	4.00	1.58	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	SELENIUM (SE)	5.00 U	50.0	5.00	3.17	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
7470A	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	12/14/15	12/15/15	#TCLPG-151214A1-AZ25347
6010C-TC	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	BARIUM (BA)	5.4 J	50.0	4.00	0.75	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	LEAD (PB)	4.00 U	100.0	4.00	1.58	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	SELENIUM (SE)	3.5 J	50.0	5.00	3.17	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
7470A	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	12/14/15	12/15/15	#TCLPG-151214A-AZ25348

Metals SC-Blank-REG MDLs
Printed: 12/22/15 3:13:32 PM

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL) (DISSOLVED)	2000	1880	94.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ANTIMONY (SB) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ARSENIC (AS) (DISSOLVED)	250	228	91.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BARIUM (BA) (DISSOLVED)	250	230	92.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BERYLLIUM (BE) (DISSOLVED)	50.0	46.1	92.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BORON (B) (DISSOLVED)	250	231	92.4	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CADMIUM (CD) (DISSOLVED)	50.0	46.8	93.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CALCIUM (CA) (DISSOLVED)	25000	23900	95.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CHROMIUM (CR) (DISSOLVED)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	COBALT (CO) (DISSOLVED)	250	232	92.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	COPPER (CU) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	IRON (FE) (DISSOLVED)	1000	930	93.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	LEAD (PB) (DISSOLVED)	250	236	94.4	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	LITHIUM (LI) (DISSOLVED)	100.0	95.8	95.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	MAGNESIUM (MG) (DISSOLVED)	25000	24300	97.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	MANGANESE (MN) (DISSOLVED	250	229	91.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	NICKEL (NI) (DISSOLVED)	250	239	95.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	POTASSIUM (K) (DISSOLVED)	5000	4590	91.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	SELENIUM (SE) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	SILVER (AG) (DISSOLVED)	100.0	86.7	86.7	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	THALLIUM (TL) (DISSOLVED)	250	230	92.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	VANADIUM (V) (DISSOLVED)	250	242	96.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ZINC (ZN) (DISSOLVED)	500	464	92.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 7470A	MERCURY (HG) (DISSOLVED)	4.00	4.0	100	80-120	12/11/15	12/14/15	#HGDOD-151211A-AZ25346

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL)	2000	1980	99.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ANTIMONY (SB)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ARSENIC (AS)	250	241	96.4	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BARIUM (BA)	250	242	96.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BERYLLIUM (BE)	50.0	48.3	96.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BORON (B)	250	239	95.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CADMIUM (CD)	50.0	48.9	97.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CALCIUM (CA)	25000	25100	100	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CHROMIUM (CR)	250	247	98.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	COBALT (CO)	250	244	97.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	COPPER (CU)	250	236	94.4	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	IRON (FE)	1000	972	97.2	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	LEAD (PB)	250	247	98.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	LITHIUM (LI)	100.0	102	102	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	MAGNESIUM (MG)	25000	25300	101	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	MANGANESE (MN)	250	243	97.2	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	NICKEL (NI)	250	245	98.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	POTASSIUM (K)	5000	4780	95.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	SELENIUM (SE)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	SILVER (AG)	100.0	90.3	90.3	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	THALLIUM (TL)	250	240	96.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	VANADIUM (V)	250	256	102	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ZINC (ZN)	500	490	98.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 7470A	MERCURY (HG)	4.00	4.0	100	80-120	12/05/15	12/07/15	#HGDOD-151205B1-AZ25346

Comments:

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6010C-TCL	ARSENIC (AS)	250	228	91.2	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	BARIUM (BA)	250	234	93.6	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	CADMIUM (CD)	50.0	47.5	95.0	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	CHROMIUM (CR)	250	239	95.6	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	LEAD (PB)	250	238	95.2	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	SELENIUM (SE)	250	222	88.8	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	SILVER (AG)	100.0	90.5	90.5	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6010C-TCL	ARSENIC (AS)	250	251	100	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	BARIUM (BA)	250	233	93.2	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	CADMIUM (CD)	50.0	48.0	96.0	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	CHROMIUM (CR)	250	231	92.4	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	LEAD (PB)	250	231	92.4	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	SELENIUM (SE)	250	256	102	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	SILVER (AG)	100.0	94.5	94.5	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 7470A	MERCURY (HG)	0.004	0.0041	103	80-120	12/14/15	12/15/15	#TCLPG-151214A-AZ25348

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 7470A	MERCURY (HG)	0.004	0.0039	97.5	80-120	12/14/15	12/15/15	#TCLPG-151214A1-AZ25347

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202993**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	ALUMINUM (AL) (DISS	2000	1270	3200	3230	96.5	98.0	0.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ANTIMONY (SB) (DISS	250	ND	233	239	93.2	95.6	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ARSENIC (AS) (DISSO	250	8.3	251	255	97.1	98.7	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BARIUM (BA) (DISSOL	250	14.8	255	260	96.1	98.1	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BERYLLIUM (BE) (DIS	50.0	1.3	49.9	50.4	97.2	98.2	1.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BORON (B) (DISSOLV	250	196	440	443	97.6	98.8	0.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CADMIUM (CD) (DISS	50.0	ND	47.7	47.4	95.4	94.8	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CALCIUM (CA) (DISSO	25000	17400	42000	42100	98.4	98.8	0.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CHROMIUM (CR) (DIS	250	0.74	238	243	94.9	96.9	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	COBALT (CO) (DISSOL	250	9.9	252	256	96.8	98.4	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	COPPER (CU) (DISSO	250	28.1	266	271	95.2	97.2	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	IRON (FE) (DISSOLVE	1000	18800	19800	20100	100	130 #	1.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	LEAD (PB) (DISSOLVE	250	ND	238	244	95.2	97.6	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	LITHIUM (LI) (DISSOLV	100.0	36.2	141	144	105	108	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	MAGNESIUM (MG) (DI	25000	6330	31500	31500	101	101	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	MANGANESE (MN) (DI	250	368	604	610	94.4	96.8	1.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	NICKEL (NI) (DISSOLV	250	19.3	257	262	95.1	97.1	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	POTASSIUM (K) (DISS	5000	6550	11300	11300	95.0	95.0	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202993**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	SELENIUM (SE) (DISS	250	1.1	233	239	92.8	95.2	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	SILVER (AG) (DISSOL	100.0	ND	89.0	92.2	89.0	92.2	3.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	THALLIUM (TL) (DISSO	250	ND	230	236	92.0	94.4	2.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	VANADIUM (V) (DISSO	250	1.0	251	256	100	102	2.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ZINC (ZN) (DISSOLVE	500	417	892	911	95.0	98.8	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 7470A	MERCURY (HG) (DISS	4.00	ND	3.8	3.9	95.0	97.5	2.6	20	80-120	12/11/15	12/14/15	12/11/15	12/14/15	203130	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202994**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	ALUMINUM (AL)	2000	1320	3290	3270	98.5	97.5	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ANTIMONY (SB)	250	ND	244	239	97.6	95.6	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ARSENIC (AS)	250	8.6	266	263	103	102	1.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BARIUM (BA)	250	15.1	264	262	99.6	98.8	0.8	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BERYLLIUM (BE)	50.0	1.4	51.5	50.6	100	98.4	1.8	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BORON (B)	250	202	457	453	102	100	0.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CADMIUM (CD)	50.0	ND	48.8	48.0	97.6	96.0	1.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CALCIUM (CA)	25000	18100	43500	43300	102	101	0.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CHROMIUM (CR)	250	0.76	248	245	98.9	97.7	1.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	COBALT (CO)	250	10.5	262	258	101	99.0	1.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	COPPER (CU)	250	31.5	277	275	98.2	97.4	0.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	IRON (FE)	1000	20200	20700	20700	50.0 #	50.0 #	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	LEAD (PB)	250	ND	249	245	99.6	98.0	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	LITHIUM (LI)	100.0	37.1	145	145	108	108	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	MAGNESIUM (MG)	25000	6580	32600	32500	104	104	0.3	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	MANGANESE (MN)	250	392	631	627	95.6	94.0	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	NICKEL (NI)	250	20.3	267	266	98.7	98.3	0.4	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	POTASSIUM (K)	5000	6690	11600	11600	98.2	98.2	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202994**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	SELENIUM (SE)	250	1.1	244	245	97.2	97.6	0.4	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	SILVER (AG)	100.0	ND	93.3	92.1	93.3	92.1	1.3	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	THALLIUM (TL)	250	0.20	237	232	94.7	92.7	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	VANADIUM (V)	250	1.0	262	259	104	103	1.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ZINC (ZN)	500	430	929	924	99.8	98.8	0.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 7470A	MERCURY (HG)	4.00	ND	4.1	4.2	102	105	2.4	20	80-120	12/05/15	12/07/15	12/05/15	12/07/15	202932	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151214S-25348 MS - 203323**

Sample ID: AZ25348

Client ID: S67-SOIDW-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6010C-TCL	ARSENIC (AS)	250	2.1	239	240	94.8	95.2	0.4	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	BARIUM (BA)	250	342	580	584	95.2	96.8	0.7	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	CADMIUM (CD)	50.0	1.5	47.0	47.1	91.0	91.2	0.2	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	CHROMIUM (CR)	250	2.0	223	225	88.4	89.2	0.9	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	LEAD (PB)	250	12.6	230	230	87.0	87.0	0.0	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	SELENIUM (SE)	250	4.9	243	247	95.2	96.8	1.6	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	SILVER (AG)	100.0	ND	89.5	90.6	89.5	90.6	1.2	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
EPA 7470A	MERCURY (HG)	0.004	ND	0.0042	0.0041	105	103	2.4	15	80-120	12/14/15	12/15/15	12/14/15	12/15/15	203173	AZ25348

Comments: _____

6010C/3010A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/08/15

Matrix: WATER Instrument: Phoebe

Blank ID: 151208A1-BLK Time Analyzed: 1516

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151208A1-MS	Matrix Spike	151208A	12/08/15 1738
AZ25343	S67-MW23-112015	151208A	12/08/15 1718
AZ25344	S67-MW22-112015	151208A	12/08/15 1723
AZ25345	S67-MW22P-112015	151208A	12/08/15 1728
AZ25346	S67-MW18-112015	151208A	12/08/15 1733
151208A1-BLK	Blank	151208A	12/08/15 1516
AZ25342	S67-MW13-112015	151208A	12/08/15 1713
151208A1-LCS	Lab Control Spike	151208A	12/08/15 1520
151208A1-MSD	Matrix SpikeD	151208A	12/08/15 1743
AZ25345	S67-MW22P-112015	151209A	12/09/15 1452
AZ25344	S67-MW22-112015	151209A	12/09/15 1448
AZ25343	S67-MW23-112015	151209A	12/09/15 1444
AZ25342	S67-MW13-112015	151209A	12/09/15 1440
AZ25346	S67-MW18-112015	151209A	12/09/15 1457

Comments: Batch: #61C14-151208A1

6010C/3010A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/08/15

Matrix: WATER Instrument: Phoebe

Blank ID: 151208A-BLK Time Analyzed: 1505

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151208A-MS	Matrix Spike	151208A	12/08/15 1554
AZ25343	S67-MW23-112015	151208A	12/08/15 1534
AZ25344	S67-MW22-112015	151208A	12/08/15 1539
AZ25345	S67-MW22P-112015	151208A	12/08/15 1544
AZ25346	S67-MW18-112015	151208A	12/08/15 1549
151208A-BLK	Blank	151208A	12/08/15 1505
AZ25342	S67-MW13-112015	151208A	12/08/15 1529
151208A-LCS	Lab Control Spike	151208A	12/08/15 1510
151208A-MSD	Matrix SpikeD	151208A	12/08/15 1559
AZ25345	S67-MW22P-112015	151209A	12/09/15 1405
AZ25344	S67-MW22-112015	151209A	12/09/15 1401
AZ25343	S67-MW23-112015	151209A	12/09/15 1357
AZ25342	S67-MW13-112015	151209A	12/09/15 1353
AZ25346	S67-MW18-112015	151209A	12/09/15 1410

Comments: Batch: #61C14-151208A

6010C-TCLP

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/18/15

Matrix: WATER Instrument: Phoebe

Blank ID: 151214A-BLK Time Analyzed: 1157

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151214A-BLK	Blank	151218A	12/18/15 1157
151214A-LCS	Lab Control Spike	151218A	12/18/15 1201
AZ25347	S67-AQIDW-112015	151218A	12/18/15 1205

Comments: Batch: #6010C-151214A

6010C-TCLP

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/18/15

Matrix: SOIL Instrument: Phoebe

Blank ID: 151214A1-BLK Time Analyzed: 1211

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151214A1-MSD	Matrix SpikeD	151218A	12/18/15 1232
AZ25348	S67-SOIDW-112015	151218A	12/18/15 1221
151214A1-BLK	Blank	151218A	12/18/15 1211
151214A1-LCS	Lab Control Spike	151218A	12/18/15 1216
151214A1-MS	Matrix Spike	151218A	12/18/15 1227

Comments: Batch: #6010C-151214A1

7470A/7470A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/07/15

Matrix: WATER Instrument: Freddie

Blank ID: 151205B1-BLK Time Analyzed: 1317

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151205B1-BLK	Blank	151207W	12/07/15 1317
151205B1-MSD	Matrix SpikeD	151207W	12/07/15 1514
AZ25342	S67-MW13-112015	151207W	12/07/15 1501
AZ25343	S67-MW23-112015	151207W	12/07/15 1503
AZ25344	S67-MW22-112015	151207W	12/07/15 1506
AZ25345	S67-MW22P-112015	151207W	12/07/15 1508
AZ25346	S67-MW18-112015	151207W	12/07/15 1510
151205B1-LCS	Lab Control Spike	151207W	12/07/15 1319
151205B1-MS	Matrix Spike	151207W	12/07/15 1512

Comments: Batch: #HGDOD-151205B

7470A/7470A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/14/15

Matrix: WATER Instrument: Freddie

Blank ID: 151211A-BLK Time Analyzed: 0951

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151211A-BLK	Blank	151214W	12/14/15 0951
151211A-MSD	Matrix SpikeD	151214W	12/14/15 1046
AZ25342	S67-MW13-112015	151214W	12/14/15 1033
AZ25343	S67-MW23-112015	151214W	12/14/15 1036
AZ25344	S67-MW22-112015	151214W	12/14/15 1038
AZ25345	S67-MW22P-112015	151214W	12/14/15 1040
AZ25346	S67-MW18-112015	151214W	12/14/15 1042
151211A-LCS	Lab Control Spike	151214W	12/14/15 0953
151211A-MS	Matrix Spike	151214W	12/14/15 1044

Comments: Batch: #HGDOD-151211A

7470A/TCLP

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/15/15

Matrix: SOIL Instrument: Freddie

Blank ID: 151214A-BLK Time Analyzed: 0924

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151214A-LCS	Lab Control Spike	151215W	12/15/15 0928
151214A-MS	Matrix Spike	151215W	12/15/15 1034
151214A-MSD	Matrix SpikeD	151215W	12/15/15 1036
AZ25348	S67-SOIDW-112015	151215W	12/15/15 1032
151214A-BLK	Blank	151215W	12/15/15 0924

Comments: Batch: #TCLPG-151214A

7470A/TCLP

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/15/15

Matrix: WATER Instrument: Freddie

Blank ID: 151214A1-BLK Time Analyzed: 0926

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AZ25347	S67-AQIDW-112015	151215W	12/15/15 1030
151214A1-BLK	Blank	151215W	12/15/15 0926
151214A1-LCS	Lab Control Spike	151215W	12/15/15 0930

Comments: Batch: #TCLPG-151214A1

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Form 4, Blank Summary

Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-AQIDW-112015

Sample Collection Date: 11/20/15

APPL ID: AZ25347

ARF: 78007

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 9040C	PH	6.67@12.2C	NA			pH Units	1	11/23/15	11/23/15

Printed: 12/22/15 3:17:17 PM

APPL-F1-SC-NoMC-REG MDLs

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 74807

Data Validatable Report

December 22, 2015

Tetra Tech
5700 Lake Wright Drive, Suite 309
Norfolk, Virginia 23502

Attn: Ed Corack

Title: Report of Data: Case 78007

Project: CTO JU11 112G02622 NSF Indian Head, MD

Contract #: Prime contract # for DoD: Navy CLEAN. N62470-08-D-1001
Subcontract: MSA # 1045497, Work Release # 08-JU11

Dear Mr. Corack:

Six waters and one soil sample were received November 21, 2015, at 3.5°C. Written results for the requested analyses are provided on this December 22, 2015.

The Corrosivity and Ignitability analyses were subcontracted to CALS Environmental, Kelso, WA. Their report is included.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, cclark@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

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. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/rp
Enclosure
cc: File

Number of pages in this report: 45

Data Validation Package
for
CTO JU11 112G02622 NSF Indian Head
ARF 78007
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SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 78007

Project: CTO JU11 112G02622 NSF Indian Head, MD

Sample Receipt Information:

The samples were received on November 21, 2015, at 3.5°C. The samples were assigned Analytical Request Form (ARF) number 78007. The sample numbers and requested analyses were compared to the chain of custody. Sample ID discrepancies were noted and reported to the client. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
S67-MW13-112015	AZ25342	WATER	11/20/15	11/21/15
S67-MW23-112015	AZ25343	WATER	11/20/15	11/21/15
S67-MW22-112015	AZ25344	WATER	11/20/15	11/21/15
S67-MW22P-112015	AZ25345	WATER	11/20/15	11/21/15
S67-MW18-112015	AZ25346	WATER	11/20/15	11/21/15
S67-AQIDW-112015	AZ25347	WATER	11/20/15	11/21/15
S67-SOIDW-112015	AZ25348	SOIL	11/20/15	11/21/15

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

Laboratory control limits generated in house do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control limits generated for this project meet all control limits listed in the DoD QSM 4.2 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8270D
TCLP Semi-Volatile Organic Compounds

Sample Preparation and Analysis Information:

There was less than 0.5% solid in the water sample; it was extracted according to EPA method 3510C. The soil sample was leached according to EPA method 1311 and the leachate was extracted according to EPA method 3510C. The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS. All holding times were met.

Quality Control/Assurance

Spike Recovery

Laboratory Control Spikes (LCS) were used for quality assurance. Pyridine recovered below the 48% lower control limit in the water and in TCLP extraction. The client was notified. All other LCS acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Method blanks

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. All surrogate recoveries were within the control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met. Hexachlorobutadiene recovered at 21% in second source standard. There were no Hexachlorobutadiene detections in the samples.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Methods 6010C and 7470A
Total, Dissolved, and TCLP Metals

Digestion and Analysis Information:

The water samples were digested according to EPA methods 3010A and 7470A. The soil sample was leached according to EPA method 1311 and the leachate was digested according to EPA method 3010A and 7470A.

The samples were analyzed according to EPA method 6010C using a Perkin Elmer Optima 5300DV and according to EPA methods 7470A using a Perkin Elmer mercury analyzer FIMS 400. All holding times were met.

Quality Control/Assurance:

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Blanks:

No target metal was detected above one half the LOQ in the method blanks.

Spikes:

Laboratory Control Spikes (LCS), Matrix Spikes (MS/MSD), Post-Digestion Spikes (PDS), and Dilution Tests (DT) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW18-112015 was designated by the client for MS/MSD analysis. Sample S67-SOIDW-112015 was designated by the laboratory for MS/MSD analysis.

For sample S67-MW18-112015, iron recovered above the 120% upper control limit in MS/MSDs. In the PDS, one metal recovered below the 75% lower limit. All DT recoveries were acceptable.

. For sample S67-SOIDW-112015, one analyte exceeded the 10% deviation limit in the DT. All other MS/MSD, DT, and PDS acceptance criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

Inorganic Analysis

EPA Method 9040C

Sample Preparation Information:

The water sample was prepared according to the method.

Analysis Information:

Samples:

The sample was analyzed according to the method. The sample was received on a Saturday, and analyzed for pH on the next business day.

Calibrations:

Calibrations were performed according to the method for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Summary:

No analytical exception is noted.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,
ARF, CRF, AND
CLIENT COMMUNICATION

APPL - Analysis Request Form 78007

Client: Tetra Tech
Address: 5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502
Attn: Ed Corack
Phone: 757-466-4908 Fax: 757-461-4148
Job: CTO JU11 112G02622 NSF Indian Head
PO #: MSA #1045497 Release #08-CTO JU11
Chain of Custody (Y/N): Y # 42666
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: STD

Received by: YL
Date Received: 11/21/15 Time: 11:15
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -4
Chest Temp(s): 3.5°C
Color: H-PURGRN/P-ORGGN/SUB
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Cynthia Clark
QC Report Type: DVP4/LEDD/MD
Due Date: 12/14/15

Comments:
login to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetratech.com.
Rush results to Ed; 21 calendar day TAT for final report
1HC DVP4 and summary report & 2 BOOKMARKED CDs of DVP4 and
Summary report (sample & QC results w/surrogate & blank summaries) to Amy Thomson (Pittsburgh)
Include original COC with report. NOTHING to Ed in VA office
EDD: TTEC LEDD to http://isg.applications.tetratech.com/LEDDChecker2010/
EDD: email confirm to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetratech.com
Guidance: DOD QSM v4.2: DOD Forms, LOD Database
corros/ignit sub to ALS-Kelso; label discrepancies, follow COC per Ed 11/23/15

Sample Distribution:
GC: 2-$TCLPSDOD
Extractions: 2-_SEP004, 2-_TCLP827
Metals: 5-$61C14W(TAL+B,Li), 5-$61C14WD(TAL+B,Li), 5-$HGDODDW, 5-$HGDODW, 2-$6010CTCLP(As,Ba,Cd,Cr,Pb,Se,Ag), 2-$TCLPGDODM(As,Ba,Cd,Cr,Pb,Se,Ag)
Wetlab: 1-$9040C
Other: 5-_M3010, 5-_M3010F, 5-_M7470, 5-_M7470F, 2-_M3010TCLP, 2-_M7470TCLP, 2-SUB-ALS

Charges:

Invoice To:
ACCOUNTS PAYABLE
661 Andersen Dr, Foster Plaza 7
Pittsburgh, PA 15220-2745
invoice in triplicate per SOW

	Client ID	APPL ID	Sampled	Analyses Requested
1.	S67-MW13-112015	AZ25342W	11/20/15 10:50	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
2.	S67-MW23-112015	AZ25343W	11/20/15 10:55	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
3.	S67-MW22-112015	AZ25344W	11/20/15 12:45	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
4.	S67-MW22P-112015	AZ25345W	11/20/15 12:45	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -4 UTC

5.	S67-MW18-112015	ms/msd AZ25346W	11/20/15	12:32	$61C14W(TAL+B,Li), $61C14WD(TAL+B,Li), $HGDODDW, $HGDODW -- add Li Spike
6.	S67-AQIDW-112015	AZ25347W	11/20/15	13:50	$6010CTCLP(As,Ba,Cd,Cr,Pb,Se,Ag), $9040C, $TCLPGDODM(As,Ba,Cd,Cr,Pb,Se,Ag), $TCLPSDOD, SUB-ALS
7.	S67-SOIDW-112015	AZ25348S	11/20/15	13:40	$6010CTCLP(As,Ba,Cd,Cr,Pb,Se,Ag), $TCLPGDODM(As,Ba,Cd,Cr,Pb,Se,Ag), $TCLPSDOD, SUB-ALS

APPL Sample Receipt Form

ARF# **78007**

Sample	Container Type	Count	p
AZ25342	[6] PL 500mL - HNO3	2	1.7
AZ25343	[6] PL 500mL - HNO3	2	1.7
AZ25344	[6] PL 500mL - HNO3	2	1.7
AZ25345	[6] PL 500mL - HNO3	2	1.7
AZ25346	[6] PL 500mL - HNO3	5	1.7
	[7] PL 250mL - HNO3	1	1.7
AZ25347	[17] Amber Liter	7	NA
AZ25348	[21] 8oz Jar	3	NA

Sample	Container Type	Count	p

78007

CHAIN OF CUSTODY RECORD

3.5°C

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 42666

Report to: PLEASE PRINT

Company Name: Tetra Tech Phone: 757-466-4908

Address: 5700 Lake Wright Dr. Suite 309
Norfolk, VA 23502 Fax:

Attn: Ed Corack

Invoice to: PLEASE PRINT

Company Name: See Contract Phone:

Address: Fax:

Attn:

Project Name/Number: NSF-Indian Head Site 67 112G02622

Sampler (Print): Jacob Birkett

Purchase Order Number:

Sampler (Signature): [signature]

Date Shipped: 11-20-15

Carrier: FedEx

Waybill No.: 8744-3758

Comments: 5678

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Analysis Requested/Method Number: Total TAL Metals	Dissolved TAL Metals	TCLP Metals	TCLP SVOCs Ignit/Flashpoint	TCLP Metals TCLP SVOCs	Corrosivity (Gel)	Corrosivity (Steel)	Ignit/Flash	
S67-MW13-112015	MW13	11-20-15		ET	2	X			1	1							
S67-MW23-112015	MW23	↓	1055	↓	2	X			1	1							
S67-MW22-112015	MW22	↓	1245	↓	2	X			1	1							
S67-MW22P-112015	MW22	↓	1245	↓	2	X			1	1							
S67-MW18-112015	MW18	↓		↓	6	X			3	3							Run MSMSD
S67-AQIDW-112015	—	↓	1350	↓	7	X							7 →				Aqueous IDW
S67-SOIDW-112015	—	↓	1340	↓	3			X			3 →						Soil IDW

JBB 11-20-15

Shuttle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[signature]	11-20-15		FedEx				
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					11/21/15	11:15	[signature]

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 78007**

1) Project: CTO JU11 112G02622 NSF Indian Head Date Received: 11/21/15

2) Coolers: Number of Coolers: 1

3) YES Were custody seals present and intact?
How many? 2 Name/Date on seal? 10/20/15

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 3.5 2: ____ 3: ____ 4: ____ 5: ____ 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) No Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: ____
Smaller than a pea: ____

Preservation Hold time:

18) NA Was a sufficient amount of holding time remaining to analyze the samples?

19) NA Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) NA Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: ____
Lab notified if pH was not adequate: ____

Notes/Deficiencies:
Sample ID discrepancies for samples MW23,MW22 and MW22P. All container IDs had a 0 in front for the #

Personnel receiving samples: cm Second reviewer: ____
Personnel labeling samples: cm
Project manager notified: C. Clark Date/Time of notification 0952 11/23/15
Name of client notified: ____ Date/Time of notification ____

Revision: 22, November 5, 2013

EPA METHOD 8270D
Semivolatile Organic Compounds

EPA METHOD 8270D
Semivolatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
TCLP Semivolatile 8270D

Blank Name/QCG: **151202W-25347 - 203103**
Batch ID: #TCLPS-151202A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/02/15	12/10/15
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/02/15	12/10/15
BLANK	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
BLANK	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/02/15	12/10/15
BLANK	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/02/15	12/10/15
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/02/15	12/10/15
BLANK	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/02/15	12/10/15
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
BLANK	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/02/15	12/10/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	75.0	40-125			%	12/02/15	12/10/15
BLANK	SURROGATE: 2-FLUORBIPHENY	69.1	50-110			%	12/02/15	12/10/15
BLANK	SURROGATE: 2-FLUOROPHENO	48.5	20-110			%	12/02/15	12/10/15
BLANK	SURROGATE: NITROBENZENE-	71.8	40-110			%	12/02/15	12/10/15
BLANK	SURROGATE: PHENOL (S)	31.5	10-115			%	12/02/15	12/10/15
BLANK	SURROGATE: TERPHENYL-D14 (	88.9	50-135			%	12/02/15	12/10/15

Quant Method: Y1209.M
Run #: 1209Y028
Instrument: Yoda
Sequence: Y151209
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/12/15 3:14:07 PM

Method Blank
TCLP Semivolatile 8270D

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **151204S-25348 - 203104**
Batch ID: #TCLPS-151204A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/04/15	12/10/15
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/04/15	12/10/15
BLANK	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
BLANK	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/04/15	12/10/15
BLANK	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/04/15	12/10/15
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/04/15	12/10/15
BLANK	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/04/15	12/10/15
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
BLANK	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/04/15	12/10/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	84.7	40-125			%	12/04/15	12/10/15
BLANK	SURROGATE: 2-FLUORBIPHENY	78.0	50-110			%	12/04/15	12/10/15
BLANK	SURROGATE: 2-FLUOROPHENO	47.4	20-110			%	12/04/15	12/10/15
BLANK	SURROGATE: NITROBENZENE-	77.5	40-110			%	12/04/15	12/10/15
BLANK	SURROGATE: PHENOL (S)	30.1	10-115			%	12/04/15	12/10/15
BLANK	SURROGATE: TERPHENYL-D14 (	96.0	50-135			%	12/04/15	12/10/15

Quant Method:Y1209.M
Run #:1209Y069
Instrument:Yoda
Sequence:Y151209
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/12/15 3:14:07 PM

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151202A-BLK	Blank	40-125	75.0		50-110	69.1	
151202A-LCS	Lab Control Spike	40-125	83.0		50-110	72.6	
AZ25347	S67-AQIDW-112015	40-125	87.8		50-110	83.7	

Comments: Batch: #TCLPS-151202A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151202A-BLK	Blank	20-110	48.5		40-110	71.8	
151202A-LCS	Lab Control Spike	20-110	49.5		40-110	74.3	
AZ25347	S67-AQIDW-112015	20-110	53.9		40-110	81.6	

Comments: Batch: #TCLPS-151202A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151202A-BLK	Blank	10-115	31.5		50-135	88.9	
151202A-LCS	Lab Control Spike	10-115	32.6		50-135	94.6	
AZ25347	S67-AQIDW-112015	10-115	37.8		50-135	99.1	

Comments: Batch: #TCLPS-151202A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151204A-BLK	Blank	40-125	84.7		50-110	78.0	
151204A-LCS	Lab Control Spike	40-125	88.0		50-110	80.4	
AZ25348	S67-SOIDW-112015	40-125	80.6		50-110	75.6	

Comments: Batch: #TCLPS-151204A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151204A-BLK	Blank	10-115	30.1		50-135	96.0	
151204A-LCS	Lab Control Spike	10-115	30.2		50-135	93.5	
AZ25348	S67-SOIDW-112015	10-115	28.9		50-135	91.7	

Comments: Batch: #TCLPS-151204A

EPA 8270D/TCLP

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151204A-BLK	Blank	20-110	47.4		40-110	77.5	
151204A-LCS	Lab Control Spike	20-110	47.3		40-110	76.8	
AZ25348	S67-SOIDW-112015	20-110	45.8		40-110	74.1	

Comments: Batch: #TCLPS-151204A

Laboratory Control Spike Recovery
TCLP Semivolatile 8270D

APPL ID: **151202W-25347 LCS - 203103**
Batch ID: #TCLPS-151202A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,4-DCB	50.0	23.0	46.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	40.3	80.6	50-110
2,4,6-TRICHLOROPHENOL	50.0	40.5	81.0	50-115
2,4-DNT	50.0	42.1	84.2	50-120
2-METHYLPHENOL	50.0	35.9	71.8	40-110
4-METHYLPHENOL	100	67.5	67.5	30-110
HEXACHLOROBENZENE	50.0	41.3	82.6	50-110
HEXACHLOROBUTADIENE	50.0	23.0	46.0	25-105
HEXACHLOROETHANE	50.0	20.2	40.4	30-95
NITROBENZENE	50.0	39.6	79.2	45-110
PENTACHLOROPHENOL	50.0	38.6	77.2	40-115
PHENOL	50.0	19.7	39.4	10-115
PYRIDINE	50.0	18.7	37.4 #	48-108
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	166	83.0	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	72.6	72.6	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	98.9	49.5	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	74.3	74.3	40-110
SURROGATE: PHENOL (S)	200	65.2	32.6	10-115
SURROGATE: TERPHENYL-D14 (S)	100	94.6	94.6	50-135

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y1209.M
Extraction Date :	12/02/15
Analysis Date :	12/10/15
Instrument :	Yoda
Run :	1209Y029
Initials :	MA

Printed: 12/14/15 9:06:34 AM
APPL Standard LCS

Laboratory Control Spike Recovery
TCLP Semivolatile 8270D

APPL ID: **151204S-25348 LCS - 203104**
Batch ID: #TCLPS-151204A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,4-DCB	50.0	33.5	67.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	44.8	89.6	50-110
2,4,6-TRICHLOROPHENOL	50.0	45.0	90.0	50-115
2,4-DNT	50.0	44.3	88.6	50-120
2-METHYLPHENOL	50.0	36.7	73.4	40-110
4-METHYLPHENOL	100	67.2	67.2	30-110
HEXACHLOROBENZENE	50.0	43.7	87.4	50-110
HEXACHLOROBUTADIENE	50.0	36.3	72.6	25-105
HEXACHLOROETHANE	50.0	30.5	61.0	30-95
NITROBENZENE	50.0	41.6	83.2	45-110
PENTACHLOROPHENOL	50.0	45.5	91.0	40-115
PHENOL	50.0	18.7	37.4	10-115
PYRIDINE	50.0	22.4	44.8 #	48-108
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	176	88.0	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	80.4	80.4	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	94.5	47.3	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	76.8	76.8	40-110
SURROGATE: PHENOL (S)	200	60.4	30.2	10-115
SURROGATE: TERPHENYL-D14 (S)	100	93.5	93.5	50-135

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y1209.M
Extraction Date :	12/04/15
Analysis Date :	12/10/15
Instrument :	Yoda
Run :	1209Y070
Initials :	MA

Printed: 12/12/15 3:16:18 PM
APPL Standard LCS

EPA 8270D/TC

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: WATER Instrument: Yoda

Blank ID: 151202A-BLK Time Analyzed: 0147

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151202A-BLK	Blank	1209Y028	12/10/15 0147
151202A-LCS	Lab Control Spike	1209Y029	12/10/15 0216
AZ25347	S67-AQIDW-112015	1209Y031	12/10/15 0314

Comments: Batch: #TCLPS-151202A

EPA 8270D/TC

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 78007

Case No: 78007 Date Analyzed: 12/10/15

Matrix: SOIL Instrument: Yoda

Blank ID: 151204A-BLK Time Analyzed: 2131

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151204A-BLK	Blank	1209Y069	12/10/15 2131
151204A-LCS	Lab Control Spike	1209Y070	12/10/15 2200
AZ25348	S67-SOIDW-112015	1209Y071	12/10/15 2229

Comments: Batch: #TCLPS-151204A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Soil
ID: SV Tune 11/16/15

SDG No: 78007
Date Analyzed: 12/09/15
Instrument: Yoda
Time Analyzed: 13:38

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 12/09/15	1209Y003.D	12/09/15 13:56
2		10ug/ml SVOC 12/09/1	1209Y004.D	12/09/15 14:26
3		20ug/ml SVOC 12/09/1	1209Y005.D	12/09/15 14:55
4		40ug/ml SVOC 12/09/1	1209Y006.D	12/09/15 15:35
5		50ug/ml SVOC 12/09/1	1209Y007.D	12/09/15 16:05
6		60ug/ml SVOC 12/09/1	1209Y008.D	12/09/15 16:34
7		80ug/ml SVOC 12/09/1	1209Y009.D	12/09/15 17:04
8		100ug/ml SVOC 12/09/	1209Y010.D	12/09/15 17:33
9		50ug/ml SVOC (SS STD	1209Y011.D	12/09/15 18:03
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	33.9
68	0 - 2% of mass 69	0.1
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	49.4
197	0 - 1.4% of mass 198	0.2
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	27.4
365	1 - 100% of mass 198	3.2
441	0.01 - 100% of mass 443	77.2
442	50 - 150% of mass 198	101.9
443	17 - 23% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 78007
Matrix: Water
ID: SV TUNE 11/16/15

SDG No: 78007
Date Analyzed: 12/09/15
Instrument: Yoda
Time Analyzed: 18:43

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	151202A BLK 1/1000	1209Y028.D	12/10/15 1:47
2	Lab Control Spike	151202A LCS-1 1/1000	1209Y029.D	12/10/15 2:16
3	S67-AQIDW-112015	AZ25347W04 1/1000	1209Y031.D	12/10/15 3:14
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	32.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	40 - 60% of mass 198	49.1
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.3
365	1 - 100% of mass 198	3.2
441	0.01 - 100% of mass 443	76.7
442	50 - 150% of mass 198	108.5
443	17 - 23% of mass 442	18.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 78007
Matrix: Water
ID: SV TUNE 11/16/15

SDG No: 78007
Date Analyzed: 12/10/15
Instrument: Yoda
Time Analyzed: 16:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		CCV: 50ug/ml SVOC 12	1209Y061.D	12/10/15 17:02
2	Blank	151204A BLK 1/1000	1209Y069.D	12/10/15 21:31
3	Lab Control Spike	151204A LCS-1 1/1000	1209Y070.D	12/10/15 22:00
4	S67-SOIDW-112015	AZ25348S01 1/1000	1209Y071.D	12/10/15 22:29
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	35.1
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	40 - 60% of mass 198	48.7
197	0 - 1.4% of mass 198	0.1
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	28.6
365	1 - 100% of mass 198	3.5
441	0.01 - 100% of mass 443	78.0
442	50 - 150% of mass 198	115.2
443	17 - 23% of mass 442	19.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 78007

Lab File ID (Standard): 1209Y007.D Date Analyzed: 9 Dec 15 16:05

Instrument ID: Yoda Time Analyzed: 9 Dec 15 16:05

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	475030	5.09	2086760	6.52	1155770	8.54
	UPPER LIMIT	950060	5.59	4173520	7.02	2311540	9.04
	LOWER LIMIT	237515	4.59	1043380	6.02	577885	8.04
	SAMPLE NO.						
01	50ug/ml SVOC (SS STD	482703	5.08	2115480	6.52	1170200	8.54
02	151202A BLK 1/1000	432770	5.09	1861520	6.51	1053270	8.54
03	151202A LCS-1 1/1000	501771	5.09	2175580	6.51	1257110	8.54
04	AZ25347W04 1/1000	480326	5.09	2058320	6.52	1147950	8.53
05	CCV: 50ug/ml SVOC 12	477576	5.08	2076100	6.52	1147970	8.54
06	151204A BLK 1/1000	472852	5.08	2014520	6.51	1133050	8.54
07	151204A LCS-1 1/1000	470755	5.08	2040780	6.51	1155200	8.54
08	AZ25348S01 1/1000	487798	5.08	2060670	6.51	1167870	8.54
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 78007

Lab File ID (Standard): 1209Y007.D Date Analyzed: 9 Dec 15 16:05

Instrument ID: Yoda Time Analyzed: 9 Dec 15 16:05

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2118200	10.27	2000300	13.36	942499	15.08
	UPPER LIMIT	4236400	10.77	4000600	13.86	1884998	15.58
	LOWER LIMIT	1059100	9.77	1000150	12.86	471250	14.58
	SAMPLE NO.						
01	50ug/ml SVOC (SS STD	2198020	10.27	2082110	13.36	984335	15.07
02	151202A BLK 1/1000	1972200	10.27	1744920	13.36	848618	15.06
03	151202A LCS-1 1/1000	2316990	10.27	2181150	13.36	1047270	15.07
04	AZ25347W04 1/1000	2166760	10.27	1985490	13.35	943366	15.07
05	CCV: 50ug/ml SVOC 12	2138950	10.27	2098530	13.37	1012930	15.07
06	151204A BLK 1/1000	2049420	10.26	1884900	13.36	934912	15.07
07	151204A LCS-1 1/1000	2134970	10.27	1991540	13.36	963179	15.07
08	AZ25348S01 1/1000	2109880	10.26	1928630	13.36	933760	15.07
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8270D
Semivolatile Organic Compounds
Sample Data

APPL, INC.

TCLP Semivolatile 8270D

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-AQIDW-112015
Sample Collection Date: 11/20/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 78007
APPL ID: AZ25347
QCG: #TCLPS-151202A-203103

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D/T	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
EPA 8270D/T	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/02/15	12/10/15
EPA 8270D/T	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/02/15	12/10/15
EPA 8270D/T	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
EPA 8270D/T	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/02/15	12/10/15
EPA 8270D/T	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/02/15	12/10/15
EPA 8270D/T	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
EPA 8270D/T	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/02/15	12/10/15
EPA 8270D/T	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/02/15	12/10/15
EPA 8270D/T	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/02/15	12/10/15
EPA 8270D/T	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/02/15	12/10/15
EPA 8270D/T	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
EPA 8270D/T	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: 2,4,6-TRIBROMOPHEN	87.8	40-125			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUORBIPHENYL (S)	83.7	50-110			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUOROPHENOL (S)	53.9	20-110			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: NITROBENZENE-D5 (S)	81.6	40-110			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: PHENOL (S)	37.8	10-115			%	12/02/15	12/10/15
EPA 8270D/T	SURROGATE: TERPHENYL-D14 (S)	99.1	50-135			%	12/02/15	12/10/15

Quant Method: Y1209.M
Run #: 1209Y031
Instrument: Yoda
Sequence: Y151209
Dilution Factor: 1
Initials: MA

Printed: 12/12/15 3:14:12 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y031.D Vial: 31
Acq On : 10 Dec 15 3:14 Operator: MA
Sample : AZ25347W04 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 10 12:23 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

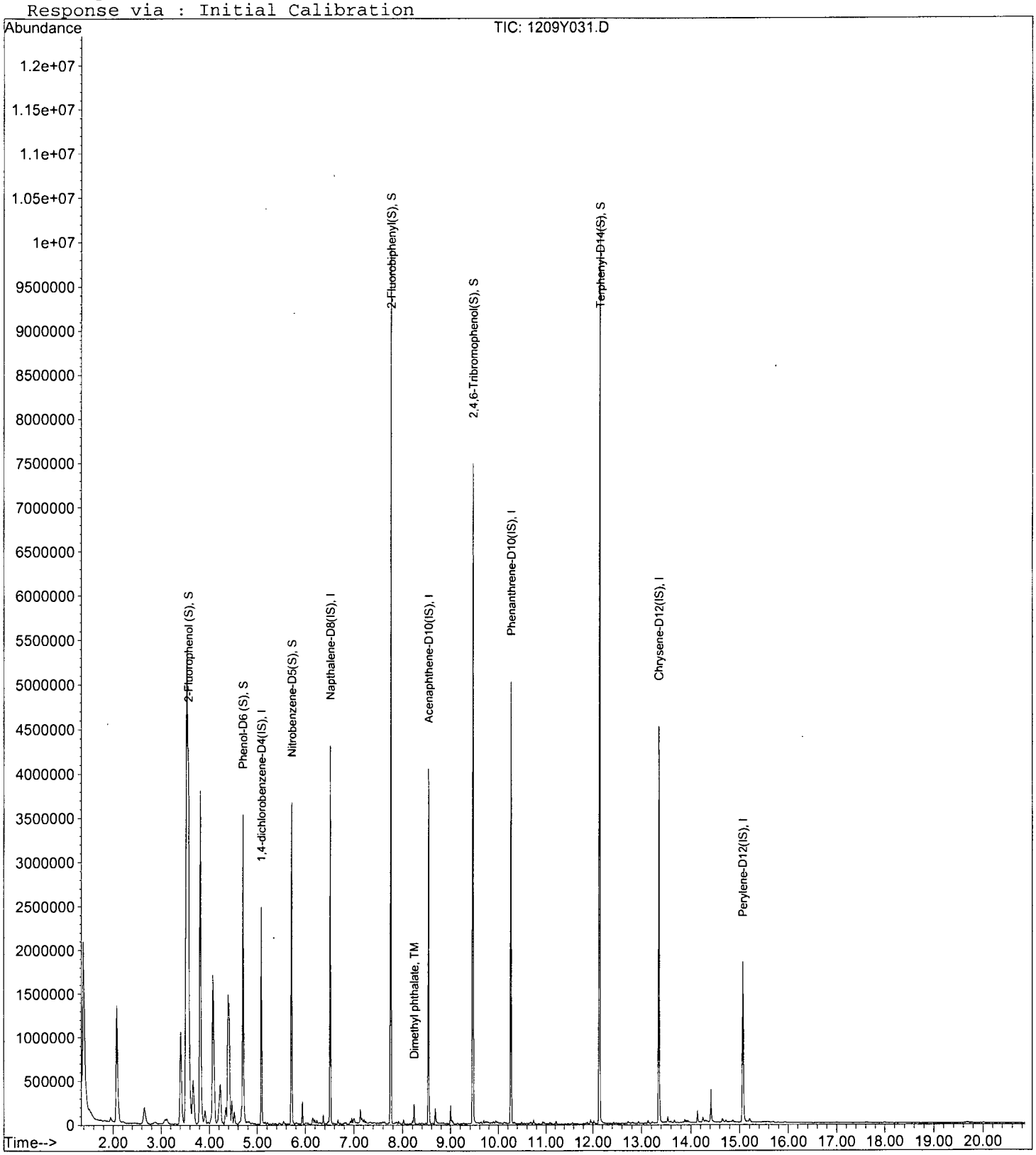
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	480326	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.52	136	2058316	40.00000 ppb	-0.01
40) Acenaphthene-D10(IS)	8.53	164	1147945	40.00000 ppb	-0.01
64) Phenanthrene-D10(IS)	10.27	188	2166755	40.00000 ppb	-0.01
78) Chrysene-D12(IS)	13.35	240	1985489	40.00000 ppb	-0.02
88) Perylene-D12(IS)	15.07	264	943366	40.00000 ppb	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.57	112	1883385	107.77982 ppb	-0.01
Spiked Amount 200.000			Recovery =	53.890%	
5) Phenol-D6 (S)	4.70	99	1720973	75.63515 ppb	-0.03
Spiked Amount 200.000			Recovery =	37.818%	
21) Nitrobenzene-D5(S)	5.72	82	1578050	81.56713 ppb	-0.01
Spiked Amount 100.000			Recovery =	81.567%	
45) 2-Fluorobiphenyl(S)	7.76	172	3265936	83.73283 ppb	0.00
Spiked Amount 100.000			Recovery =	83.733%	
63) 2,4,6-Tribromophenol(S)	9.46	330	939768	175.53735 ppb	-0.02
Spiked Amount 200.000			Recovery =	87.769%	
81) Terphenyl-D14(S)	12.14	244	4634108	99.09412 ppb	0.00
Spiked Amount 100.000			Recovery =	99.094%	
Target Compounds					Qvalue
49) Dimethyl phthalate	8.23	163	113813	2.92981 ppb	98

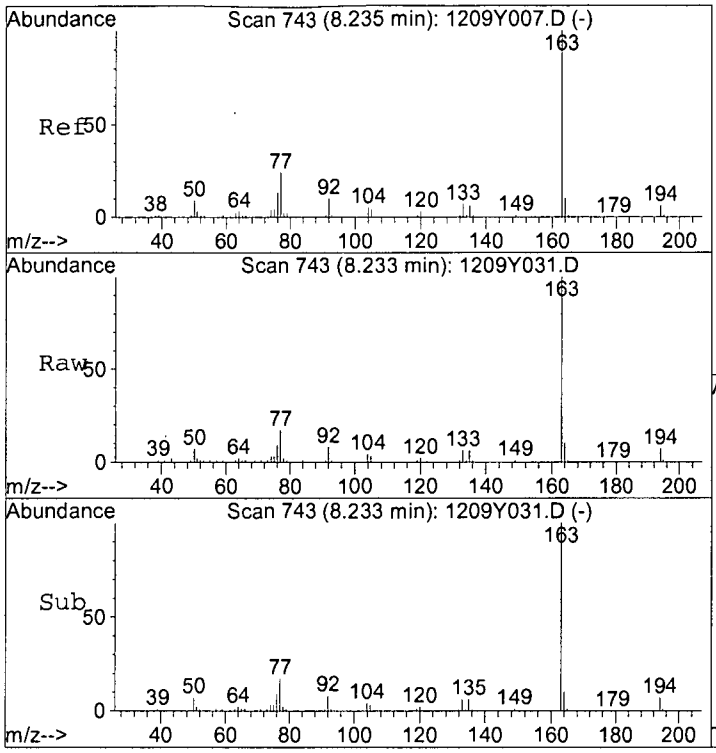
(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y151209\1209Y031.D Vial: 31
Acq On : 10 Dec 15 3:14 Operator: MA
Sample : AZ25347W04 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 10 12:23 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration

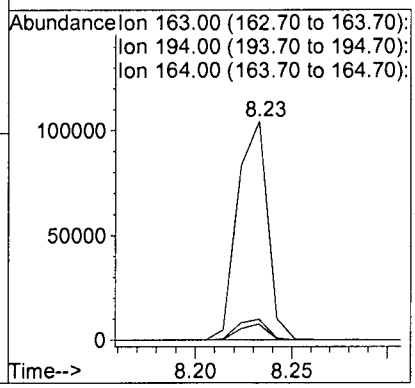




#49
Dimethyl phthalate
Concen: 2.92981 ppb
RT: 8.23 min Scan# 743
Delta R.T. -0.01 min
Lab File: 1209Y031.D
Acq: 10 Dec 15 3:14

Tgt Ion:163 Resp: 113813

Ion	Ratio	Lower	Upper
163	100		
194	7.3	4.3	8.1
164	9.6	7.2	13.4



TCLP Semivolatile 8270D

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-SOIDW-112015

Sample Collection Date: 11/20/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 78007

APPL ID: AZ25348

QCG: #TCLPS-151204A-203104

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D/T	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
EPA 8270D/T	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/04/15	12/10/15
EPA 8270D/T	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/04/15	12/10/15
EPA 8270D/T	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
EPA 8270D/T	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/04/15	12/10/15
EPA 8270D/T	4-METHYLPHENOL	2.9 J	10.0	5.00	1.70	ug/L	12/04/15	12/10/15
EPA 8270D/T	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
EPA 8270D/T	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/04/15	12/10/15
EPA 8270D/T	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/04/15	12/10/15
EPA 8270D/T	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/04/15	12/10/15
EPA 8270D/T	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/04/15	12/10/15
EPA 8270D/T	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
EPA 8270D/T	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: 2,4,6-TRIBROMOPHEN	80.6	40-125			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUORBIPHENYL (S)	75.6	50-110			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: 2-FLUOROPHENOL (S)	45.8	20-110			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: NITROBENZENE-D5 (S)	74.1	40-110			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: PHENOL (S)	28.9	10-115			%	12/04/15	12/10/15
EPA 8270D/T	SURROGATE: TERPHENYL-D14 (S)	91.7	50-135			%	12/04/15	12/10/15

J = Estimated value.

Quant Method: Y1209.M
Run #: 1209Y071
Instrument: Yoda
Sequence: Y151209
Dilution Factor: 1
Initials: MA

Printed: 12/12/15 3:14:12 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y071.D Vial: 71
Acq On : 10 Dec 15 22:29 Operator: MA
Sample : AZ25348S01 1/1000 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 11 11:18 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	487798	40.00000	ppb	0.00
20) Napthalene-D8(IS)	6.51	136	2060667	40.00000	ppb	-0.01
40) Acenaphthene-D10(IS)	8.54	164	1167871	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.26	188	2109880	40.00000	ppb	-0.01
78) Chrysene-D12(IS)	13.36	240	1928626	40.00000	ppb	-0.01
88) Perylene-D12(IS)	15.07	264	933760	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.57	112	1625423	91.59270	ppb	-0.01
Spiked Amount 200.000			Recovery =	45.797%		
5) Phenol-D6 (S)	4.70	99	1337173	57.86731	ppb	-0.02
Spiked Amount 200.000			Recovery =	28.934%		
21) Nitrobenzene-D5(S)	5.72	82	1434347	74.05474	ppb	-0.01
Spiked Amount 100.000			Recovery =	74.055%		
45) 2-Fluorobiphenyl(S)	7.76	172	2999316	75.58516	ppb	0.00
Spiked Amount 100.000			Recovery =	75.585%		
63) 2,4,6-Tribromophenol(S)	9.47	330	878014	161.20426	ppb	-0.01
Spiked Amount 200.000			Recovery =	80.602%		
81) Terphenyl-D14(S)	12.14	244	4165969	91.71012	ppb	0.00
Spiked Amount 100.000			Recovery =	91.710%		
Target Compounds						Qvalue
17) 3&4-Methylphenol	5.57	107	61945	2.85097	ppb	93

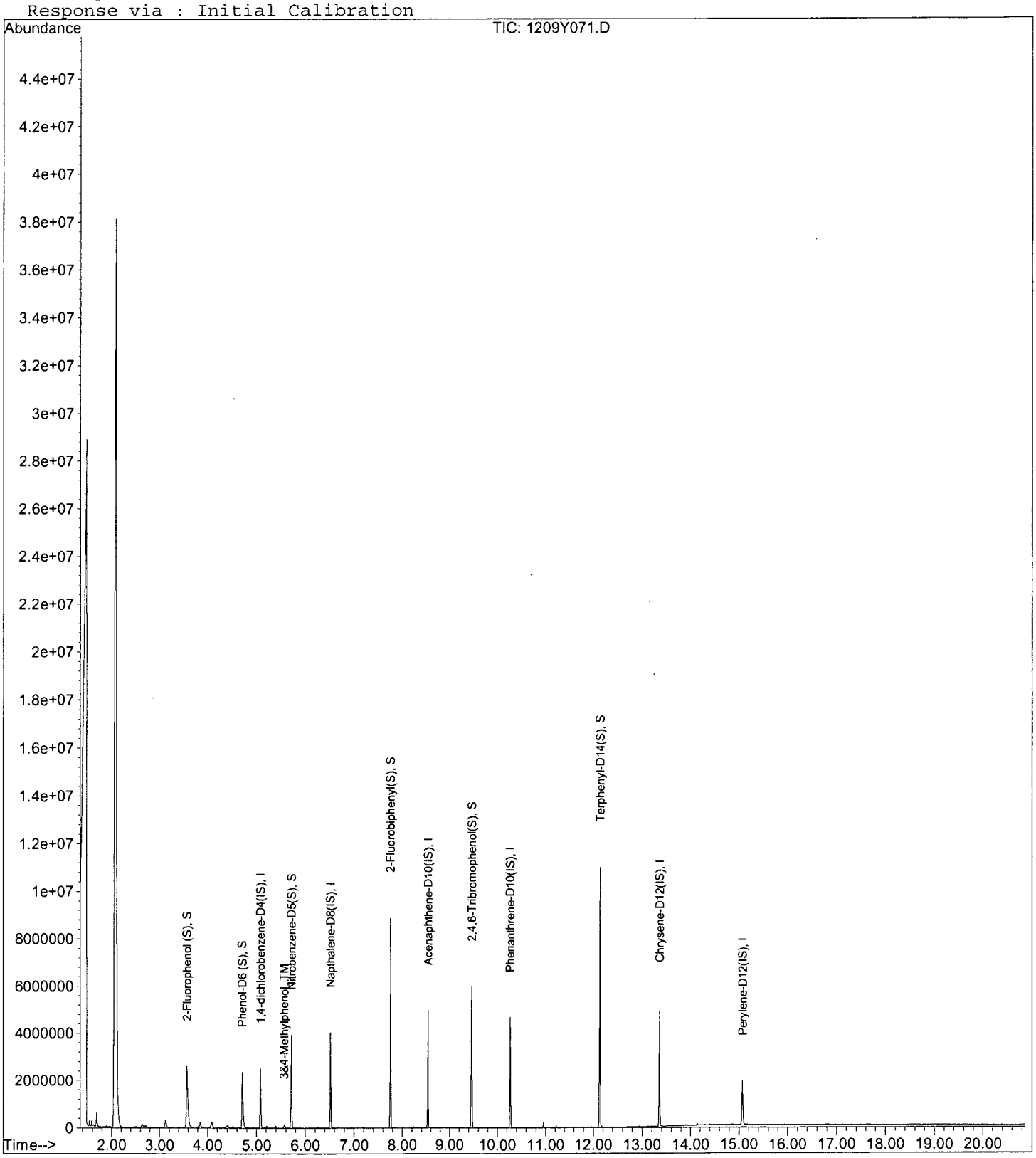
(#) = qualifier out of range (m) = manual integration

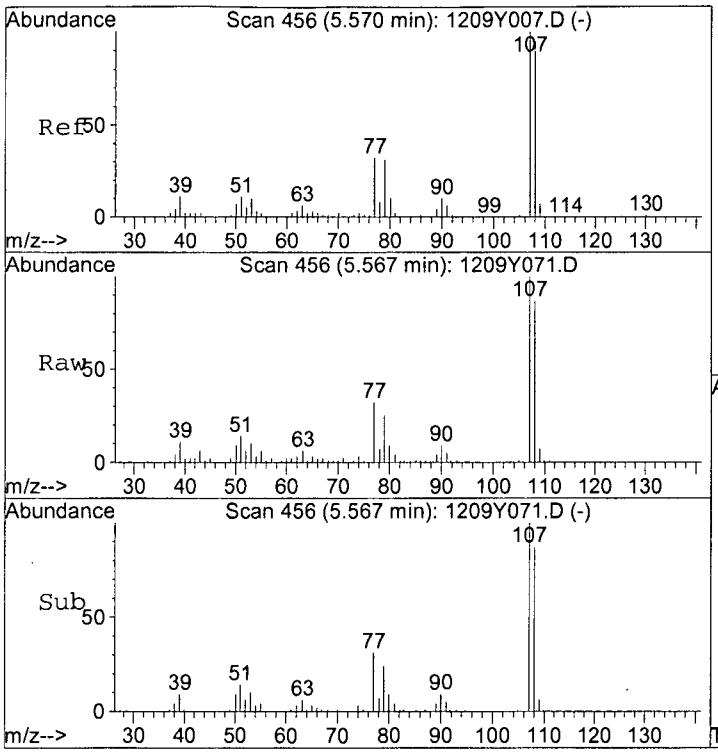
Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y071.D Vial: 71
Acq On : 10 Dec 15 22:29 Operator: MA
Sample : AZ25348S01 1/1000 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 11 11:18 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration

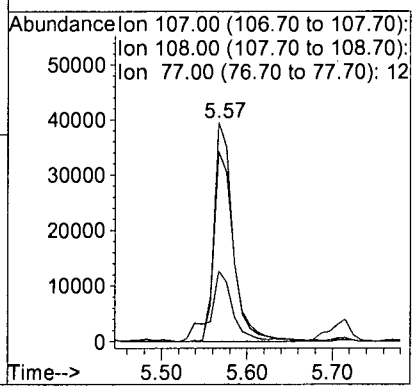




#17
3&4-Methylphenol
Concen: 2.85097 ppb
RT: 5.57 min Scan# 456
Delta R.T. -0.01 min
Lab File: 1209Y071.D
Acq: 10 Dec 15 22:29

Tgt Ion:107 Resp: 61945

Ion	Ratio	Lower	Upper
107	100		
108	86.7	66.8	124.0
77	30.8	22.4	41.6



EPA METHOD 8270D
Semivolatile Organic Compounds
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 78007
Initial Cal. Date: 12/09/15
Instrument: Yoda

Initials: MA

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		r^2
			1209Y003.D	1209Y004.D	1209Y005.D	1209Y006.D	1209Y007.D	1209Y008.D	1209Y009.D	1209Y010.D						
1	I	1,4-dichlorobenzene-D4(IS)														
2	TM	n-Nitrosodimethylamine	0.4263	0.4150	0.4550	0.4453	0.3961	0.4303	0.4160	0.4386			0.43	4.4	TM	
3	TM	Pyridine	1.080	1.061	1.158	1.121	1.158	1.221	1.159	1.205			1.1	4.9	TM	
4	S	2-Fluorophenol (S)	1.441	1.441	1.459	1.469	1.406	1.483	1.440	1.504			1.5	2.1	S	
5	S	Phenol-D6 (S)	1.838	1.877	1.890	1.920	1.832	1.946	1.892	1.964			1.9	2.5	S	
6	*TM	Phenol	2.042	2.072	2.076	2.148	2.019	2.157	2.076	2.158			2.1	2.6	*TM	
7	TM	Aniline	1.931	2.131	2.166	2.271	2.076	2.207	2.105	2.168			2.1	4.7	TM	
8	TM	Bis (2-chloroethyl) ether	1.386	1.365	1.387	1.427	1.358	1.435	1.399	1.474			1.4	2.8	TM	
9	TM	2-Chlorophenol	1.496	1.530	1.566	1.598	1.505	1.609	1.539	1.619			1.6	3.0	TM	
10	TM	1,3-DCB	1.703	1.661	1.694	1.729	1.627	1.738	1.673	1.771			1.7	2.7	TM	
11	*TM	1,4-DCB	1.749	1.730	1.751	1.779	1.671	1.787	1.725	1.801			1.7	2.4	*TM	
12	TM	Benzyl alcohol	0.9425	0.9611	0.9576	1.012	0.9565	1.016	0.9749	1.024			0.98	3.2	TM	
13	TM	1,2-DCB	1.640	1.585	1.636	1.661	1.551	1.672	1.610	1.718			1.6	3.2	TM	
14	TM	2-Methylphenol	1.297	1.277	1.274	1.310	1.256	1.338	1.287	1.351			1.3	2.5	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.804	1.759	1.733	1.763	1.627	1.741	1.667	1.715			1.7	3.3	TM	
16	TM	Acetophenone	1.964	2.027	2.031	2.054	1.953	2.074	1.986	2.086			2.0	2.5	TM	
17	TM	3&4-Methylphenol	1.744	1.754	1.764	1.807	1.715	1.840	1.766	1.864			1.8	2.8	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.154	1.150	1.164	1.178	1.100	1.185	1.128	1.190			1.2	2.6	**TM	
19	TM	Hexachloroethane	0.6087	0.6032	0.6077	0.6325	0.6105	0.6437	0.6216	0.6503			0.62	2.9	TM	
20	I	Napthalene-D8(IS)														
21	S	Nitrobenzene-D5(S)	0.3596	0.3606	0.3696	0.3891	0.3701	0.3843	0.3872	0.3872			0.38	3.3	S	
22	TM	Nitrobenzene	0.3829	0.3703	0.3665	0.3995	0.3726	0.3926	0.3874	0.3895			0.38	3.1	TM	
23	TM	Isophorone	0.6748	0.6541	0.6405	0.6888	0.6441	0.6856	0.6719	0.6758			0.67	2.8	TM	
24	*TM	2-Nitrophenol	0.1836	0.1829	0.1883	0.2054	0.1934	0.2061	0.2046	0.2053			0.20	5.2	*TM	
25	TM	2,4-Dimethylphenol	0.3162	0.3045	0.3007	0.3260	0.3083	0.3268	0.3199	0.3240			0.32	3.2	TM	
26	TML	Benzoic acid	0.1366	0.1549	0.1883	0.2477	0.2397	0.2255	0.2379	0.2462			0.21	21	TML	0.997
27	TM	Bis (2-chloroethoxy) methane	0.3795	0.3792	0.3697	0.3904	0.3722	0.4008	0.3864	0.3858			0.38	2.6	TM	
28	*TM	2,4-Dichlorophenol	0.2811	0.2752	0.2740	0.2916	0.2780	0.2961	0.2915	0.2973			0.29	3.3	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3118	0.3030	0.3028	0.3285	0.3062	0.3255	0.3236	0.3299			0.32	3.7	TM	
30	TM	3,4-Dimethylphenol	0.5443	0.4966	0.4755	0.5060	0.4684	0.5090	0.4969	0.4962			0.50	4.6	TM	
31	TM	Naphthalene	1.091	1.049	1.047	1.123	1.084	1.149	1.141	1.142			1.1	3.8	TM	
32	TM	4-Chloroaniline	0.3671	0.4068	0.4082	0.4331	0.3992	0.4237	0.4051	0.3818			0.40	5.3	TM	
33	TM	2,6-Dichlorophenol	0.2825	0.2768	0.2745	0.2995	0.2865	0.3049	0.3002	0.3045			0.29	4.3	TM	
34	TM	Hexachloropropene	0.1997	0.1947	0.2030	0.2248	0.2171	0.2317	0.2313	0.2354			0.22	7.4	TM	
35	*TML	Hexachlorobutadiene		0.1673	0.1675	0.1786	0.1678	0.1821	0.1839	0.1845			0.18	4.6	*TML	0.998

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 78007
Initial Cal. Date: 12/09/15
Instrument: Yoda

Initials: MA

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		r^2
36	TM	Caprolactum	0.1415	0.1422	0.1392	0.1468	0.1373	0.1475	0.1428	0.1437			0.14	2.4	TM	
37	*TM	4-Chloro-3-methylphenol	0.3144	0.3207	0.3143	0.3440	0.3220	0.3402	0.3378	0.3394			0.33	3.8	*TM	
38	TM	2-Methylnaphthalene	0.6921	0.6901	0.6872	0.7254	0.7016	0.7390	0.7308	0.7390			0.71	3.2	TM	
39	TM	1-Methylnaphthalene	0.7104	0.6878	0.6851	0.7406	0.6983	0.7337	0.7414	0.7545			0.72	3.7	TM	
40	I	Acenaphthene-D10(IS)														
41	**TML	Hexachlorocyclopentadiene	0.1074	0.1477	0.1986	0.2689	0.2804	0.3087	0.3279	0.3501			0.25	35	**TML	0.992
42	TM	1,2,4,5-Tetrachlorobenzene	0.5288	0.5196	0.5363	0.5627	0.5502	0.5710	0.5799	0.5908			0.55	4.6	TM	
43	*TM	2,4,6-Trichlorophenol	0.3430	0.3420	0.3554	0.3787	0.3700	0.3907	0.3854	0.3952			0.37	5.7	*TM	
44	TM	2,4,5-Trichlorophenol	0.3758	0.3704	0.3773	0.4073	0.3996	0.4169	0.4239	0.4272			0.40	5.7	TM	
45	S	2-Fluorobiphenyl(S)	1.305	1.308	1.322	1.347	1.361	1.394	1.408	1.428			1.4	3.5	S	
46	TM	1,1'-Biphenyl	1.546	1.489	1.529	1.628	1.570	1.651	1.675	1.686			1.6	4.6	TM	
47	TML	2-Chloronaphthalene	1.141	1.090	1.117	1.176	1.169	1.214	1.199	1.240			1.2	4.3	TML	0.999
48	TM	2-Nitroaniline	0.3334	0.3471	0.3552	0.3811	0.3713	0.3814	0.3815	0.3832			0.37	5.2	TM	
49	TM	Dimethyl phthalate	1.328	1.293	1.323	1.365	1.319	1.404	1.384	1.412			1.4	3.2	TM	
50	TM	2,6-DNT	0.2686	0.2751	0.2942	0.3149	0.3076	0.3260	0.3203	0.3337			0.31	7.8	TM	
51	TM	Acenaphthylene	1.936	1.873	1.909	2.030	2.017	2.088	2.112	2.158			2.0	5.1	TM	
52	TM	3-Nitroaniline	0.3122	0.3356	0.3397	0.3537	0.3449	0.3569	0.3489	0.3419			0.34	4.1	TM	
53	*TM	Acenaphthene	1.178	1.144	1.147	1.197	1.185	1.213	1.236	1.244			1.2	3.1	*TM	
54	**TML	2,4-Dinitrophenol	0.0363	0.0635	0.0912	0.1336	0.1496	0.1723	0.1741	0.1858			0.13	44	**TML	0.991
55	**TM	4-Nitrophenol	0.2579	0.2543	0.2713	0.2486	0.2439	0.2572	0.2683	0.2665			0.26	3.7	**TM	
56	TM	Dibenzofuran	1.680	1.627	1.626	1.721	1.706	1.758	1.796	1.802			1.7	4.0	TM	
57	TM	2,4-DNT	0.3879	0.4002	0.4209	0.4494	0.4439	0.4588	0.4617	0.4645			0.44	6.7	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.2726	0.2798	0.2837	0.3125	0.3070	0.3233	0.3293	0.3364			0.31	7.9	TM	
59	TM	Diethyl phthalate	1.341	1.338	1.328	1.398	1.348	1.393	1.404	1.420			1.4	2.6	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6519	0.6332	0.6482	0.6846	0.6811	0.7108	0.7067	0.7306			0.68	5.0	TM	
61	TM	Fluorene	1.399	1.347	1.373	1.490	1.452	1.527	1.526	1.554			1.5	5.4	TM	
62	TM	4-Nitroaniline	0.3076	0.3350	0.3366	0.3436	0.3308	0.3415	0.3339	0.3255			0.33	3.4	TM	
63	S	2,4,6-Tribromophenol(S)	0.1625	0.1638	0.1708	0.1867	0.1881	0.1986	0.2062	0.2155			0.19	11	S	
64	I	Phenanthrene-D10(IS)														
65	TML	4,6-Dinitro-2-methylphenol	0.0720	0.0996	0.1170	0.1422	0.1424	0.1568	0.1553	0.1564			0.13	24	TML	0.998
66	TM	Diphenyl amine	0.6084	0.5839	0.6177	0.6311	0.6409	0.6583	0.6760	0.6604			0.63	4.8	TM	
67	*TM	n-Nitrosodiphenylamine	0.6084	0.5839	0.6177	0.6311	0.6409	0.6583	0.6760	0.6604			0.63	4.8	*TM	
68	TM	1,2-Diphenylhydrazine	0.7473	0.7098	0.7360	0.7602	0.7498	0.7856	0.9057	0.8915			0.79	9.3	TM	
69	TM	4-Bromophenyl phenyl ether	0.1943	0.1880	0.1952	0.2085	0.1998	0.2150	0.2146	0.2201			0.20	5.7	TM	
70	TML	Hexachlorobenzene	0.1981	0.1885	0.1977	0.2071	0.2084	0.2203	0.2227	0.2271			0.21	6.6	TML	0.998

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 78007
Initial Cal. Date: 12/09/15
Instrument: Yoda

Initials: MA

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		r^2
71	TM	Atrazine	0.1952	0.1949	0.2020	0.2103	0.2014	0.2209	0.2093	0.2103			0.21	4.3	TM	
72	*TML	Pentachlorophenol	0.0784	0.0844	0.0956	0.1148	0.1142	0.1262	0.1268	0.1296			0.11	18	*TML	0.998
73	TM	Phenanthrene	1.108	1.072	1.103	1.160	1.144	1.222	1.204	1.192			1.2	4.6	TM	
74	TM	Anthracene	1.139	1.108	1.145	1.202	1.202	1.262	1.256	1.254			1.2	5.0	TM	
75	TM	Carbazol	1.014	0.9828	1.013	1.077	1.056	1.119	1.117	1.111			1.1	5.0	TM	
76	TM	Di-n-butylphthalate	1.188	1.172	1.230	1.291	1.295	1.346	1.307	1.341			1.3	5.2	TM	
77	*TM	Fluoranthene	1.143	1.104	1.151	1.210	1.211	1.288	1.262	1.256			1.2	5.4	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.2915	0.3319	0.3391	0.3679	0.3728	0.4045	0.3867	0.3597			0.36	9.9	TM	
80	TM	Pyrene	1.294	1.258	1.288	1.361	1.319	1.375	1.368	1.340			1.3	3.2	TM	
81	S	Terphenyl-D14(S)	0.8902	0.8677	0.9045	0.9451	0.9462	0.9735	0.9978	1.012			0.94	5.5	S	
82	TM	Butyl benzylphthalate	0.5691	0.5593	0.5675	0.6016	0.5887	0.6201	0.6212	0.6070			0.59	4.1	TM	
83	TML	3,3'-Dichlorobenzidine	0.3414	0.3422	0.3545	0.3658	0.3621	0.3734	0.3627				0.36	3.4	TML	0.999
84	TM	Benz (a) anthracene	1.198	1.173	1.161	1.226	1.246	1.298	1.254	1.268			1.2	3.9	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.8537	0.8403	0.8492	0.8825	0.8710	0.9324	0.9070	0.8928			0.88	3.6	TM	
86	TM	Chrysene	1.223	1.153	1.199	1.274	1.223	1.318	1.298	1.277			1.2	4.4	TM	
87	*TM	Di-n-octylphthalate	1.333	1.323	1.358	1.433	1.441	1.527	1.465	1.427			1.4	5.0	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	2.106	2.136	2.168	2.539	2.307	2.697	2.483	2.448			2.4	9.1	TM	
90	TM	Benzo (k) fluoranthene	2.319	2.271	2.369	2.355	2.477	2.304	2.489	2.589			2.4	4.6	TM	
91	*TM	Benzo (a) pyrene	2.032	2.016	2.139	2.281	2.247	2.349	2.346	2.370			2.2	6.4	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	2.423	2.400	2.451	2.630	2.576	2.667	2.638	2.620			2.6	4.2	TM	
93	TM	Dibenz (a,h) anthracene	2.062	2.028	2.102	2.281	2.250	2.358	2.361	2.379			2.2	6.4	TM	
94	TM	Benzo (g,h,i) perylene	2.051	2.069	2.106	2.228	2.158	2.243	2.203	2.193			2.2	3.4	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y003.D Vial: 3
Acq On : 9 Dec 15 13:56 Operator: MA
Sample : 5ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	471662	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.51	136	2072261	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.54	164	1187532	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.26	188	2178104	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.35	240	2014561	40.00000 ppb		-0.01
88) Perylene-D12(IS)	15.06	264	981998	40.00000 ppb		-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.57	112	169872	9.89628 ppb		0.00
Spiked Amount 200.000			Recovery =	4.948%		
5) Phenol-D6 (S)	4.70	99	216753	9.70108 ppb		0.00
Spiked Amount 200.000			Recovery =	4.851%		
21) Nitrobenzene-D5(S)	5.71	82	93154	4.78259 ppb		-0.01
Spiked Amount 100.000			Recovery =	4.783%		
45) 2-Fluorobiphenyl(S)	7.76	172	193651	4.79936 ppb		0.00
Spiked Amount 100.000			Recovery =	4.799%		
63) 2,4,6-Tribromophenol(S)	9.46	330	48257	8.71335 ppb		-0.01
Spiked Amount 200.000			Recovery =	4.357%		
81) Terphenyl-D14(S)	12.13	244	224168	4.72425 ppb		0.00
Spiked Amount 100.000			Recovery =	4.724%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.88	42	25133	4.97955 ppb		91
3) Pyridine	1.91	79	63650	4.68785 ppb		94
6) Phenol	4.71	94	120396	4.87733 ppb		98
7) Aniline	4.72	93	113856	4.52902 ppb		88
8) Bis (2-chloroethyl) ether	4.80	93	81696	4.93618 ppb		94
9) 2-Chlorophenol	4.85	128	88218	4.80310 ppb		98
10) 1,3-DCB	5.02	146	100379	5.00901 ppb		98
11) 1,4-DCB	5.10	146	103098	4.99852 ppb		98
12) Benzyl alcohol	5.25	108	55566	4.80627 ppb		95
13) 1,2-DCB	5.27	146	96677	5.01746 ppb		98
14) 2-Methylphenol	5.38	107	76493	4.99419 ppb		97
15) Bis (2-chloroisopropyl) et	5.39	45	106370	5.22586 ppb	#	81
16) Acetophenone	5.54	105	115809	4.85732 ppb		96
17) 3&4-Methylphenol	5.56	107	205590	9.78582 ppb		94
18) n-Nitrosodi-n-propylamine	5.54	70	68050	4.99220 ppb		97
19) Hexachloroethane	5.64	117	35889	4.89119 ppb		98
22) Nitrobenzene	5.73	77	99182	5.00227 ppb		94
23) Isophorone	5.99	82	174801	5.05900 ppb		98
24) 2-Nitrophenol	6.09	139	47566	4.67933 ppb		99
25) 2,4-Dimethylphenol	6.14	122	81907	5.00655 ppb		97
26) Benzoic acid	6.26	105	35380	6.05337 ppb		99
27) Bis (2-chloroethoxy) metha	6.25	93	98292	4.95369 ppb		98
28) 2,4-Dichlorophenol	6.38	162	72823	4.92138 ppb		94
29) 1,2,4-Trichlorobenzene	6.45	180	80755	4.92668 ppb		98
30) 3,4-Dimethylphenol	6.49	107	140984	5.45249 ppb		98
31) Naphthalene	6.54	128	282512	4.94285 ppb		99
32) 4-Chloroaniline	6.61	127	95093	4.55405 ppb	#	92
33) 2,6-Dichlorophenol	6.62	162	73170	4.85036 ppb		98
34) Hexachloropropene	6.64	213	51740	4.59764 ppb		96
35) Hexachlorobutadiene	6.67	225	43906	4.83818 ppb		97
36) Caprolactum	6.99	55	36654	4.96048 ppb		98
37) 4-Chloro-3-methylphenol	7.18	107	81443	4.77707 ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y151209\1209Y003.D
Acq On : 9 Dec 15 13:56
Sample : 5ug/ml SVOC 12/09/15
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	179272	4.85230 ppb		99
39) 1-Methylnaphthalene	7.44	142	184028	4.94056 ppb		99
41) Hexachlorocyclopentadiene	7.51	237	15945	9.07567 ppb		93
42) 1,2,4,5-Tetrachlorobenzene	7.53	216	78503	4.76516 ppb		96
43) 2,4,6-Trichlorophenol	7.67	196	50919	4.63483 ppb		97
44) 2,4,5-Trichlorophenol	7.72	196	55779	4.69945 ppb		98
46) 1,1'-Biphenyl	7.87	154	229502	4.84130 ppb		99
47) 2-Chloronaphthalene	7.89	162	169307	4.88133 ppb		96
48) 2-Nitroaniline	8.02	65	49487	4.54478 ppb		80
49) Dimethyl phthalate	8.23	163	197177	4.90658 ppb		98
50) 2,6-DNT	8.31	165	39871	4.40246 ppb	#	82
51) Acenaphthylene	8.37	152	287365	4.80249 ppb		99
52) 3-Nitroaniline	8.50	138	46341	4.56749 ppb		91
53) Acenaphthene	8.58	154	174901	4.93839 ppb		99
54) 2,4-Dinitrophenol	8.64	184	5384	9.38891 ppb	#	32
55) 4-Nitrophenol	8.73	65	38284	4.98847 ppb		99
56) Dibenzofuran	8.77	168	249366	4.89921 ppb		99
57) 2,4-DNT	8.77	165	57582	4.44944 ppb	#	67
58) 2,3,4,6-Tetrachlorophenol	8.93	232	40458	4.45977 ppb		99
59) Diethyl phthalate	9.05	149	198988	4.88749 ppb		98
60) 4-Chlorophenyl phenyl ethe	9.18	204	96769	4.78712 ppb		100
61) Fluorene	9.17	166	207687	4.79625 ppb		99
62) 4-Nitroaniline	9.21	138	45667	4.63564 ppb		88
65) 4,6-Dinitro-2-methylphenol	9.24	198	19598	2.76407 ppb		90
66) Diphenyl amine	9.32	169	331304	9.58767 ppb		100
67) n-Nitrosodiphenylamine	9.32	169	331304	9.58767 ppb		100
68) 1,2-Diphenylhydrazine	9.36	77	203472	4.75558 ppb		91
69) 4-Bromophenyl phenyl ether	9.75	248	52896	4.75155 ppb		95
70) Hexachlorobenzene	9.81	284	53938	4.74512 ppb		88
71) Atrazine	9.95	200	26579	2.37470 ppb		96
72) Pentachlorophenol	10.05	266	21352	3.60556 ppb		90
73) Phenanthrene	10.29	178	301702	4.81576 ppb		99
74) Anthracene	10.35	178	310034	4.76046 ppb		98
75) Carbazol	10.55	167	276002	4.77681 ppb		99
76) Di-n-butylphthalate	10.96	149	323381	4.67188 ppb		99
77) Fluoranthene	11.68	202	311225	4.75058 ppb	#	94
79) Benzidine	11.85	184	73400	4.08492 ppb		97
80) Pyrene	11.95	202	325833	4.88114 ppb		100
82) Butyl benzylphthalate	12.71	149	143323	4.80843 ppb		98
83) 3,3'-Dichlorobenzidine	13.32	252	85969	4.79320 ppb		95
84) Benz (a) anthracene	13.34	228	301633	4.87705 ppb		99
85) Bis (2-ethylhexyl) phthala	13.37	149	214981	4.85823 ppb	#	93
86) Chrysene	13.38	228	307956	4.90855 ppb		99
87) Di-n-octylphthalate	14.10	149	335640	4.71477 ppb		100
89) Benzo (b) fluoranthene	14.57	252	258452	4.42775 ppb		99
90) Benzo (k) fluoranthene	14.60	252	284605	4.83033 ppb		99
91) Benzo (a) pyrene	14.99	252	249397	4.56893 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.74	276	297371	4.74082 ppb		98
93) Dibenz (a,h) anthracene	16.77	278	253063	4.62611 ppb		99
94) Benzo (g,h,i) perylene	17.25	276	251805	4.75787 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

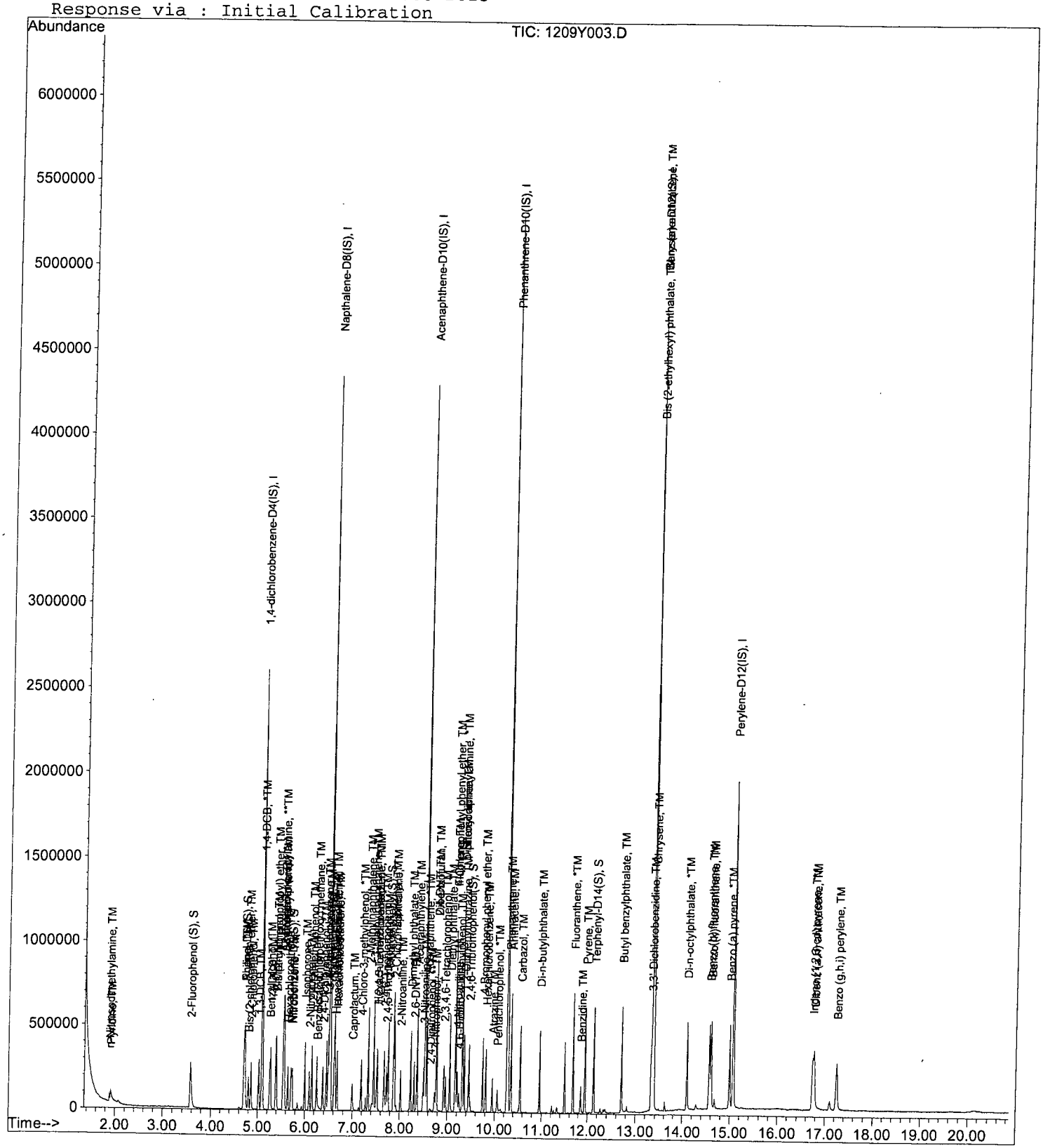
Data File : M:\YODA\DATA\Y151209\1209Y003.D
Acq On : 9 Dec 15 13:56
Sample : 5ug/ml SVOC 12/09/15
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y004.D Vial: 4
Acq On : 9 Dec 15 14:26 Operator: MA
Sample : 10ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	401259	9.67731 ppb		100
39) 1-Methylnaphthalene	7.44	142	399918	9.56661 ppb		98
41) Hexachlorocyclopentadiene	7.51	237	49588	11.66213 ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.52	216	174460	9.36286 ppb		97
43) 2,4,6-Trichlorophenol	7.67	196	114847	9.24261 ppb		100
44) 2,4,5-Trichlorophenol	7.71	196	124383	9.26527 ppb		92
46) 1,1'-Biphenyl	7.87	154	499890	9.32332 ppb		98
47) 2-Chloronaphthalene	7.89	162	366127	9.33288 ppb		97
48) 2-Nitroaniline	8.02	65	116565	9.46478 ppb		86
49) Dimethyl phthalate	8.23	163	434233	9.55359 ppb		98
50) 2,6-DNT	8.31	165	92386	9.01915 ppb		91
51) Acenaphthylene	8.37	152	628890	9.29240 ppb		99
52) 3-Nitroaniline	8.50	138	112704	9.82138 ppb		100
53) Acenaphthene	8.57	154	384281	9.59319 ppb		99
54) 2,4-Dinitrophenol	8.63	184	21327	11.70252 ppb		98
55) 4-Nitrophenol	8.73	65	85401	9.83861 ppb		92
56) Dibenzofuran	8.77	168	546189	9.48752 ppb		98
57) 2,4-DNT	8.77	165	134397	9.18182 ppb		84
58) 2,3,4,6-Tetrachlorophenol	8.92	232	93967	9.15807 ppb	#	90
59) Diethyl phthalate	9.05	149	449299	9.75698 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.17	204	212628	9.29993 ppb		87
61) Fluorene	9.17	166	452163	9.23227 ppb		99
62) 4-Nitroaniline	9.21	138	112502	10.09691 ppb		91
65) 4,6-Dinitro-2-methylphenol	9.25	198	62249	7.64860 ppb		91
66) Diphenyl amine	9.32	169	729940	18.40286 ppb		99
67) n-Nitrosodiphenylamine	9.32	169	729940	18.40286 ppb		99
68) 1,2-Diphenylhydrazine	9.36	77	443663	9.03366 ppb		93
69) 4-Bromophenyl phenyl ether	9.75	248	117518	9.19663 ppb		87
70) Hexachlorobenzene	9.81	284	117843	9.03167 ppb	#	84
71) Atrazine	9.95	200	60897	4.74000 ppb		93
72) Pentachlorophenol	10.05	266	52764	7.76218 ppb		100
73) Phenanthrene	10.29	178	670241	9.32030 ppb		100
74) Anthracene	10.35	178	692493	9.26333 ppb		99
75) Carbazol	10.55	167	614285	9.26206 ppb		99
76) Di-n-butylphthalate	10.95	149	732815	9.22324 ppb		98
77) Fluoranthene	11.68	202	690049	9.17622 ppb	#	96
79) Benzidine	11.84	184	192675	9.30418 ppb	#	97
80) Pyrene	11.94	202	730293	9.49268 ppb		97
82) Butyl benzylphthalate	12.71	149	324659	9.45104 ppb		87
83) 3,3'-Dichlorobenzidine	13.32	252	198602	9.60799 ppb		98
84) Benz (a) anthracene	13.34	228	681037	9.55465 ppb		99
85) Bis (2-ethylhexyl) phthala	13.37	149	487722	9.56348 ppb	#	93
86) Chrysene	13.38	228	669400	9.25797 ppb		99
87) Di-n-octylphthalate	14.09	149	768118	9.36225 ppb	#	93
89) Benzo (b) fluoranthene	14.57	252	591760	8.98385 ppb		99
90) Benzo (k) fluoranthene	14.60	252	629243	9.46381 ppb		99
91) Benzo (a) pyrene	14.99	252	558614	9.06877 ppb		97
92) Indeno (1,2,3-cd) pyrene	16.74	276	665022	9.39515 ppb		99
93) Dibenz (a,h) anthracene	16.77	278	561697	9.09918 ppb		98
94) Benzo (g,h,i) perylene	17.24	276	573321	9.59974 ppb		97

(#) = qualifier out of range (m) = manual integration
1209Y004.D Y1209.M Thu Dec 10 11:35:04 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y004.D Vial: 4
Acq On : 9 Dec 15 14:26 Operator: MA
Sample : 10ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	506737	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.52	136	2325681	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.53	164	1343150	40.00000 ppb		-0.01
64) Phenanthrene-D10(IS)	10.27	188	2500153	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.35	240	2321748	40.00000 ppb		-0.01
88) Perylene-D12(IS)	15.07	264	1108147	40.00000 ppb		-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.57	112	364993	19.79169 ppb		0.00
Spiked Amount 200.000			Recovery =	9.896%		
5) Phenol-D6 (S)	4.71	99	475603	19.81288 ppb		0.00
Spiked Amount 200.000			Recovery =	9.906%		
21) Nitrobenzene-D5(S)	5.71	82	209643	9.59040 ppb		-0.01
Spiked Amount 100.000			Recovery =	9.590%		
45) 2-Fluorobiphenyl(S)	7.75	172	439163	9.62300 ppb		-0.01
Spiked Amount 100.000			Recovery =	9.623%		
63) 2,4,6-Tribromophenol(S)	9.46	330	110033	17.56582 ppb		-0.01
Spiked Amount 200.000			Recovery =	8.783%		
81) Terphenyl-D14(S)	12.13	244	503670	9.21023 ppb		0.00
Spiked Amount 100.000			Recovery =	9.210%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.88	42	52570	9.69465 ppb		99
3) Pyridine	1.90	79	134427	9.21532 ppb		92
6) Phenol	4.72	94	262512	9.89846 ppb		96
7) Aniline	4.72	93	269999	9.99674 ppb	#	76
8) Bis (2-chloroethyl) ether	4.80	93	172913	9.72447 ppb		95
9) 2-Chlorophenol	4.85	128	193779	9.82017 ppb		98
10) 1,3-DCB	5.02	146	210395	9.77220 ppb		98
11) 1,4-DCB	5.10	146	219190	9.89146 ppb		99
12) Benzyl alcohol	5.25	108	121751	9.80212 ppb		97
13) 1,2-DCB	5.27	146	200800	9.70003 ppb		98
14) 2-Methylphenol	5.38	107	161757	9.83004 ppb		97
15) Bis (2-chloroisopropyl) et	5.39	45	222899	10.19283 ppb	#	87
16) Acetophenone	5.54	105	256789	10.02487 ppb		95
17) 3&4-Methylphenol	5.56	107	444419	19.68957 ppb		98
18) n-Nitrosodi-n-propylamine	5.54	70	145657	9.94588 ppb		98
19) Hexachloroethane	5.64	117	76413	9.69324 ppb		94
22) Nitrobenzene	5.73	77	215294	9.67522 ppb		96
23) Isophorone	6.00	82	380304	9.80722 ppb		99
24) 2-Nitrophenol	6.09	139	106349	9.32213 ppb		95
25) 2,4-Dimethylphenol	6.14	122	177045	9.64263 ppb		96
26) Benzoic acid	6.27	105	90038	9.49564 ppb		93
27) Bis (2-chloroethoxy) metha	6.25	93	220469	9.90040 ppb		98
28) 2,4-Dichlorophenol	6.37	162	160035	9.63669 ppb		97
29) 1,2,4-Trichlorobenzene	6.45	180	176184	9.57736 ppb		98
30) 3,4-Dimethylphenol	6.49	107	288732	9.94981 ppb		96
31) Naphthalene	6.53	128	610021	9.50998 ppb		98
32) 4-Chloroaniline	6.61	127	236519	10.09276 ppb		94
33) 2,6-Dichlorophenol	6.62	162	160955	9.50691 ppb		94
34) Hexachloropropene	6.64	213	113197	8.96269 ppb		97
35) Hexachlorobutadiene	6.67	225	97284	9.55199 ppb		98
36) Caprolactum	7.00	55	82699	9.97233 ppb		99
37) 4-Chloro-3-methylphenol	7.18	107	186439	9.74403 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

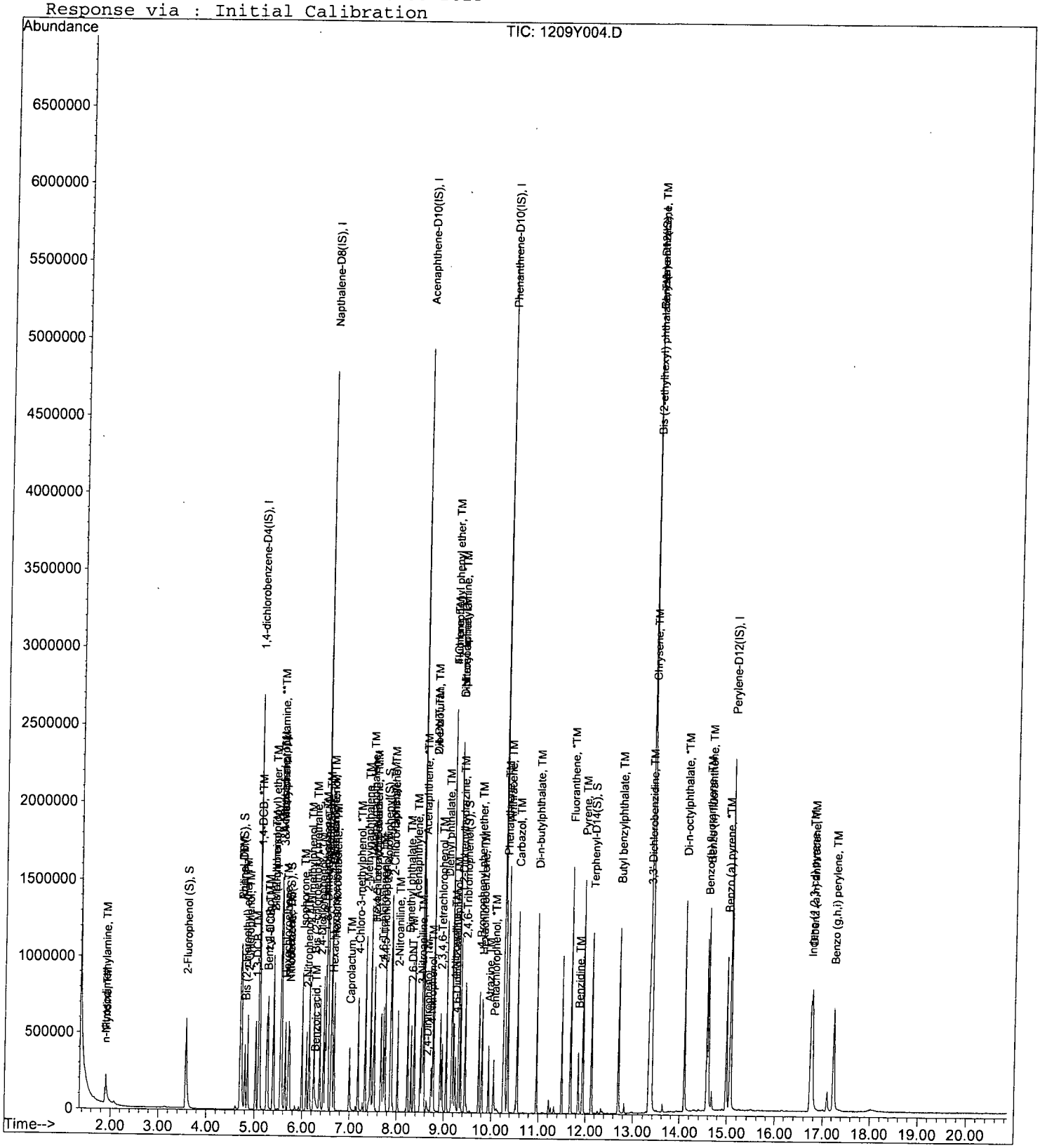
Data File : M:\YODA\DATA\Y151209\1209Y004.D
Acq On : 9 Dec 15 14:26
Sample : 10ug/ml SVOC 12/09/15
Misc :

Vial: 4
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y005.D
Acq On : 9 Dec 15 14:55
Sample : 20ug/ml SVOC 12/09/15
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	467078	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.52	136	2145163	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.53	164	1204748	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.27	188	2198395	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.36	240	2079417	40.00000 ppb		0.00
88) Perylene-D12(IS)	15.07	264	981706	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.57	112	681404	40.08632 ppb		0.00
Spiked Amount 200.000			Recovery = 20.043%			
5) Phenol-D6 (S)	4.70	99	882830	39.90005 ppb		0.00
Spiked Amount 200.000			Recovery = 19.950%			
21) Nitrobenzene-D5(S)	5.71	82	396419	19.66077 ppb		0.00
Spiked Amount 100.000			Recovery = 19.661%			
45) 2-Fluorobiphenyl(S)	7.75	172	796528	19.45871 ppb		0.00
Spiked Amount 100.000			Recovery = 19.459%			
63) 2,4,6-Tribromophenol(S)	9.46	330	205799	36.62832 ppb		0.00
Spiked Amount 200.000			Recovery = 18.314%			
81) Terphenyl-D14(S)	12.13	244	940370	19.19979 ppb		0.00
Spiked Amount 100.000			Recovery = 19.200%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.88	42	106262	21.26010 ppb		97
3) Pyridine	1.89	79	270530	20.12021 ppb		88
6) Phenol	4.72	94	484753	19.83043 ppb		98
7) Aniline	4.73	93	505883	20.32074 ppb	#	76
8) Bis (2-chloroethyl) ether	4.80	93	323822	19.75776 ppb		97
9) 2-Chlorophenol	4.86	128	365775	20.11035 ppb		97
10) 1,3-DCB	5.02	146	395598	19.93445 ppb		99
11) 1,4-DCB	5.11	146	409029	20.02567 ppb		99
12) Benzyl alcohol	5.25	108	223632	19.53325 ppb		94
13) 1,2-DCB	5.27	146	382077	20.02412 ppb		99
14) 2-Methylphenol	5.38	107	297612	19.62166 ppb		96
15) Bis (2-chloroisopropyl) et	5.39	45	404610	20.07319 ppb	#	86
16) Acetophenone	5.54	105	474332	20.08991 ppb		97
17) 3&4-Methylphenol	5.56	107	823918	39.60235 ppb		97
18) n-Nitrosodi-n-propylamine	5.54	70	271858	20.13944 ppb		99
19) Hexachloroethane	5.64	117	141911	19.53038 ppb		89
22) Nitrobenzene	5.73	77	393082	19.15145 ppb		97
23) Isophorone	6.00	82	686971	19.20629 ppb		99
24) 2-Nitrophenol	6.09	139	201963	19.19302 ppb		94
25) 2,4-Dimethylphenol	6.15	122	322548	19.04567 ppb		97
26) Benzoic acid	6.26	105	201997	18.31532 ppb		95
27) Bis (2-chloroethoxy) metha	6.25	93	396567	19.30686 ppb		99
28) 2,4-Dichlorophenol	6.37	162	293933	19.18894 ppb		97
29) 1,2,4-Trichlorobenzene	6.45	180	324728	19.13767 ppb		98
30) 3,4-Dimethylphenol	6.49	107	510015	19.05428 ppb		96
31) Naphthalene	6.54	128	1122911	18.97886 ppb		99
32) 4-Chloroaniline	6.61	127	437862	20.25680 ppb		96
33) 2,6-Dichlorophenol	6.62	162	294431	18.85421 ppb		97
34) Hexachloropropene	6.64	213	217752	18.69198 ppb		99
35) Hexachlorobutadiene	6.67	225	179692	19.12807 ppb		98
36) Caprolactum	7.01	55	149279	19.51574 ppb		99
37) 4-Chloro-3-methylphenol	7.18	107	337070	19.09906 ppb		96

(#) = qualifier out of range (m) = manual integration
1209Y005.D Y1209.M Thu Dec 10 11:35:21 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y005.D Vial: 5
Acq On : 9 Dec 15 14:55 Operator: MA
Sample : 20ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	737062	19.27186 ppb		99
39) 1-Methylnaphthalene	7.45	142	734853	19.05800 ppb		99
41) Hexachlorocyclopentadiene	7.51	237	119657	18.53249 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.52	216	323077	19.33066 ppb		98
43) 2,4,6-Trichlorophenol	7.67	196	214090	19.20877 ppb		98
44) 2,4,5-Trichlorophenol	7.71	196	227275	18.87456 ppb		95
46) 1,1'-Biphenyl	7.87	154	920816	19.14685 ppb		98
47) 2-Chloronaphthalene	7.89	162	673093	19.12878 ppb		97
48) 2-Nitroaniline	8.02	65	213979	19.37054 ppb		87
49) Dimethyl phthalate	8.23	163	796640	19.54043 ppb		99
50) 2,6-DNT	8.31	165	177217	19.28826 ppb		86
51) Acenaphthylene	8.37	152	1149972	18.94387 ppb		100
52) 3-Nitroaniline	8.50	138	204637	19.88135 ppb		96
53) Acenaphthene	8.57	154	690852	19.22770 ppb		99
54) 2,4-Dinitrophenol	8.63	184	54925	17.76199 ppb	#	79
55) 4-Nitrophenol	8.73	65	163422	20.98987 ppb		91
56) Dibenzofuran	8.77	168	979605	18.97095 ppb		98
57) 2,4-DNT	8.77	165	253512	19.30927 ppb	#	76
58) 2,3,4,6-Tetrachlorophenol	8.93	232	170900	18.56944 ppb		97
59) Diethyl phthalate	9.05	149	800112	19.37131 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.17	204	390468	19.04027 ppb		87
61) Fluorene	9.17	166	827348	18.83346 ppb		99
62) 4-Nitroaniline	9.22	138	202775	20.28947 ppb		87
65) 4,6-Dinitro-2-methylphenol	9.25	198	128554	17.96371 ppb		93
66) Diphenyl amine	9.32	169	1358039	38.93779 ppb		100
67) n-Nitrosodiphenylamine	9.32	169	1358039	38.93779 ppb		100
68) 1,2-Diphenylhydrazine	9.36	77	809005	18.73367 ppb		92
69) 4-Bromophenyl phenyl ether	9.75	248	214528	19.09277 ppb		88
70) Hexachlorobenzene	9.81	284	217319	18.94186 ppb	#	82
71) Atrazine	9.95	200	111018	9.82735 ppb		96
72) Pentachlorophenol	10.05	266	105129	17.58853 ppb		99
73) Phenanthrene	10.30	178	1211947	19.16653 ppb		99
74) Anthracene	10.35	178	1258923	19.15190 ppb		99
75) Carbazol	10.55	167	1113026	19.08552 ppb		97
76) Di-n-butylphthalate	10.95	149	1352463	19.35866 ppb		98
77) Fluoranthene	11.68	202	1264687	19.12616 ppb	#	95
79) Benzidine	11.85	184	352602	19.01127 ppb	#	96
80) Pyrene	11.95	202	1339382	19.43881 ppb		99
82) Butyl benzylphthalate	12.71	149	590020	19.17752 ppb		93
83) 3,3'-Dichlorobenzidine	13.32	252	368622	19.91149 ppb		98
84) Benz (a) anthracene	13.34	228	1206654	18.90167 ppb		99
85) Bis (2-ethylhexyl) phthala	13.37	149	882928	19.33046 ppb	#	92
86) Chrysene	13.39	228	1246687	19.25135 ppb		99
87) Di-n-octylphthalate	14.09	149	1411697	19.21176 ppb	#	92
89) Benzo (b) fluoranthene	14.57	252	1063932	18.23252 ppb		99
90) Benzo (k) fluoranthene	14.60	252	1162980	19.74402 ppb		100
91) Benzo (a) pyrene	14.99	252	1050046	19.24247 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.75	276	1203222	19.18798 ppb		100
93) Dibenz (a,h) anthracene	16.77	278	1031591	18.86356 ppb		98
94) Benzo (g,h,i) perylene	17.25	276	1033569	19.53517 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

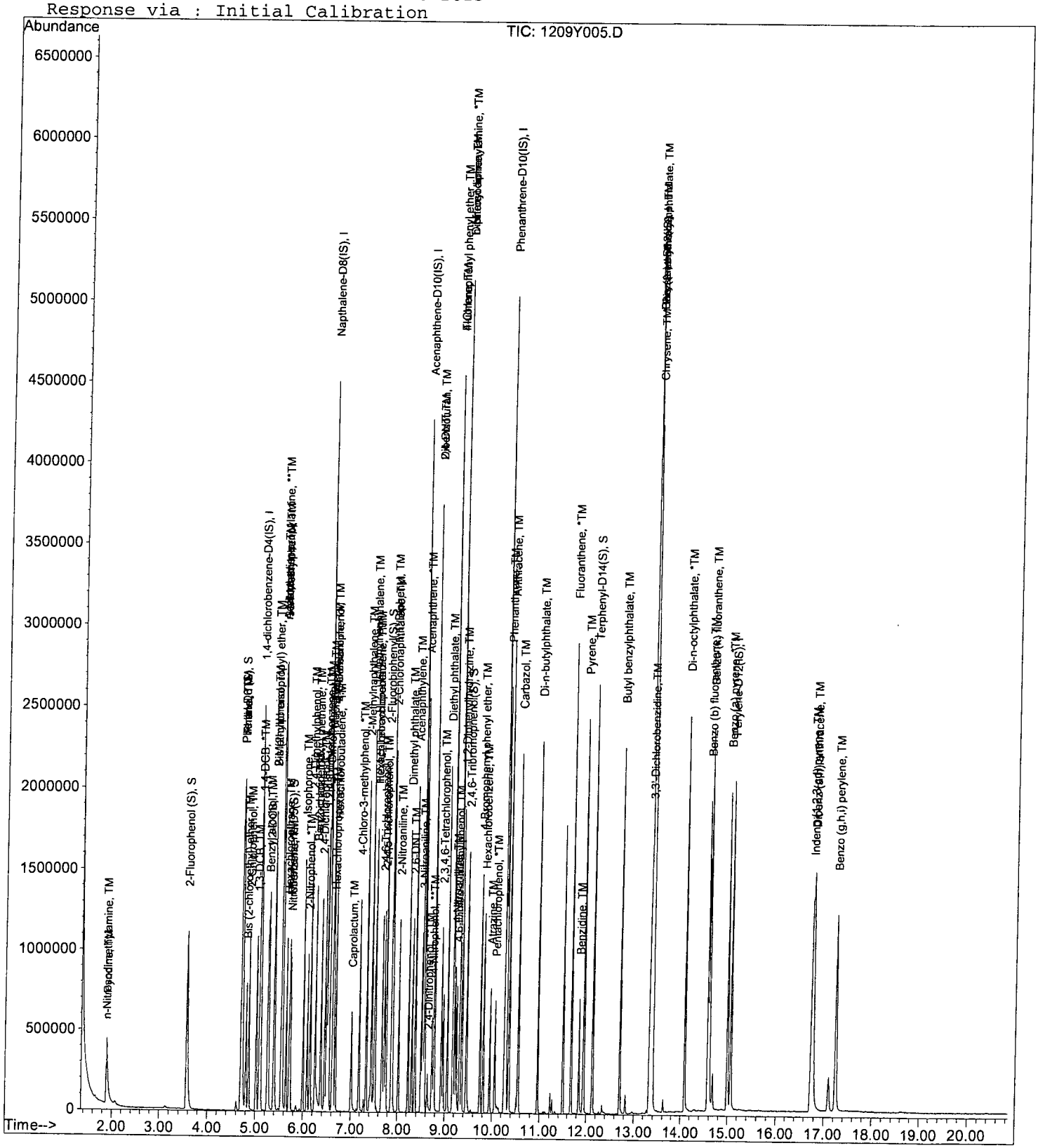
Data File : M:\YODA\DATA\Y151209\1209Y005.D
Acq On : 9 Dec 15 14:55
Sample : 20ug/ml SVOC 12/09/15
Misc :

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y006.D
Acq On : 9 Dec 15 15:35
Sample : 40ug/ml SVOC 12/09/15
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	471054	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.52	136	2062628	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.54	164	1184723	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.27	188	2182823	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.36	240	2064385	40.00000 ppb	0.00
88) Perylene-D12(IS)	15.07	264	963292	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.57	112	1383977	80.73078 ppb	0.00
Spiked Amount 200.000				Recovery = 40.366%	
5) Phenol-D6 (S)	4.70	99	1809075	81.07213 ppb	0.00
Spiked Amount 200.000				Recovery = 40.536%	
21) Nitrobenzene-D5(S)	5.71	82	802665	41.40186 ppb	0.00
Spiked Amount 100.000				Recovery = 41.402%	
45) 2-Fluorobiphenyl(S)	7.76	172	1595957	39.64729 ppb	0.00
Spiked Amount 100.000				Recovery = 39.647%	
63) 2,4,6-Tribromophenol(S)	9.47	330	442456	80.07985 ppb	0.00
Spiked Amount 200.000				Recovery = 40.040%	
81) Terphenyl-D14(S)	12.14	244	1950974	40.12362 ppb	0.00
Spiked Amount 100.000				Recovery = 40.124%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.87	42	209737	41.60840 ppb	98
3) Pyridine	1.89	79	527822	38.92452 ppb	92
6) Phenol	4.72	94	1011974	41.04873 ppb	100
7) Aniline	4.72	93	1069769	42.60869 ppb	94
8) Bis (2-chloroethyl) ether	4.81	93	671969	40.65363 ppb	97
9) 2-Chlorophenol	4.86	128	752851	41.04245 ppb	95
10) 1,3-DCB	5.02	146	814604	40.70198 ppb	99
11) 1,4-DCB	5.10	146	838029	40.68279 ppb	98
12) Benzyl alcohol	5.26	108	476589	41.27654 ppb	91
13) 1,2-DCB	5.27	146	782623	40.66998 ppb	97
14) 2-Methylphenol	5.39	107	617154	40.34572 ppb	98
15) Bis (2-chloroisopropyl) et	5.40	45	830554	40.85699 ppb	92
16) Acetophenone	5.55	105	967507	40.63202 ppb	97
17) 3&4-Methylphenol	5.57	107	1702648	81.14850 ppb	98
18) n-Nitrosodi-n-propylamine	5.55	70	554718	40.74705 ppb	99
19) Hexachloroethane	5.65	117	297956	40.65983 ppb	82
22) Nitrobenzene	5.73	77	824043	41.75494 ppb	97
23) Isophorone	6.00	82	1420792	41.31188 ppb	98
24) 2-Nitrophenol	6.10	139	423737	41.88007 ppb	88
25) 2,4-Dimethylphenol	6.15	122	672345	41.28891 ppb	98
26) Benzoic acid	6.29	105	510926	42.73754 ppb	100
27) Bis (2-chloroethoxy) metha	6.25	93	805346	40.77717 ppb	99
28) 2,4-Dichlorophenol	6.37	162	601417	40.83360 ppb	94
29) 1,2,4-Trichlorobenzene	6.46	180	677497	41.52562 ppb	97
30) 3,4-Dimethylphenol	6.49	107	1043672	40.55206 ppb	97
31) Naphthalene	6.54	128	2315330	40.69838 ppb	99
32) 4-Chloroaniline	6.62	127	893370	42.98375 ppb	97
33) 2,6-Dichlorophenol	6.62	162	617788	41.14373 ppb	95
34) Hexachloropropene	6.64	213	463774	41.40368 ppb	98
35) Hexachlorobutadiene	6.68	225	368409	40.78608 ppb	99
36) Caprolactum	7.03	55	302756	41.16409 ppb	99
37) 4-Chloro-3-methylphenol	7.18	107	709573	41.81463 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y006.D Vial: 6
Acq On : 9 Dec 15 15:35 Operator: MA
Sample : 40ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	1496256	40.68786 ppb		100
39) 1-Methylnaphthalene	7.45	142	1527583	41.20225 ppb		99
41) Hexachlorocyclopentadiene	7.51	237	318539	37.19978 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.53	216	666605	40.55914 ppb		97
43) 2,4,6-Trichlorophenol	7.66	196	448707	40.93977 ppb		99
44) 2,4,5-Trichlorophenol	7.72	196	482557	40.75241 ppb		95
46) 1,1'-Biphenyl	7.88	154	1928855	40.78528 ppb		98
47) 2-Chloronaphthalene	7.90	162	1392791	40.25108 ppb		97
48) 2-Nitroaniline	8.03	65	451465	41.55985 ppb		85
49) Dimethyl phthalate	8.24	163	1617703	40.35061 ppb		98
50) 2,6-DNT	8.31	165	373058	41.28987 ppb	#	81
51) Acenaphthylene	8.38	152	2405074	40.28926 ppb		99
52) 3-Nitroaniline	8.51	138	419082	41.40379 ppb		91
53) Acenaphthene	8.57	154	1417854	40.12853 ppb		100
54) 2,4-Dinitrophenol	8.64	184	158276	35.71010 ppb		87
55) 4-Nitrophenol	8.73	65	294551	38.47151 ppb		85
56) Dibenzofuran	8.78	168	2038813	40.15086 ppb		96
57) 2,4-DNT	8.78	165	532440	41.23988 ppb	#	77
58) 2,3,4,6-Tetrachlorophenol	8.93	232	370245	40.90962 ppb	#	92
59) Diethyl phthalate	9.06	149	1656675	40.78729 ppb		98
60) 4-Chlorophenyl phenyl ethe	9.18	204	811066	40.21825 ppb		90
61) Fluorene	9.18	166	1765616	40.87121 ppb		99
62) 4-Nitroaniline	9.22	138	407023	41.41472 ppb		95
65) 4,6-Dinitro-2-methylphenol	9.26	198	310433	43.68833 ppb	#	78
66) Diphenyl amine	9.33	169	2755236	79.56189 ppb		99
67) n-Nitrosodiphenylamine	9.33	169	2755236	79.56189 ppb		99
68) 1,2-Diphenylhydrazine	9.36	77	1659442	38.70088 ppb		90
69) 4-Bromophenyl phenyl ether	9.75	248	455188	40.80026 ppb	#	85
70) Hexachlorobenzene	9.82	284	452143	39.69062 ppb	#	83
71) Atrazine	9.96	200	229532	20.46320 ppb		97
72) Pentachlorophenol	10.06	266	250524	42.21275 ppb		98
73) Phenanthrene	10.30	178	2532760	40.34048 ppb		100
74) Anthracene	10.36	178	2624599	40.21266 ppb		99
75) Carbazol	10.56	167	2351643	40.61228 ppb		98
76) Di-n-butylphthalate	10.96	149	2816941	40.60831 ppb		99
77) Fluoranthene	11.68	202	2642066	40.24163 ppb	#	96
79) Benzidine	11.85	184	759420	41.24386 ppb		97
80) Pyrene	11.95	202	2810279	41.08333 ppb		100
82) Butyl benzylphthalate	12.71	149	1241874	40.65877 ppb		93
83) 3,3'-Dichlorobenzidine	13.33	252	755198	41.08982 ppb		98
84) Benz (a) anthracene	13.35	228	2530724	39.93126 ppb		100
85) Bis (2-ethylhexyl) phthala	13.37	149	1821741	40.17487 ppb	#	94
86) Chrysene	13.39	228	2630699	40.91908 ppb		99
87) Di-n-octylphthalate	14.10	149	2958574	40.55636 ppb	#	93
89) Benzo (b) fluoranthene	14.58	252	2445671	42.71244 ppb		98
90) Benzo (k) fluoranthene	14.62	252	2268232	39.24409 ppb		97
91) Benzo (a) pyrene	15.01	252	2197412	41.03813 ppb		98
92) Indeno (1,2,3-cd) pyrene	16.76	276	2533883	41.18069 ppb		99
93) Dibenz (a,h) anthracene	16.80	278	2197024	40.94251 ppb		98
94) Benzo (g,h,i) perylene	17.27	276	2146694	41.34961 ppb		100

(#) = qualifier out of range (m) = manual integration
1209Y006.D Y1209.M Thu Dec 10 11:35:42 2015

Quantitation Report

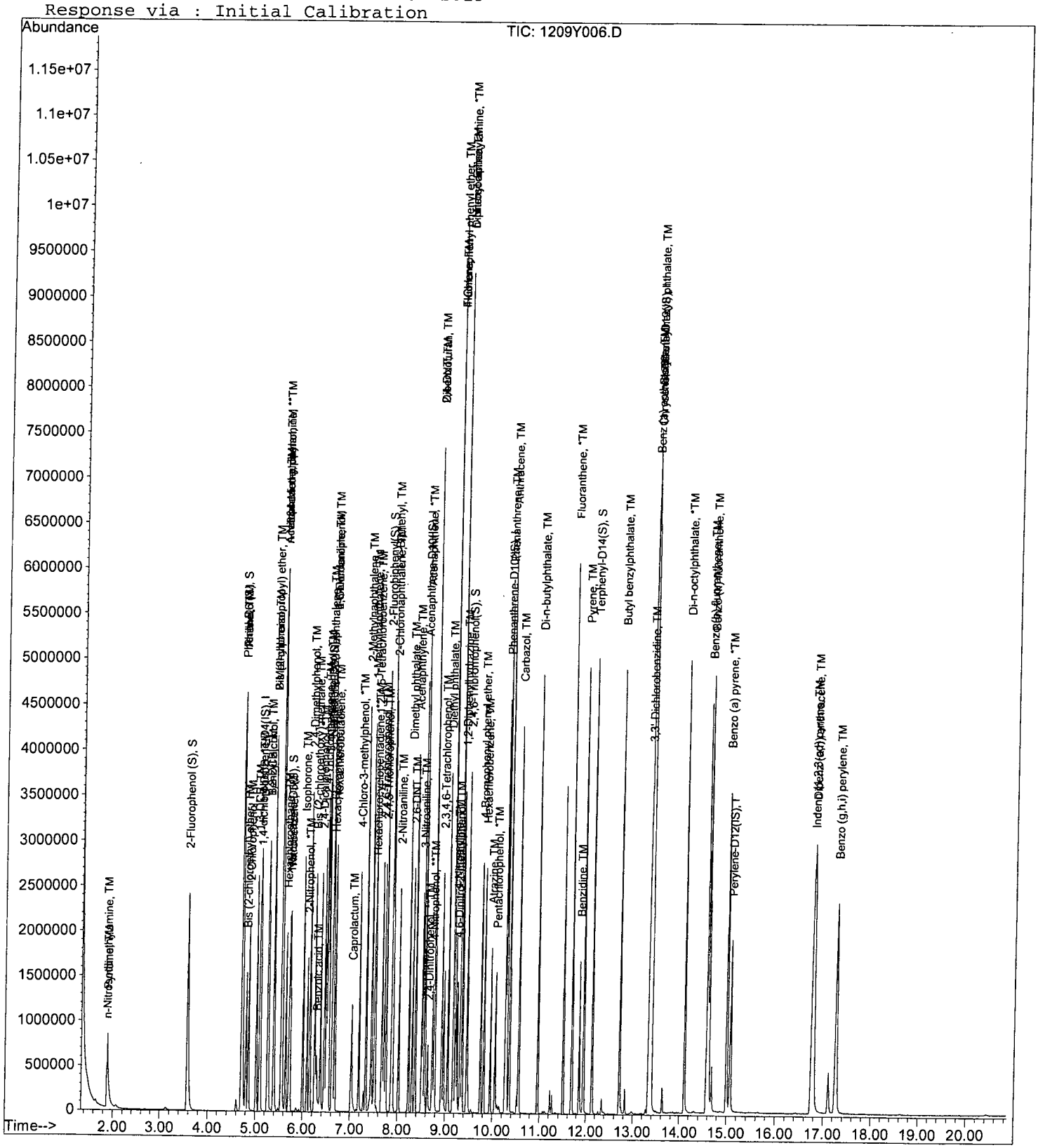
Data File : M:\YODA\DATA\Y151209\1209Y006.D
Acq On : 9 Dec 15 15:35
Sample : 40ug/ml SVOC 12/09/15
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y007.D Vial: 7
Acq On : 9 Dec 15 16:05 Operator: MA
Sample : 50ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38) 2-Methylnaphthalene	7.33	142	1830064	49.18975 ppb	100
39) 1-Methylnaphthalene	7.45	142	1821576	48.56383 ppb	100
41) Hexachlorocyclopentadiene	7.51	237	405138	46.19088 ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.53	216	794870	49.57505 ppb	100
43) 2,4,6-Trichlorophenol	7.67	196	534513	49.99053 ppb	100
44) 2,4,5-Trichlorophenol	7.72	196	577266	49.97210 ppb	100
46) 1,1'-Biphenyl	7.87	154	2268909	49.17766 ppb	100
47) 2-Chloronaphthalene	7.90	162	1688901	50.03141 ppb	100
48) 2-Nitroaniline	8.03	65	536360	50.61196 ppb	100
49) Dimethyl phthalate	8.23	163	1905592	48.72234 ppb	100
50) 2,6-DNT	8.32	165	444340	50.41148 ppb	100
51) Acenaphthylene	8.37	152	2914106	50.03951 ppb	100
52) 3-Nitroaniline	8.51	138	498342	50.46793 ppb	100
53) Acenaphthene	8.58	154	1711513	49.65338 ppb	100
54) 2,4-Dinitrophenol	8.63	184	216120	46.59953 ppb	100
55) 4-Nitrophenol	8.73	65	352334	47.17155 ppb	100
56) Dibenzofuran	8.77	168	2464412	49.74823 ppb	100
57) 2,4-DNT	8.78	165	641277	50.91424 ppb	100
58) 2,3,4,6-Tetrachlorophenol	8.93	232	443473	50.22851 ppb	100
59) Diethyl phthalate	9.06	149	1947024	49.13667 ppb	100
60) 4-Chlorophenyl phenyl ethe	9.18	204	983982	50.01509 ppb	100
61) Fluorene	9.18	166	2097563	49.77177 ppb	100
62) 4-Nitroaniline	9.23	138	477971	49.85219 ppb	100
65) 4,6-Dinitro-2-methylphenol	9.26	198	377156	54.69794 ppb	100
66) Diphenyl amine	9.33	169	3393843	100.99280 ppb	100
67) n-Nitrosodiphenylamine	9.33	169	3393843	100.99280 ppb	100
68) 1,2-Diphenylhydrazine	9.37	77	1985375	47.71486 ppb	100
69) 4-Bromophenyl phenyl ether	9.75	248	529098	48.87206 ppb	100
70) Hexachlorobenzene	9.81	284	551737	49.91104 ppb	100
71) Atrazine	9.95	200	266669	24.49938 ppb	100
72) Pentachlorophenol	10.05	266	302413	52.51062 ppb	100
73) Phenanthrene	10.30	178	3027968	49.69935 ppb	100
74) Anthracene	10.36	178	3182867	50.25401 ppb	100
75) Carbazol	10.56	167	2794869	49.73932 ppb	100
76) Di-n-butylphthalate	10.96	149	3428458	50.93173 ppb	100
77) Fluoranthene	11.69	202	3206356	50.32642 ppb	100
79) Benzidine	11.86	184	932021	52.23953 ppb	100
80) Pyrene	11.95	202	3297777	49.75465 ppb	100
82) Butyl benzylphthalate	12.71	149	1471932	49.73483 ppb	100
83) 3,3'-Dichlorobenzidine	13.32	252	905484	50.84525 ppb	100
84) Benz (a) anthracene	13.35	228	3115994	50.74124 ppb	100
85) Bis (2-ethylhexyl) phthala	13.38	149	2177715	49.56386 ppb	100
86) Chrysene	13.39	228	3059126	49.10755 ppb	100
87) Di-n-octylphthalate	14.10	149	3604237	50.99013 ppb	100
89) Benzo (b) fluoranthene	14.58	252	2717755	48.51139 ppb	100
90) Benzo (k) fluoranthene	14.61	252	2918455	51.60798 ppb	100
91) Benzo (a) pyrene	15.00	252	2647081	50.52663 ppb	100
92) Indeno (1,2,3-cd) pyrene	16.77	276	3035117	50.41497 ppb	100
93) Dibenz (a,h) anthracene	16.79	278	2650621	50.48524 ppb	100
94) Benzo (g,h,i) perylene	17.28	276	2542069	50.04557 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y007.D Vial: 7
Acq On : 9 Dec 15 16:05 Operator: MA
Sample : 50ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	475030	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.52	136	2086755	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.54	164	1155766	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.27	188	2118196	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.36	240	2000297	40.00000 ppb	0.00
88) Perylene-D12(IS)	15.08	264	942499	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.57	112	1669962	96.59764 ppb	0.00
Spiked Amount 200.000			Recovery =	48.299%	
5) Phenol-D6 (S)	4.71	99	2175217	96.66456 ppb	0.00
Spiked Amount 200.000			Recovery =	48.333%	
21) Nitrobenzene-D5(S)	5.72	82	965387	49.21941 ppb	0.00
Spiked Amount 100.000			Recovery =	49.219%	
45) 2-Fluorobiphenyl(S)	7.76	172	1965696	50.05594 ppb	0.00
Spiked Amount 100.000			Recovery =	50.056%	
63) 2,4,6-Tribromophenol(S)	9.47	330	543521	100.83618 ppb	0.00
Spiked Amount 200.000			Recovery =	50.418%	
81) Terphenyl-D14(S)	12.13	244	2365861	50.21507 ppb	0.00
Spiked Amount 100.000			Recovery =	50.215%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.88	42	235175	46.26439 ppb	100
3) Pyridine	1.88	79	687446	50.27175 ppb	100
6) Phenol	4.73	94	1198632	48.21319 ppb	100
7) Aniline	4.73	93	1232687	48.68674 ppb	100
8) Bis (2-chloroethyl) ether	4.81	93	806553	48.38744 ppb	100
9) 2-Chlorophenol	4.86	128	893365	48.29508 ppb	100
10) 1,3-DCB	5.02	146	966323	47.87855 ppb	100
11) 1,4-DCB	5.11	146	992087	47.75854 ppb	100
12) Benzyl alcohol	5.25	108	567983	48.78028 ppb	100
13) 1,2-DCB	5.27	146	921037	47.46222 ppb	100
14) 2-Methylphenol	5.39	107	745964	48.35835 ppb	100
15) Bis (2-chloroisopropyl) et	5.40	45	966145	47.12924 ppb	100
16) Acetophenone	5.55	105	1159504	48.28766 ppb	100
17) 3&4-Methylphenol	5.57	107	2036908	96.26684 ppb	100
18) n-Nitrosodi-n-propylamine	5.55	70	653010	47.56565 ppb	100
19) Hexachloroethane	5.64	117	362493	49.05267 ppb	100
22) Nitrobenzene	5.74	77	971813	48.67322 ppb	100
23) Isophorone	6.01	82	1680062	48.28578 ppb	100
24) 2-Nitrophenol	6.09	139	504466	49.28246 ppb	100
25) 2,4-Dimethylphenol	6.16	122	804077	48.80769 ppb	100
26) Benzoic acid	6.30	105	625186	50.99123 ppb	100
27) Bis (2-chloroethoxy) metha	6.26	93	970868	48.58970 ppb	100
28) 2,4-Dichlorophenol	6.37	162	725201	48.66871 ppb	100
29) 1,2,4-Trichlorobenzene	6.45	180	798787	48.39374 ppb	100
30) 3,4-Dimethylphenol	6.49	107	1221825	46.92533 ppb	100
31) Naphthalene	6.55	128	2827901	49.13352 ppb	100
32) 4-Chloroaniline	6.62	127	1041235	49.51892 ppb	100
33) 2,6-Dichlorophenol	6.62	162	747389	49.19946 ppb	100
34) Hexachloropropene	6.64	213	566257	49.96842 ppb	100
35) Hexachlorobutadiene	6.68	225	437740	47.90131 ppb	100
36) Caprolactum	7.04	55	358211	48.14089 ppb	100
37) 4-Chloro-3-methylphenol	7.19	107	839804	48.91686 ppb	100

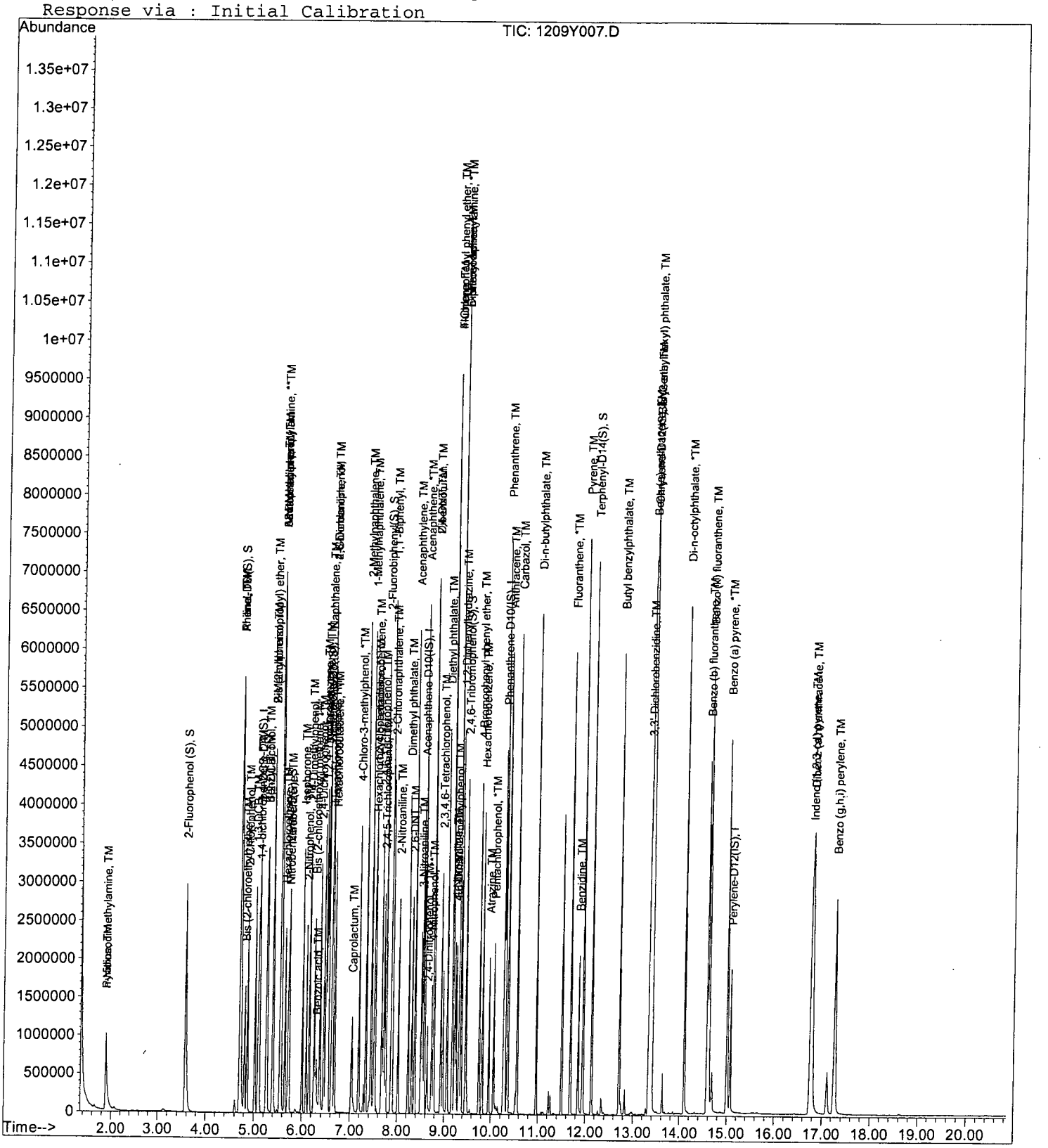
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y007.D Vial: 7
Acq On : 9 Dec 15 16:05 Operator: MA
Sample : 50ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y008.D Vial: 8
Acq On : 9 Dec 15 16:34 Operator: MA
Sample : 60ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	459640	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.52	136	2028955	40.00000 ppb	0.00
40) Acenaphthene-D10(IS)	8.54	164	1159612	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.27	188	2084408	40.00000 ppb	0.00
78) Chrysene-D12(IS)	13.36	240	2020365	40.00000 ppb	0.00
88) Perylene-D12(IS)	15.08	264	957808	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.57	112	2044960	122.24975 ppb	0.00
Spiked Amount 200.000				Recovery = 61.125%	
5) Phenol-D6 (S)	4.72	99	2683236	123.23293 ppb	0.00
Spiked Amount 200.000				Recovery = 61.617%	
21) Nitrobenzene-D5(S)	5.72	82	1169704	61.33523 ppb	0.00
Spiked Amount 100.000				Recovery = 61.335%	
45) 2-Fluorobiphenyl(S)	7.76	172	2424953	61.54600 ppb	0.00
Spiked Amount 100.000				Recovery = 61.546%	
63) 2,4,6-Tribromophenol(S)	9.47	330	691019	127.77540 ppb	0.00
Spiked Amount 200.000				Recovery = 63.888%	
81) Terphenyl-D14(S)	12.13	244	2950251	61.99669 ppb	0.00
Spiked Amount 100.000				Recovery = 61.997%	
Target Compounds					Qvalue
2) n-Nitrosodimethylamine	1.88	42	296641	60.31010 ppb	96
3) Pyridine	1.89	79	842024	63.63750 ppb	96
6) Phenol	4.73	94	1487141	61.82091 ppb	99
7) Aniline	4.73	93	1521940	62.12389 ppb	92
8) Bis (2-chloroethyl) ether	4.81	93	989111	61.32647 ppb	98
9) 2-Chlorophenol	4.87	128	1109283	61.97542 ppb	93
10) 1,3-DCB	5.02	146	1198308	61.36070 ppb	99
11) 1,4-DCB	5.11	146	1232164	61.30177 ppb	99
12) Benzyl alcohol	5.26	108	700373	62.16437 ppb	91
13) 1,2-DCB	5.27	146	1152476	61.37707 ppb	99
14) 2-Methylphenol	5.39	107	922557	61.80876 ppb	99
15) Bis (2-chloroisopropyl) et	5.40	45	1200374	60.51568 ppb	97
16) Acetophenone	5.55	105	1430092	61.55043 ppb	97
17) 3&4-Methylphenol	5.57	107	2536538	123.89389 ppb	97
18) n-Nitrosodi-n-propylamine	5.55	70	816735	61.48341 ppb	99
19) Hexachloroethane	5.64	117	443795	62.06528 ppb	99
22) Nitrobenzene	5.74	77	1194977	61.55538 ppb	99
23) Isophorone	6.02	82	2086579	61.67764 ppb	95
24) 2-Nitrophenol	6.09	139	627356	63.03381 ppb	97
25) 2,4-Dimethylphenol	6.16	122	994489	62.08543 ppb	99
26) Benzoic acid	6.31	105	686347	57.14344 ppb	100
27) Bis (2-chloroethoxy) metha	6.26	93	1219884	62.79161 ppb	98
28) 2,4-Dichlorophenol	6.38	162	901301	62.21002 ppb	92
29) 1,2,4-Trichlorobenzene	6.45	180	990650	61.72732 ppb	99
30) 3,4-Dimethylphenol	6.50	107	1549078	61.18862 ppb	95
31) Naphthalene	6.55	128	3498277	62.51250 ppb	100
32) 4-Chloroaniline	6.62	127	1289583	63.07696 ppb	98
33) 2,6-Dichlorophenol	6.62	162	928056	62.83286 ppb	99
34) Hexachloropropene	6.64	213	705175	63.99970 ppb	99
35) Hexachlorobutadiene	6.68	225	554221	62.37538 ppb	96
36) Caprolactum	7.05	55	448762	62.02836 ppb	100
37) 4-Chloro-3-methylphenol	7.19	107	1035466	62.03197 ppb	98

(#) = qualifier out of range (m) = manual integration
1209Y008.D Y1209.M Thu Dec 10 11:36:18 2015 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y008.D
Acq On : 9 Dec 15 16:34
Sample : 60ug/ml SVOC 12/09/15
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	2248994	62.17212 ppb		99
39) 1-Methylnaphthalene	7.45	142	2233040	61.22956 ppb		99
41) Hexachlorocyclopentadiene	7.51	237	536941	58.57681 ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.53	216	993206	61.73957 ppb		99
43) 2,4,6-Trichlorophenol	7.67	196	679571	63.34634 ppb		99
44) 2,4,5-Trichlorophenol	7.72	196	725148	62.56558 ppb		97
46) 1,1'-Biphenyl	7.87	154	2871202	62.02571 ppb		99
47) 2-Chloronaphthalene	7.90	162	2111492	62.34264 ppb		99
48) 2-Nitroaniline	8.03	65	663429	62.39480 ppb		90
49) Dimethyl phthalate	8.24	163	2442135	62.23363 ppb		98
50) 2,6-DNT	8.32	165	567083	64.12360 ppb		88
51) Acenaphthylene	8.37	152	3632641	62.17093 ppb		100
52) 3-Nitroaniline	8.51	138	620717	62.65257 ppb		94
53) Acenaphthene	8.58	154	2109616	60.99992 ppb		100
54) 2,4-Dinitrophenol	8.64	184	299655	61.16424 ppb		82
55) 4-Nitrophenol	8.74	65	447297	59.68687 ppb		82
56) Dibenzofuran	8.78	168	3058211	61.53029 ppb		93
57) 2,4-DNT	8.78	165	797968	63.14461 ppb		83
58) 2,3,4,6-Tetrachlorophenol	8.93	232	562328	63.47899 ppb		96
59) Diethyl phthalate	9.06	149	2423730	60.96434 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.18	204	1236449	62.63936 ppb		97
61) Fluorene	9.18	166	2655933	62.81197 ppb		100
62) 4-Nitroaniline	9.24	138	593983	61.74672 ppb		94
65) 4,6-Dinitro-2-methylphenol	9.27	198	490148	72.23715 ppb	#	81
66) Diphenyl amine	9.33	169	4116395	124.47987 ppb		98
67) n-Nitrosodiphenylamine	9.33	169	4116395	124.47987 ppb		98
68) 1,2-Diphenylhydrazine	9.37	77	2456173	59.98650 ppb		95
69) 4-Bromophenyl phenyl ether	9.75	248	672205	63.09714 ppb		96
70) Hexachlorobenzene	9.81	284	688820	63.32186 ppb		97
71) Atrazine	9.96	200	345334	32.24076 ppb		96
72) Pentachlorophenol	10.05	266	394514	69.61334 ppb		99
73) Phenanthrene	10.30	178	3819855	63.71325 ppb		100
74) Anthracene	10.36	178	3944653	63.29136 ppb		100
75) Carbazol	10.56	167	3499596	63.29067 ppb		99
76) Di-n-butylphthalate	10.96	149	4207552	63.51883 ppb		100
77) Fluoranthene	11.69	202	4027165	64.23432 ppb		99
79) Benzidine	11.86	184	1225769	68.02160 ppb		99
80) Pyrene	11.95	202	4166022	62.22983 ppb		100
82) Butyl benzylphthalate	12.71	149	1879243	62.86668 ppb		97
83) 3,3'-Dichlorobenzidine	13.32	252	1131518	62.90653 ppb		99
84) Benz (a) anthracene	13.35	228	3933750	63.42141 ppb		100
85) Bis (2-ethylhexyl) phthala	13.38	149	2825533	63.66916 ppb		99
86) Chrysene	13.40	228	3994262	63.48222 ppb		99
87) Di-n-octylphthalate	14.10	149	4628586	64.83145 ppb		99
89) Benzo (b) fluoranthene	14.58	252	3875366	68.06887 ppb		99
90) Benzo (k) fluoranthene	14.62	252	3309766	57.59219 ppb	#	95
91) Benzo (a) pyrene	15.01	252	3375253	63.39601 ppb		96
92) Indeno (1,2,3-cd) pyrene	16.77	276	3831496	62.62604 ppb		99
93) Dibenz (a,h) anthracene	16.80	278	3387717	63.49307 ppb		97
94) Benzo (g,h,i) perylene	17.28	276	3222911	62.43514 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

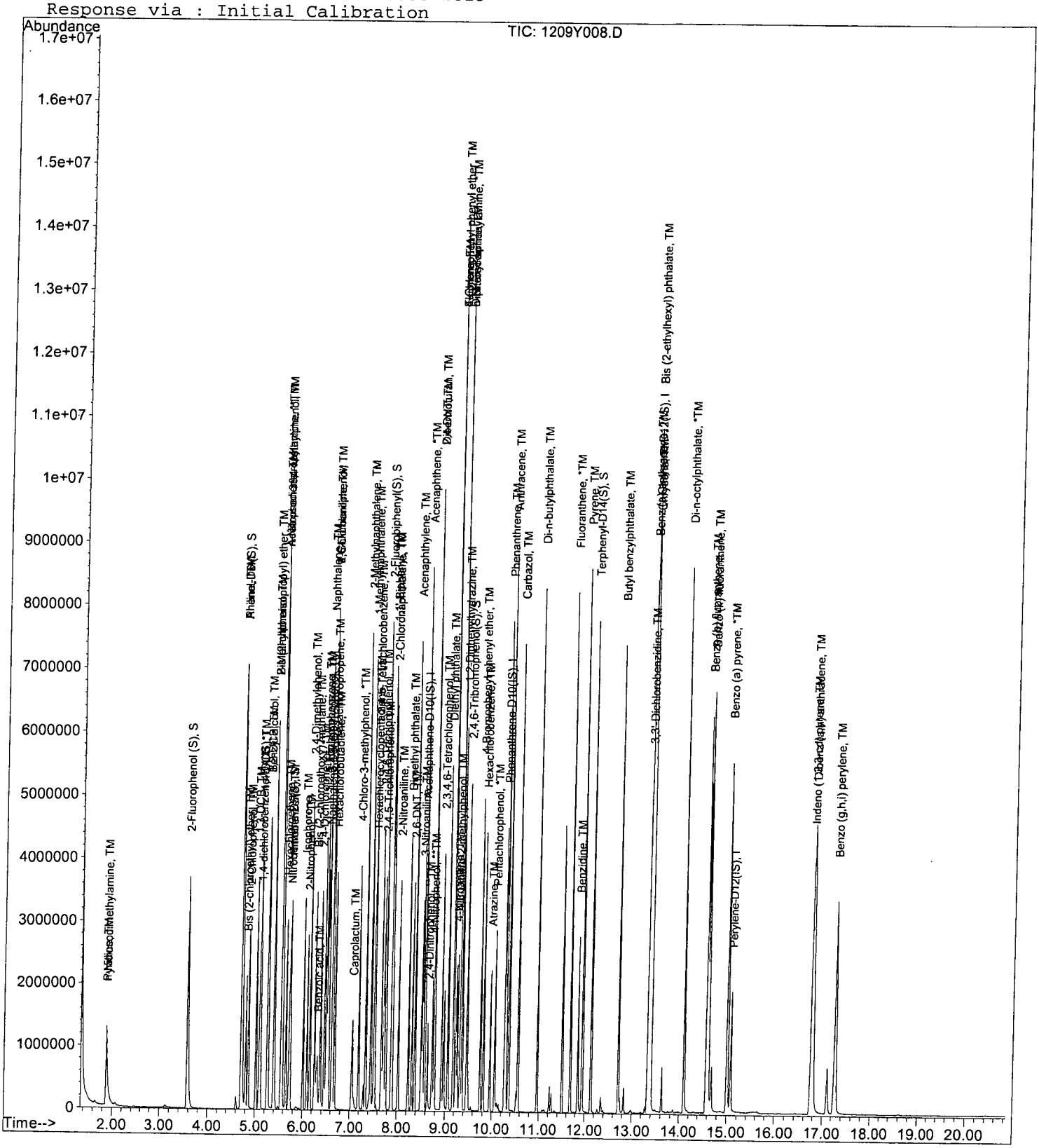
Data File : M:\YODA\DATA\Y151209\1209Y008.D
Acq On : 9 Dec 15 16:34
Sample : 60ug/ml SVOC 12/09/15
Misc :

Vial: 8
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y009.D Vial: 9
Acq On : 9 Dec 15 17:04 Operator: MA
Sample : 80ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	474921	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.53	136	2052419	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.54	164	1154896	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.27	188	2115042	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.37	240	2068398	40.00000 ppb		0.00
88) Perylene-D12(IS)	15.08	264	966414	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.58	112	2735144	158.24857 ppb		0.00
Spiked Amount 200.000			Recovery =	79.125%		
5) Phenol-D6 (S)	4.71	99	3594061	159.75328 ppb		0.00
Spiked Amount 200.000			Recovery =	79.876%		
21) Nitrobenzene-D5(S)	5.72	82	1589294	82.38434 ppb		0.00
Spiked Amount 100.000			Recovery =	82.384%		
45) 2-Fluorobiphenyl(S)	7.76	172	3253054	82.90058 ppb		0.00
Spiked Amount 100.000			Recovery =	82.901%		
63) 2,4,6-Tribromophenol(S)	9.47	330	952652	176.87293 ppb		0.00
Spiked Amount 200.000			Recovery =	88.437%		
81) Terphenyl-D14(S)	12.14	244	4127623	84.72377 ppb		0.00
Spiked Amount 100.000			Recovery =	84.724%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	395153	77.75362 ppb		97
3) Pyridine	1.88	79	1100777	80.51642 ppb		97
6) Phenol	4.73	94	1971765	79.32952 ppb		93
7) Aniline	4.73	93	1998970	78.97030 ppb		91
8) Bis (2-chloroethyl) ether	4.81	93	1328676	79.72939 ppb		97
9) 2-Chlorophenol	4.86	128	1461567	79.03006 ppb		95
10) 1,3-DCB	5.02	146	1589313	78.76400 ppb		99
11) 1,4-DCB	5.10	146	1638833	78.91066 ppb		98
12) Benzyl alcohol	5.26	108	926024	79.54828 ppb		98
13) 1,2-DCB	5.27	146	1528997	78.80927 ppb		99
14) 2-Methylphenol	5.39	107	1222886	79.29380 ppb		99
15) Bis (2-chloroisopropyl) et	5.40	45	1583170	77.24589 ppb	#	83
16) Acetophenone	5.55	105	1886464	78.58001 ppb		97
17) 3&4-Methylphenol	5.58	107	3355008	158.59830 ppb		100
18) n-Nitrosodi-n-propylamine	5.56	70	1071262	78.04929 ppb		97
19) Hexachloroethane	5.64	117	590450	79.91823 ppb		94
22) Nitrobenzene	5.75	77	1590033	80.96904 ppb		95
23) Isophorone	6.01	82	2758103	80.59532 ppb		100
24) 2-Nitrophenol	6.10	139	839743	83.40888 ppb		90
25) 2,4-Dimethylphenol	6.15	122	1313317	81.05236 ppb		96
26) Benzoic acid	6.33	105	976663	79.02725 ppb		98
27) Bis (2-chloroethoxy) metha	6.26	93	1585992	80.70314 ppb		98
28) 2,4-Dichlorophenol	6.38	162	1196538	81.64383 ppb		96
29) 1,2,4-Trichlorobenzene	6.46	180	1328141	81.81026 ppb		98
30) 3,4-Dimethylphenol	6.50	107	2039573	79.64216 ppb		98
31) Naphthalene	6.54	128	4682558	82.71842 ppb		100
32) 4-Chloroaniline	6.63	127	1662929	80.40843 ppb		96
33) 2,6-Dichlorophenol	6.63	162	1232265	82.47516 ppb		98
34) Hexachloropropene	6.64	213	949588	85.19668 ppb		100
35) Hexachlorobutadiene	6.68	225	755040	84.00527 ppb		98
36) Caprolactum	7.06	55	586301	80.11267 ppb		99
37) 4-Chloro-3-methylphenol	7.19	107	1386562	82.11555 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y009.D
Acq On : 9 Dec 15 17:04
Sample : 80ug/ml SVOC 12/09/15
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	2999873	81.98165 ppb		99
39) 1-Methylnaphthalene	7.45	142	3043344	82.49395 ppb		98
41) Hexachlorocyclopentadiene	7.51	237	757391	79.80089 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.53	216	1339505	83.60619 ppb		98
43) 2,4,6-Trichlorophenol	7.68	196	890120	83.31152 ppb		98
44) 2,4,5-Trichlorophenol	7.72	196	979148	84.82560 ppb	#	93
46) 1,1'-Biphenyl	7.88	154	3868914	83.92028 ppb		97
47) 2-Chloronaphthalene	7.90	162	2769500	82.10450 ppb		97
48) 2-Nitroaniline	8.03	65	881122	83.20700 ppb		84
49) Dimethyl phthalate	8.24	163	3197877	81.82519 ppb		99
50) 2,6-DNT	8.32	165	739871	84.00345 ppb	#	69
51) Acenaphthylene	8.38	152	4879380	83.84929 ppb		99
52) 3-Nitroaniline	8.51	138	805995	81.68595 ppb		85
53) Acenaphthene	8.58	154	2853977	82.86023 ppb		99
54) 2,4-Dinitrophenol	8.64	184	402190	79.48577 ppb		93
55) 4-Nitrophenol	8.73	65	619787	83.04148 ppb		99
56) Dibenzofuran	8.78	168	4147302	83.78321 ppb		94
57) 2,4-DNT	8.79	165	1066353	84.72696 ppb		90
58) 2,3,4,6-Tetrachlorophenol	8.93	232	760648	86.21719 ppb		94
59) Diethyl phthalate	9.07	149	3244078	81.93185 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.18	204	1632249	83.02852 ppb		93
61) Fluorene	9.18	166	3524425	83.69190 ppb		100
62) 4-Nitroaniline	9.25	138	771208	80.49728 ppb		91
65) 4,6-Dinitro-2-methylphenol	9.27	198	656983	95.42259 ppb	#	71
66) Diphenyl amine	9.34	169	5719163	170.44265 ppb		100
67) n-Nitrosodiphenylamine	9.34	169	5719163	170.44265 ppb		100
68) 1,2-Diphenylhydrazine	9.37	77	3831131	92.21154 ppb		92
69) 4-Bromophenyl phenyl ether	9.76	248	907955	83.99163 ppb	#	84
70) Hexachlorobenzene	9.82	284	942081	85.34928 ppb	#	83
71) Atrazine	9.96	200	442720	40.73417 ppb		98
72) Pentachlorophenol	10.06	266	536511	93.29802 ppb		98
73) Phenanthrene	10.30	178	5092796	83.71492 ppb		99
74) Anthracene	10.36	178	5311504	83.98793 ppb		100
75) Carbazol	10.56	167	4724312	84.20232 ppb		98
76) Di-n-butylphthalate	10.96	149	5529088	82.26029 ppb		99
77) Fluoranthene	11.69	202	5338318	83.91429 ppb	#	96
79) Benzidine	11.85	184	1599792	86.71564 ppb		98
80) Pyrene	11.96	202	5660381	82.58829 ppb		100
82) Butyl benzylphthalate	12.72	149	2569765	83.97049 ppb		85
83) 3,3'-Dichlorobenzidine	13.33	252	1500260	81.46977 ppb		98
84) Benz (a) anthracene	13.35	228	5185597	81.66268 ppb		99
85) Bis (2-ethylhexyl) phthala	13.38	149	3752269	82.58828 ppb		95
86) Chrysene	13.39	228	5368228	83.33783 ppb		99
87) Di-n-octylphthalate	14.10	149	6060587	82.91781 ppb		96
89) Benzo (b) fluoranthene	14.58	252	4798421	83.53133 ppb	#	97
90) Benzo (k) fluoranthene	14.62	252	4810411	82.95905 ppb		99
91) Benzo (a) pyrene	15.01	252	4535181	84.42391 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.77	276	5099016	82.60154 ppb		100
93) Dibenz (a,h) anthracene	16.81	278	4562939	84.75769 ppb		97
94) Benzo (g,h,i) perylene	17.28	276	4258032	81.75323 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

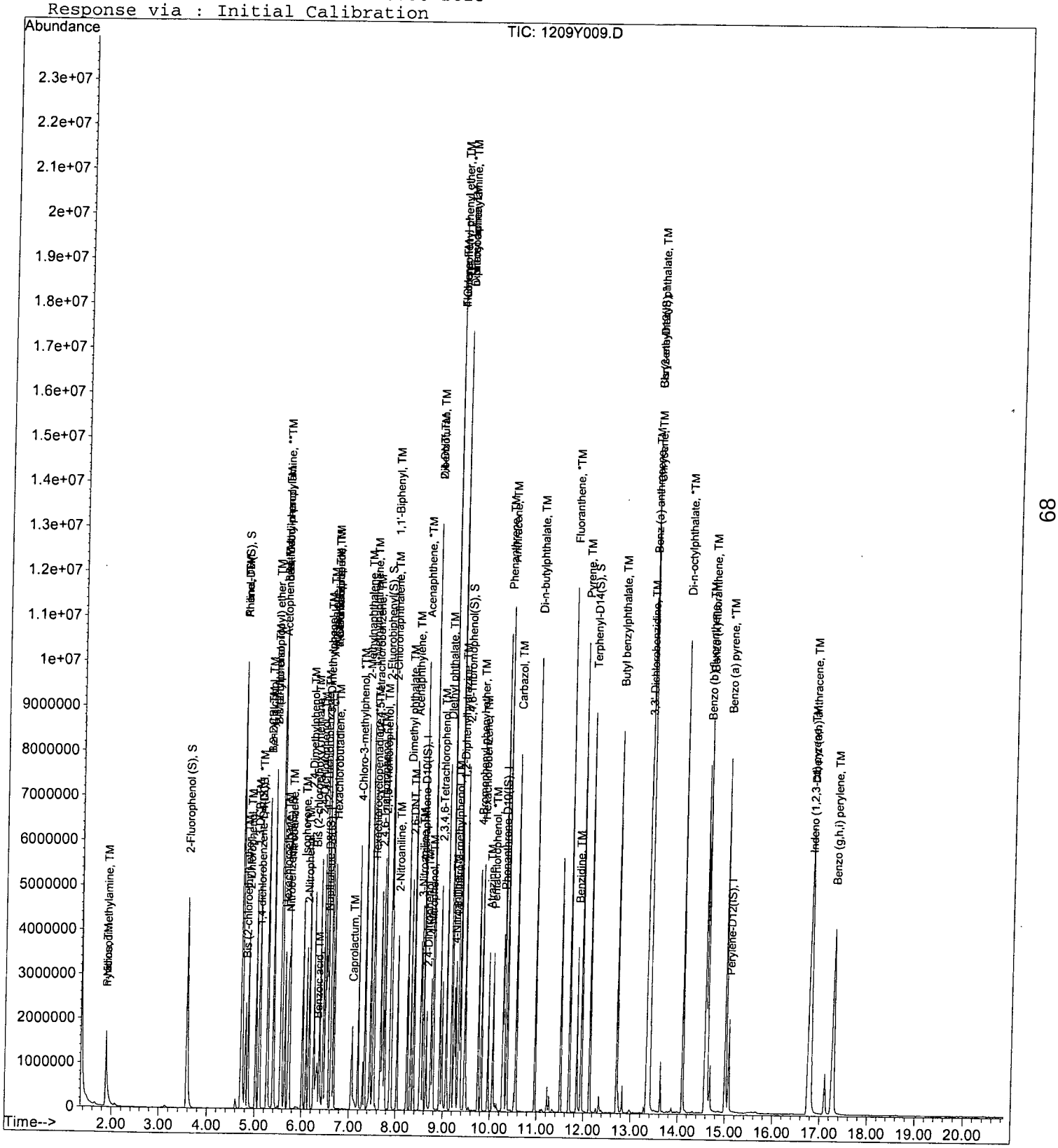
Data File : M:\YODA\DATA\Y151209\1209Y009.D
Acq On : 9 Dec 15 17:04
Sample : 80ug/ml SVOC 12/09/15
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y010.D
Acq On : 9 Dec 15 17:33
Sample : 100ug/ml SVOC 12/09/15
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	451017	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.53	136	2024907	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.54	164	1142449	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.28	188	2126934	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.37	240	2110031	40.00000 ppb		0.00
88) Perylene-D12(IS)	15.08	264	969755	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.58	112	3390752	206.57800 ppb		0.00
Spiked Amount 200.000				Recovery = 103.289%		
5) Phenol-D6 (S)	4.73	99	4428156	207.26011 ppb		0.02
Spiked Amount 200.000				Recovery = 103.630%		
21) Nitrobenzene-D5(S)	5.73	82	1960188	102.99096 ppb		0.00
Spiked Amount 100.000				Recovery = 102.991%		
45) 2-Fluorobiphenyl(S)	7.76	172	4078039	105.05670 ppb		0.00
Spiked Amount 100.000				Recovery = 105.057%		
63) 2,4,6-Tribromophenol(S)	9.48	330	1230835	231.01117 ppb		0.00
Spiked Amount 200.000				Recovery = 115.506%		
81) Terphenyl-D14(S)	12.14	244	5338883	107.42390 ppb		0.00
Spiked Amount 100.000				Recovery = 107.424%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.88	42	494567	102.47288 ppb		98
3) Pyridine	1.88	79	1358640	104.64487 ppb		97
6) Phenol	4.73	94	2432940	103.07172 ppb		94
7) Aniline	4.73	93	2444768	101.70063 ppb		86
8) Bis (2-chloroethyl) ether	4.81	93	1662100	105.02314 ppb		98
9) 2-Chlorophenol	4.86	128	1824940	103.90840 ppb		96
10) 1,3-DCB	5.02	146	1996559	104.19069 ppb		99
11) 1,4-DCB	5.11	146	2030562	102.95458 ppb		98
12) Benzyl alcohol	5.26	108	1154072	104.39265 ppb		99
13) 1,2-DCB	5.27	146	1936874	105.12367 ppb		97
14) 2-Methylphenol	5.40	107	1523103	103.99465 ppb		99
15) Bis (2-chloroisopropyl) et	5.40	45	1934117	99.37085 ppb	#	77
16) Acetophenone	5.56	105	2352609	103.19099 ppb		97
17) 3&4-Methylphenol	5.58	107	4203370	209.23341 ppb		97
18) n-Nitrosodi-n-propylamine	5.56	70	1342137	102.96712 ppb		98
19) Hexachloroethane	5.64	117	733184	104.49709 ppb		95
22) Nitrobenzene	5.75	77	1971597	101.76348 ppb		98
23) Isophorone	6.03	82	3421019	101.32480 ppb		98
24) 2-Nitrophenol	6.10	139	1039415	104.64436 ppb		93
25) 2,4-Dimethylphenol	6.16	122	1639944	102.58551 ppb		99
26) Benzoic acid	6.35	105	1246304	101.23621 ppb		99
27) Bis (2-chloroethoxy) metha	6.26	93	1953102	100.73383 ppb		97
28) 2,4-Dichlorophenol	6.38	162	1505214	104.10127 ppb		97
29) 1,2,4-Trichlorobenzene	6.46	180	1669929	104.26116 ppb		98
30) 3,4-Dimethylphenol	6.50	107	2511841	99.41613 ppb		99
31) Naphthalene	6.54	128	5783243	103.55033 ppb		100
32) 4-Chloroaniline	6.63	127	1932558	94.71556 ppb		97
33) 2,6-Dichlorophenol	6.63	162	1541576	104.57911 ppb		98
34) Hexachloropropene	6.64	213	1191488	108.35228 ppb		99
35) Hexachlorobutadiene	6.68	225	934130	105.34280 ppb		98
36) Caprolactum	7.08	55	727631	100.77498 ppb		94
37) 4-Chloro-3-methylphenol	7.19	107	1717920	103.12168 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y010.D
Acq On : 9 Dec 15 17:33
Sample : 100ug/ml SVOC 12/09/15
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 09:24:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	3741025	103.62519 ppb		99
39) 1-Methylnaphthalene	7.45	142	3819257	104.93270 ppb		99
41) Hexachlorocyclopentadiene	7.51	237	999932	103.96136 ppb		99
42) 1,2,4,5-Tetrachlorobenzene	7.53	216	1687275	106.45989 ppb		97
43) 2,4,6-Trichlorophenol	7.68	196	1128634	106.78634 ppb		98
44) 2,4,5-Trichlorophenol	7.73	196	1220111	106.85234 ppb		96
46) 1,1'-Biphenyl	7.88	154	4816453	105.61150 ppb		97
47) 2-Chloronaphthalene	7.90	162	3542838	106.17516 ppb		96
48) 2-Nitroaniline	8.04	65	1094473	104.48042 ppb		98
49) Dimethyl phthalate	8.24	163	4032491	104.30491 ppb		99
50) 2,6-DNT	8.32	165	953111	109.39328 ppb	#	64
51) Acenaphthylene	8.38	152	6163780	107.07496 ppb		100
52) 3-Nitroaniline	8.52	138	976610	100.05580 ppb		100
53) Acenaphthene	8.58	154	3553440	104.29193 ppb		100
54) 2,4-Dinitrophenol	8.64	184	530627	103.18694 ppb		98
55) 4-Nitrophenol	8.75	65	761152	103.09322 ppb		82
56) Dibenzofuran	8.78	168	5148025	105.13276 ppb		95
57) 2,4-DNT	8.79	165	1326795	106.56891 ppb		98
58) 2,3,4,6-Tetrachlorophenol	8.93	232	960674	110.07590 ppb		93
59) Diethyl phthalate	9.07	149	4056259	103.56028 ppb		100
60) 4-Chlorophenyl phenyl ethe	9.18	204	2086597	107.29650 ppb		93
61) Fluorene	9.18	166	4439160	106.56191 ppb		99
62) 4-Nitroaniline	9.25	138	929692	98.09680 ppb		99
65) 4,6-Dinitro-2-methylphenol	9.27	198	831701	120.12386 ppb		87
66) Diphenyl amine	9.34	169	7022650	208.11904 ppb		99
67) n-Nitrosodiphenylamine	9.34	169	7022650	208.11904 ppb		99
68) 1,2-Diphenylhydrazine	9.37	77	4740433	113.45961 ppb		92
69) 4-Bromophenyl phenyl ether	9.76	248	1170168	107.64277 ppb		86
70) Hexachlorobenzene	9.82	284	1207682	108.80008 ppb	#	83
71) Atrazine	9.96	200	559162	51.16022 ppb		98
72) Pentachlorophenol	10.06	266	688889	119.12641 ppb		99
73) Phenanthrene	10.30	178	6335907	103.56675 ppb		99
74) Anthracene	10.36	178	6670534	104.88779 ppb		100
75) Carbazol	10.56	167	5905638	104.66882 ppb		98
76) Di-n-butylphthalate	10.96	149	7128463	105.46239 ppb		100
77) Fluoranthene	11.69	202	6678149	104.38848 ppb	#	95
79) Benzidine	11.86	184	1897695	100.83367 ppb		98
80) Pyrene	11.96	202	7066478	101.06972 ppb		99
82) Butyl benzylphthalate	12.72	149	3201793	102.55854 ppb		87
83) 3,3'-Dichlorobenzidine	13.33	252	1829447	97.38567 ppb		99
84) Benz (a) anthracene	13.35	228	6691297	103.29527 ppb		99
85) Bis (2-ethylhexyl) phthala	13.38	149	4709666	101.61548 ppb		96
86) Chrysene	13.40	228	6734557	102.48624 ppb		98
87) Di-n-octylphthalate	14.10	149	7526015	100.93539 ppb		96
89) Benzo (b) fluoranthene	14.58	252	5934030	102.94422 ppb	#	97
90) Benzo (k) fluoranthene	14.63	252	6276784	107.87478 ppb	#	94
91) Benzo (a) pyrene	15.01	252	5745873	106.59284 ppb		99
92) Indeno (1,2,3-cd) pyrene	16.78	276	6352718	102.55635 ppb		98
93) Dibenz (a,h) anthracene	16.82	278	5767832	106.76975 ppb		97
94) Benzo (g,h,i) perylene	17.30	276	5316193	101.71803 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

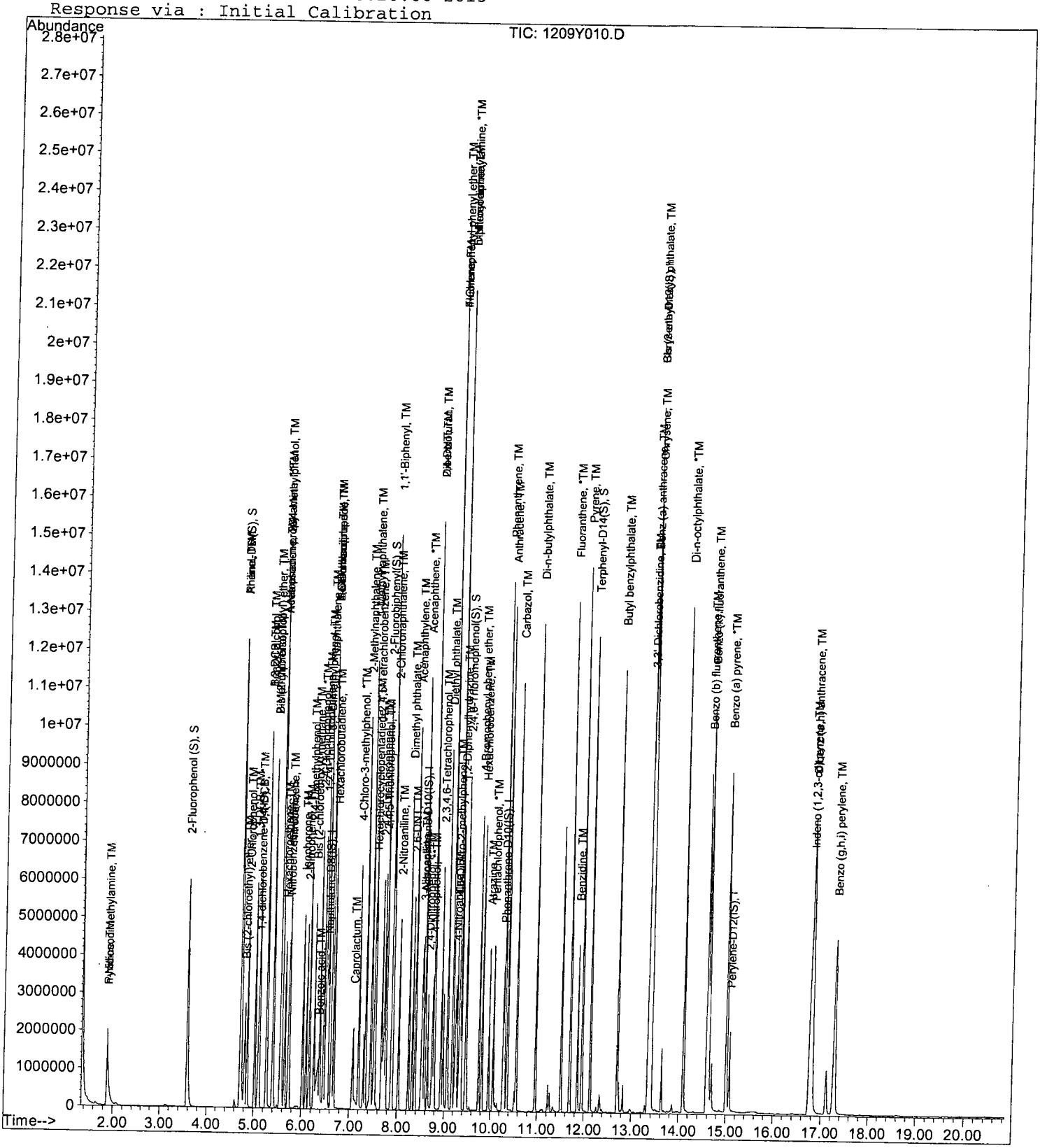
Data File : M:\YODA\DATA\Y151209\1209Y010.D
Acq On : 9 Dec 15 17:33
Sample : 100ug/ml SVOC 12/09/15
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 10 9:24 2015

Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



1209Y010.D Y1209.M Thu Dec 10 11:37:02 2015

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 78007
Date Analyzed: 9 Dec 15 18:03
Instrument: Yoda
Initial Cal. Date: 12/09/15
Data File: 1209Y011.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	n-Nitrosodimethylamine	0.4278	0.4919	15	TM		
2	TM	Pyridine	1.145	1.118	2.4	TM		
3	*TM	Phenol	2.093	2.101	0.34	*TM		
4	TM	Aniline	2.132	2.381	12	TM		
5	TM	Bis (2-chloroethyl) ether	1.404	1.557	11	TM		
6	TM	2-Chlorophenol	1.558	1.612	3.5	TM		
7	TM	1,3-DCB	1.700	1.962	15	TM		
8	*TM	1,4-DCB	1.749	2.076	19	*TM		
9	TM	Benzyl alcohol	0.9805	1.076	9.7	TM		
10	TM	1,2-DCB	1.634	1.892	16	TM		
11	TM	2-Methylphenol	1.299	1.311	0.89	TM		
12	TM	Bis (2-chloroisopropyl) ether	1.726	1.784	3.4	TM		
13	TM	Acetophenone	2.022	2.346	16	TM		
14	TM	3&4-Methylphenol	1.782	1.834	2.9	TM		
15	**TM	n-Nitrosodi-n-propylamine	1.156	1.164	0.72	**TM		
16	TM	Hexachloroethane	0.6223	0.7269	17	TM		
17	TM	Nitrobenzene	0.3827	0.4264	11	TM		
18	TM	Isophorone	0.6670	0.8014	20	TM		
19	*TM	2-Nitrophenol	0.1962	0.2096	6.8	*TM		
20	TM	2,4-Dimethylphenol	0.3158	0.3349	6.0	TM		
21	TML	Benzoic acid	0.2096	0.2691	28	TML	14	
22	TM	Bis (2-chloroethoxy) methane	0.3830	0.4211	9.9	TM		
23	*TM	2,4-Dichlorophenol	0.2856	0.3013	5.5	*TM		
24	TM	1,2,4-Trichlorobenzene	0.3164	0.3792	20	TM		
25	TM	3,4-Dimethylphenol	0.4991	0.5159	3.4	TM		
26	TM	Naphthalene	1.103	1.185	7.4	TM		
27	TM	4-Chloroaniline	0.4031	0.4731	17	TM		
28	TM	2,6-Dichlorophenol	0.2912	0.3298	13	TM		
29	TM	Hexachloropropene	0.2172	0.2338	7.6	TM		
30	*TML	Hexachlorobutadiene	0.1760	0.2196	25	*TML	21	*
31	TM	Caprolactum	0.1426	0.1498	5.0	TM		
32	*TM	4-Chloro-3-methylphenol	0.3291	0.3433	4.3	*TM		
33	TM	2-Methylnaphthalene	0.7131	0.7912	11	TM		
34	TM	1-Methylnaphthalene	0.7190	0.7418	3.2	TM		
35	**TML	Hexachlorocyclopentadiene	0.2487	0.3181	28	**TML	2.7	
36	TM	1,2,4,5-Tetrachlorobenzene	0.5549	0.5914	6.6	TM		
37	*TM	2,4,6-Trichlorophenol	0.3700	0.3985	7.7	*TM		
38	TM	2,4,5-Trichlorophenol	0.3998	0.4366	9.2	TM		
39	TM	1,1'-Biphenyl	1.597	1.711	7.2	TM		
40	TML	2-Chloronaphthalene	1.168	1.432	23	TML	19	
		Average			10.8			

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 78007
Date Analyzed: 9 Dec 15 18:03
Instrument: Yoda
Cal. Date: 12/09/15
Data File: 1209Y011.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	2-Nitroaniline	0.3668	0.4059	11	TM		
42	TM	Dimethyl phthalate	1.354	1.484	9.7	TM		
43	TM	2,6-DNT	0.3051	0.3574	17	TM		
44	TM	Acenaphthylene	2.015	2.207	9.5	TM		
45	TM	3-Nitroaniline	0.3417	0.3798	11	TM		
46	*TM	Acenaphthene	1.193	1.283	7.6	*TM		
47	**TML	2,4-Dinitrophenol	0.1258	0.1777	41	**TML	7.5	
48	**TM	4-Nitrophenol	0.2585	0.2608	0.89	**TM		
49	TM	Dibenzofuran	1.714	1.869	9.0	TM		
50	TM	2,4-DNT	0.4359	0.5107	17	TM		
51	TM	2,3,4,6-Tetrachlorophenol	0.3056	0.3473	14	TM		
52	TM	Diethyl phthalate	1.371	1.468	7.0	TM		
53	TM	4-Chlorophenyl phenyl ether	0.6809	0.7494	10	TM		
54	TM	Fluorene	1.459	1.593	9.2	TM		
55	TM	4-Nitroaniline	0.3318	0.3963	19	TM		
56	TML	4,6-Dinitro-2-methylphenol	0.1302	0.1543	19	TML	3.1	
57	TM	Diphenyl amine	0.6346	0.6727	6.0	TM		
58	*TM	n-Nitrosodiphenylamine	0.6346	0.6727	6.0	*TM		
59	TM	1,2-Diphenylhydrazine	0.7857	0.8743	11	TM		
60	TM	4-Bromophenyl phenyl ether	0.2044	0.2180	6.6	TM		
61	TML	Hexachlorobenzene	0.2088	0.2527	21	TML	15	
62	TM	Atrazine	0.2055	0.2132	3.7	TM		
63	*TML	Pentachlorophenol	0.1088	0.1202	11	*TML	1.3	
64	TM	Phenanthrene	1.151	1.226	6.6	TM		
65	TM	Anthracene	1.196	1.222	2.2	TM		
66	TM	Carbazol	1.061	1.101	3.8	TM		
67	TM	Di-n-butylphthalate	1.271	1.318	3.7	TM		
68	*TM	Fluoranthene	1.203	1.280	6.4	*TM		
69	TM	Benzidine	0.3568	0.4085	14	TM		
70	TM	Pyrene	1.325	1.387	4.6	TM		
71	TM	Butyl benzylphthalate	0.5918	0.6164	4.2	TM		
72	TML	3,3'-Dichlorobenzidine	0.3574	0.4538	27	TML	24	*
73	TM	Benz (a) anthracene	1.228	1.307	6.4	TM		
74	TM	Bis (2-ethylhexyl) phthalate	0.8786	0.9497	8.1	TM		
75	TM	Chrysene	1.246	1.289	3.4	TM		
76	*TM	Di-n-octylphthalate	1.413	1.516	7.3	*TM		
77	TM	Benzo (b) fluoranthene	2.360	2.619	11	TM		
78	TM	Benzo (k) fluoranthene	2.397	2.460	2.7	TM		
79	*TM	Benzo (a) pyrene	2.223	2.404	8.2	*TM		
80	TM	Indeno (1,2,3-cd) pyrene	2.551	2.772	8.7	TM		
		Average			10.1			

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 78007
Date Analyzed: 9 Dec 15 18:03
Instrument: Yoda
Cal. Date: 12/09/15
Data File: 1209Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	2.227	2.393	7.5	TM	
82	TM	Benzo (g,h,i) perylene	2.156	2.274	5.4	TM	
83							
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118							
119							
120							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y011.D Vial: 11
Acq On : 9 Dec 15 18:03 Operator: MA
Sample : 50ug/ml SVOC (SS STD10/23/15) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 10:40 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	482703	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.52	136	2115482	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.54	164	1170198	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.27	188	2198019	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.36	240	2082108	40.00000 ppb		0.00
88) Perylene-D12(IS)	15.07	264	984335	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
5) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
21) Nitrobenzene-D5(S)	5.65	82	101526	5.10592 ppb		-0.08
Spiked Amount 100.000			Recovery =	5.106%		
45) 2-Fluorobiphenyl(S)	7.72	172	1548	0.03893 ppb		-0.04
Spiked Amount 100.000			Recovery =	0.039%		
63) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
81) Terphenyl-D14(S)	12.13	244	174	0.00355 ppb		-0.01
Spiked Amount 100.000			Recovery =	0.004%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	296794	57.48911 ppb		94
3) Pyridine	1.89	79	674730	48.81876 ppb		91
6) Phenol	4.72	94	1267420	50.16971 ppb		94
7) Aniline	4.72	93	1436579	55.83782 ppb		95
8) Bis (2-chloroethyl) ether	4.81	93	939216	55.44633 ppb		99
9) 2-Chlorophenol	4.86	128	972466	51.73559 ppb		96
10) 1,3-DCB	5.02	146	1183997	57.73116 ppb		99
11) 1,4-DCB	5.10	146	1252388	59.33094 ppb		98
12) Benzyl alcohol	5.26	108	648965	54.84932 ppb		94
13) 1,2-DCB	5.27	146	1141382	57.88194 ppb		97
14) 2-Methylphenol	5.39	107	790742	50.44631 ppb		96
15) Bis (2-chloroisopropyl) et	5.40	45	1076600	51.68251 ppb	#	89
16) Acetophenone	5.55	105	1415346	58.00529 ppb		97
17) 3&4-Methylphenol	5.57	107	2212980	102.92570 ppb		97
18) n-Nitrosodi-n-propylamine	5.55	70	702543	50.36021 ppb		99
19) Hexachloroethane	5.65	117	438595	58.40739 ppb		79
22) Nitrobenzene	5.73	77	1127561	55.71702 ppb		97
23) Isophorone	6.01	82	2119101	60.07692 ppb		96
24) 2-Nitrophenol	6.10	139	554302	53.41571 ppb		90
25) 2,4-Dimethylphenol	6.15	122	885520	53.02139 ppb		97
26) Benzoic acid	6.31	105	711645	56.84479 ppb		99
27) Bis (2-chloroethoxy) metha	6.25	93	1113470	54.96987 ppb		98
28) 2,4-Dichlorophenol	6.37	162	796776	52.74603 ppb		95
29) 1,2,4-Trichlorobenzene	6.46	180	1002834	59.93070 ppb		98
30) 3,4-Dimethylphenol	6.50	107	1364176	51.68100 ppb		97
31) Naphthalene	6.54	128	3133367	53.70158 ppb		99
32) 4-Chloroaniline	6.62	127	1251135	58.68275 ppb		96
33) 2,6-Dichlorophenol	6.63	162	872240	56.63850 ppb		97
34) Hexachloropropene	6.63	213	618124	53.80464 ppb		99
35) Hexachlorobutadiene	6.68	225	580623	60.71279 ppb		98
36) Caprolactum	7.04	55	396114	52.51187 ppb		98
37) 4-Chloro-3-methylphenol	7.19	107	907843	52.16192 ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y011.D Vial: 11
Acq On : 9 Dec 15 18:03 Operator: MA
Sample : 50ug/ml SVOC (SS STD10/23/15) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 10:40 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 2-Methylnaphthalene	7.33	142	2092242	55.47310 ppb		99
39) 1-Methylnaphthalene	7.45	142	1961573	51.58604 ppb		98
41) Hexachlorocyclopentadiene	7.51	237	465263	51.37178 ppb		98
42) 1,2,4,5-Tetrachlorobenzene	7.53	216	865080	53.28855 ppb		97
43) 2,4,6-Trichlorophenol	7.66	196	582850	53.83898 ppb		100
44) 2,4,5-Trichlorophenol	7.72	196	638650	54.60408 ppb		98
46) 1,1'-Biphenyl	7.88	154	2502965	53.58166 ppb		97
47) 2-Chloronaphthalene	7.90	162	2094916	59.29502 ppb		98
48) 2-Nitroaniline	8.03	65	593715	55.33314 ppb		86
49) Dimethyl phthalate	8.24	163	2171360	54.83283 ppb		98
50) 2,6-DNT	8.31	165	522826	58.58438 ppb	#	78
51) Acenaphthylene	8.37	152	3227671	54.74034 ppb		99
52) 3-Nitroaniline	8.51	138	555559	55.56851 ppb		90
53) Acenaphthene	8.57	154	1877365	53.79326 ppb		99
54) 2,4-Dinitrophenol	8.64	184	259917	53.76205 ppb		89
55) 4-Nitrophenol	8.73	65	381499	50.44633 ppb		88
56) Dibenzofuran	8.78	168	2733639	54.50245 ppb		96
57) 2,4-DNT	8.79	165	747041	58.57990 ppb		84
58) 2,3,4,6-Tetrachlorophenol	8.93	232	507941	56.82075 ppb	#	91
59) Diethyl phthalate	9.06	149	2147191	53.51995 ppb		99
60) 4-Chlorophenyl phenyl ethe	9.18	204	1096125	55.02810 ppb		93
61) Fluorene	9.18	166	2329986	54.60495 ppb		100
62) 4-Nitroaniline	9.23	138	579619	59.70846 ppb		95
65) 4,6-Dinitro-2-methylphenol	9.26	198	424047	51.56220 ppb	#	80
66) Diphenyl amine	9.33	169	3696315	105.99914 ppb		100
67) n-Nitrosodiphenylamine	9.33	169	3696315	105.99914 ppb		100
68) 1,2-Diphenylhydrazine	9.36	77	2402118	55.63399 ppb		92
69) 4-Bromophenyl phenyl ether	9.75	248	598834	53.30472 ppb	#	86
70) Hexachlorobenzene	9.82	284	694350	57.51364 ppb	#	81
71) Atrazine	9.96	200	292870	25.92938 ppb		96
72) Pentachlorophenol	10.06	266	330373	49.33907 ppb		99
73) Phenanthrene	10.30	178	3369610	53.29835 ppb		99
74) Anthracene	10.36	178	3358056	51.09458 ppb		100
75) Carbazol	10.55	167	3025574	51.88966 ppb		98
76) Di-n-butylphthalate	10.96	149	3621629	51.84755 ppb		99
77) Fluoranthene	11.68	202	3516004	53.18245 ppb	#	96
79) Benzidine	11.85	184	1063118	57.24737 ppb		97
80) Pyrene	11.95	202	3609103	52.31331 ppb		100
82) Butyl benzylphthalate	12.72	149	1604213	52.07576 ppb		89
83) 3,3'-Dichlorobenzidine	13.33	252	1181107	62.07853 ppb		98
84) Benz (a) anthracene	13.35	228	3400995	53.20730 ppb		100
85) Bis (2-ethylhexyl) phthala	13.37	149	2471845	54.04878 ppb	#	95
86) Chrysene	13.39	228	3353846	51.72431 ppb		99
87) Di-n-octylphthalate	14.10	149	3945957	53.63220 ppb		95
89) Benzo (b) fluoranthene	14.58	252	3222868	55.48713 ppb		98
90) Benzo (k) fluoranthene	14.62	252	3027076	51.32738 ppb		98
91) Benzo (a) pyrene	15.01	252	2958038	54.08194 ppb		98
92) Indeno (1,2,3-cd) pyrene	16.77	276	3411043	54.34124 ppb		99
93) Dibenz (a,h) anthracene	16.80	278	2944856	53.72584 ppb		99
94) Benzo (g,h,i) perylene	17.27	276	2797636	52.71863 ppb		99

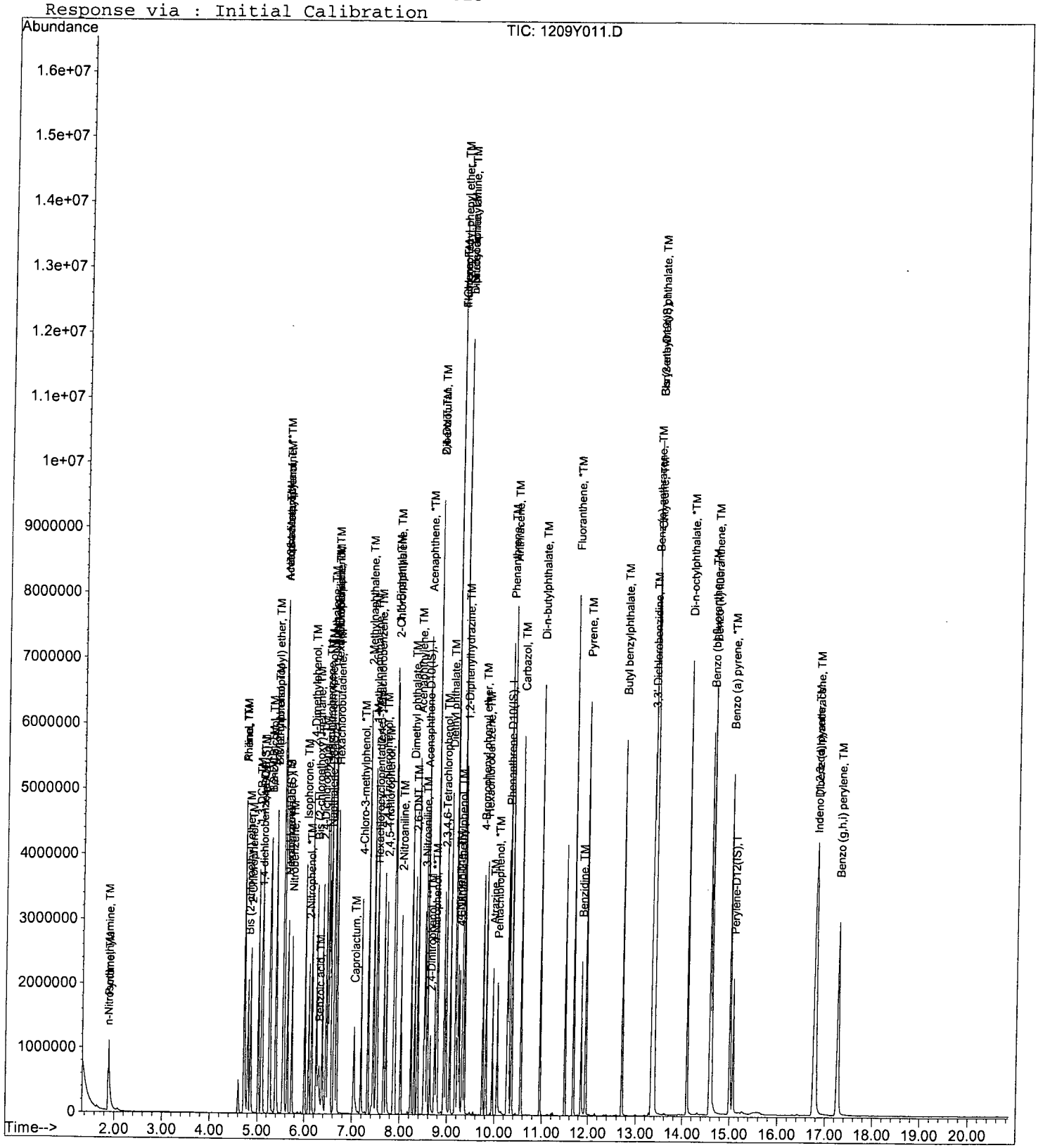
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y011.D Vial: 11
Acq On : 9 Dec 15 18:03 Operator: MA
Sample : 50ug/ml SVOC (SS STD10/23/15) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 10 10:40 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 78007
Date Analyzed: 12/10/15
Instrument: Yoda
Initial Cal. Date: 12/09/15
Data File: 1209Y061.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	n-Nitrosodimethylamine	0.4278	0.4026	5.9	TM	
3	TM	Pyridine	1.145	1.124	1.9	TM	
4	S	2-Fluorophenol (S)	1.455	1.443	0.85	S	
5	S	Phenol-D6 (S)	1.895	1.884	0.57	S	
6	*TM	Phenol	2.093	1.995	4.7	*TM	
7	TM	Aniline	2.132	2.010	5.7	TM	
8	TM	Bis (2-chloroethyl) ether	1.404	1.314	6.4	TM	
9	TM	2-Chlorophenol	1.558	1.518	2.5	TM	
10	TM	1,3-DCB	1.700	1.638	3.6	TM	
11	*TM	1,4-DCB	1.749	1.683	3.8	*TM	
12	TM	Benzyl alcohol	0.9805	0.9584	2.2	TM	
13	TM	1,2-DCB	1.634	1.564	4.3	TM	
14	TM	2-Methylphenol	1.299	1.238	4.7	TM	
15	TM	Bis (2-chloroisopropyl) ether	1.726	1.550	10	TM	
16	TM	Acetophenone	2.022	1.931	4.5	TM	
17	TM	3&4-Methylphenol	1.782	1.717	3.7	TM	
18	**TM	n-Nitrosodi-n-propylamine	1.156	1.080	6.6	**TM	
19	TM	Hexachloroethane	0.6223	0.6033	3.1	TM	
20	I	Napthalene-D8(IS)	ISTD			I	
21	S	Nitrobenzene-D5(S)	0.3760	0.3758	0.04	S	
22	TM	Nitrobenzene	0.3827	0.3636	5.0	TM	
23	TM	Isophorone	0.6670	0.6376	4.4	TM	
24	*TM	2-Nitrophenol	0.1962	0.1979	0.85	*TM	
25	TM	2,4-Dimethylphenol	0.3158	0.3103	1.7	TM	
26	TML	Benzoic acid	0.2096	0.2547	22	TML	7.9
27	TM	Bis (2-chloroethoxy) methane	0.3830	0.3651	4.7	TM	
28	*TM	2,4-Dichlorophenol	0.2856	0.2843	0.47	*TM	
29	TM	1,2,4-Trichlorobenzene	0.3164	0.3141	0.71	TM	
30	TM	3,4-Dimethylphenol	0.4991	0.4746	4.9	TM	
31	TM	Naphthalene	1.103	1.082	1.9	TM	
32	TM	4-Chloroaniline	0.4031	0.4020	0.27	TM	
33	TM	2,6-Dichlorophenol	0.2912	0.2908	0.13	TM	
34	TM	Hexachloropropene	0.2172	0.2202	1.4	TM	
35	*TML	Hexachlorobutadiene	0.1760	0.1710	2.8	*TML	4.5
36	TM	Caprolactum	0.1426	0.1340	6.0	TM	
37	*TM	4-Chloro-3-methylphenol	0.3291	0.3161	3.9	*TM	
38	TM	2-Methylnaphthalene	0.7131	0.6970	2.3	TM	
39	TM	1-Methylnaphthalene	0.7190	0.7052	1.9	TM	
40	I	Acenaphthene-D10(IS)	ISTD			I	
		Average			3.8		

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 78007
Date Analyzed: 12/10/15
Instrument: Yoda
Cal. Date: 12/09/15
Data File: 1209Y061.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TML	Hexachlorocyclopentadiene	0.2487	0.2749	11	**TML	9.1
42	TM	1,2,4,5-Tetrachlorobenzene	0.5549	0.5583	0.62	TM	
43	*TM	2,4,6-Trichlorophenol	0.3700	0.3796	2.6	*TM	
44	TM	2,4,5-Trichlorophenol	0.3998	0.4118	3.0	TM	
45	S	2-Fluorobiphenyl(S)	1.359	1.401	3.1	S	
46	TM	1,1'-Biphenyl	1.597	1.608	0.72	TM	
47	TML	2-Chloronaphthalene	1.168	1.180	1.0	TML	1.7
48	TM	2-Nitroaniline	0.3668	0.3614	1.5	TM	
49	TM	Dimethyl phthalate	1.354	1.355	0.08	TM	
50	TM	2,6-DNT	0.3051	0.3122	2.3	TM	
51	TM	Acenaphthylene	2.015	2.055	2.0	TM	
52	TM	3-Nitroaniline	0.3417	0.3456	1.1	TM	
53	*TM	Acenaphthene	1.193	1.185	0.66	*TM	
54	**TML	2,4-Dinitrophenol	0.1258	0.1872	49	**TML	12
55	**TM	4-Nitrophenol	0.2585	0.2799	8.3	**TM	
56	TM	Dibenzofuran	1.714	1.718	0.18	TM	
57	TM	2,4-DNT	0.4359	0.4460	2.3	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3056	0.3182	4.1	TM	
59	TM	Diethyl phthalate	1.371	1.386	1.1	TM	
60	TM	4-Chlorophenyl phenyl ether	0.6809	0.6877	1.00	TM	
61	TM	Fluorene	1.459	1.474	1.1	TM	
62	TM	4-Nitroaniline	0.3318	0.3465	4.4	TM	
63	S	2,4,6-Tribromophenol(S)	0.1865	0.2001	7.3	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TML	4,6-Dinitro-2-methylphenol	0.1302	0.1511	16	TML	1.1
66	TM	Diphenyl amine	0.6346	0.6397	0.80	TM	
67	*TM	n-Nitrosodiphenylamine	0.6346	0.6397	0.80	*TM	
68	TM	1,2-Diphenylhydrazine	0.7857	0.7140	9.1	TM	
69	TM	4-Bromophenyl phenyl ether	0.2044	0.2076	1.5	TM	
70	TML	Hexachlorobenzene	0.2088	0.2130	2.0	TML	2.3
71	TM	Atrazine	0.2055	0.2010	2.2	TM	
72	*TML	Pentachlorophenol	0.1088	0.1240	14	*TML	1.5
73	TM	Phenanthrene	1.151	1.150	0.06	TM	
74	TM	Anthracene	1.196	1.186	0.87	TM	
75	TM	Carbazol	1.061	1.053	0.74	TM	
76	TM	Di-n-butylphthalate	1.271	1.288	1.3	TM	
77	*TM	Fluoranthene	1.203	1.215	1.00	*TM	
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.3568	0.3583	0.44	TM	
80	TM	Pyrene	1.325	1.299	2.0	TM	
		Average			4.2		

0
0

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No: 79807
Date Analyzed: 12/10/15
Instrument: Yoda
Cal. Date: 12/09/15
Data File: 1209Y061.D

		Compound	MEAN	CCRF	%D		%Drift
81	S	Terphenyl-D14(S)	0.9421	0.9726	3.2	S	
82	TM	Butyl benzylphthalate	0.5918	0.5878	0.68	TM	
83	TML	3,3'-Dichlorobenzidine	0.3574	0.4023	13	TML	10
84	TM	Benz (a) anthracene	1.228	1.224	0.29	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.8786	0.8748	0.43	TM	
86	TM	Chrysene	1.246	1.252	0.49	TM	
87	*TM	Di-n-octylphthalate	1.413	1.431	1.3	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	2.360	2.401	1.7	TM	
90	TM	Benzo (k) fluoranthene	2.397	2.287	4.6	TM	
91	*TM	Benzo (a) pyrene	2.223	2.208	0.67	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	2.551	2.589	1.5	TM	
93	TM	Dibenz (a,h) anthracene	2.227	2.281	2.4	TM	
94	TM	Benzo (g,h,i) perylene	2.156	2.169	0.59	TM	
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			2.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y061.D Vial: 61
Acq On : 10 Dec 15 17:02 Operator: MA
Sample : CCV: 50ug/ml SVOC 12/09/15 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 10 17:23 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	477576	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.52	136	2076099	40.00000 ppb		0.00
40) Acenaphthene-D10(IS)	8.54	164	1147973	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.27	188	2138952	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.37	240	2098525	40.00000 ppb		0.00
88) Perylene-D12(IS)	15.07	264	1012931	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.57	112	1722715	99.15290 ppb		-0.01
Spiked Amount 200.000			Recovery = 49.577%			
5) Phenol-D6 (S)	4.71	99	2249533	99.43416 ppb		-0.01
Spiked Amount 200.000			Recovery = 49.717%			
21) Nitrobenzene-D5(S)	5.72	82	975313	49.98071 ppb		-0.01
Spiked Amount 100.000			Recovery = 49.981%			
45) 2-Fluorobiphenyl(S)	7.76	172	2010285	51.53890 ppb		0.00
Spiked Amount 100.000			Recovery = 51.539%			
63) 2,4,6-Tribromophenol(S)	9.47	330	574220	107.25477 ppb		-0.01
Spiked Amount 200.000			Recovery = 53.628%			
81) Terphenyl-D14(S)	12.14	244	2551222	51.61588 ppb		0.00
Spiked Amount 100.000			Recovery = 51.616%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	240324	47.05059 ppb		92
3) Pyridine	1.88	79	670977	49.06840 ppb		95
6) Phenol	4.72	94	1191036	47.65225 ppb		99
7) Aniline	4.72	93	1199909	47.13947 ppb		92
8) Bis (2-chloroethyl) ether	4.81	93	784658	46.81933 ppb		99
9) 2-Chlorophenol	4.86	128	906413	48.73922 ppb		92
10) 1,3-DCB	5.02	146	977892	48.19346 ppb		100
11) 1,4-DCB	5.10	146	1004555	48.10094 ppb		99
12) Benzyl alcohol	5.26	108	572138	48.87517 ppb		92
13) 1,2-DCB	5.27	146	933613	47.85380 ppb		98
14) 2-Methylphenol	5.39	107	739236	47.66672 ppb		98
15) Bis (2-chloroisopropyl) et	5.40	45	925247	44.89359 ppb	#	88
16) Acetophenone	5.55	105	1153033	47.76219 ppb		93
17) 3&4-Methylphenol	5.57	107	2049405	96.34111 ppb		96
18) n-Nitrosodi-n-propylamine	5.55	70	644620	46.70420 ppb		100
19) Hexachloroethane	5.64	117	360124	48.47231 ppb		92
22) Nitrobenzene	5.73	77	943640	47.51333 ppb		98
23) Isophorone	6.00	82	1654679	47.80035 ppb		98
24) 2-Nitrophenol	6.10	139	513512	50.42367 ppb		87
25) 2,4-Dimethylphenol	6.15	122	805321	49.13411 ppb		97
26) Benzoic acid	6.30	105	660904	53.97233 ppb		99
27) Bis (2-chloroethoxy) metha	6.25	93	947366	47.65684 ppb		99
28) 2,4-Dichlorophenol	6.37	162	737740	49.76433 ppb		95
29) 1,2,4-Trichlorobenzene	6.46	180	815225	49.64312 ppb		97
30) 3,4-Dimethylphenol	6.50	107	1231648	47.54538 ppb		95
31) Naphthalene	6.54	128	2809170	49.05859 ppb		100
32) 4-Chloroaniline	6.62	127	1043310	49.86329 ppb		96
33) 2,6-Dichlorophenol	6.63	162	754687	49.93486 ppb		96
34) Hexachloropropene	6.63	213	571392	50.68034 ppb		100
35) Hexachlorobutadiene	6.68	225	443731	47.76860 ppb		97
36) Caprolactum	7.04	55	347872	46.99136 ppb		95
37) 4-Chloro-3-methylphenol	7.19	107	820295	48.02575 ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y061.D Vial: 61
Acq On : 10 Dec 15 17:02 Operator: MA
Sample : CCV: 50ug/ml SVOC 12/09/15 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 10 17:23 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.33	142	1808683	48.86459	ppb		100
39)	1-Methylnaphthalene	7.45	142	1830158	49.04306	ppb		98
41)	Hexachlorocyclopentadiene	7.52	237	394523	45.43482	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.53	216	801194	50.30869	ppb		97
43)	2,4,6-Trichlorophenol	7.67	196	544710	51.29004	ppb		98
44)	2,4,5-Trichlorophenol	7.72	196	590941	51.50317	ppb		94
46)	1,1'-Biphenyl	7.88	154	2307885	50.36203	ppb		98
47)	2-Chloronaphthalene	7.90	162	1693895	49.14691	ppb		98
48)	2-Nitroaniline	8.03	65	518528	49.26145	ppb		87
49)	Dimethyl phthalate	8.24	163	1943973	50.04109	ppb		99
50)	2,6-DNT	8.31	165	447967	51.16799	ppb	#	82
51)	Acenaphthylene	8.38	152	2948721	50.97763	ppb		100
52)	3-Nitroaniline	8.51	138	495975	50.56919	ppb		89
53)	Acenaphthene	8.57	154	1700510	49.66907	ppb		98
54)	2,4-Dinitrophenol	8.64	184	268636	56.18797	ppb		85
55)	4-Nitrophenol	8.73	65	401701	54.14605	ppb		95
56)	Dibenzofuran	8.78	168	2464560	50.08895	ppb		94
57)	2,4-DNT	8.78	165	639937	51.15276	ppb	#	74
58)	2,3,4,6-Tetrachlorophenol	8.94	232	456658	52.07298	ppb		95
59)	Diethyl phthalate	9.06	149	1989185	50.54147	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.18	204	986782	50.49790	ppb		93
61)	Fluorene	9.18	166	2115449	50.53694	ppb		99
62)	4-Nitroaniline	9.23	138	497280	52.21820	ppb		88
65)	4,6-Dinitro-2-methylphenol	9.26	198	403979	50.56913	ppb	#	81
66)	Diphenyl amine	9.33	169	3420560	100.80010	ppb		100
67)	n-Nitrosodiphenylamine	9.33	169	3420560	100.80010	ppb		100
68)	1,2-Diphenylhydrazine	9.36	77	1908992	45.43394	ppb		96
69)	4-Bromophenyl phenyl ether	9.75	248	554997	50.76686	ppb	#	82
70)	Hexachlorobenzene	9.82	284	569403	48.84400	ppb	#	80
71)	Atrazine	9.96	200	268741	24.45016	ppb		97
72)	Pentachlorophenol	10.06	266	331641	50.75771	ppb		97
73)	Phenanthrene	10.30	178	3074263	49.96956	ppb		100
74)	Anthracene	10.36	178	3169872	49.56317	ppb		100
75)	Carbazol	10.55	167	2815955	49.62827	ppb		99
76)	Di-n-butylphthalate	10.96	149	3444129	50.66804	ppb		99
77)	Fluoranthene	11.68	202	3248824	50.49817	ppb	#	96
79)	Benzidine	11.85	184	939963	50.21968	ppb		98
80)	Pyrene	11.95	202	3407656	49.00696	ppb		100
82)	Butyl benzylphthalate	12.72	149	1541934	49.66249	ppb		87
83)	3,3'-Dichlorobenzidine	13.33	252	1055170	55.08043	ppb		97
84)	Benz (a) anthracene	13.35	228	3211713	49.85297	ppb		99
85)	Bis (2-ethylhexyl) phthala	13.37	149	2294779	49.78456	ppb		95
86)	Chrysene	13.39	228	3283619	50.24507	ppb		100
87)	Di-n-octylphthalate	14.10	149	3754488	50.63060	ppb		97
89)	Benzo (b) fluoranthene	14.58	252	3040007	50.86129	ppb		97
90)	Benzo (k) fluoranthene	14.62	252	2896056	47.71949	ppb		96
91)	Benzo (a) pyrene	15.01	252	2795425	49.66603	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.76	276	3278638	50.75734	ppb		100
93)	Dibenz (a,h) anthracene	16.80	278	2888518	51.21030	ppb		98
94)	Benzo (g,h,i) perylene	17.27	276	2746660	50.29686	ppb		100

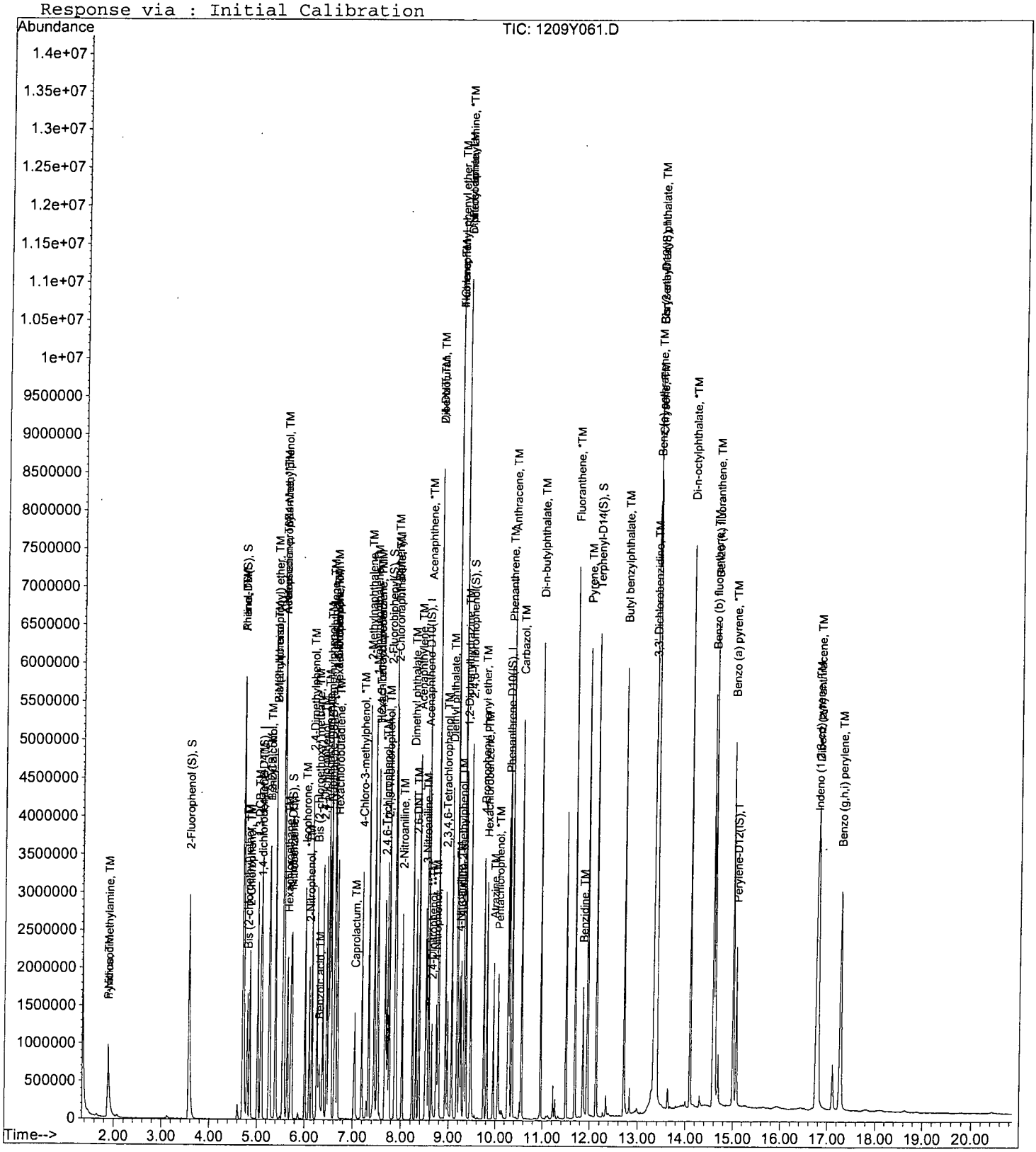
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y061.D Vial: 61
Acq On : 10 Dec 15 17:02 Operator: MA
Sample : CCV: 50ug/ml SVOC 12/09/15 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 10 17:23 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



EPA METHOD 8270D
Semivolatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
TCLP Semivolatile 8270D

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **151202W-25347 - 203103**
Batch ID: #TCLPS-151202A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/02/15	12/10/15
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/02/15	12/10/15
BLANK	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
BLANK	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/02/15	12/10/15
BLANK	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/02/15	12/10/15
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/02/15	12/10/15
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/02/15	12/10/15
BLANK	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/02/15	12/10/15
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/02/15	12/10/15
BLANK	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/02/15	12/10/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	75.0	40-125			%	12/02/15	12/10/15
BLANK	SURROGATE: 2-FLUORBIPHENY	69.1	50-110			%	12/02/15	12/10/15
BLANK	SURROGATE: 2-FLUOROPHENO	48.5	20-110			%	12/02/15	12/10/15
BLANK	SURROGATE: NITROBENZENE-	71.8	40-110			%	12/02/15	12/10/15
BLANK	SURROGATE: PHENOL (S)	31.5	10-115			%	12/02/15	12/10/15
BLANK	SURROGATE: TERPHENYL-D14 (	88.9	50-135			%	12/02/15	12/10/15

Quant Method:Y1209.M
Run #:1209Y028
Instrument:Yoda
Sequence:Y151209
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/12/15 3:14:13 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y028.D Vial: 28
Acq On : 10 Dec 15 1:47 Operator: MA
Sample : 151202A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 10 12:21 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	432770	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.51	136	1861520	40.00000 ppb	-0.01
40) Acenaphthene-D10(IS)	8.54	164	1053271	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.27	188	1972202	40.00000 ppb	-0.01
78) Chrysene-D12(IS)	13.36	240	1744919	40.00000 ppb	-0.01
88) Perylene-D12(IS)	15.06	264	848618	40.00000 ppb	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.56	112	1527840	97.04098 ppb	-0.02
Spiked Amount 200.000			Recovery =	48.521%	
5) Phenol-D6 (S)	4.70	99	1292286	63.03579 ppb	-0.03
Spiked Amount 200.000			Recovery =	31.518%	
21) Nitrobenzene-D5(S)	5.71	82	1255876	71.77703 ppb	-0.02
Spiked Amount 100.000			Recovery =	71.777%	
45) 2-Fluorobiphenyl(S)	7.76	172	2472936	69.10062 ppb	0.00
Spiked Amount 100.000			Recovery =	69.101%	
63) 2,4,6-Tribromophenol(S)	9.46	330	736589	149.95297 ppb	-0.02
Spiked Amount 200.000			Recovery =	74.977%	
81) Terphenyl-D14(S)	12.13	244	3654281	88.91518 ppb	-0.01
Spiked Amount 100.000			Recovery =	88.915%	

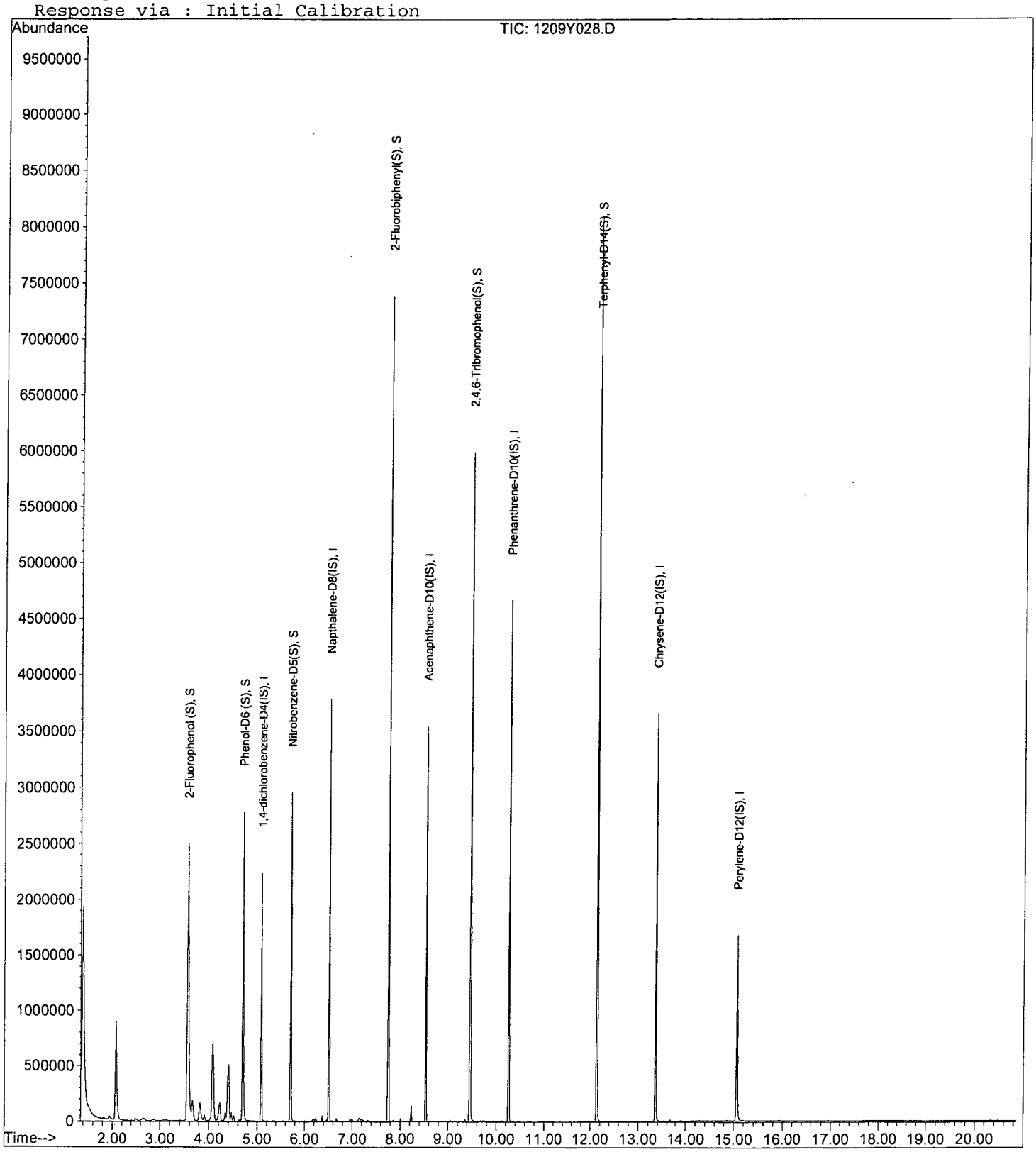
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1209Y028.D Y1209.M Thu Dec 10 12:25:26 2015 Page 1

Data File : M:\YODA\DATA\Y151209\1209Y028.D Vial: 28
Acq On : 10 Dec 15 1:47 Operator: MA
Sample : 151202A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 10 12:21 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Method Blank
TCLP Semivolatile 8270D

Blank Name/QCG: **151204S-25348 - 203104**
Batch ID: #TCLPS-151204A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,4-DCB	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
BLANK	2,4,5-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.30	ug/L	12/04/15	12/10/15
BLANK	2,4,6-TRICHLOROPHENOL	5.00 U	10.0	5.00	2.50	ug/L	12/04/15	12/10/15
BLANK	2,4-DNT	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
BLANK	2-METHYLPHENOL	5.00 U	10.0	5.00	1.90	ug/L	12/04/15	12/10/15
BLANK	4-METHYLPHENOL	5.00 U	10.0	5.00	1.70	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROBENZENE	5.00 U	10.0	5.00	2.70	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROBUTADIENE	5.00 U	10.0	5.00	0.90	ug/L	12/04/15	12/10/15
BLANK	HEXACHLOROETHANE	5.00 U	10.0	5.00	0.80	ug/L	12/04/15	12/10/15
BLANK	NITROBENZENE	5.00 U	10.0	5.00	2.10	ug/L	12/04/15	12/10/15
BLANK	PENTACHLOROPHENOL	5.00 U	50.0	5.00	2.80	ug/L	12/04/15	12/10/15
BLANK	PHENOL	5.00 U	10.0	5.00	1.00	ug/L	12/04/15	12/10/15
BLANK	PYRIDINE	5.00 U	15.0	5.00	5.00	ug/L	12/04/15	12/10/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	84.7	40-125			%	12/04/15	12/10/15
BLANK	SURROGATE: 2-FLUORBIPHENY	78.0	50-110			%	12/04/15	12/10/15
BLANK	SURROGATE: 2-FLUOROPHENO	47.4	20-110			%	12/04/15	12/10/15
BLANK	SURROGATE: NITROBENZENE-	77.5	40-110			%	12/04/15	12/10/15
BLANK	SURROGATE: PHENOL (S)	30.1	10-115			%	12/04/15	12/10/15
BLANK	SURROGATE: TERPHENYL-D14 (	96.0	50-135			%	12/04/15	12/10/15

Quant Method:Y1209.M
Run #:1209Y069
Instrument:Yoda
Sequence:Y151209
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 12/12/15 3:14:13 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y069.D Vial: 69
Acq On : 10 Dec 15 21:31 Operator: MA
Sample : 151204A BLK 1/1000 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 11 11:16 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	472852	40.00000 ppb	0.00
20) Napthalene-D8(IS)	6.51	136	2014523	40.00000 ppb	-0.01
40) Acenaphthene-D10(IS)	8.54	164	1133047	40.00000 ppb	0.00
64) Phenanthrene-D10(IS)	10.26	188	2049415	40.00000 ppb	-0.01
78) Chrysene-D12(IS)	13.36	240	1884900	40.00000 ppb	-0.01
88) Perylene-D12(IS)	15.07	264	934912	40.00000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (S)	3.57	112	1629582	94.72954 ppb	-0.01
Spiked Amount 200.000			Recovery =	47.365%	
5) Phenol-D6 (S)	4.71	99	1350384	60.28618 ppb	-0.01
Spiked Amount 200.000			Recovery =	30.143%	
21) Nitrobenzene-D5(S)	5.72	82	1467700	77.51246 ppb	-0.01
Spiked Amount 100.000			Recovery =	77.512%	
45) 2-Fluorobiphenyl(S)	7.76	172	3001987	77.97764 ppb	0.00
Spiked Amount 100.000			Recovery =	77.978%	
63) 2,4,6-Tribromophenol(S)	9.47	330	894762	169.32831 ppb	-0.01
Spiked Amount 200.000			Recovery =	84.664%	
81) Terphenyl-D14(S)	12.14	244	4262532	96.01268 ppb	0.00
Spiked Amount 100.000			Recovery =	96.013%	

Target Compounds Qvalue

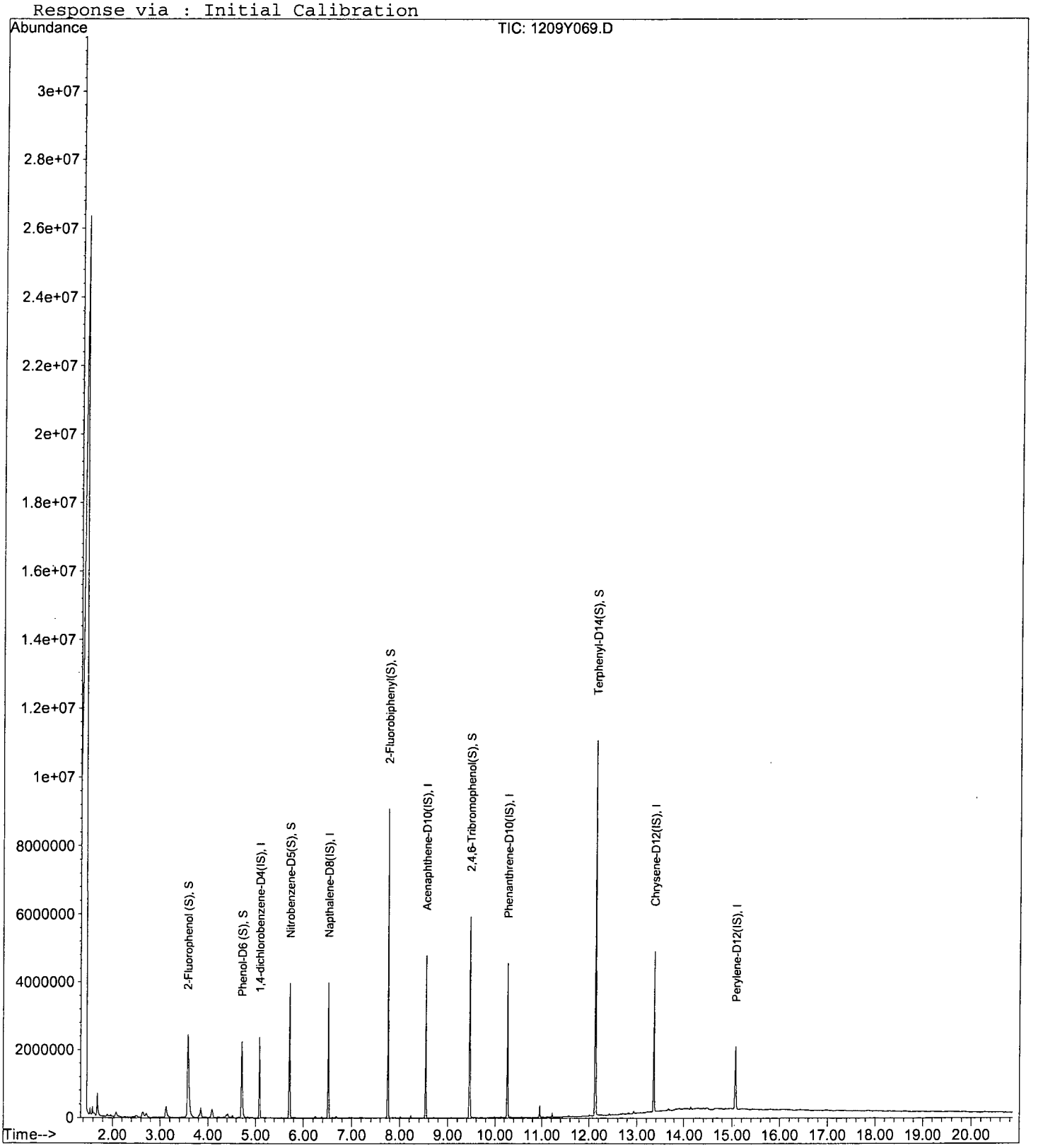
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y069.D Vial: 69
Acq On : 10 Dec 15 21:31 Operator: MA
Sample : 151204A BLK 1/1000 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 11 11:16 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Laboratory Control Spike Recovery
TCLP Semivolatile 8270D

APPL ID: **151202W-25347 LCS - 203103**
Batch ID: #TCLPS-151202A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,4-DCB	50.0	23.0	46.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	40.3	80.6	50-110
2,4,6-TRICHLOROPHENOL	50.0	40.5	81.0	50-115
2,4-DNT	50.0	42.1	84.2	50-120
2-METHYLPHENOL	50.0	35.9	71.8	40-110
4-METHYLPHENOL	100	67.5	67.5	30-110
HEXACHLOROBENZENE	50.0	41.3	82.6	50-110
HEXACHLOROBUTADIENE	50.0	23.0	46.0	25-105
HEXACHLOROETHANE	50.0	20.2	40.4	30-95
NITROBENZENE	50.0	39.6	79.2	45-110
PENTACHLOROPHENOL	50.0	38.6	77.2	40-115
PHENOL	50.0	19.7	39.4	10-115
PYRIDINE	50.0	18.7	37.4 #	48-108
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	166	83.0	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	72.6	72.6	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	98.9	49.5	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	74.3	74.3	40-110
SURROGATE: PHENOL (S)	200	65.2	32.6	10-115
SURROGATE: TERPHENYL-D14 (S)	100	94.6	94.6	50-135

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y1209.M
Extraction Date :	12/02/15
Analysis Date :	12/10/15
Instrument :	Yoda
Run :	1209Y029
Initials :	MA

Printed: 12/14/15 9:05:34 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y029.D Vial: 29
Acq On : 10 Dec 15 2:16 Operator: MA
Sample : 151202A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 10 11:44 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	501771	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.51	136	2175575	40.00000 ppb		-0.01
40) Acenaphthene-D10(IS)	8.54	164	1257108	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.27	188	2316988	40.00000 ppb		-0.01
78) Chrysene-D12(IS)	13.36	240	2181152	40.00000 ppb		-0.01
88) Perylene-D12(IS)	15.07	264	1047265	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.57	112	1805228	98.89196 ppb		-0.01
Spiked Amount 200.000			Recovery = 49.446%			
5) Phenol-D6 (S)	4.70	99	1549659	65.19530 ppb		-0.02
Spiked Amount 200.000			Recovery = 32.598%			
21) Nitrobenzene-D5(S)	5.72	82	1519243	74.29501 ppb		-0.01
Spiked Amount 100.000			Recovery = 74.295%			
45) 2-Fluorobiphenyl(S)	7.76	172	3102718	72.64051 ppb		0.00
Spiked Amount 100.000			Recovery = 72.641%			
63) 2,4,6-Tribromophenol(S)	9.47	330	972786	165.92609 ppb		-0.01
Spiked Amount 200.000			Recovery = 82.963%			
81) Terphenyl-D14(S)	12.14	244	4862268	94.64599 ppb		0.00
Spiked Amount 100.000			Recovery = 94.646%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	168359	31.37193 ppb		93
3) Pyridine	1.89	79	268177	18.66606 ppb		95
6) Phenol	4.71	94	516847	19.68147 ppb		82
7) Aniline	4.72	93	1036077	38.74051 ppb	#	66
8) Bis (2-chloroethyl) ether	4.81	93	663403	37.67551 ppb		98
9) 2-Chlorophenol	4.85	128	753409	38.55851 ppb		97
10) 1,3-DCB	5.02	146	480366	22.53234 ppb		100
11) 1,4-DCB	5.10	146	504285	22.98227 ppb		98
12) Benzyl alcohol	5.25	108	474180	38.55384 ppb		100
13) 1,2-DCB	5.27	146	500379	24.41100 ppb		98
14) 2-Methylphenol	5.38	107	584754	35.88742 ppb		97
15) Bis (2-chloroisopropyl) et	5.40	45	781945	36.11103 ppb		97
16) Acetophenone	5.55	105	1076828	42.45470 ppb		97
17) 3&4-Methylphenol	5.56	107	1507720	67.45924 ppb	#	90
18) n-Nitrosodi-n-propylamine	5.55	70	561369	38.71128 ppb		99
19) Hexachloroethane	5.64	117	157898	20.22810 ppb		98
22) Nitrobenzene	5.74	77	824123	39.59818 ppb		100
23) Isophorone	6.00	82	1472491	40.59233 ppb		99
24) 2-Nitrophenol	6.09	139	441185	41.34077 ppb		98
25) 2,4-Dimethylphenol	6.14	122	583909	33.99642 ppb		96
26) Benzoic acid	6.27	105	212731	18.89072 ppb		100
27) Bis (2-chloroethoxy) metha	6.25	93	832295	39.95386 ppb		96
28) 2,4-Dichlorophenol	6.37	162	630780	40.60381 ppb		97
29) 1,2,4-Trichlorobenzene	6.45	180	464352	26.98379 ppb		98
30) 3,4-Dimethylphenol	6.49	107	1047898	38.60244 ppb		99
31) Naphthalene	6.54	128	1962034	32.69773 ppb		100
32) 4-Chloroaniline	6.62	127	1059056	48.30148 ppb		98
33) 2,6-Dichlorophenol	6.62	162	642913	40.59413 ppb		99
34) Hexachloropropene	6.64	213	258426	21.87337 ppb		99
35) Hexachlorobutadiene	6.67	225	212037	22.98659 ppb		99
36) Caprolactum	7.02	55	120236	15.49912 ppb		98
37) 4-Chloro-3-methylphenol	7.17	107	756070	42.24157 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y029.D Vial: 29
Acq On : 10 Dec 15 2:16 Operator: MA
Sample : 151202A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 10 11:44 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.33	142	1264210	32.59305	ppb		99
39)	1-Methylnaphthalene	7.44	142	1318244	33.71000	ppb		97
41)	Hexachlorocyclopentadiene	7.51	237	138456	19.72346	ppb		98
42)	1,2,4,5-Tetrachlorobenzene	7.53	216	558001	31.99627	ppb		99
43)	2,4,6-Trichlorophenol	7.67	196	471104	40.50826	ppb		100
44)	2,4,5-Trichlorophenol	7.72	196	505781	40.25422	ppb		97
46)	1,1'-Biphenyl	7.87	154	1804932	35.96739	ppb		100
47)	2-Chloronaphthalene	7.90	162	1290121	34.65727	ppb		100
48)	2-Nitroaniline	8.03	65	479104	41.56463	ppb		99
49)	Dimethyl phthalate	8.24	163	1892846	44.49496	ppb		97
50)	2,6-DNT	8.32	165	415399	43.32882	ppb		96
51)	Acenaphthylene	8.37	152	2396290	37.83070	ppb		100
52)	3-Nitroaniline	8.51	138	505708	47.08528	ppb		99
53)	Acenaphthene	8.58	154	1407533	37.54261	ppb		99
54)	2,4-Dinitrophenol	8.63	184	181818	37.96047	ppb		98
55)	4-Nitrophenol	8.73	65	138606	17.06102	ppb		82
56)	Dibenzofuran	8.78	168	2107306	39.11013	ppb		93
57)	2,4-DNT	8.78	165	577427	42.14907	ppb		93
58)	2,3,4,6-Tetrachlorophenol	8.93	232	400218	41.67514	ppb		97
59)	Diethyl phthalate	9.06	149	1764648	40.94396	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.18	204	854276	39.92173	ppb		99
61)	Fluorene	9.18	166	1840981	40.16194	ppb		100
62)	4-Nitroaniline	9.23	138	476157	45.65940	ppb		97
65)	4,6-Dinitro-2-methylphenol	9.26	198	340192	40.27191	ppb	#	72
66)	Diphenyl amine	9.33	169	2993107	81.42603	ppb		99
67)	n-Nitrosodiphenylamine	9.33	169	2993107	81.42603	ppb		99
68)	1,2-Diphenylhydrazine	9.37	77	1727809	37.96201	ppb		97
69)	4-Bromophenyl phenyl ether	9.75	248	487519	41.16787	ppb		97
70)	Hexachlorobenzene	9.81	284	517187	41.34335	ppb		99
71)	Atrazine	9.95	200	255304	21.44285	ppb		97
72)	Pentachlorophenol	10.05	266	265294	38.63070	ppb		99
73)	Phenanthrene	10.29	178	2719481	40.80636	ppb		100
74)	Anthracene	10.36	178	2878188	41.54452	ppb		99
75)	Carbazol	10.55	167	2506913	40.78683	ppb		99
76)	Di-n-butylphthalate	10.96	149	3092413	41.99808	ppb		99
77)	Fluoranthene	11.69	202	2923081	41.94378	ppb		99
79)	Benzidine	11.85	184	252747	12.99204	ppb		98
80)	Pyrene	11.95	202	3001656	41.53280	ppb		100
82)	Butyl benzylphthalate	12.71	149	1337604	41.44942	ppb		96
83)	3,3'-Dichlorobenzidine	13.32	252	861476	43.36974	ppb		99
84)	Benz (a) anthracene	13.35	228	2803248	41.86432	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.38	149	2031778	42.40902	ppb		98
86)	Chrysene	13.39	228	2824635	41.58447	ppb		100
87)	Di-n-octylphthalate	14.10	149	3226411	41.86107	ppb		99
89)	Benzo (b) fluoranthene	14.58	252	2486771	40.24129	ppb		100
90)	Benzo (k) fluoranthene	14.62	252	2727286	43.46531	ppb	#	95
91)	Benzo (a) pyrene	15.00	252	2427435	41.71406	ppb		100
92)	Indeno (1,2,3-cd) pyrene	16.76	276	2756542	41.27559	ppb		99
93)	Dibenz (a,h) anthracene	16.79	278	2411999	41.36020	ppb		99
94)	Benzo (g,h,i) perylene	17.27	276	2322353	41.13273	ppb		97

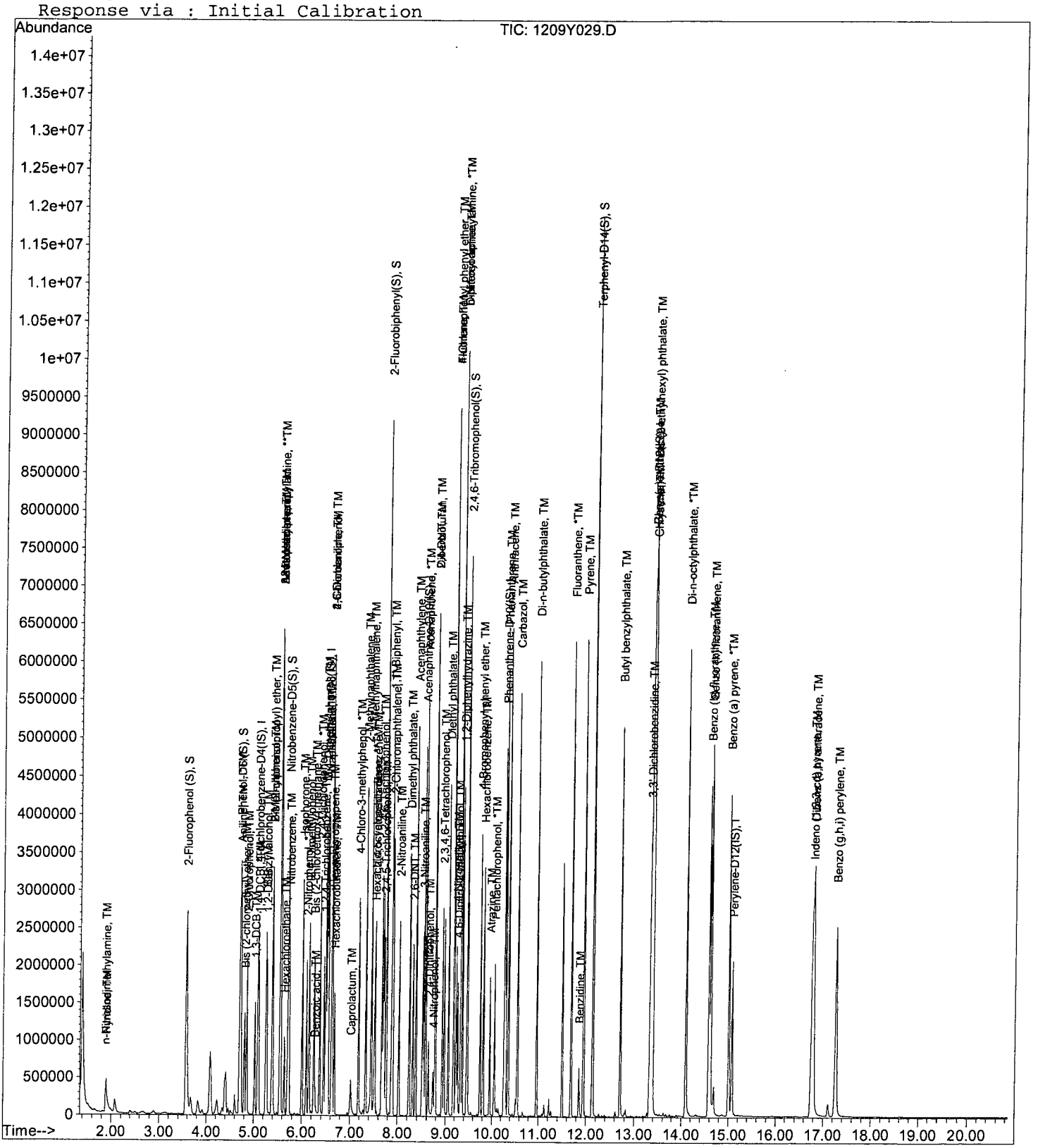
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y029.D Vial: 29
Acq On : 10 Dec 15 2:16 Operator: MA
Sample : 151202A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Dec 10 11:44 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Laboratory Control Spike Recovery
TCLP Semivolatile 8270D

APPL ID: **151204S-25348 LCS - 203104**
Batch ID: #TCLPS-151204A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,4-DCB	50.0	33.5	67.0	30-100
2,4,5-TRICHLOROPHENOL	50.0	44.8	89.6	50-110
2,4,6-TRICHLOROPHENOL	50.0	45.0	90.0	50-115
2,4-DNT	50.0	44.3	88.6	50-120
2-METHYLPHENOL	50.0	36.7	73.4	40-110
4-METHYLPHENOL	100	67.2	67.2	30-110
HEXACHLOROBENZENE	50.0	43.7	87.4	50-110
HEXACHLOROBUTADIENE	50.0	36.3	72.6	25-105
HEXACHLOROETHANE	50.0	30.5	61.0	30-95
NITROBENZENE	50.0	41.6	83.2	45-110
PENTACHLOROPHENOL	50.0	45.5	91.0	40-115
PHENOL	50.0	18.7	37.4	10-115
PYRIDINE	50.0	22.4	44.8 #	48-108
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	176	88.0	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	80.4	80.4	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	94.5	47.3	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	76.8	76.8	40-110
SURROGATE: PHENOL (S)	200	60.4	30.2	10-115
SURROGATE: TERPHENYL-D14 (S)	100	93.5	93.5	50-135

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	Y1209.M
Extraction Date :	12/04/15
Analysis Date :	12/10/15
Instrument :	Yoda
Run :	1209Y070
Initials :	MA

Printed: 12/12/15 3:16:18 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y070.D Vial: 70
Acq On : 10 Dec 15 22:00 Operator: MA
Sample : 151204A LCS-1 1/1000 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 11 9:21 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	470755	40.00000 ppb		0.00
20) Napthalene-D8(IS)	6.51	136	2040779	40.00000 ppb		-0.01
40) Acenaphthene-D10(IS)	8.54	164	1155200	40.00000 ppb		0.00
64) Phenanthrene-D10(IS)	10.27	188	2134965	40.00000 ppb		0.00
78) Chrysene-D12(IS)	13.36	240	1991539	40.00000 ppb		-0.01
88) Perylene-D12(IS)	15.07	264	963179	40.00000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.58	112	1618734	94.51811 ppb		0.00
Spiked Amount 200.000			Recovery =	47.259%		
5) Phenol-D6 (S)	4.71	99	1346854	60.39644 ppb		-0.01
Spiked Amount 200.000			Recovery =	30.198%		
21) Nitrobenzene-D5(S)	5.72	82	1474014	76.84438 ppb		-0.01
Spiked Amount 100.000			Recovery =	76.844%		
45) 2-Fluorobiphenyl(S)	7.76	172	3155277	80.38768 ppb		0.00
Spiked Amount 100.000			Recovery =	80.388%		
63) 2,4,6-Tribromophenol(S)	9.47	330	947900	175.94434 ppb		-0.01
Spiked Amount 200.000			Recovery =	87.972%		
81) Terphenyl-D14(S)	12.14	244	4386226	93.50857 ppb		0.00
Spiked Amount 100.000			Recovery =	93.509%		
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	1.87	42	158814	31.54310 ppb		90
3) Pyridine	1.93	79	301819	22.39177 ppb		89
6) Phenol	4.72	94	460544	18.69292 ppb	#	57
7) Aniline	4.73	93	903437	36.00658 ppb	#	69
8) Bis (2-chloroethyl) ether	4.81	93	662583	40.10815 ppb		96
9) 2-Chlorophenol	4.86	128	743874	40.57882 ppb		94
10) 1,3-DCB	5.02	146	661740	33.08507 ppb		100
11) 1,4-DCB	5.10	146	689236	33.48076 ppb		99
12) Benzyl alcohol	5.26	108	450958	39.08149 ppb		93
13) 1,2-DCB	5.27	146	655706	34.09622 ppb		99
14) 2-Methylphenol	5.39	107	561704	36.74406 ppb		99
15) Bis (2-chloroisopropyl) et	5.40	45	749683	36.90217 ppb	#	82
16) Acetophenone	5.55	105	1062211	44.63760 ppb		90
17) 3&4-Methylphenol	5.57	107	1408341	67.16441 ppb		96
18) n-Nitrosodi-n-propylamine	5.55	70	536177	39.41013 ppb		99
19) Hexachloroethane	5.64	117	223291	30.49021 ppb		98
22) Nitrobenzene	5.73	77	812293	41.60772 ppb		98
23) Isophorone	6.00	82	1442664	42.39695 ppb		100
24) 2-Nitrophenol	6.10	139	439435	43.89657 ppb		85
25) 2,4-Dimethylphenol	6.15	122	654434	40.61926 ppb		98
26) Benzoic acid	6.29	105	308447	27.37813 ppb		97
27) Bis (2-chloroethoxy) metha	6.25	93	805013	41.19670 ppb		99
28) 2,4-Dichlorophenol	6.38	162	625991	42.95710 ppb		95
29) 1,2,4-Trichlorobenzene	6.46	180	616487	38.19070 ppb		97
30) 3,4-Dimethylphenol	6.50	107	1035496	40.66514 ppb		96
31) Naphthalene	6.54	128	2164203	38.44918 ppb		99
32) 4-Chloroaniline	6.62	127	867148	42.16119 ppb		98
33) 2,6-Dichlorophenol	6.63	162	643039	43.28390 ppb		95
34) Hexachloropropene	6.64	213	313412	28.27959 ppb		99
35) Hexachlorobutadiene	6.68	225	326042	36.26548 ppb		99
36) Caprolactum	7.03	55	123106	16.91725 ppb		97
37) 4-Chloro-3-methylphenol	7.18	107	723236	43.07608 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151209\1209Y070.D Vial: 70
Acq On : 10 Dec 15 22:00 Operator: MA
Sample : 151204A LCS-1 1/1000 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Dec 11 9:21 2015 Quant Results File: Y1209.RES

Quant Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	2-Methylnaphthalene	7.33	142	1479098	40.65190	ppb		99
39)	1-Methylnaphthalene	7.44	142	1516429	41.33930	ppb		98
41)	Hexachlorocyclopentadiene	7.51	237	146987	21.60624	ppb		99
42)	1,2,4,5-Tetrachlorobenzene	7.53	216	675920	42.17694	ppb		98
43)	2,4,6-Trichlorophenol	7.67	196	480388	44.95048	ppb		98
44)	2,4,5-Trichlorophenol	7.72	196	517172	44.79188	ppb	#	91
46)	1,1'-Biphenyl	7.88	154	1975575	42.84075	ppb		97
47)	2-Chloronaphthalene	7.90	162	1449555	42.02792	ppb		98
48)	2-Nitroaniline	8.03	65	465748	43.97041	ppb		88
49)	Dimethyl phthalate	8.24	163	1802126	46.09949	ppb		98
50)	2,6-DNT	8.32	165	395633	44.90754	ppb		84
51)	Acenaphthylene	8.37	152	2450289	42.09570	ppb		98
52)	3-Nitroaniline	8.51	138	439480	44.52868	ppb		89
53)	Acenaphthene	8.58	154	1453054	42.17578	ppb		99
54)	2,4-Dinitrophenol	8.64	184	111937	28.22570	ppb		88
55)	4-Nitrophenol	8.74	65	170590	22.85030	ppb		88
56)	Dibenzofuran	8.78	168	2166822	43.76231	ppb		93
57)	2,4-DNT	8.78	165	558118	44.33353	ppb	#	79
58)	2,3,4,6-Tetrachlorophenol	8.93	232	407726	46.20237	ppb		94
59)	Diethyl phthalate	9.06	149	1753155	44.26571	ppb		99
60)	4-Chlorophenyl phenyl ethe	9.18	204	858075	43.63670	ppb		93
61)	Fluorene	9.18	166	1831036	43.46881	ppb		100
62)	4-Nitroaniline	9.23	138	456231	47.60803	ppb		97
65)	4,6-Dinitro-2-methylphenol	9.26	198	200791	27.34576	ppb	#	72
66)	Diphenyl amine	9.33	169	2922120	86.27244	ppb		99
67)	n-Nitrosodiphenylamine	9.33	169	2922120	86.27244	ppb		99
68)	1,2-Diphenylhydrazine	9.36	77	1673160	39.89551	ppb		96
69)	4-Bromophenyl phenyl ether	9.75	248	482259	44.19572	ppb	#	81
70)	Hexachlorobenzene	9.82	284	505616	43.71807	ppb	#	79
71)	Atrazine	9.96	200	256234	23.35580	ppb		96
72)	Pentachlorophenol	10.06	266	293184	45.45715	ppb		98
73)	Phenanthrene	10.30	178	2712154	44.16611	ppb		99
74)	Anthracene	10.36	178	2788775	43.68588	ppb		99
75)	Carbazol	10.55	167	2467718	43.57218	ppb		98
76)	Di-n-butylphthalate	10.96	149	3177372	46.83096	ppb		99
77)	Fluoranthene	11.69	202	2857497	44.49851	ppb		97
79)	Benzidine	11.85	184	279735	15.74836	ppb		97
80)	Pyrene	11.95	202	2928448	44.37771	ppb		100
82)	Butyl benzylphthalate	12.72	149	1315914	44.65967	ppb		84
83)	3,3'-Dichlorobenzidine	13.33	252	899984	49.55239	ppb	#	96
84)	Benz (a) anthracene	13.35	228	2700853	44.17541	ppb		100
85)	Bis (2-ethylhexyl) phthala	13.37	149	2010642	45.96358	ppb		96
86)	Chrysene	13.39	228	2715020	43.77630	ppb		100
87)	Di-n-octylphthalate	14.10	149	3206922	45.56969	ppb		98
89)	Benzo (b) fluoranthene	14.58	252	2534303	44.59069	ppb		97
90)	Benzo (k) fluoranthene	14.62	252	2385190	41.33183	ppb		97
91)	Benzo (a) pyrene	15.01	252	2307450	43.11385	ppb		97
92)	Indeno (1,2,3-cd) pyrene	16.76	276	2510446	40.87230	ppb		99
93)	Dibenz (a,h) anthracene	16.80	278	2206822	41.14550	ppb		97
94)	Benzo (g,h,i) perylene	17.27	276	1993082	38.38257	ppb		99

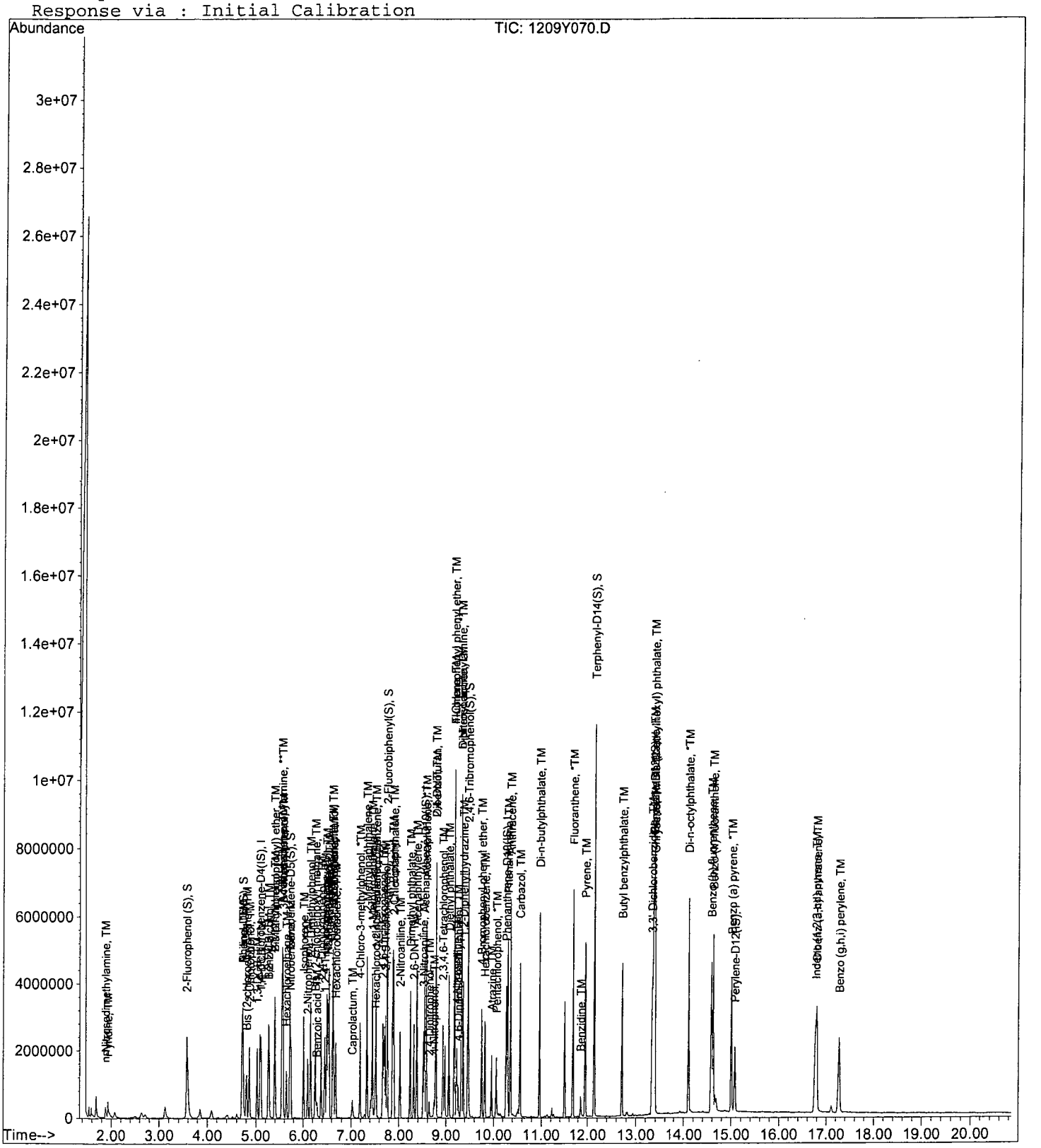
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y070.D Vial: 70
Acq On : 10 Dec 15 22:00 Operator: MA
Sample : 151204A LCS-1 1/1000 Inst : Yoda
Misc : soil Multiplr: 1.00

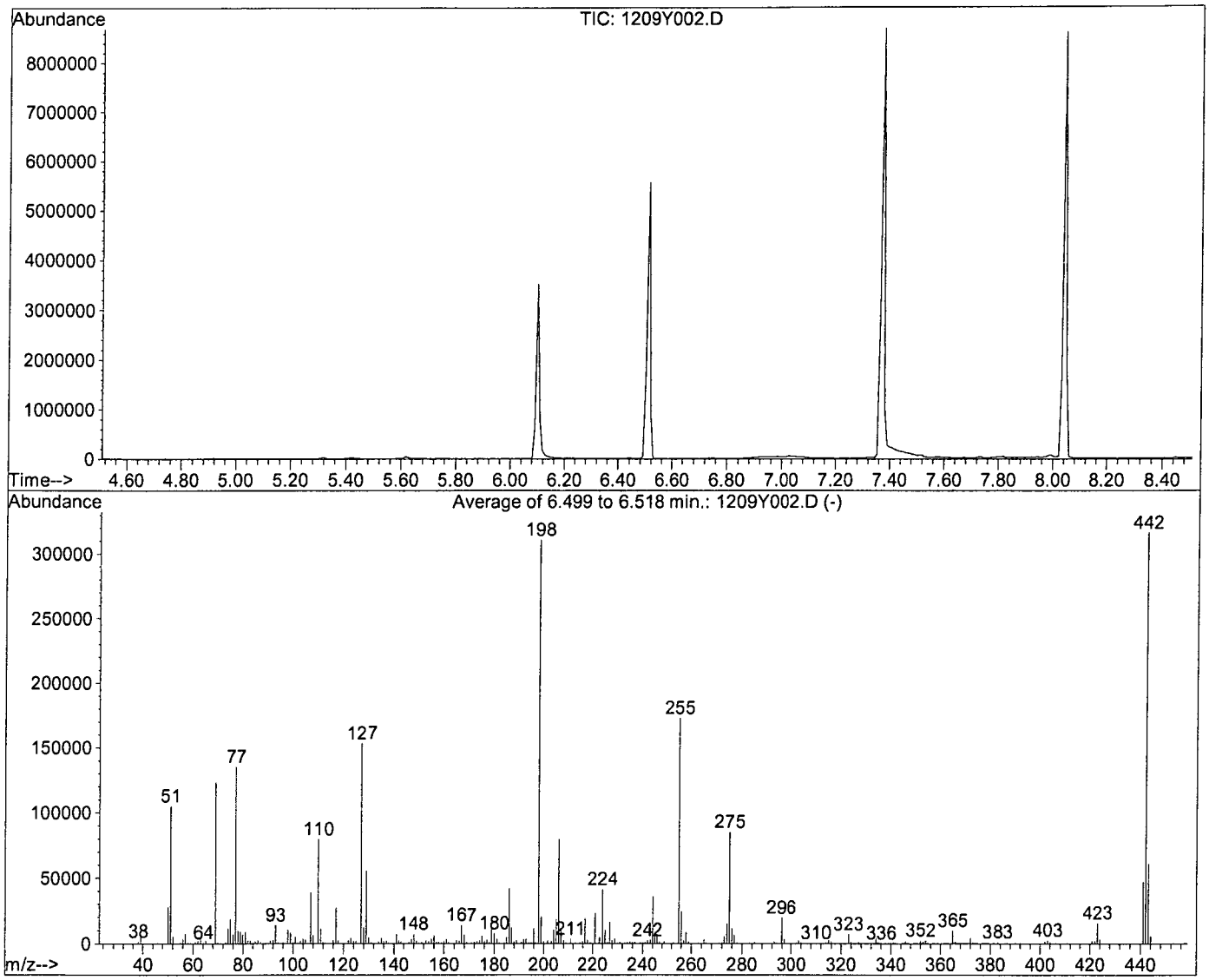
Quant Time: Dec 11 9:21 2015 Quant Results File: Y1209.RES

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y151209\1209Y002.D Vial: 2
Acq On : 9 Dec 15 13:38 Operator: MA
Sample : SV Tune 11/16/15 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 314, 315, 316; Background Corrected with Scan 310

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.9	105354	PASS
68	69	0.00	2	0.1	107	PASS
70	69	0.00	2	0.6	688	PASS
127	198	40	60	49.4	153463	PASS
197	198	0.00	1	0.2	526	PASS
198	198	100	100	100.0	310869	PASS
199	198	5	9	6.6	20465	PASS
275	198	10	30	27.4	85277	PASS
365	198	1	100	3.2	9831	PASS
441	443	0.01	100	77.2	47175	PASS
442	198	50	150	101.9	316741	PASS
443	442	17	23	19.3	61075	PASS

1209Y002.D Y1209.M Wed Dec 09 14:02:54 2015

Data File Name:	**1209Y002.D**
Data File Path:	**M:\YODA\DATA\Y151209**
Operator:	**MA**
Date Acquired:	**9 Dec 15 13:38**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 11/16/15**
Vial Number:	**2**
Instrument Name:	**Yoda**

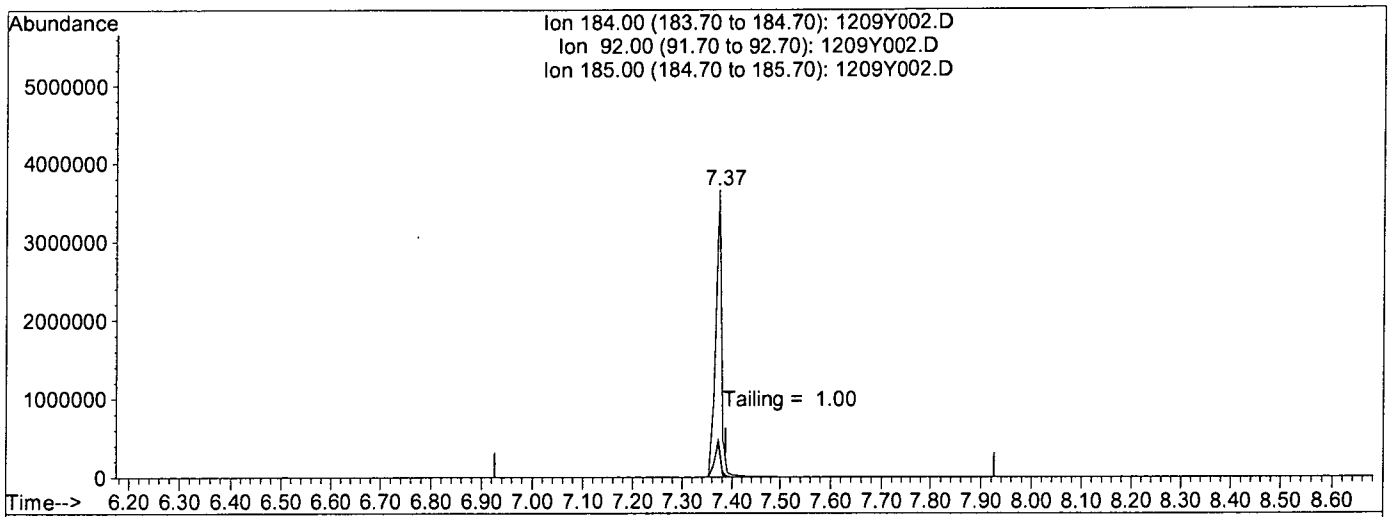
#	Name	Ret Time	Target Response
1)	DDT	8.10	68114000
2)	DDD	7.85	662360
3)	DDE	7.77	0

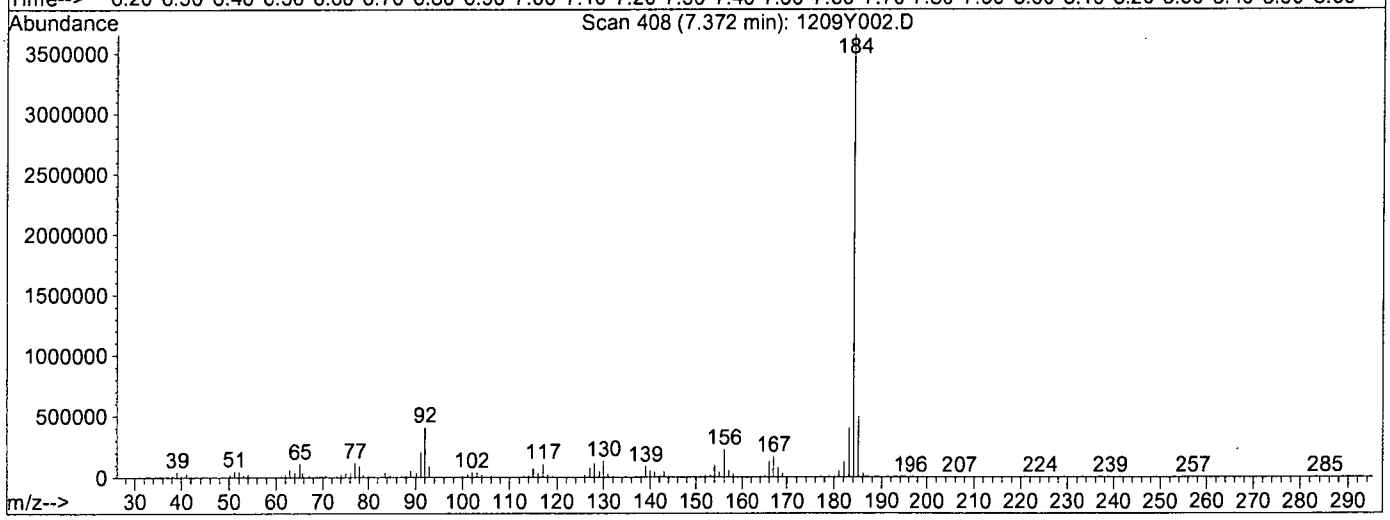
Breakdown **0.96**

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y002.D Vial: 2
Acq On : 9 Dec 15 13:38 Operator: MA
Sample : SV Tune 11/16/15 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 9 14:03 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151209\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Dec 02 09:20:25 2015
Response via : Single Level Calibration





TIC: 1209Y002.D

(6) Benzidine

7.38min 0.0000

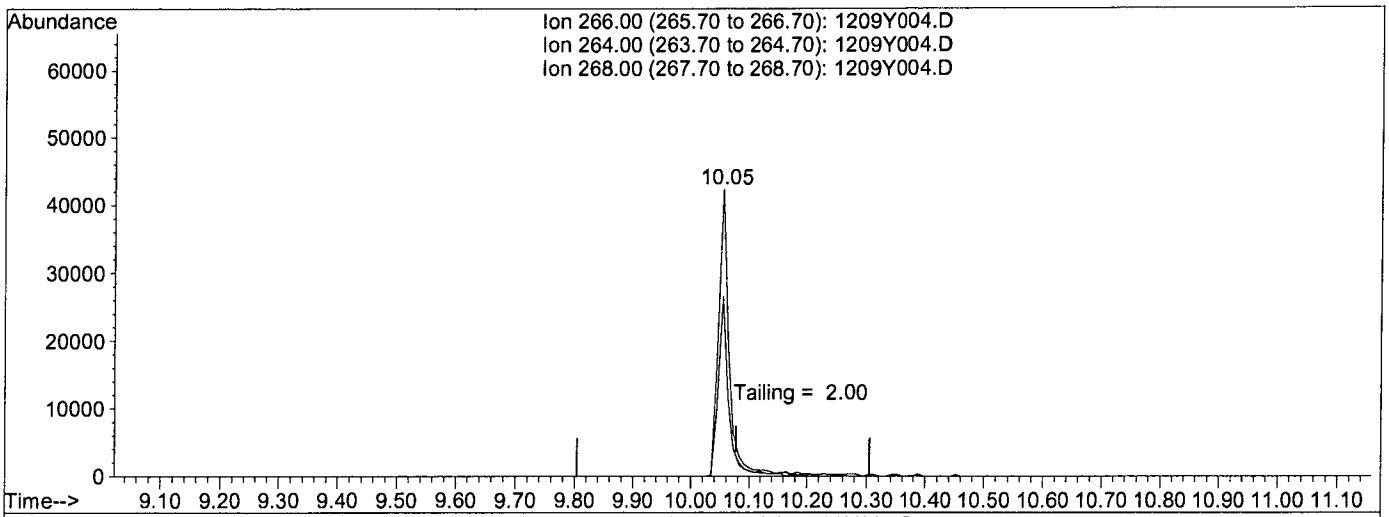
response 29790456

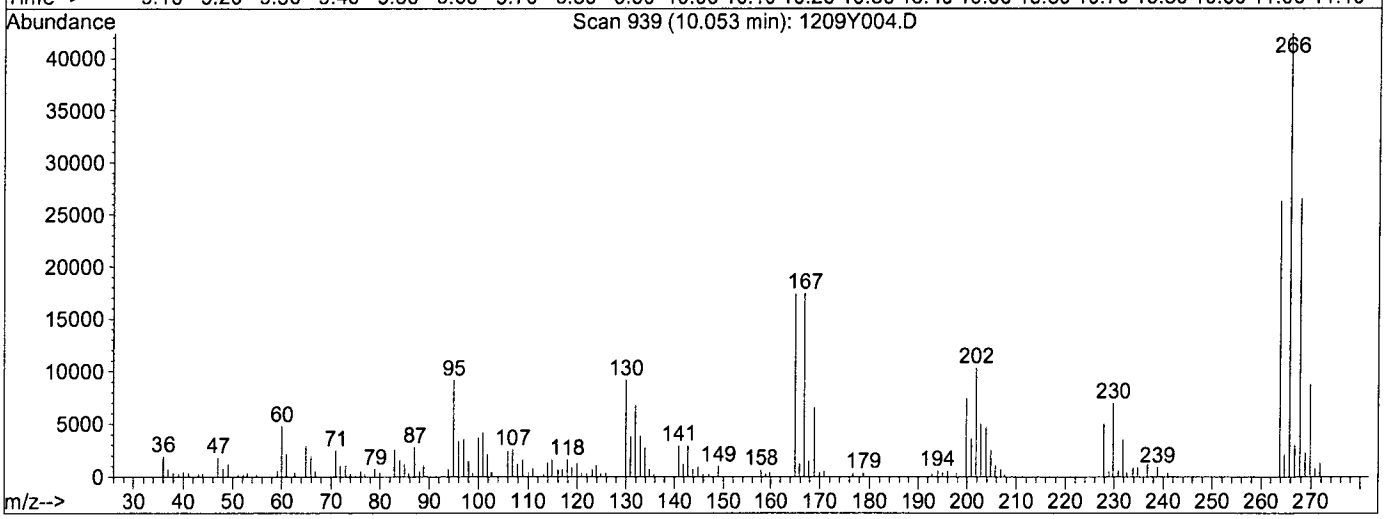
Ion	Exp%	Act%
184.00	100	100
92.00	6.30	11.54#
185.00	12.90	13.82
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y004.D Vial: 4
Acq On : 9 Dec 15 14:26 Operator: MA
Sample : 10ug/ml SVOC 12/09/15 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 9 14:54 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Dec 09 14:54:16 2015
Response via : Multiple Level Calibration





TIC: 1209Y004.D

(72) Pentachlorophenol (*TM)

10.05min 7.6210ppb

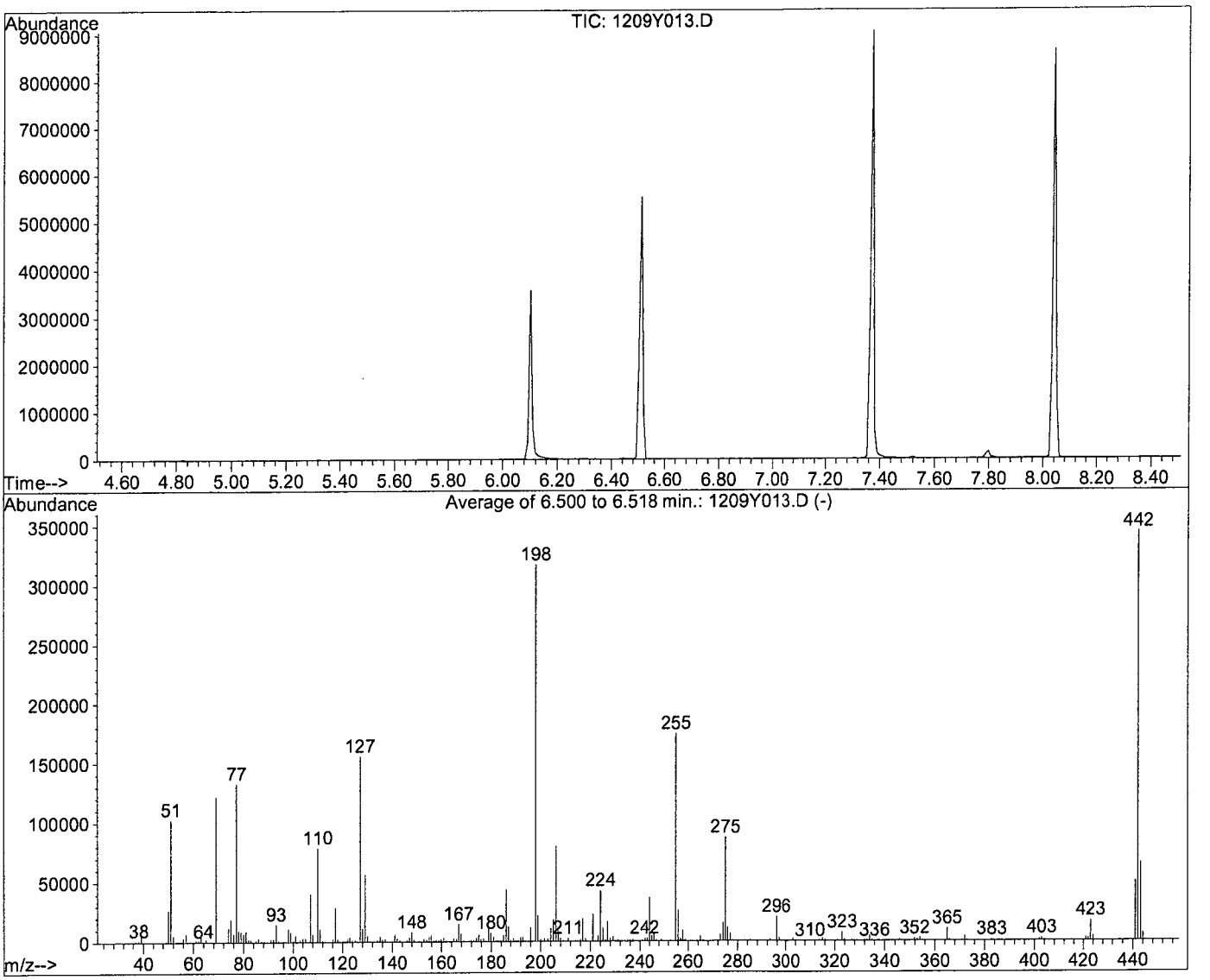
response 52764

Ion	Exp%	Act%
266.00	100	100
264.00	61.90	62.12
268.00	63.20	62.59
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y151209\1209Y013.D
Acq On : 9 Dec 15 18:43
Sample : SV TUNE 11/16/15
Misc : water

Vial: 13
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 314, 315, 316; Background Corrected with Scan 310

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.3	102518	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	338	PASS
127	198	40	60	49.1	155906	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	317309	PASS
199	198	5	9	6.8	21673	PASS
275	198	10	30	27.3	86627	PASS
365	198	1	100	3.2	10182	PASS
441	443	0.01	100	76.7	49772	PASS
442	198	50	150	108.5	344325	PASS
443	442	17	23	18.8	64858	PASS

Data File Name:	**1209Y013.D**
Data File Path:	**M:\YODA\DATA\Y151209**
Operator:	**MA**
Date Acquired:	**9 Dec 15 18:43**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 11/16/15**
Vial Number:	**13**
Instrument Name:	**Yoda**

#	Name	Ret Time	Target Response
1)	DDT	8.10	65751000
2)	DDD	7.85	1900780
3)	DDE	7.77	0

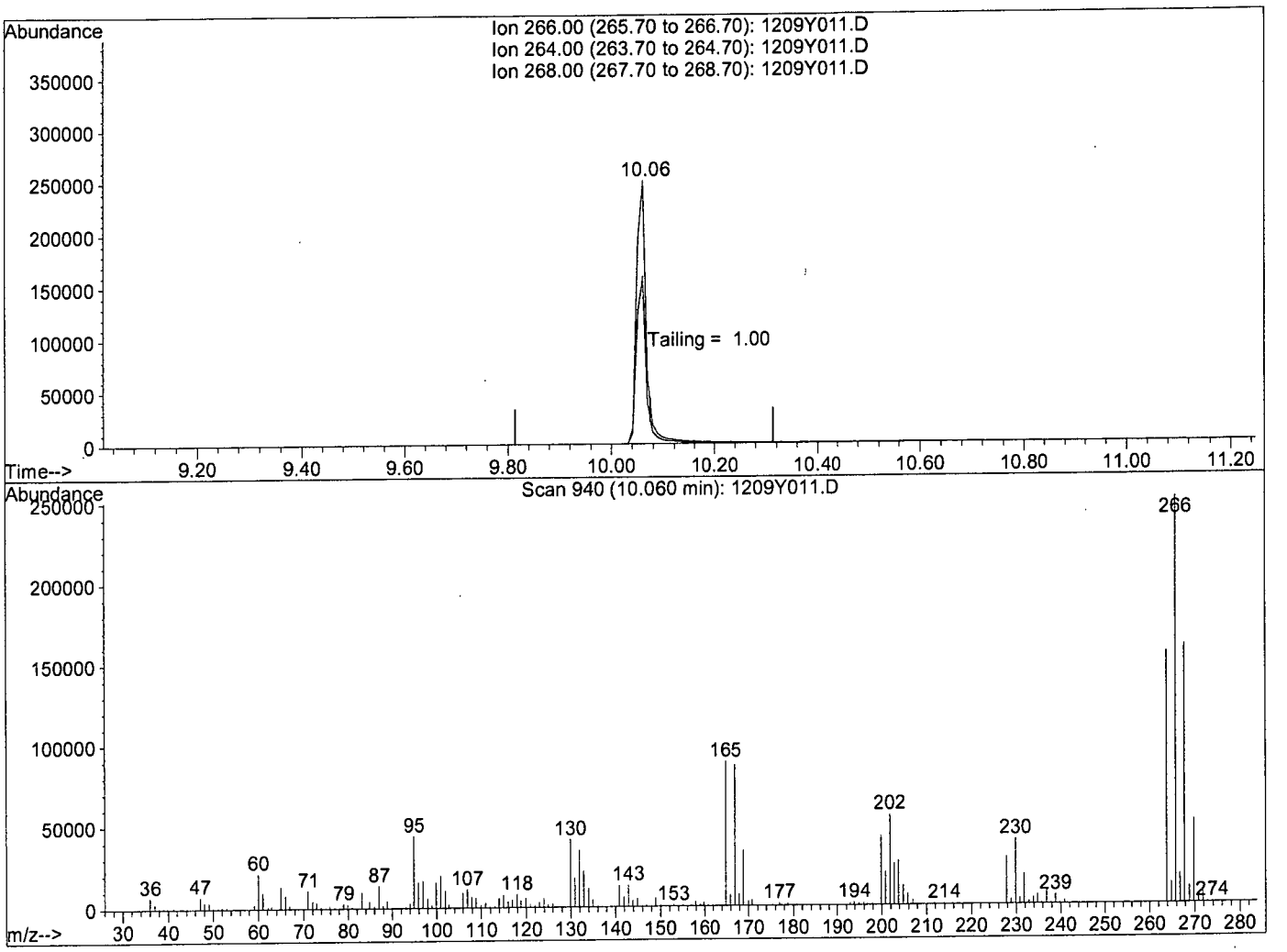
Breakdown **2.81**

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y011.D
Acq On : 9 Dec 15 18:03
Sample : 50ug/ml SVOC (SS STD10/23/15)
Misc :
Quant Time: Dec 10 10:40 2015

Vial: 11
Operator: MA
Inst : Yoda
Multiplr: 1.00
Quant Results File: temp.res

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Multiple Level Calibration



TIC: 1209Y011.D

(72) Pentachlorophenol (*TM)

10.06min 49.3391ppb

response 330373

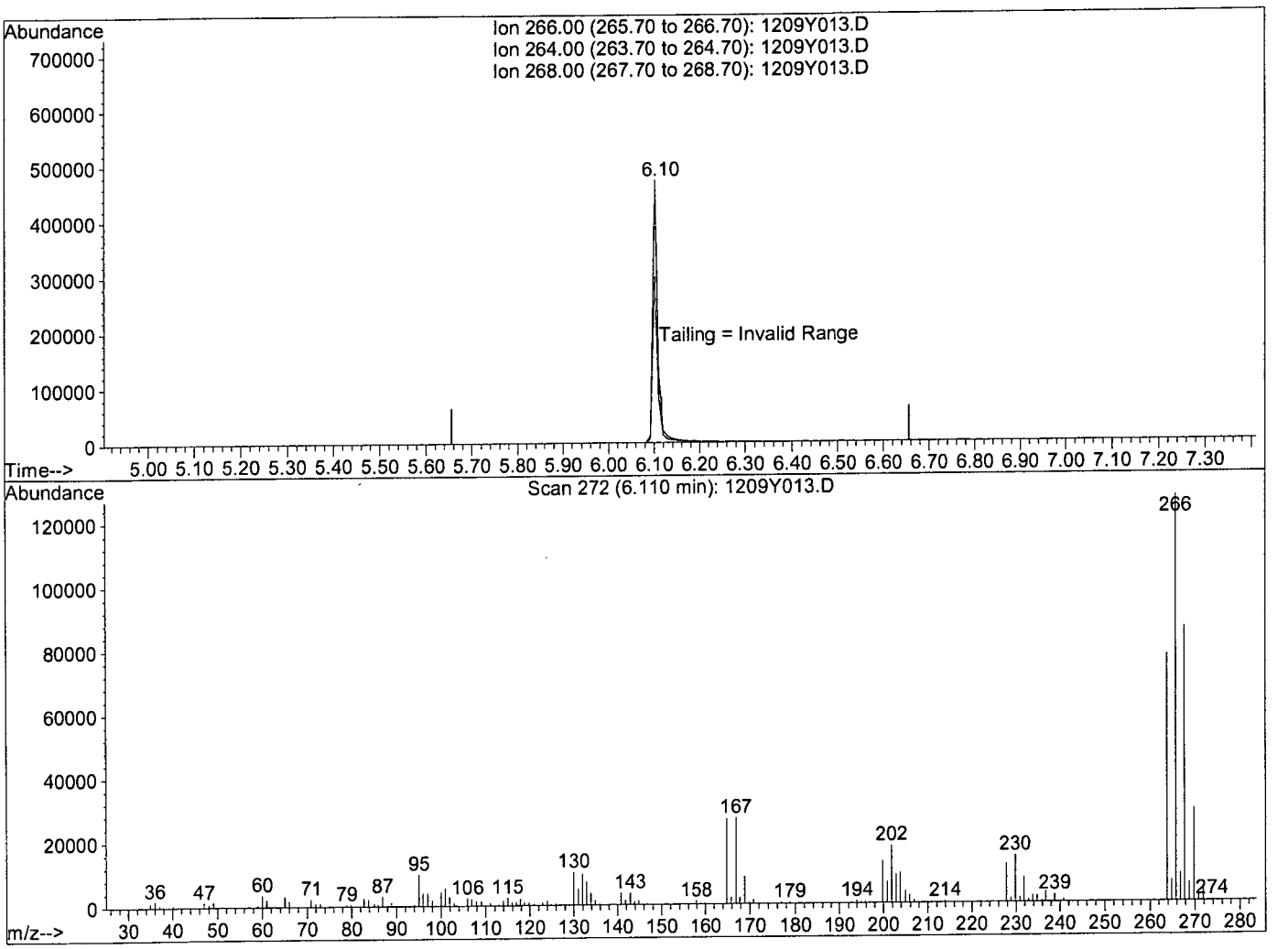
Ion	Exp%	Act%
266.00	100	100
264.00	62.00	61.96
268.00	62.60	63.69
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y013.D
Acq On : 9 Dec 15 18:43
Sample : SV TUNE 11/16/15
Misc : water
Quant Time: Dec 10 18:53 2015

Vial: 13
Operator: MA
Inst : Yoda
Multiplr: 1.00
Quant Results File: temp.res

Method : M:\YODA\DATA\Y151209\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Dec 02 09:20:25 2015
Response via : Single Level Calibration



TIC: 1209Y013.D

(5) Pentachlorophenol

6.11min 0.0000

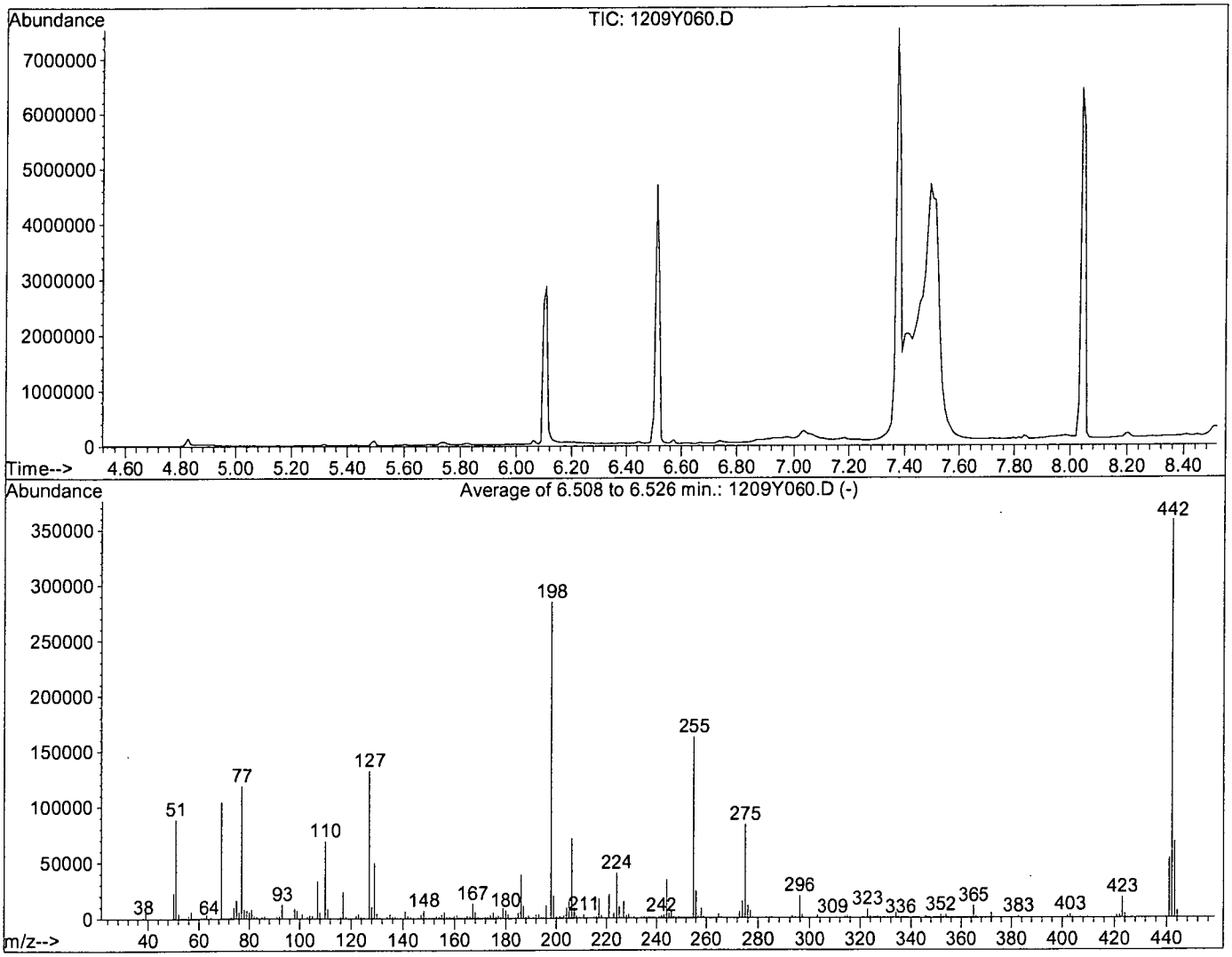
response 3740375

Ion	Exp%	Act%
266.00	100	100
264.00	62.10	61.86
268.00	63.80	63.69
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y151209\1209Y060.D
Acq On : 10 Dec 15 16:44
Sample : SV TUNE 11/16/15
Misc : soil

Vial: 60
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y151209\DFTPP2.M (Chemstation Integrator)
Title :



AutoFind: Scans 315, 316, 317; Background Corrected with Scan 311

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.2	88801	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	104905	PASS
70	69	0.00	2	0.6	630	PASS
127	198	40	60	46.6	132610	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	284745	PASS
199	198	5	9	6.9	19758	PASS
275	198	10	30	29.4	83804	PASS
365	198	1	100	3.7	10644	PASS
441	443	0.01	100	78.2	53197	PASS
442	198	40	150	125.9	358469	PASS
443	442	17	23	19.0	68044	PASS

1209Y060.D DFTPP2.M Fri Dec 11 09:14:57 2015

Data File Name:	**1209Y060.D**
Data File Path:	**M:\YODA\DATA\Y151209**
Operator:	**MA**
Date Acquired:	**10 Dec 2015 16:44**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 11/16/15**
Vial Number:	**60**
Instrument Name:	**Yoda**

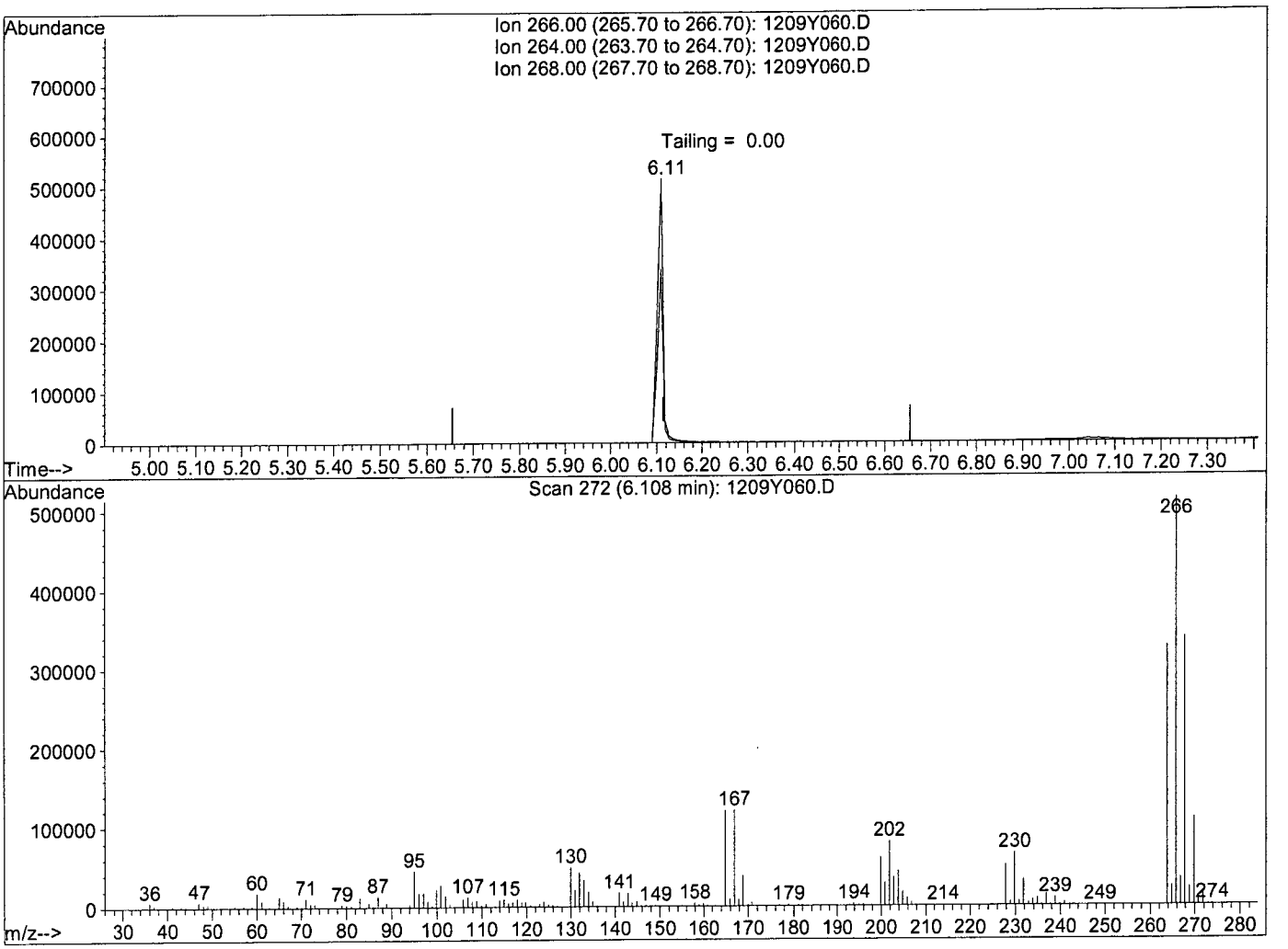
#	Name	Ret Time	Target Response
1)	DDT	8.10	71038100
2)	DDD	7.85	0
3)	DDE	7.77	0

Breakdown **0.00**

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y060.D Vial: 60
Acq On : 10 Dec 15 16:44 Operator: MA
Sample : SV TUNE 11/16/15 Inst : Yoda
Misc : soil Multiplr: 1.00
Quant Time: Dec 10 17:07 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151209\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Dec 02 09:20:25 2015
Response via : Single Level Calibration



TIC: 1209Y060.D

(5) Pentachlorophenol

6.11min 0.0000

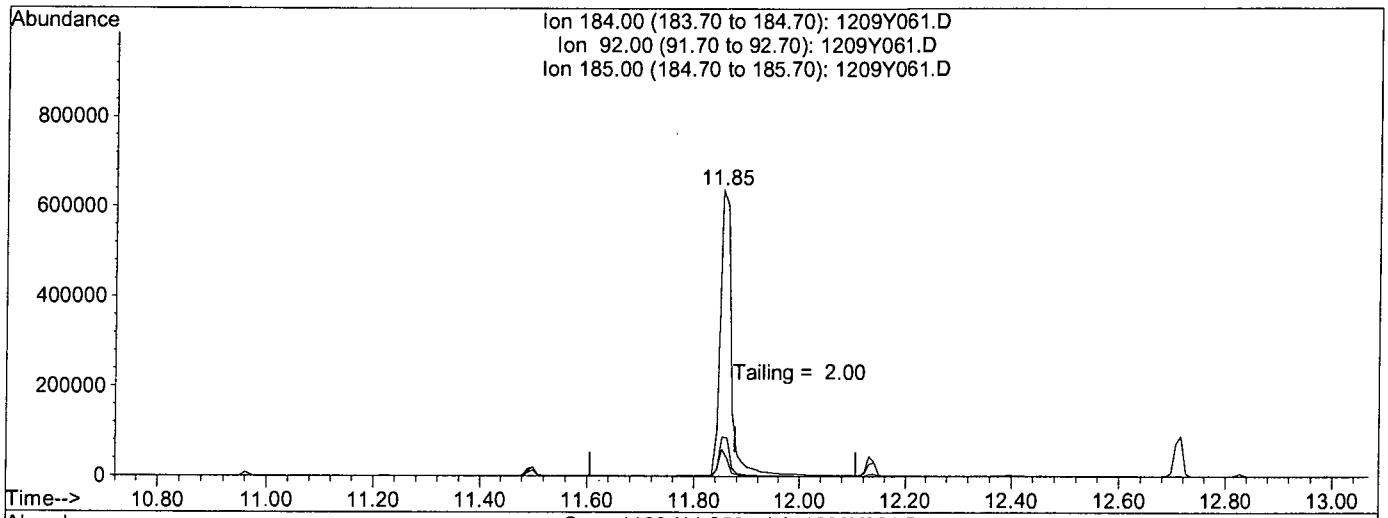
response 4567008

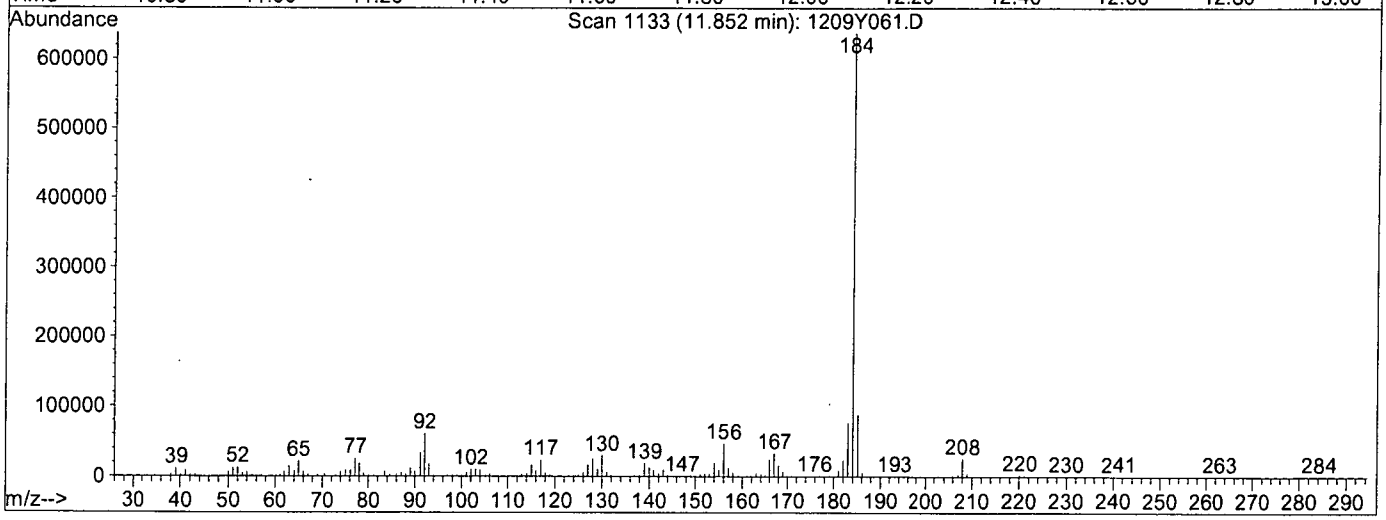
Ion	Exp%	Act%
266.00	100	100
264.00	62.10	63.81
268.00	63.80	63.70
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y151209\1209Y061.D Vial: 61
Acq On : 10 Dec 15 17:02 Operator: MA
Sample : CCV: 50ug/ml SVOC 12/09/15 Inst : Yoda
Misc : soil Multiplr: 1.00
Quant Time: Dec 10 17:23 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151209\Y1209.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 10 10:26:00 2015
Response via : Multiple Level Calibration





TIC: 1209Y061.D

(79) Benzidine (TM)

11.85min 50.2197ppb

response 939963

Ion	Exp%	Act%
184.00	100	100
92.00	7.60	9.52
185.00	13.80	13.77
0.00	0.00	0.00

Semivolatile (SV) Tuning Solution -L.H.						
PREP DATE:	11/16/15					
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	11/16/16					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile	1000	CL-5063-3518	11/16/15	11/16/16	1000
EM Science	Methylene Chloride		55006	11/06/14		19000
				Final Vol.		20000

8270 Full Scan Standard Curve

PREP D	12/09/15-L.H.												
8270 Standard Curve													
Exp:	10/23/16					5	10	20	40	50	60	80	100
		Conc.		Date									
Suppli	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
Absolut	8270 Stock	200	VAR	12/07/15	12/07/16	5	5	10	20	25	30	40	50
o2si	8270 BN:A	200/400	248285-35792	10/23/15	10/23/16	5	5	10	20	25	30	40	50
EM Scie	Methylene Chloride		55006	11/06/14		190	90	80	60	50	40	20	0
Supleco	CRM48902	2000	A10079V-3550	12/09/15	12/09/16	4	2	2	2	2	2	2	2
				Final Vol.		204	102	102	102	102	102	102	102

8270 Full Scan Second Source (SS)

PREP D	12/09/15-L.H.					
		Conc.		Date		
Suppli	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	10/23/15	10/23/16	25
EM Scie	Methylene Chloride		55006	11/06/14		75
Supleco	CRM48902	2000	A10079V-3550	11/13/15	11/13/16	2
				Final Vol.		102

Technical Chlordane 2nd Src

ompoun	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Final Vol.	Solvent
Technica	10µg/mL	ch Chld 2nd Src	250µL	0.25µg/mL	10mL	Hexane
Chlordan	Prep:	10/21/15				Lot:
	Exp:	10/20/16				050615C

Technical Chlordane Stock

ompoun	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Final Vol.	Solvent
Technica	100µg/mL	Absolute	1000µL	10µg/mL	10mL	Hexane
Chlordan	Part:	91824				Lot:
	Lot:	080211-33057				050615C
	Open:	12/09/15				
	Exp:	12/09/16		Prep:12/09/15 Exp:12/09/16 LH		

Technical Chlordane Calibration Curve

ompoun	Initial Conc.	Stock Src.	Aliquot	Final Conc.	Solvent	Final Vol
Technica	10µg/mL	Tech. Chld Stk	1A- 25µL	0.025 µg/mL	Hexane	10 mL
Chlordane		Prep: 12/09/15	1- 50uL	0.05µg/mL	Lot#	10 mL
		Exp:12/09/16	2- 100uL	0.10µg/mL	050615C	10 mL
			3- 250uL	0.25µg/mL		10 mL
			4- 500uL	0.50µg/mL		10 mL
			5- 750uL	0.75µg/mL		10 mL
		Prep:12/09/15 Exp:06/09/16 LH				

MOTOR OIL CCV 1000ppm

8270 Full Scan CCV

PREP DATE:	12/07/15-L.H.					
8270 Continuing Calibration Verification 50ug/ml						
Exp:	9/2/16					50
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Absolute	8270 Stock	200	VAR	10/23/15	10/23/16	50
o2si	8270 BN:A	200/400	248285-35792	10/23/15	10/23/16	50
EM Science	Methylene Chloride		55006	11/06/14		100
Supleco	CRM48902	2000	XA10079V-35505	11/13/15	11/13/16	4

Chlordane Spike	
Cat:	91824
Lot: 080211-33056	
OP:	12/07/15
Ex:	12/07/16

8270 SVOC Stock 10mL

8270 Stock/Spike Standard						
prep:	12/07/15-LH					
Exp:	12/07/16					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-35518	12/07/15	12/07/16	1000
Absolute	10002	2000	111114-35527	12/07/15	12/07/16	1000
Absolute	10004	2000	010815-35533	12/07/15	12/07/16	1000
Absolute	10005	2000	110314-35536	12/07/15	12/07/16	1000
Absolute	10006	2000	042915-35545	12/07/15	12/07/16	1000
Absolute	10007	2000	020515-35548	12/07/15	12/07/16	1000
Absolute	10018	2000	020315-35558	12/07/15	12/07/16	1000
Absolute	70023	1000	112114-35563	12/07/15	12/07/16	1000
Absolute	82705	2000	031215-35566	12/07/15	12/07/16	1000
Absolute	94552	2000	082914-35576	10/22/15	10/22/16	1000
				Final Vol.		10000

8270 PAH SIMPCP CCV

PREP DATE:	12/07/15-L.H.					
8270 PAH SIM Continuing Calibration Verification 5ug/ml						
Exp.DATE:	11/24/16					5
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	8270 PAH SIN	200	various	11/18/15	11/18/16	5
o2si	8270 BN:A	200/400	248285-35648	10/13/15	10/13/16	5
EM Science	Methylene Chloride		55006	11/06/14		190
Supelco	SIM SV Inter	125	XA10079V-34496	11/24/15	11/24/16	4
				Final Vol.		204

8270 SVOC Stock 10mL						
8270 Stock/Spike Standard						
prep:	12/07/15-LH					
Exp:	12/07/16					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-35518	12/07/15	12/07/16	1000
Absolute	10002	2000	111114-35527	12/07/15	12/07/16	1000
Absolute	10004	2000	010815-35533	12/07/15	12/07/16	1000
Absolute	10005	2000	110314-35536	12/07/15	12/07/16	1000
Absolute	10006	2000	042915-35545	12/07/15	12/07/16	1000
Absolute	10007	2000	020515-35548	12/07/15	12/07/16	1000
Absolute	10018	2000	020315-35558	12/07/15	12/07/16	1000
Absolute	70023	1000	112114-35563	12/07/15	12/07/16	1000
Absolute	82705	2000	031215-35566	12/07/15	12/07/16	1000
Absolute	94552	2000	082914-35576	10/22/15	10/22/16	1000
				Final Vol.		10000

8270 SVOC Stock 10mL 11/24/15						
8270 Stock/Spike Standard						
Exp:	11/24/16					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	53014-3551	11/24/15	11/24/16	1000
Absolute	10002	2000	11114-3552	11/24/15	11/24/16	1000
Absolute	10004	2000	10815-3553	11/24/15	11/24/16	1000
Absolute	10005	2000	10314-3553	11/24/15	11/24/16	1000
Absolute	10006	2000	42915-3554	11/24/15	11/24/16	1000
Absolute	10007	2000	20515-3554	11/24/15	11/24/16	1000
Absolute	10018	2000	20315-3555	11/24/15	11/24/16	1000
Absolute	70023	1000	12114-3556	11/24/15	11/24/16	1000
Absolute	82705	2000	31215-3556	11/24/15	11/24/16	1000
Absolute	94552	2000	82914-3557	11/24/15	11/24/16	1000

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	151202A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 11-24-15 EXP 1-21-16		Surrogate ID 1	8270 Surrogate 10-27-15 EXP 10-27-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/02/15 9:50	
Spiked ID 8			Ext. End Time:	12/02/15 14:40	
			GC Requires Extract By:	**12/03/15 0:00**	

pH1	2	2/02/15 10:00:00 AM	Water Bath Temp Criteria	78 °C
pH2	14	2/02/15 11:10:00 AM		
pH3				

Spiked By: DL **Date** 12/02/15 **Witnessed By:** DC **Date** 12/02/15

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	151202A Blk				1	1 equip	1000 E-WB7	1	2/1	12/02/15 9:50	
2	151202A LCS-1		0.250	1	1	1 equip	1000 E-WB7	1	2/1	12/02/15 9:50	
3	151202A LCSD-1		0.250	1	1	1 equip	1000 E-WB7	1	2/1	12/02/15 9:50	
4	AZ25347	AZ25347W04			1	1 equip	1000 E-WB7	1	2/1	12/02/15 16:10	78007
5	AZ25611	AZ25611W04			1	1 equip	1070 E-WB7	1	2/1	12/02/15 9:50	78053 RUSH 48HRS
6	AZ25612	AZ25612W04			1	1 equip	1050 E-WB7	1	2/1	12/02/15 9:50	78053 RUSH 48HRS

Key 12/03/15

Solvent and Lot#	
MC	55097
1+1 Sulfuric Acid	10-8-15
Acidified Na2SO4	11-18-15
B.Na2SO4	XC28D
10N NaOH	10-07-15
ph strips	HC 554612
Filter Paper	400098

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	12/3/15
Time	3:26
Refrigerator	GC-C

	Technician's Initials
Scanned By	DC
Sample Preparation	DC
Extraction	DC
Concentration	DC

Modified	12/03/15 3:13:35 PM

Reviewed By: Key **Date** 12/03/15

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	151204A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 11-24-15 exp 11-24-16		Surrogate ID 1	8270 Surrogate 10-27-15 exp 10-27-16	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	12/04/15 8:15	
Spiked ID 8			Ext. End Time:	12/04/15 13:55	
			GC Requires Extract By:	12/14/15 0:00	

pH1	2	12/04/15 8:25:00 AM	Water Bath Temp Criteria	75 °C
pH2	14	12/04/15 9:05:00 AM		
pH3				

Spiked By: IC **Date** 12/04/15 **Witnessed By:** DC **Date** 12/04/15

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	151204A Blk				1	1	1000	1	2/1	12/04/15 8:15	Fluid 1 Start Tumble 12/3/15@15:40 Temp 21
						equip	E-WB6				
2	151204A LCS-1		0.250	1	1	1	1000	1	2/1	12/04/15 8:15	End 12/4/15 12/4/15 @ 08:00 Temp: 21
						equip	E-WB6				
3	AZ25348	AZ25348S01			1	1	1000	1	2/1	12/04/15 8:15	78007 weight: 100.00g
						equip	E-WB6				

Key 12/04/15

Solvent and Lot#	
MC	55097
1+1 Sulfuric Acid	10-8-15
Acidified Na2SO4	11-18-15
B.Na2SO4	XC28D
10N NaOH	10-7-15
ph strips	HC 554612
Filter Paper	400098

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	12/4/15
Time	2:26
Refrigerator	GC-C

	Technician's Initials
Scanned By	KY
Sample Preparation	IC
Extraction	IC
Concentration	IC

Modified	12/04/15 2:11:30 PM

Reviewed By: Key **Date** 12/04/15

Injection Log

Directory: M:\YODA\DATA\Y151209\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1209Y002.D	1	SV Tune 11/16/15		9 Dec 15 13:38
3	1209Y003.D	1	5ug/ml SVOC 12/09/15		9 Dec 15 13:56
4	1209Y004.D	1	10ug/ml SVOC 12/09/15		9 Dec 15 14:26
5	1209Y005.D	1	20ug/ml SVOC 12/09/15		9 Dec 15 14:55
6	1209Y006.D	1	40ug/ml SVOC 12/09/15		9 Dec 15 15:35
7	1209Y007.D	1	50ug/ml SVOC 12/09/15		9 Dec 15 16:05
8	1209Y008.D	1	60ug/ml SVOC 12/09/15		9 Dec 15 16:34
9	1209Y009.D	1	80ug/ml SVOC 12/09/15		9 Dec 15 17:04
10	1209Y010.D	1	100ug/ml SVOC 12/09/15		9 Dec 15 17:33
11	1209Y011.D	1	50ug/ml SVOC (SS STD10/23/15)		9 Dec 15 18:03
13	1209Y013.D	1	SV TUNE 11/16/15	water	9 Dec 15 18:43
28	1209Y028.D	1	151202A BLK 1/1000	water	10 Dec 15 1:47
29	1209Y029.D	1	151202A LCS-1 1/1000	water	10 Dec 15 2:16
31	1209Y031.D	1	AZ25347W04 1/1000	water	10 Dec 15 3:14
60	1209Y060.D	1	SV TUNE 11/16/15	soil	10 Dec 15 16:44
61	1209Y061.D	1	CCV: 50ug/ml SVOC 12/09/15	soil	10 Dec 15 17:02
69	1209Y069.D	1	151204A BLK 1/1000	soil	10 Dec 15 21:31
70	1209Y070.D	1	151204A LCS-1 1/1000	soil	10 Dec 15 22:00
71	1209Y071.D	1	AZ25348S01 1/1000	soil	10 Dec 15 22:29

METALS

APPL, INC.

METALS
QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	80.0 U	300	80.0	27.4	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BARIUM (BA)	4.00 U	10.0	4.00	0.75	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BERYLLIUM (BE)	1.00 U	2.0	1.00	0.45	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BORON (B)	40.00 U	50.0	40.00	21.80	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CALCIUM (CA)	31.2 J	1000	75.0	27.5	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	COBALT (CO)	3.00 U	15.0	3.00	0.63	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	COPPER (CU)	4.00 U	15.0	4.00	1.71	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	IRON (FE)	25.0 U	100	25.0	21.0	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	LEAD (PB)	4.00 U	15.0	4.00	1.58	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	LITHIUM (LI)	0.80 U	1.0	0.80	0.40	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	NICKEL (NI)	3.00 U	40.0	3.00	0.42	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	VANADIUM (V)	4.00 U	15.0	4.00	0.97	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ZINC (ZN)	20.0 U	150	20.0	13.7	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ALUMINUM (AL) (DI	80.0 U	300	80.0	27.4	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ANTIMONY (SB) (DI	5.00 U	20.0	5.00	2.90	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ARSENIC (AS) (DIS	10.00 U	25.0	10.00	4.30	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BARIUM (BA) (DISS	4.00 U	10.0	4.00	0.75	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BERYLLIUM (BE) (D	1.00 U	2.0	1.00	0.45	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BORON (B) (DISSO	40.00 U	50.0	40.00	21.80	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	CADMIUM (CD) (DIS	3.00 U	5.0	3.00	0.51	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	CALCIUM (CA) (DIS	49.9 J	1000	75.0	27.5	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346

J = Estimated value.

Metals SC-Blank-REG MDLs
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CHROMIUM (CR) (D	4.00 U	15.0	4.00	1.37	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	COBALT (CO) (DISS	3.00 U	15.0	3.00	0.63	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	COPPER (CU) (DIS	4.00 U	15.0	4.00	1.71	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	IRON (FE) (DISSOL	25.0 U	100	25.0	21.0	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	LEAD (PB) (DISSOL	4.00 U	15.0	4.00	1.58	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	LITHIUM (LI) (DISSO	0.80 U	1.0	0.80	0.40	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	MAGNESIUM (MG) (	30.0 U	500	30.0	12.9	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	MANGANESE (MN) (	4.00 U	10.0	4.00	1.23	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	NICKEL (NI) (DISSO	3.00 U	40.0	3.00	0.42	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	POTASSIUM (K) (DI	500.0 U	3000	500.0	220.0	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SELENIUM (SE) (DI	10.00 U	22.0	10.00	4.60	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SILVER (AG) (DISS	0.90 U	15.0	0.90	0.85	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SODIUM (NA) (DISS	500.0 U	5000	500.0	111.1	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	THALLIUM (TL) (DIS	10.00 U	40.0	10.00	4.80	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	VANADIUM (V) (DIS	4.00 U	15.0	4.00	0.97	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ZINC (ZN) (DISSOL	20.0 U	150	20.0	13.7	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
7470A	MERCURY (HG) (DI	0.15 U	0.2	0.15	0.06	ug/L	12/11/15	12/14/15	#HGDOD-151211A-AZ25346
7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	12/05/15	12/07/15	HGDOD-151205B1-AZ25346
6010C-TC	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	BARIUM (BA)	4.00 U	50.0	4.00	0.75	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	LEAD (PB)	4.00 U	100.0	4.00	1.58	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	SELENIUM (SE)	5.00 U	50.0	5.00	3.17	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
7470A	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	12/14/15	12/15/15	#TCLPG-151214A1-AZ25347
6010C-TC	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	BARIUM (BA)	5.4 J	50.0	4.00	0.75	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348

J = Estimated value.

Metals SC-Blank-REG MDLs
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C-TC	LEAD (PB)	4.00 U	100.0	4.00	1.58	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	SELENIUM (SE)	3.5 J	50.0	5.00	3.17	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
7470A	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	12/14/15	12/15/15	#TCLPG-151214A-AZ25348

Metals SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL) (DISSOLVED)	2000	1880	94.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ANTIMONY (SB) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ARSENIC (AS) (DISSOLVED)	250	228	91.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BARIUM (BA) (DISSOLVED)	250	230	92.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BERYLLIUM (BE) (DISSOLVED)	50.0	46.1	92.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BORON (B) (DISSOLVED)	250	231	92.4	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CADMIUM (CD) (DISSOLVED)	50.0	46.8	93.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CALCIUM (CA) (DISSOLVED)	25000	23900	95.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CHROMIUM (CR) (DISSOLVED)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	COBALT (CO) (DISSOLVED)	250	232	92.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	COPPER (CU) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	IRON (FE) (DISSOLVED)	1000	930	93.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	LEAD (PB) (DISSOLVED)	250	236	94.4	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	LITHIUM (LI) (DISSOLVED)	100.0	95.8	95.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	MAGNESIUM (MG) (DISSOLVED)	25000	24300	97.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	MANGANESE (MN) (DISSOLVED	250	229	91.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	NICKEL (NI) (DISSOLVED)	250	239	95.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	POTASSIUM (K) (DISSOLVED)	5000	4590	91.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	SELENIUM (SE) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	SILVER (AG) (DISSOLVED)	100.0	86.7	86.7	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	THALLIUM (TL) (DISSOLVED)	250	230	92.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	VANADIUM (V) (DISSOLVED)	250	242	96.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ZINC (ZN) (DISSOLVED)	500	464	92.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ALUMINUM (AL)	2000	1980	99.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ANTIMONY (SB)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ARSENIC (AS)	250	241	96.4	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BARIUM (BA)	250	242	96.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BERYLLIUM (BE)	50.0	48.3	96.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BORON (B)	250	239	95.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CADMIUM (CD)	50.0	48.9	97.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CALCIUM (CA)	25000	25100	100	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CHROMIUM (CR)	250	247	98.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	COBALT (CO)	250	244	97.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	COPPER (CU)	250	236	94.4	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	IRON (FE)	1000	972	97.2	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	LEAD (PB)	250	247	98.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	LITHIUM (LI)	100.0	102	102	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	MAGNESIUM (MG)	25000	25300	101	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	MANGANESE (MN)	250	243	97.2	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	NICKEL (NI)	250	245	98.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	POTASSIUM (K)	5000	4780	95.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	SELENIUM (SE)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	SILVER (AG)	100.0	90.3	90.3	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	THALLIUM (TL)	250	240	96.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	VANADIUM (V)	250	256	102	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ZINC (ZN)	500	490	98.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 7470A	MERCURY (HG) (DISSOLVED)	4.00	4.0	100	80-120	12/11/15	12/14/15	#HGDOD-151211A-AZ25346
EPA 7470A	MERCURY (HG)	4.00	4.0	100	80-120	12/05/15	12/07/15	#HGDOD-151205B1-AZ25346

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6010C-TCL	ARSENIC (AS)	250	228	91.2	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	BARIUM (BA)	250	234	93.6	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	CADMIUM (CD)	50.0	47.5	95.0	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	CHROMIUM (CR)	250	239	95.6	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	LEAD (PB)	250	238	95.2	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	SELENIUM (SE)	250	222	88.8	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	SILVER (AG)	100.0	90.5	90.5	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6010C-TCL	ARSENIC (AS)	250	251	100	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	BARIUM (BA)	250	233	93.2	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	CADMIUM (CD)	50.0	48.0	96.0	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	CHROMIUM (CR)	250	231	92.4	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	LEAD (PB)	250	231	92.4	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	SELENIUM (SE)	250	256	102	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	SILVER (AG)	100.0	94.5	94.5	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 7470A	MERCURY (HG)	0.004	0.0041	103	80-120	12/14/15	12/15/15	#TCLPG-151214A-AZ25348

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 7470A	MERCURY (HG)	0.004	0.0039	97.5	80-120	12/14/15	12/15/15	#TCLPG-151214A1-AZ25347

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202993**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	ALUMINUM (AL) (DISS	2000	1270	3200	3230	96.5	98.0	0.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ANTIMONY (SB) (DISS	250	ND	233	239	93.2	95.6	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ARSENIC (AS) (DISSO	250	8.3	251	255	97.1	98.7	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BARIUM (BA) (DISSOL	250	14.8	255	260	96.1	98.1	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BERYLLIUM (BE) (DIS	50.0	1.3	49.9	50.4	97.2	98.2	1.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BORON (B) (DISSOLV	250	196	440	443	97.6	98.8	0.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CADMIUM (CD) (DISS	50.0	ND	47.7	47.4	95.4	94.8	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CALCIUM (CA) (DISSO	25000	17400	42000	42100	98.4	98.8	0.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CHROMIUM (CR) (DIS	250	0.74	238	243	94.9	96.9	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	COBALT (CO) (DISSOL	250	9.9	252	256	96.8	98.4	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	COPPER (CU) (DISSO	250	28.1	266	271	95.2	97.2	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	IRON (FE) (DISSOLVE	1000	18800	19800	20100	100	130 #	1.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	LEAD (PB) (DISSOLVE	250	ND	238	244	95.2	97.6	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	LITHIUM (LI) (DISSOLV	100.0	36.2	141	144	105	108	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	MAGNESIUM (MG) (DI	25000	6330	31500	31500	101	101	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	MANGANESE (MN) (DI	250	368	604	610	94.4	96.8	1.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	NICKEL (NI) (DISSOLV	250	19.3	257	262	95.1	97.1	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	POTASSIUM (K) (DISS	5000	6550	11300	11300	95.0	95.0	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202993**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	SELENIUM (SE) (DISS	250	1.1	233	239	92.8	95.2	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	SILVER (AG) (DISSOL	100.0	ND	89.0	92.2	89.0	92.2	3.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	THALLIUM (TL) (DISSO	250	ND	230	236	92.0	94.4	2.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	VANADIUM (V) (DISSO	250	1.0	251	256	100	102	2.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ZINC (ZN) (DISSOLVE	500	417	892	911	95.0	98.8	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ALUMINUM (AL)	2000	1320	3290	3270	98.5	97.5	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ANTIMONY (SB)	250	ND	244	239	97.6	95.6	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ARSENIC (AS)	250	8.6	266	263	103	102	1.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BARIUM (BA)	250	15.1	264	262	99.6	98.8	0.8	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BERYLLIUM (BE)	50.0	1.4	51.5	50.6	100	98.4	1.8	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BORON (B)	250	202	457	453	102	100	0.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CADMIUM (CD)	50.0	ND	48.8	48.0	97.6	96.0	1.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CALCIUM (CA)	25000	18100	43500	43300	102	101	0.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CHROMIUM (CR)	250	0.76	248	245	98.9	97.7	1.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	COBALT (CO)	250	10.5	262	258	101	99.0	1.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	COPPER (CU)	250	31.5	277	275	98.2	97.4	0.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	IRON (FE)	1000	20200	20700	20700	50.0 #	50.0 #	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	LEAD (PB)	250	ND	249	245	99.6	98.0	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346

= Recovery is outside QC limits.

Comments:

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202994**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	LITHIUM (LI)	100.0	37.1	145	145	108	108	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	MAGNESIUM (MG)	25000	6580	32600	32500	104	104	0.3	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	MANGANESE (MN)	250	392	631	627	95.6	94.0	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	NICKEL (NI)	250	20.3	267	266	98.7	98.3	0.4	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	POTASSIUM (K)	5000	6690	11600	11600	98.2	98.2	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	SELENIUM (SE)	250	1.1	244	245	97.2	97.6	0.4	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	SILVER (AG)	100.0	ND	93.3	92.1	93.3	92.1	1.3	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	THALLIUM (TL)	250	0.20	237	232	94.7	92.7	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	VANADIUM (V)	250	1.0	262	259	104	103	1.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ZINC (ZN)	500	430	929	924	99.8	98.8	0.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 7470A	MERCURY (HG) (DISS	4.00	ND	3.8	3.9	95.0	97.5	2.6	20	80-120	12/11/15	12/14/15	12/11/15	12/14/15	203130	AZ25346
EPA 7470A	MERCURY (HG)	4.00	ND	4.1	4.2	102	105	2.4	20	80-120	12/05/15	12/07/15	12/05/15	12/07/15	202932	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151214S-25348 MS - 203323**

Sample ID: AZ25348

Client ID: S67-SOIDW-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6010C-TCL	ARSENIC (AS)	250	2.1	239	240	94.8	95.2	0.4	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	BARIUM (BA)	250	342	580	584	95.2	96.8	0.7	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	CADMIUM (CD)	50.0	1.5	47.0	47.1	91.0	91.2	0.2	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	CHROMIUM (CR)	250	2.0	223	225	88.4	89.2	0.9	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	LEAD (PB)	250	12.6	230	230	87.0	87.0	0.0	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	SELENIUM (SE)	250	4.9	243	247	95.2	96.8	1.6	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	SILVER (AG)	100.0	ND	89.5	90.6	89.5	90.6	1.2	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
EPA 7470A	MERCURY (HG)	0.004	ND	0.0042	0.0041	105	103	2.4	15	80-120	12/14/15	12/15/15	12/14/15	12/15/15	203173	AZ25348

Comments: _____

METALS
Sample Data

APPL, INC.

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW13-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25342

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	5490	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	15.5	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	2.2	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	149	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	13.2	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	47500	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	28.4	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	274	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	21400	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	14.8	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	9630	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	539	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	25.2 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	5540	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	48700	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	2.6 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	3860	600	80.0	55.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	5460	300	80.0	27.4	ug/L	1	12/08/15	12/08/15

J = Estimated value.

Printed: 12/21/15 2:46:29 PM

APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW13-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25342

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	16.0	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	2.2	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	146	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVED	13.4	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	46900	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	29.5	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	277	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	21700	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	15.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	9460	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	537	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	25.9 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	5570	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	1.0 J	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	49200	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	2.4 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	3960	600	80.0	55.0	ug/L	4	12/08/15	12/09/15

J = Estimated value.

Printed: 12/21/15 2:46:29 PM

APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 18
Sample ID: AZ25342W01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 41
Date Collected: 12/08/15 3:29:53 PM
Data Type: Reprocessed on 12/09/15 9:03:59 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25342W01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	828786.1	100.5	%	0.33				0.33%
Y 371.029 Radial	50173.7	101.3	%	1.63				1.61%
Ag 338.289†	111.2	1.014	ug/L	0.9005	1.014	ug/L	0.9005	88.83%
Al 308.215†	2704.9	5461	ug/L	75.7	5461	ug/L	75.7	1.39%
As 188.979†	5.3	1.664	ug/L	1.0113	1.664	ug/L	1.0113	60.77%
B†	124.0	145.6	ug/L	2.11	145.6	ug/L	2.11	1.45%
Ba 233.527†	2640.1	15.97	ug/L	0.063	15.97	ug/L	0.063	0.39%
Be 313.107†	485.7	2.173	ug/L	0.0142	2.173	ug/L	0.0142	0.65%
Ca 315.887†	186325.6	46870	ug/L	206.6	46870	ug/L	206.6	0.44%
Cd 214.440†	3247.8	13.40	ug/L	0.034	13.40	ug/L	0.034	0.25%
Co 228.616†	1742.3	29.46	ug/L	0.298	29.46	ug/L	0.298	1.01%
Cr 267.716†	73.7	0.272	ug/L	0.0394	0.272	ug/L	0.0394	14.47%
Cu 327.393†	22679.5	276.9	ug/L	1.73	276.9	ug/L	1.73	0.63%
Fe 273.955†	297164.2	21690	ug/L	9.8	21690	ug/L	9.8	0.05%
K 766.490†	9583.0	5572	ug/L	42.0	5572	ug/L	42.0	0.75%
Mg 285.213†	69555.4	9461	ug/L	43.3	9461	ug/L	43.3	0.46%
Mn 257.610†	6940.4	536.6	ug/L	6.86	536.6	ug/L	6.86	1.28%
Mo 202.031†	-68.3	-0.538	ug/L	0.1340	-0.538	ug/L	0.1340	24.92%
Na 589.592†	321159.7	43580	ug/L	211.6	43580	ug/L	211.6	0.49%
Ni 231.604†	1111.7	25.94	ug/L	0.023	25.94	ug/L	0.023	0.09%
P 213.617†	2.2	0.575	ug/L	1.6444	0.575	ug/L	1.6444	285.88%
Pb 220.353†	7.4	0.662	ug/L	0.6752	0.662	ug/L	0.6752	102.04%
Sb 206.836†	-1.5	-0.360	ug/L	0.6023	-0.360	ug/L	0.6023	167.38%
Se 196.026†	-33.6	-3.177	ug/L	1.2607	-3.177	ug/L	1.2607	39.68%
Sn 189.927†	-126.0	-6.121	ug/L	1.0083	-6.121	ug/L	1.0083	16.47%
Sr 421.552†	128710.5	276.0	ug/L	1.16	276.0	ug/L	1.16	0.42%
Ti 337.279†	28.4	0.783	ug/L	0.4644	0.783	ug/L	0.4644	59.28%
Tl 190.801†	1.0	0.195	ug/L	0.7920	0.195	ug/L	0.7920	406.90%
V 292.402†	1301.5	2.448	ug/L	0.1144	2.448	ug/L	0.1144	4.67%
Zn 206.200†	94667.0	3425	ug/L	4.2	3425	ug/L	4.2	0.12%
Li 670.784†	216231.4	15.12	ug/L	0.032	15.12	ug/L	0.032	0.21%

Sequence No.: 13
Sample ID: AZ25342W01-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 38
Date Collected: 12/09/15 1:53:34 PM
Data Type: Reprocessed on 12/09/15 4:57:24 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25342W01-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	859998.8	101.2	%	0.83				0.82%
Y 371.029 Radial	55386.1	102.3	%	3.02				2.95%
Ag 338.289†	12.4	0.105	ug/L	0.9198	2.096	ug/L	18.3962	877.65%
Al 308.215†	158.5	309.0	ug/L	10.98	6180	ug/L	219.5	3.55%
As 188.979†	5.2	1.604	ug/L	0.0910	32.08	ug/L	1.820	5.67%
B†	14.4	12.87	ug/L	1.562	257.4	ug/L	31.24	12.14%
Ba 233.527†	173.4	1.042	ug/L	0.0515	20.83	ug/L	1.031	4.95%
Be 313.107†	35.5	0.147	ug/L	0.0054	2.943	ug/L	0.1087	3.69%
Ca 315.887†	11260.9	2620	ug/L	105.2	52410	ug/L	2104.1	4.01%
Cd 214.440†	270.6	1.154	ug/L	0.0284	23.09	ug/L	0.568	2.46%
Co 228.616†	89.4	1.499	ug/L	0.2201	29.98	ug/L	4.401	14.68%
Cr 267.716†	15.0	0.129	ug/L	0.3757	2.581	ug/L	7.5140	291.18%
Cu 327.393†	1348.4	15.26	ug/L	0.702	305.2	ug/L	14.04	4.60%
Fe 273.955†	17229.8	1231	ug/L	4.0	24620	ug/L	79.1	0.32%
K 766.490†	587.4	307.4	ug/L	12.08	6149	ug/L	241.6	3.93%
Mg 285.213†	4472.1	561.9	ug/L	18.06	11240	ug/L	361.3	3.21%
Mn 257.610†	412.6	29.96	ug/L	0.789	599.1	ug/L	15.78	2.63%
Mo 202.031†	38.4	1.393	ug/L	0.1764	27.86	ug/L	3.529	12.67%
Na 589.592†	18509.6	2462	ug/L	98.2	49240	ug/L	1964.6	3.99%
Ni 231.604†	69.5	1.591	ug/L	0.0933	31.81	ug/L	1.867	5.87%
P 213.617†	3.7	0.941	ug/L	1.6486	18.82	ug/L	32.971	175.23%
Pb 220.353†	14.3	1.238	ug/L	0.3427	24.76	ug/L	6.854	27.68%
Sb 206.836†	6.9	1.536	ug/L	0.8414	30.72	ug/L	16.827	54.78%
Se 196.026†	-4.0	-0.817	ug/L	2.7311	-16.34	ug/L	54.621	334.24%
Sn 189.927†	12.4	1.396	ug/L	0.1178	27.92	ug/L	2.356	8.44%
Sr 421.552†	8169.0	16.07	ug/L	0.535	321.5	ug/L	10.69	3.33%
Ti 337.279†	20.1	0.683	ug/L	0.3750	13.65	ug/L	7.499	54.93%
Tl 190.801†	12.7	2.442	ug/L	0.5872	48.83	ug/L	11.744	24.05%
V 292.402†	123.1	0.403	ug/L	0.0976	8.051	ug/L	1.9516	24.24%
Zn 206.200†	5402.0	197.9	ug/L	1.18	3959	ug/L	23.7	0.60%
Li 670.784†	10401.0	0.678	ug/L	0.0082	13.57	ug/L	0.165	1.22%

Sequence No.: 40
Sample ID: AZ25342W02
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 61
Date Collected: 12/08/15 5:13:50 PM
Data Type: Reprocessed on 12/09/15 9:04:28 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25342W02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	836103.7	101.4	%	1.08				1.07%
Y 371.029 Radial	49737.3	100.5	%	2.56				2.55%
Ag 338.289†	-22.1	-0.201	ug/L	0.5187	-0.201	ug/L	0.5187	257.80%
Al 308.215†	2716.9	5486	ug/L	145.3	5486	ug/L	145.3	2.65%
As 188.979†	5.3	1.657	ug/L	1.0339	1.657	ug/L	1.0339	62.41%
B†	129.5	148.5	ug/L	0.50	148.5	ug/L	0.50	0.33%
Ba 233.527†	2572.3	15.51	ug/L	0.293	15.51	ug/L	0.293	1.89%
Be 313.107†	495.0	2.215	ug/L	0.0540	2.215	ug/L	0.0540	2.44%
Ca 315.887†	188860.7	47510	ug/L	1427.4	47510	ug/L	1427.4	3.00%
Cd 214.440†	3192.1	13.16	ug/L	0.209	13.16	ug/L	0.209	1.59%
Co 228.616†	1681.0	28.41	ug/L	0.270	28.41	ug/L	0.270	0.95%
Cr 267.716†	82.2	0.359	ug/L	0.0628	0.359	ug/L	0.0628	17.50%
Cu 327.393†	22404.0	273.6	ug/L	0.40	273.6	ug/L	0.40	0.15%
Fe 273.955†	293603.8	21430	ug/L	85.2	21430	ug/L	85.2	0.40%
K 766.490†	9520.6	5535	ug/L	116.1	5535	ug/L	116.1	2.10%
Mg 285.213†	70818.0	9632	ug/L	280.4	9632	ug/L	280.4	2.91%
Mn 257.610†	6974.0	539.2	ug/L	13.28	539.2	ug/L	13.28	2.46%
Mo 202.031†	-27.4	0.815	ug/L	0.6482	0.815	ug/L	0.6482	79.54%
Na 589.592†	324740.4	44060	ug/L	1266.6	44060	ug/L	1266.6	2.87%
Ni 231.604†	1080.5	25.22	ug/L	0.349	25.22	ug/L	0.349	1.38%
P 213.617†	1.2	0.306	ug/L	1.9028	0.306	ug/L	1.9028	622.19%
Pb 220.353†	4.1	0.371	ug/L	0.0682	0.371	ug/L	0.0682	18.38%
Sb 206.836†	10.1	2.430	ug/L	0.2203	2.430	ug/L	0.2203	9.07%
Se 196.026†	-26.4	-0.994	ug/L	0.8209	-0.994	ug/L	0.8209	82.55%
Sn 189.927†	-115.6	-5.093	ug/L	0.4759	-5.093	ug/L	0.4759	9.34%
Sr 421.552†	129779.7	278.3	ug/L	8.27	278.3	ug/L	8.27	2.97%
Ti 337.279†	49.7	1.623	ug/L	0.5471	1.623	ug/L	0.5471	33.71%
Tl 190.801†	1.6	0.325	ug/L	0.1447	0.325	ug/L	0.1447	44.52%
V 292.402†	1314.6	2.598	ug/L	0.1534	2.598	ug/L	0.1534	5.91%
Zn 206.200†	92942.8	3363	ug/L	22.2	3363	ug/L	22.2	0.66%
Li 670.784†	211369.1	14.78	ug/L	0.049	14.78	ug/L	0.049	0.33%

Sequence No.: 24
Sample ID: AZ25342W02-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 47
Date Collected: 12/09/15 2:40:07 PM
Data Type: Reprocessed on 12/09/15 4:57:39 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25342W02-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	868844.3	102.3	%	0.26				0.25%
Y 371.029 Radial	55629.4	102.8	%	0.80				0.78%
Ag 338.289†	25.8	0.218	ug/L	0.9250	4.366	ug/L	18.5008	423.77%
Al 308.215†	158.6	309.1	ug/L	2.84	6183	ug/L	56.8	0.92%
As 188.979†	2.7	0.847	ug/L	0.1982	16.93	ug/L	3.964	23.40%
B†	16.8	14.33	ug/L	4.008	286.5	ug/L	80.17	27.98%
Ba 233.527†	170.9	1.029	ug/L	0.1581	20.58	ug/L	3.162	15.36%
Be 313.107†	29.9	0.124	ug/L	0.0126	2.478	ug/L	0.2528	10.20%
Ca 315.887†	11102.9	2584	ug/L	49.5	51670	ug/L	989.2	1.91%
Cd 214.440†	204.7	0.855	ug/L	0.0143	17.10	ug/L	0.285	1.67%
Co 228.616†	88.2	1.478	ug/L	0.0425	29.55	ug/L	0.850	2.88%
Cr 267.716†	-12.5	-0.161	ug/L	0.1170	-3.211	ug/L	2.3409	72.89%
Cu 327.393†	1276.5	14.45	ug/L	0.210	289.0	ug/L	4.20	1.46%
Fe 273.955†	16759.0	1197	ug/L	5.0	23950	ug/L	100.5	0.42%
K 766.490†	612.6	320.6	ug/L	68.09	6412	ug/L	1361.9	21.24%
Mg 285.213†	4401.3	553.0	ug/L	8.05	11060	ug/L	161.0	1.46%
Mn 257.610†	409.5	29.73	ug/L	0.377	594.5	ug/L	7.54	1.27%
Mo 202.031†	16.6	0.658	ug/L	0.3941	13.16	ug/L	7.883	59.91%
Na 589.592†	18301.3	2434	ug/L	55.0	48690	ug/L	1099.8	2.26%
Ni 231.604†	72.0	1.645	ug/L	0.1780	32.90	ug/L	3.560	10.82%
P 213.617†	6.7	1.728	ug/L	1.0639	34.55	ug/L	21.277	61.58%
Pb 220.353†	8.4	0.727	ug/L	0.9442	14.53	ug/L	18.883	129.93%
Sb 206.836†	8.2	1.848	ug/L	0.9756	36.96	ug/L	19.513	52.79%
Se 196.026†	-8.1	-2.086	ug/L	2.8708	-41.71	ug/L	57.415	137.64%
Sn 189.927†	5.3	0.766	ug/L	0.5966	15.32	ug/L	11.932	77.89%
Sr 421.552†	7923.2	15.59	ug/L	0.388	311.8	ug/L	7.76	2.49%
Ti 337.279†	1.7	0.041	ug/L	0.5195	0.823	ug/L	10.3908	>999.9%
Tl 190.801†	10.2	1.974	ug/L	0.7453	39.49	ug/L	14.906	37.75%
V 292.402†	117.5	0.367	ug/L	0.0127	7.348	ug/L	0.2549	3.47%
Zn 206.200†	5267.4	193.0	ug/L	0.78	3860	ug/L	15.7	0.41%
Li 670.784†	10015.5	0.653	ug/L	0.0149	13.06	ug/L	0.298	2.28%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW23-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25343

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	9270	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	30.6	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.8 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	152	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	14.9	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	48100	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	8.8 J	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	37.9	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	852	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	26200	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	2.6 J	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	26.5	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	9350	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	558	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	31.2 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	8650	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	76000	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	11.2 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	7070	600	80.0	55.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	5120	300	80.0	27.4	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW23-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25343

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	19.3	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.6 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	140	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVED	14.7	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	46600	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	36.1	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	807	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	20800	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	22.5	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	8590	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	532	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	29.1 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	7600	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	73200	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	6640	600	80.0	55.0	ug/L	4	12/08/15	12/09/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 19
Sample ID: AZ25343W02
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 12/08/15 3:34:48 PM
Data Type: Reprocessed on 12/09/15 9:04:00 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25343W02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	809331.2	98.11	%	0.474				0.48%
Y 371.029 Radial	49663.6	100.3	%	1.63				1.62%
Ag 338.289†	-80.7	-0.735	ug/L	0.7150	-0.735	ug/L	0.7150	97.22%
Al 308.215†	2536.1	5121	ug/L	83.1	5121	ug/L	83.1	1.62%
As 188.979†	6.2	1.937	ug/L	0.8834	1.937	ug/L	0.8834	45.61%
B†	119.6	140.2	ug/L	3.75	140.2	ug/L	3.75	2.68%
Ba 233.527†	3093.4	19.33	ug/L	0.087	19.33	ug/L	0.087	0.45%
Be 313.107†	355.6	1.591	ug/L	0.0279	1.591	ug/L	0.0279	1.76%
Ca 315.887†	185267.1	46610	ug/L	1138.9	46610	ug/L	1138.9	2.44%
Cd 214.440†	3512.4	14.66	ug/L	0.086	14.66	ug/L	0.086	0.59%
Co 228.616†	2133.6	36.15	ug/L	0.246	36.15	ug/L	0.246	0.68%
Cr 267.716†	119.8	0.749	ug/L	0.2261	0.749	ug/L	0.2261	30.18%
Cu 327.393†	66074.6	806.8	ug/L	1.80	806.8	ug/L	1.80	0.22%
Fe 273.955†	285219.9	20820	ug/L	77.4	20820	ug/L	77.4	0.37%
K 766.490†	13070.7	7599	ug/L	182.2	7599	ug/L	182.2	2.40%
Mg 285.213†	63152.7	8591	ug/L	188.7	8591	ug/L	188.7	2.20%
Mn 257.610†	6883.8	532.2	ug/L	9.07	532.2	ug/L	9.07	1.70%
Mo 202.031†	-66.2	-0.203	ug/L	0.0790	-0.203	ug/L	0.0790	39.00%
Na 589.592†	487223.0	66110	ug/L	1504.9	66110	ug/L	1504.9	2.28%
Ni 231.604†	1253.7	29.13	ug/L	0.061	29.13	ug/L	0.061	0.21%
P 213.617†	-22.8	-5.868	ug/L	1.4594	-5.868	ug/L	1.4594	24.87%
Pb 220.353†	7.0	0.632	ug/L	0.6479	0.632	ug/L	0.6479	102.59%
Sb 206.836†	-0.9	-0.216	ug/L	0.1793	-0.216	ug/L	0.1793	82.85%
Se 196.026†	-37.5	-5.280	ug/L	2.5805	-5.280	ug/L	2.5805	48.87%
Sn 189.927†	-126.8	-5.829	ug/L	1.3232	-5.829	ug/L	1.3232	22.70%
Sr 421.552†	125507.6	269.1	ug/L	6.21	269.1	ug/L	6.21	2.31%
Ti 337.279†	17.9	0.350	ug/L	0.3204	0.350	ug/L	0.3204	91.48%
Tl 190.801†	3.9	0.784	ug/L	0.3789	0.784	ug/L	0.3789	48.31%
V 292.402†	966.6	0.667	ug/L	0.2168	0.667	ug/L	0.2168	32.49%
Zn 206.200†	164897.3	5966	ug/L	10.4	5966	ug/L	10.4	0.17%
Li 670.784†	322036.1	22.51	ug/L	0.064	22.51	ug/L	0.064	0.29%

Sequence No.: 14
Sample ID: AZ25343W02-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 39
Date Collected: 12/09/15 1:57:41 PM
Data Type: Reprocessed on 12/09/15 4:57:26 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25343W02-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	861153.7	101.4	%	1.20				1.19%
Y 371.029 Radial	54957.0	101.5	%	1.13				1.12%
Ag 338.289†	-7.1	-0.060	ug/L	0.3867	-1.193	ug/L	7.7349	648.30%
Al 308.215†	148.1	288.6	ug/L	3.86	5773	ug/L	77.1	1.34%
As 188.979†	0.9	0.281	ug/L	0.5403	5.621	ug/L	10.8060	192.25%
B†	11.4	10.67	ug/L	3.773	213.3	ug/L	75.45	35.37%
Ba 233.527†	184.3	1.130	ug/L	0.0955	22.60	ug/L	1.911	8.45%
Be 313.107†	22.1	0.091	ug/L	0.0216	1.829	ug/L	0.4318	23.61%
Ca 315.887†	10925.0	2542	ug/L	72.4	50840	ug/L	1448.1	2.85%
Cd 214.440†	235.4	0.998	ug/L	0.0378	19.97	ug/L	0.756	3.78%
Co 228.616†	105.1	1.764	ug/L	0.1311	35.29	ug/L	2.622	7.43%
Cr 267.716†	3.1	0.003	ug/L	0.1261	0.061	ug/L	2.5225	>999.9%
Cu 327.393†	3746.0	42.40	ug/L	0.406	848.0	ug/L	8.13	0.96%
Fe 273.955†	15921.3	1138	ug/L	4.0	22750	ug/L	79.6	0.35%
K 766.490†	747.1	391.0	ug/L	21.85	7821	ug/L	437.1	5.59%
Mg 285.213†	3961.7	497.8	ug/L	5.08	9956	ug/L	101.6	1.02%
Mn 257.610†	398.3	28.92	ug/L	0.432	578.4	ug/L	8.65	1.49%
Mo 202.031†	12.4	0.530	ug/L	0.2613	10.60	ug/L	5.225	49.27%
Na 589.592†	27518.7	3660	ug/L	81.7	73210	ug/L	1634.2	2.23%
Ni 231.604†	77.9	1.774	ug/L	0.2167	35.49	ug/L	4.334	12.21%
P 213.617†	7.3	1.882	ug/L	1.4449	37.65	ug/L	28.897	76.75%
Pb 220.353†	13.5	1.168	ug/L	0.1791	23.36	ug/L	3.581	15.33%
Sb 206.836†	5.8	1.293	ug/L	0.1878	25.87	ug/L	3.757	14.52%
Se 196.026†	5.8	2.168	ug/L	2.2900	43.37	ug/L	45.800	105.61%
Sn 189.927†	2.2	0.506	ug/L	0.3336	10.12	ug/L	6.672	65.92%
Sr 421.552†	7684.4	15.12	ug/L	0.342	302.4	ug/L	6.83	2.26%
Ti 337.279†	-5.4	-0.207	ug/L	0.4083	-4.150	ug/L	8.1665	196.79%
Tl 190.801†	6.3	1.210	ug/L	0.5828	24.19	ug/L	11.656	48.18%
V 292.402†	94.4	0.252	ug/L	0.0960	5.033	ug/L	1.9202	38.15%
Zn 206.200†	9067.1	332.2	ug/L	3.52	6644	ug/L	70.3	1.06%
Li 670.784†	14909.4	0.972	ug/L	0.0120	19.45	ug/L	0.240	1.23%

Sequence No.: 41
Sample ID: AZ25343W01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 62
Date Collected: 12/08/15 5:18:45 PM
Data Type: Reprocessed on 12/09/15 9:04:29 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25343W01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	816150.3	98.93	%	0.691				0.70%
Y 371.029 Radial	49797.9	100.6	%	0.97				0.96%
Ag 338.289†	-47.8	-0.436	ug/L	1.1605	-0.436	ug/L	1.1605	266.37%
Al 308.215†	4590.7	9269	ug/L	39.7	9269	ug/L	39.7	0.43%
As 188.979†	11.3	3.545	ug/L	1.3462	3.545	ug/L	1.3462	37.98%
B†	114.7	152.0	ug/L	4.56	152.0	ug/L	4.56	3.00%
Ba 233.527†	4758.4	30.56	ug/L	0.156	30.56	ug/L	0.156	0.51%
Be 313.107†	394.9	1.767	ug/L	0.0209	1.767	ug/L	0.0209	1.18%
Ca 315.887†	191340.7	48130	ug/L	283.8	48130	ug/L	283.8	0.59%
Cd 214.440†	3639.2	14.93	ug/L	0.092	14.93	ug/L	0.092	0.62%
Co 228.616†	2257.7	37.92	ug/L	0.500	37.92	ug/L	0.500	1.32%
Cr 267.716†	861.9	8.834	ug/L	0.3944	8.834	ug/L	0.3944	4.46%
Cu 327.393†	69774.1	852.0	ug/L	4.22	852.0	ug/L	4.22	0.49%
Fe 273.955†	359042.1	26210	ug/L	118.3	26210	ug/L	118.3	0.45%
K 766.490†	14872.4	8647	ug/L	87.1	8647	ug/L	87.1	1.01%
Mg 285.213†	68685.4	9348	ug/L	45.7	9348	ug/L	45.7	0.49%
Mn 257.610†	7217.5	558.3	ug/L	1.57	558.3	ug/L	1.57	0.28%
Mo 202.031†	-78.8	-0.260	ug/L	0.3746	-0.260	ug/L	0.3746	144.25%
Na 589.592†	504541.4	68460	ug/L	391.5	68460	ug/L	391.5	0.57%
Ni 231.604†	1336.2	31.19	ug/L	0.117	31.19	ug/L	0.117	0.37%
P 213.617†	158.9	40.82	ug/L	4.763	40.82	ug/L	4.763	11.67%
Pb 220.353†	29.4	2.649	ug/L	1.2415	2.649	ug/L	1.2415	46.87%
Sb 206.836†	4.3	1.036	ug/L	1.5168	1.036	ug/L	1.5168	146.42%
Se 196.026†	-23.8	1.386	ug/L	3.9011	1.386	ug/L	3.9011	281.48%
Sn 189.927†	-135.3	-6.422	ug/L	0.6441	-6.422	ug/L	0.6441	10.03%
Sr 421.552†	130702.5	280.3	ug/L	1.95	280.3	ug/L	1.95	0.70%
Ti 337.279†	3128.9	123.2	ug/L	3.74	123.2	ug/L	3.74	3.04%
Tl 190.801†	1.8	0.364	ug/L	1.1134	0.364	ug/L	1.1134	305.53%
V 292.402†	3062.6	11.20	ug/L	0.178	11.20	ug/L	0.178	1.59%
Zn 206.200†	169811.5	6144	ug/L	38.7	6144	ug/L	38.7	0.63%
Li 670.784†	379329.1	26.52	ug/L	0.143	26.52	ug/L	0.143	0.54%

Sequence No.: 25
Sample ID: AZ25343W01-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 48
Date Collected: 12/09/15 2:44:15 PM
Data Type: Reprocessed on 12/09/15 4:57:40 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25343W01-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	858850.8	101.1	%	0.80				0.79%
Y 371.029 Radial	56100.1	103.6	%	2.24				2.16%
Ag 338.289†	-41.9	-0.354	ug/L	0.2750	-7.075	ug/L	5.4997	77.74%
Al 308.215†	227.5	443.5	ug/L	11.03	8871	ug/L	220.6	2.49%
As 188.979†	0.8	0.243	ug/L	1.1099	4.851	ug/L	22.1983	457.62%
B†	12.9	12.56	ug/L	1.868	251.3	ug/L	37.35	14.87%
Ba 233.527†	241.3	1.485	ug/L	0.0296	29.71	ug/L	0.593	1.99%
Be 313.107†	21.6	0.089	ug/L	0.0208	1.788	ug/L	0.4152	23.22%
Ca 315.887†	11384.6	2649	ug/L	104.7	52980	ug/L	2093.1	3.95%
Cd 214.440†	211.0	0.867	ug/L	0.0666	17.34	ug/L	1.331	7.68%
Co 228.616†	115.3	1.927	ug/L	0.3559	38.53	ug/L	7.117	18.47%
Cr 267.716†	10.6	0.081	ug/L	0.1189	1.623	ug/L	2.3778	146.46%
Cu 327.393†	3997.3	45.25	ug/L	1.269	904.9	ug/L	25.37	2.80%
Fe 273.955†	20413.7	1459	ug/L	39.9	29170	ug/L	798.0	2.74%
K 766.490†	895.1	468.5	ug/L	34.29	9370	ug/L	685.9	7.32%
Mg 285.213†	4255.8	535.0	ug/L	10.82	10700	ug/L	216.4	2.02%
Mn 257.610†	420.3	30.53	ug/L	0.299	610.6	ug/L	5.97	0.98%
Mo 202.031†	11.7	0.529	ug/L	0.3502	10.58	ug/L	7.005	66.20%
Na 589.592†	28558.6	3799	ug/L	142.2	75980	ug/L	2843.7	3.74%
Ni 231.604†	88.1	2.013	ug/L	0.0873	40.26	ug/L	1.745	4.34%
P 213.617†	9.2	2.356	ug/L	1.2458	47.13	ug/L	24.916	52.87%
Pb 220.353†	7.8	0.673	ug/L	0.7250	13.46	ug/L	14.501	107.73%
Sb 206.836†	4.1	0.916	ug/L	0.1830	18.33	ug/L	3.660	19.97%
Se 196.026†	-0.1	0.482	ug/L	2.3204	9.639	ug/L	46.4072	481.44%
Sn 189.927†	1.3	0.445	ug/L	0.7341	8.900	ug/L	14.6815	164.96%
Sr 421.552†	8047.4	15.83	ug/L	0.935	316.7	ug/L	18.70	5.91%
Ti 337.279†	87.2	3.029	ug/L	0.2002	60.58	ug/L	4.005	6.61%
Tl 190.801†	7.1	1.376	ug/L	1.0369	27.52	ug/L	20.737	75.34%
V 292.402†	199.0	0.737	ug/L	0.0469	14.74	ug/L	0.937	6.36%
Zn 206.200†	9644.8	353.4	ug/L	6.35	7068	ug/L	127.0	1.80%
Li 670.784†	17207.6	1.122	ug/L	0.0338	22.45	ug/L	0.677	3.02%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW22-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25344

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	50.0 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	61.4	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	139	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	16200	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	7.1 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	6.3 J	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	28700	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	18.3	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	1.0	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	6250	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	640	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	1.7 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	4710	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	91900	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	88.6 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	30.7 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
ARF: 78007
Sample ID: S67-MW22-112015
APPL ID: AZ25344
Sample Collection Date: 11/20/15

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	59.5	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	145	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVED	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	17000	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	6.6 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	4.00 U	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	27000	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	1.2	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	6160	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	624	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	1.7 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	4880	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	104000	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	77.9 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 20
Sample ID: AZ25344W02
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 12/08/15 3:39:40 PM
Data Type: Reprocessed on 12/09/15 9:04:01 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25344W02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	793973.9	96.24	%	0.706				0.73%
Y 371.029 Radial	48134.1	97.22	%	1.231				1.27%
Ag 338.289†	78.8	0.719	ug/L	0.3762	0.719	ug/L	0.3762	52.35%
Al 308.215†	15.2	30.67	ug/L	2.639	30.67	ug/L	2.639	8.61%
As 188.979†	8.3	2.602	ug/L	1.2289	2.602	ug/L	1.2289	47.23%
B†	98.2	145.1	ug/L	1.55	145.1	ug/L	1.55	1.07%
Ba 233.527†	8804.9	59.54	ug/L	0.337	59.54	ug/L	0.337	0.57%
Be 313.107†	34.0	0.152	ug/L	0.0227	0.152	ug/L	0.0227	14.96%
Ca 315.887†	67608.7	17000	ug/L	231.3	17000	ug/L	231.3	1.36%
Cd 214.440†	304.5	-0.387	ug/L	0.0699	-0.387	ug/L	0.0699	18.07%
Co 228.616†	409.7	6.643	ug/L	0.2800	6.643	ug/L	0.2800	4.21%
Cr 267.716†	41.6	-0.034	ug/L	0.0817	-0.034	ug/L	0.0817	237.50%
Cu 327.393†	-18.7	-0.229	ug/L	0.1834	-0.229	ug/L	0.1834	80.14%
Fe 273.955†	370127.2	27020	ug/L	83.3	27020	ug/L	83.3	0.31%
K 766.490†	8400.7	4884	ug/L	42.7	4884	ug/L	42.7	0.87%
Mg 285.213†	45190.4	6162	ug/L	73.9	6162	ug/L	73.9	1.20%
Mn 257.610†	8063.6	623.9	ug/L	5.19	623.9	ug/L	5.19	0.83%
Mo 202.031†	-60.3	-0.029	ug/L	0.3403	-0.029	ug/L	0.3403	>999.9%
Na 589.592†	698844.7	94830	ug/L	2938.4	94830	ug/L	2938.4	3.10%
Ni 231.604†	36.0	1.690	ug/L	0.2980	1.690	ug/L	0.2980	17.63%
P 213.617†	-7.3	-1.871	ug/L	0.5197	-1.871	ug/L	0.5197	27.77%
Pb 220.353†	1.7	0.156	ug/L	0.4305	0.156	ug/L	0.4305	275.67%
Sb 206.836†	-2.1	-0.501	ug/L	0.1485	-0.501	ug/L	0.1485	29.62%
Se 196.026†	-32.6	-0.347	ug/L	2.4729	-0.347	ug/L	2.4729	711.97%
Sn 189.927†	-62.0	-2.984	ug/L	0.4040	-2.984	ug/L	0.4040	13.54%
Sr 421.552†	47970.9	102.9	ug/L	1.48	102.9	ug/L	1.48	1.43%
Ti 337.279†	-15.1	-0.830	ug/L	0.2673	-0.830	ug/L	0.2673	32.19%
Tl 190.801†	-3.3	-0.671	ug/L	0.2427	-0.671	ug/L	0.2427	36.18%
V 292.402†	921.6	-0.812	ug/L	0.2081	-0.812	ug/L	0.2081	25.64%
Zn 206.200†	2152.1	77.86	ug/L	0.223	77.86	ug/L	0.223	0.29%
Li 670.784†	16745.2	1.171	ug/L	0.0130	1.171	ug/L	0.0130	1.11%

Sequence No.: 15
Sample ID: AZ25344W02-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 40
Date Collected: 12/09/15 2:01:47 PM
Data Type: Reprocessed on 12/09/15 4:57:27 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25344W02-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	857757.1	101.0	%	0.84				0.83%
Y 371.029 Radial	55150.7	101.9	%	2.18				2.14%
Ag 338.289†	55.0	0.465	ug/L	0.5388	9.298	ug/L	10.7760	115.90%
Al 308.215†	4.2	8.219	ug/L	5.8630	164.4	ug/L	117.26	71.33%
As 188.979†	-0.2	-0.054	ug/L	0.1035	-1.086	ug/L	2.0706	190.60%
B†	12.1	12.11	ug/L	3.212	242.3	ug/L	64.25	26.52%
Ba 233.527†	491.6	3.238	ug/L	0.0942	64.76	ug/L	1.884	2.91%
Be 313.107†	3.9	0.016	ug/L	0.0021	0.320	ug/L	0.0418	13.03%
Ca 315.887†	3983.1	926.6	ug/L	23.76	18530	ug/L	475.3	2.56%
Cd 214.440†	53.9	0.151	ug/L	0.0445	3.029	ug/L	0.8895	29.37%
Co 228.616†	9.7	0.145	ug/L	0.1405	2.904	ug/L	2.8099	96.74%
Cr 267.716†	-12.4	-0.156	ug/L	0.0725	-3.116	ug/L	1.4508	46.55%
Cu 327.393†	-27.9	-0.316	ug/L	0.0415	-6.313	ug/L	0.8305	13.16%
Fe 273.955†	20199.0	1443	ug/L	1.8	28860	ug/L	36.2	0.13%
K 766.490†	462.2	241.9	ug/L	35.49	4838	ug/L	709.7	14.67%
Mg 285.213†	2742.5	345.4	ug/L	8.13	6907	ug/L	162.6	2.35%
Mn 257.610†	451.6	32.81	ug/L	1.051	656.3	ug/L	21.01	3.20%
Mo 202.031†	7.5	0.358	ug/L	0.2279	7.170	ug/L	4.5588	63.58%
Na 589.592†	38901.9	5175	ug/L	166.4	103500	ug/L	3328.0	3.22%
Ni 231.604†	7.1	0.205	ug/L	0.1935	4.101	ug/L	3.8704	94.38%
P 213.617†	-1.6	-0.415	ug/L	1.1303	-8.305	ug/L	22.6054	272.18%
Pb 220.353†	11.6	1.004	ug/L	0.4475	20.08	ug/L	8.951	44.57%
Sb 206.836†	5.5	1.241	ug/L	0.3084	24.83	ug/L	6.168	24.84%
Se 196.026†	2.3	1.274	ug/L	3.0809	25.49	ug/L	61.618	241.75%
Sn 189.927†	15.7	1.531	ug/L	0.4349	30.61	ug/L	8.699	28.42%
Sr 421.552†	2950.7	5.806	ug/L	0.4191	116.1	ug/L	8.38	7.22%
Ti 337.279†	4.0	0.127	ug/L	0.7713	2.534	ug/L	15.4261	608.79%
Tl 190.801†	4.6	0.877	ug/L	0.8203	17.54	ug/L	16.406	93.53%
V 292.402†	103.1	0.234	ug/L	0.0542	4.686	ug/L	1.0847	23.15%
Zn 206.200†	161.3	5.909	ug/L	0.0737	118.2	ug/L	1.47	1.25%
Li 670.784†	912.8	0.060	ug/L	0.0109	1.191	ug/L	0.2180	18.31%

Sequence No.: 42
Sample ID: AZ25344W01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 12/08/15 5:23:37 PM
Data Type: Reprocessed on 12/09/15 9:04:31 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25344W01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	803837.7	97.44	%	0.136				0.14%
Y 371.029 Radial	48957.5	98.88	%	1.665				1.68%
Ag 338.289†	-27.6	-0.252	ug/L	0.6335	-0.252	ug/L	0.6335	251.32%
Al 308.215†	24.8	49.98	ug/L	3.773	49.98	ug/L	3.773	7.55%
As 188.979†	9.9	3.113	ug/L	1.2294	3.113	ug/L	1.2294	39.49%
B†	81.6	138.7	ug/L	0.39	138.7	ug/L	0.39	0.28%
Ba 233.527†	9093.3	61.39	ug/L	0.229	61.39	ug/L	0.229	0.37%
Be 313.107†	37.1	0.166	ug/L	0.0049	0.166	ug/L	0.0049	2.97%
Ca 315.887†	64338.6	16180	ug/L	470.4	16180	ug/L	470.4	2.91%
Cd 214.440†	315.1	-0.441	ug/L	0.0244	-0.441	ug/L	0.0244	5.52%
Co 228.616†	434.7	7.062	ug/L	0.0927	7.062	ug/L	0.0927	1.31%
Cr 267.716†	13.5	-0.342	ug/L	0.1555	-0.342	ug/L	0.1555	45.46%
Cu 327.393†	517.2	6.316	ug/L	0.2616	6.316	ug/L	0.2616	4.14%
Fe 273.955†	393314.4	28710	ug/L	122.5	28710	ug/L	122.5	0.43%
K 766.490†	8104.0	4712	ug/L	97.3	4712	ug/L	97.3	2.06%
Mg 285.213†	45805.4	6247	ug/L	169.8	6247	ug/L	169.8	2.72%
Mn 257.610†	8275.5	640.4	ug/L	11.26	640.4	ug/L	11.26	1.76%
Mo 202.031†	-65.4	-0.094	ug/L	0.3671	-0.094	ug/L	0.3671	392.24%
Na 589.592†	626113.0	84960	ug/L	2386.9	84960	ug/L	2386.9	2.81%
Ni 231.604†	34.0	1.714	ug/L	0.2114	1.714	ug/L	0.2114	12.33%
P 213.617†	15.4	3.960	ug/L	1.9287	3.960	ug/L	1.9287	48.71%
Pb 220.353†	203.1	18.27	ug/L	0.751	18.27	ug/L	0.751	4.11%
Sb 206.836†	-3.2	-0.768	ug/L	0.5519	-0.768	ug/L	0.5519	71.88%
Se 196.026†	-34.9	-0.177	ug/L	2.1283	-0.177	ug/L	2.1283	>999.9%
Sn 189.927†	-62.3	-3.242	ug/L	0.7874	-3.242	ug/L	0.7874	24.29%
Sr 421.552†	46814.1	100.4	ug/L	3.12	100.4	ug/L	3.12	3.11%
Ti 337.279†	9.9	0.154	ug/L	0.2124	0.154	ug/L	0.2124	137.52%
Tl 190.801†	-5.1	-1.034	ug/L	0.5781	-1.034	ug/L	0.5781	55.93%
V 292.402†	1037.8	-0.509	ug/L	0.2764	-0.509	ug/L	0.2764	54.35%
Zn 206.200†	2448.7	88.59	ug/L	0.313	88.59	ug/L	0.313	0.35%
Li 670.784†	14976.9	1.047	ug/L	0.0139	1.047	ug/L	0.0139	1.33%

Sequence No.: 26
Sample ID: AZ25344W01-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 49
Date Collected: 12/09/15 2:48:24 PM
Data Type: Reprocessed on 12/09/15 4:57:41 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25344W01-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	861014.7	101.3	%	1.39				1.37%
Y 371.029 Radial	56395.8	104.2	%	3.74				3.59%
Ag 338.289†	-16.7	-0.141	ug/L	0.8536	-2.814	ug/L	17.0727	606.69%
Al 308.215†	4.2	8.122	ug/L	5.7919	162.4	ug/L	115.84	71.31%
As 188.979†	0.8	0.256	ug/L	0.9607	5.122	ug/L	19.2132	375.14%
B†	7.6	9.556	ug/L	2.0854	191.1	ug/L	41.71	21.82%
Ba 233.527†	514.4	3.378	ug/L	0.0521	67.55	ug/L	1.042	1.54%
Be 313.107†	-0.8	-0.003	ug/L	0.0158	-0.069	ug/L	0.3156	457.21%
Ca 315.887†	3811.4	886.7	ug/L	29.36	17730	ug/L	587.3	3.31%
Cd 214.440†	33.2	0.047	ug/L	0.0430	0.949	ug/L	0.8596	90.62%
Co 228.616†	24.6	0.396	ug/L	0.3248	7.918	ug/L	6.4960	82.04%
Cr 267.716†	-1.6	-0.043	ug/L	0.1615	-0.868	ug/L	3.2301	372.15%
Cu 327.393†	27.3	0.309	ug/L	0.1683	6.180	ug/L	3.3652	54.46%
Fe 273.955†	22287.2	1592	ug/L	43.9	31850	ug/L	877.6	2.76%
K 766.490†	467.0	244.4	ug/L	13.45	4888	ug/L	268.9	5.50%
Mg 285.213†	2772.7	349.3	ug/L	12.55	6987	ug/L	251.0	3.59%
Mn 257.610†	473.8	34.43	ug/L	1.289	688.7	ug/L	25.78	3.74%
Mo 202.031†	0.1	0.122	ug/L	0.1562	2.436	ug/L	3.1248	128.25%
Na 589.592†	34548.5	4596	ug/L	213.9	91920	ug/L	4277.2	4.65%
Ni 231.604†	2.9	0.116	ug/L	0.2562	2.320	ug/L	5.1232	220.79%
P 213.617†	-0.7	-0.174	ug/L	0.9608	-3.476	ug/L	19.2155	552.78%
Pb 220.353†	15.1	1.309	ug/L	0.1970	26.17	ug/L	3.940	15.05%
Sb 206.836†	2.7	0.595	ug/L	0.7501	11.91	ug/L	15.003	126.01%
Se 196.026†	-5.2	-0.994	ug/L	1.2555	-19.89	ug/L	25.109	126.25%
Sn 189.927†	-1.2	0.029	ug/L	0.3105	0.571	ug/L	6.2098	>999.9%
Sr 421.552†	2788.5	5.488	ug/L	0.4031	109.8	ug/L	8.06	7.34%
Ti 337.279†	20.6	0.707	ug/L	0.7402	14.13	ug/L	14.805	104.76%
Tl 190.801†	7.6	1.469	ug/L	0.6513	29.38	ug/L	13.026	44.33%
V 292.402†	62.3	-0.017	ug/L	0.4209	-0.344	ug/L	8.4186	>999.9%
Zn 206.200†	153.1	5.610	ug/L	0.0841	112.2	ug/L	1.68	1.50%
Li 670.784†	866.4	0.057	ug/L	0.0085	1.130	ug/L	0.1694	14.99%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW22P-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25345

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	57.5 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	63.3	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	137	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	16400	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	7.3 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	7.0 J	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	29900	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	20.6	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	1.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	6420	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	659	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	1.8 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	4730	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	94000	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	93.3 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	41.8 J	300	80.0	27.4	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW22P-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25345

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	10.00 U	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	60.9	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.00 U	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	142	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVED	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	16800	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	6.7 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	4.00 U	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	27700	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	1.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	6190	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	638	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	2.0 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	4800	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	99600	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	4.00 U	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	76.1 J	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 21
Sample ID: AZ25345W01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 44
Date Collected: 12/08/15 3:44:38 PM
Data Type: Reprocessed on 12/09/15 9:04:03 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25345W01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	799525.3	96.92	%	0.230				0.24%
Y 371.029 Radial	47938.6	96.82	%	1.171				1.21%
Ag 338.289†	-60.5	-0.552	ug/L	0.4661	-0.552	ug/L	0.4661	84.47%
Al 308.215†	20.7	41.79	ug/L	2.716	41.79	ug/L	2.716	6.50%
As 188.979†	9.6	3.012	ug/L	0.3190	3.012	ug/L	0.3190	10.59%
B†	90.2	141.8	ug/L	2.85	141.8	ug/L	2.85	2.01%
Ba 233.527†	9013.2	60.94	ug/L	0.327	60.94	ug/L	0.327	0.54%
Be 313.107†	28.8	0.129	ug/L	0.0205	0.129	ug/L	0.0205	15.94%
Ca 315.887†	66679.2	16770	ug/L	173.2	16770	ug/L	173.2	1.03%
Cd 214.440†	299.8	-0.453	ug/L	0.0458	-0.453	ug/L	0.0458	10.12%
Co 228.616†	415.8	6.743	ug/L	0.1957	6.743	ug/L	0.1957	2.90%
Cr 267.716†	49.3	0.042	ug/L	0.2678	0.042	ug/L	0.2678	630.47%
Cu 327.393†	81.4	0.993	ug/L	0.3717	0.993	ug/L	0.3717	37.42%
Fe 273.955†	379899.9	27730	ug/L	108.0	27730	ug/L	108.0	0.39%
K 766.490†	8248.4	4796	ug/L	21.6	4796	ug/L	21.6	0.45%
Mg 285.213†	45393.7	6190	ug/L	67.1	6190	ug/L	67.1	1.08%
Mn 257.610†	8246.3	638.0	ug/L	12.37	638.0	ug/L	12.37	1.94%
Mo 202.031†	-69.4	-0.291	ug/L	0.3449	-0.291	ug/L	0.3449	118.60%
Na 589.592†	679425.0	92200	ug/L	2487.1	92200	ug/L	2487.1	2.70%
Ni 231.604†	48.2	1.995	ug/L	0.5429	1.995	ug/L	0.5429	27.21%
P 213.617†	-6.5	-1.659	ug/L	0.3196	-1.659	ug/L	0.3196	19.26%
Pb 220.353†	3.8	0.342	ug/L	0.8851	0.342	ug/L	0.8851	259.17%
Sb 206.836†	-1.9	-0.467	ug/L	0.4415	-0.467	ug/L	0.4415	94.54%
Se 196.026†	-31.5	0.356	ug/L	1.3454	0.356	ug/L	1.3454	377.69%
Sn 189.927†	-50.3	-1.980	ug/L	0.9824	-1.980	ug/L	0.9824	49.63%
Sr 421.552†	47922.3	102.8	ug/L	1.01	102.8	ug/L	1.01	0.99%
Ti 337.279†	-15.2	-0.836	ug/L	0.2213	-0.836	ug/L	0.2213	26.46%
Tl 190.801†	-2.7	-0.558	ug/L	0.5799	-0.558	ug/L	0.5799	103.97%
V 292.402†	962.6	-0.731	ug/L	0.0619	-0.731	ug/L	0.0619	8.47%
Zn 206.200†	2104.1	76.13	ug/L	0.390	76.13	ug/L	0.390	0.51%
Li 670.784†	16169.3	1.130	ug/L	0.0159	1.130	ug/L	0.0159	1.41%

Sequence No.: 16
Sample ID: AZ25345W01-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 41
Date Collected: 12/09/15 2:05:54 PM
Data Type: Reprocessed on 12/09/15 4:57:28 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25345W01-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	857446.4	100.9	%	0.47				0.47%
Y 371.029 Radial	55353.1	102.2	%	1.97				1.92%
Ag 338.289†	-38.1	-0.322	ug/L	0.1399	-6.439	ug/L	2.7983	43.46%
Al 308.215†	3.6	7.053	ug/L	5.2742	141.1	ug/L	105.48	74.78%
As 188.979†	0.8	0.258	ug/L	0.7809	5.157	ug/L	15.6187	302.84%
B†	5.5	7.920	ug/L	4.3441	158.4	ug/L	86.88	54.85%
Ba 233.527†	494.5	3.252	ug/L	0.0259	65.04	ug/L	0.519	0.80%
Be 313.107†	0.7	0.003	ug/L	0.0028	0.062	ug/L	0.0562	90.88%
Ca 315.887†	3950.8	919.1	ug/L	15.66	18380	ug/L	313.2	1.70%
Cd 214.440†	25.2	0.017	ug/L	0.0232	0.346	ug/L	0.4642	134.20%
Co 228.616†	16.1	0.253	ug/L	0.2374	5.066	ug/L	4.7479	93.72%
Cr 267.716†	-10.2	-0.133	ug/L	0.1195	-2.667	ug/L	2.3910	89.66%
Cu 327.393†	-14.2	-0.161	ug/L	0.5075	-3.212	ug/L	10.1499	316.01%
Fe 273.955†	20840.7	1489	ug/L	4.3	29780	ug/L	86.4	0.29%
K 766.490†	475.0	248.6	ug/L	4.32	4972	ug/L	86.3	1.74%
Mg 285.213†	2766.7	348.5	ug/L	5.32	6969	ug/L	106.5	1.53%
Mn 257.610†	459.5	33.39	ug/L	0.906	667.8	ug/L	18.12	2.71%
Mo 202.031†	0.7	0.135	ug/L	0.3790	2.704	ug/L	7.5794	280.26%
Na 589.592†	37448.7	4982	ug/L	219.0	99630	ug/L	4380.8	4.40%
Ni 231.604†	12.4	0.326	ug/L	0.3109	6.510	ug/L	6.2185	95.52%
P 213.617†	6.0	1.552	ug/L	1.1365	31.03	ug/L	22.729	73.25%
Pb 220.353†	7.7	0.668	ug/L	0.1509	13.35	ug/L	3.017	22.60%
Sb 206.836†	1.6	0.359	ug/L	0.3427	7.182	ug/L	6.8535	95.43%
Se 196.026†	-9.4	-2.357	ug/L	3.7674	-47.13	ug/L	75.348	159.87%
Sn 189.927†	1.3	0.261	ug/L	0.2766	5.225	ug/L	5.5326	105.89%
Sr 421.552†	2967.9	5.840	ug/L	0.0940	116.8	ug/L	1.88	1.61%
Ti 337.279†	5.3	0.173	ug/L	0.0572	3.465	ug/L	1.1446	33.04%
Tl 190.801†	9.3	1.791	ug/L	0.6000	35.82	ug/L	11.999	33.50%
V 292.402†	95.1	0.179	ug/L	0.0084	3.584	ug/L	0.1688	4.71%
Zn 206.200†	155.3	5.690	ug/L	0.1528	113.8	ug/L	3.06	2.68%
Li 670.784†	878.3	0.057	ug/L	0.0058	1.146	ug/L	0.1161	10.13%

Sequence No.: 43
Sample ID: AZ25345W02
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 12/08/15 5:28:29 PM
Data Type: Reprocessed on 12/09/15 9:04:32 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25345W02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	803962.1	97.46	%	0.840				0.86%
Y 371.029 Radial	48952.8	98.87	%	1.002				1.01%
Ag 338.289†	-43.0	-0.392	ug/L	0.8467	-0.392	ug/L	0.8467	215.99%
Al 308.215†	28.5	57.53	ug/L	3.768	57.53	ug/L	3.768	6.55%
As 188.979†	10.4	3.260	ug/L	0.6346	3.260	ug/L	0.6346	19.47%
B†	74.8	137.4	ug/L	5.22	137.4	ug/L	5.22	3.80%
Ba 233.527†	9383.4	63.31	ug/L	0.913	63.31	ug/L	0.913	1.44%
Be 313.107†	36.3	0.162	ug/L	0.0176	0.162	ug/L	0.0176	10.82%
Ca 315.887†	65309.0	16430	ug/L	294.8	16430	ug/L	294.8	1.79%
Cd 214.440†	346.0	-0.373	ug/L	0.0732	-0.373	ug/L	0.0732	19.63%
Co 228.616†	450.1	7.312	ug/L	0.2345	7.312	ug/L	0.2345	3.21%
Cr 267.716†	7.1	-0.424	ug/L	0.3106	-0.424	ug/L	0.3106	73.34%
Cu 327.393†	572.4	6.989	ug/L	0.5827	6.989	ug/L	0.5827	8.34%
Fe 273.955†	409133.8	29870	ug/L	91.6	29870	ug/L	91.6	0.31%
K 766.490†	8128.0	4726	ug/L	82.4	4726	ug/L	82.4	1.74%
Mg 285.213†	47069.9	6420	ug/L	110.4	6420	ug/L	110.4	1.72%
Mn 257.610†	8515.5	659.0	ug/L	6.59	659.0	ug/L	6.59	1.00%
Mo 202.031†	-73.9	-0.299	ug/L	0.1555	-0.299	ug/L	0.1555	51.92%
Na 589.592†	623997.8	84680	ug/L	1518.7	84680	ug/L	1518.7	1.79%
Ni 231.604†	36.9	1.823	ug/L	0.4209	1.823	ug/L	0.4209	23.09%
P 213.617†	17.0	4.364	ug/L	0.3629	4.364	ug/L	0.3629	8.32%
Pb 220.353†	228.6	20.57	ug/L	1.184	20.57	ug/L	1.184	5.76%
Sb 206.836†	-1.5	-0.353	ug/L	1.2471	-0.353	ug/L	1.2471	353.40%
Se 196.026†	-36.2	-0.100	ug/L	1.0905	-0.100	ug/L	1.0905	>999.9%
Sn 189.927†	-66.5	-3.614	ug/L	0.1608	-3.614	ug/L	0.1608	4.45%
Sr 421.552†	47682.5	102.3	ug/L	2.03	102.3	ug/L	2.03	1.99%
Ti 337.279†	12.1	0.238	ug/L	0.6807	0.238	ug/L	0.6807	286.57%
Tl 190.801†	-2.1	-0.417	ug/L	0.2989	-0.417	ug/L	0.2989	71.69%
V 292.402†	1080.0	-0.523	ug/L	0.1534	-0.523	ug/L	0.1534	29.30%
Zn 206.200†	2578.2	93.28	ug/L	1.035	93.28	ug/L	1.035	1.11%
Li 670.784†	15505.1	1.084	ug/L	0.0031	1.084	ug/L	0.0031	0.28%

Sequence No.: 27
Sample ID: AZ25345W02-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 50
Date Collected: 12/09/15 2:52:47 PM
Data Type: Reprocessed on 12/09/15 4:57:43 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25345W02-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	864903.1	101.8	%	0.81				0.80%
Y 371.029 Radial	55675.7	102.8	%	2.53				2.46%
Ag 338.289†	-10.7	-0.090	ug/L	0.8428	-1.804	ug/L	16.8555	934.51%
Al 308.215†	5.2	10.20	ug/L	0.646	204.0	ug/L	12.92	6.33%
As 188.979†	0.6	0.190	ug/L	0.6216	3.796	ug/L	12.4326	327.53%
B†	7.0	9.260	ug/L	3.4850	185.2	ug/L	69.70	37.63%
Ba 233.527†	518.8	3.405	ug/L	0.0910	68.11	ug/L	1.821	2.67%
Be 313.107†	2.0	0.008	ug/L	0.0017	0.165	ug/L	0.0345	20.98%
Ca 315.887†	3928.2	913.8	ug/L	22.21	18280	ug/L	444.3	2.43%
Cd 214.440†	35.0	0.054	ug/L	0.0426	1.083	ug/L	0.8524	78.72%
Co 228.616†	13.7	0.210	ug/L	0.1504	4.209	ug/L	3.0087	71.49%
Cr 267.716†	-4.1	-0.070	ug/L	0.1268	-1.396	ug/L	2.5367	181.68%
Cu 327.393†	-17.1	-0.194	ug/L	0.4721	-3.877	ug/L	9.4417	243.55%
Fe 273.955†	22582.6	1614	ug/L	3.3	32270	ug/L	66.9	0.21%
K 766.490†	501.4	262.4	ug/L	25.97	5249	ug/L	519.4	9.90%
Mg 285.213†	2901.0	365.4	ug/L	8.67	7309	ug/L	173.5	2.37%
Mn 257.610†	482.3	35.05	ug/L	0.183	700.9	ug/L	3.66	0.52%
Mo 202.031†	4.9	0.283	ug/L	0.0358	5.668	ug/L	0.7163	12.64%
Na 589.592†	35320.7	4699	ug/L	104.4	93970	ug/L	2087.6	2.22%
Ni 231.604†	17.9	0.454	ug/L	0.1899	9.076	ug/L	3.7987	41.85%
P 213.617†	5.8	1.479	ug/L	0.2667	29.58	ug/L	5.335	18.04%
Pb 220.353†	17.1	1.482	ug/L	0.6260	29.64	ug/L	12.519	42.24%
Sb 206.836†	0.6	0.135	ug/L	0.2238	2.696	ug/L	4.4770	166.07%
Se 196.026†	-6.1	-1.288	ug/L	1.6556	-25.76	ug/L	33.112	128.54%
Sn 189.927†	1.1	0.236	ug/L	0.4476	4.727	ug/L	8.9516	189.38%
Sr 421.552†	2882.1	5.672	ug/L	0.2634	113.4	ug/L	5.27	4.64%
Ti 337.279†	12.4	0.422	ug/L	0.0819	8.438	ug/L	1.6389	19.42%
Tl 190.801†	7.1	1.376	ug/L	0.5825	27.53	ug/L	11.650	42.32%
V 292.402†	94.6	0.153	ug/L	0.0280	3.051	ug/L	0.5599	18.35%
Zn 206.200†	159.6	5.848	ug/L	0.0615	117.0	ug/L	1.23	1.05%
Li 670.784†	935.2	0.061	ug/L	0.0062	1.220	ug/L	0.1240	10.16%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW18-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25346

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	1320	300	80.0	27.4	ug/L	1	12/08/15	12/08/15
6010C/3010A	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS)	8.6 J	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA)	15.1	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE)	1.4 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B)	202	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA)	18100	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO)	10.5 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU)	31.5	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE)	20200	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI)	37.1	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG)	6580	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN)	392	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	1	12/05/15	12/07/15
6010C/3010A	NICKEL (NI)	20.3 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K)	6690	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA)	74600	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V)	1.0 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN)	430	150	20.0	13.7	ug/L	1	12/08/15	12/08/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	1270	300	80.0	27.4	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW18-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25346

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ANTIMONY (SB) (DISSOLVE	5.00 U	20.0	5.00	2.90	ug/L	1	12/08/15	12/08/15
6010C/3010A	ARSENIC (AS) (DISSOLVED)	8.3 J	25.0	10.00	4.30	ug/L	1	12/08/15	12/08/15
6010C/3010A	BARIUM (BA) (DISSOLVED)	14.8	10.0	4.00	0.75	ug/L	1	12/08/15	12/08/15
6010C/3010A	BERYLLIUM (BE) (DISSOLV	1.3 J	2.0	1.00	0.45	ug/L	1	12/08/15	12/08/15
6010C/3010A	BORON (B) (DISSOLVED)	196	50.0	40.00	21.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	CADMIUM (CD) (DISSOLVED	3.00 U	5.0	3.00	0.51	ug/L	1	12/08/15	12/08/15
6010C/3010A	CALCIUM (CA) (DISSOLVED	17400	1000	75.0	27.5	ug/L	1	12/08/15	12/08/15
6010C/3010A	CHROMIUM (CR) (DISSOLV	4.00 U	15.0	4.00	1.37	ug/L	1	12/08/15	12/08/15
6010C/3010A	COBALT (CO) (DISSOLVED)	9.9 J	15.0	3.00	0.63	ug/L	1	12/08/15	12/08/15
6010C/3010A	COPPER (CU) (DISSOLVED)	28.1	15.0	4.00	1.71	ug/L	1	12/08/15	12/08/15
6010C/3010A	IRON (FE) (DISSOLVED)	18800	100	25.0	21.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	LEAD (PB) (DISSOLVED)	4.00 U	15.0	4.00	1.58	ug/L	1	12/08/15	12/08/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	36.2	1.0	0.80	0.40	ug/L	1	12/08/15	12/08/15
6010C/3010A	MAGNESIUM (MG) (DISSOL	6330	500	30.0	12.9	ug/L	1	12/08/15	12/08/15
6010C/3010A	MANGANESE (MN) (DISSOL	368	10.0	4.00	1.23	ug/L	1	12/08/15	12/08/15
7470A/7470A	MERCURY (HG) (DISSOLVE	0.15 U	0.2	0.15	0.06	ug/L	1	12/11/15	12/14/15
6010C/3010A	NICKEL (NI) (DISSOLVED)	19.3 J	40.0	3.00	0.42	ug/L	1	12/08/15	12/08/15
6010C/3010A	POTASSIUM (K) (DISSOLVE	6550	3000	500.0	220.0	ug/L	1	12/08/15	12/08/15
6010C/3010A	SELENIUM (SE) (DISSOLVE	10.00 U	22.0	10.00	4.60	ug/L	1	12/08/15	12/08/15
6010C/3010A	SILVER (AG) (DISSOLVED)	0.90 U	15.0	0.90	0.85	ug/L	1	12/08/15	12/08/15
6010C/3010A	SODIUM (NA) (DISSOLVED)	74300	20000	2000.0	444.0	ug/L	4	12/08/15	12/09/15
6010C/3010A	THALLIUM (TL) (DISSOLVED	10.00 U	40.0	10.00	4.80	ug/L	1	12/08/15	12/08/15
6010C/3010A	VANADIUM (V) (DISSOLVED	1.0 J	15.0	4.00	0.97	ug/L	1	12/08/15	12/08/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	417	150	20.0	13.7	ug/L	1	12/08/15	12/08/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 22
Sample ID: AZ25346W05
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 45
Date Collected: 12/08/15 3:49:37 PM
Data Type: Reprocessed on 12/09/15 9:04:04 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	803424.9	97.39	%	0.812				0.83%
Y 371.029 Radial	48927.8	98.82	%	2.432				2.46%
Ag 338.289†	-59.8	-0.545	ug/L	0.5766	-0.545	ug/L	0.5766	105.84%
Al 308.215†	627.5	1267	ug/L	42.9	1267	ug/L	42.9	3.38%
As 188.979†	26.6	8.345	ug/L	0.5683	8.345	ug/L	0.5683	6.81%
B†	208.0	195.7	ug/L	5.37	195.7	ug/L	5.37	2.75%
Ba 233.527†	2415.5	14.78	ug/L	0.156	14.78	ug/L	0.156	1.05%
Be 313.107†	297.5	1.331	ug/L	0.0475	1.331	ug/L	0.0475	3.57%
Ca 315.887†	69284.3	17430	ug/L	439.3	17430	ug/L	439.3	2.52%
Cd 214.440†	238.0	-0.160	ug/L	0.0479	-0.160	ug/L	0.0479	29.99%
Co 228.616†	595.0	9.912	ug/L	0.3304	9.912	ug/L	0.3304	3.33%
Cr 267.716†	96.5	0.738	ug/L	0.1755	0.738	ug/L	0.1755	23.77%
Cu 327.393†	2301.2	28.10	ug/L	0.867	28.10	ug/L	0.867	3.09%
Fe 273.955†	257609.4	18810	ug/L	36.0	18810	ug/L	36.0	0.19%
K 766.490†	11263.6	6549	ug/L	126.3	6549	ug/L	126.3	1.93%
Mg 285.213†	46482.9	6328	ug/L	155.5	6328	ug/L	155.5	2.46%
Mn 257.610†	4755.1	368.0	ug/L	9.03	368.0	ug/L	9.03	2.45%
Mo 202.031†	-39.5	0.061	ug/L	0.4775	0.061	ug/L	0.4775	786.30%
Na 589.592†	490486.6	66560	ug/L	1446.0	66560	ug/L	1446.0	2.17%
Ni 231.604†	820.7	19.26	ug/L	0.435	19.26	ug/L	0.435	2.26%
P 213.617†	111.1	28.52	ug/L	0.653	28.52	ug/L	0.653	2.29%
Pb 220.353†	-14.0	-1.258	ug/L	1.0859	-1.258	ug/L	1.0859	86.31%
Sb 206.836†	-3.1	-0.758	ug/L	1.6553	-0.758	ug/L	1.6553	218.27%
Se 196.026†	-17.8	1.141	ug/L	3.4154	1.141	ug/L	3.4154	299.21%
Sn 189.927†	-66.8	-3.629	ug/L	1.1043	-3.629	ug/L	1.1043	30.43%
Sr 421.552†	45418.0	97.39	ug/L	2.464	97.39	ug/L	2.464	2.53%
Ti 337.279†	3.6	-0.075	ug/L	0.4314	-0.075	ug/L	0.4314	575.90%
Tl 190.801†	-0.6	-0.113	ug/L	1.1076	-0.113	ug/L	1.1076	979.58%
V 292.402†	933.9	1.048	ug/L	0.2207	1.048	ug/L	0.2207	21.05%
Zn 206.200†	11524.5	417.0	ug/L	2.05	417.0	ug/L	2.05	0.49%
Li 670.784†	517459.9	36.18	ug/L	0.230	36.18	ug/L	0.230	0.64%

Sequence No.: 17
Sample ID: AZ25346W05-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 42
Date Collected: 12/09/15 2:10:00 PM
Data Type: Reprocessed on 12/09/15 4:57:29 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	858014.4	101.0	%	0.63				0.63%
Y 371.029 Radial	54554.0	100.8	%	0.51				0.51%
Ag 338.289†	57.6	0.487	ug/L	0.2826	9.737	ug/L	5.6525	58.05%
Al 308.215†	38.2	74.52	ug/L	2.837	1490	ug/L	56.7	3.81%
As 188.979†	1.6	0.486	ug/L	0.2783	9.713	ug/L	5.5653	57.30%
B†	13.6	11.86	ug/L	0.925	237.2	ug/L	18.50	7.80%
Ba 233.527†	148.8	0.899	ug/L	0.1137	17.98	ug/L	2.273	12.64%
Be 313.107†	19.4	0.080	ug/L	0.0110	1.605	ug/L	0.2202	13.72%
Ca 315.887†	4247.7	988.3	ug/L	2.39	19770	ug/L	47.9	0.24%
Cd 214.440†	23.2	0.038	ug/L	0.0420	0.762	ug/L	0.8410	110.34%
Co 228.616†	35.5	0.588	ug/L	0.1141	11.76	ug/L	2.281	19.40%
Cr 267.716†	0.6	-0.011	ug/L	0.1970	-0.226	ug/L	3.9391	>999.9%
Cu 327.393†	89.3	1.011	ug/L	0.5763	20.22	ug/L	11.525	57.01%
Fe 273.955†	14380.0	1027	ug/L	6.6	20550	ug/L	131.2	0.64%
K 766.490†	673.2	352.3	ug/L	16.77	7047	ug/L	335.4	4.76%
Mg 285.213†	2914.2	366.4	ug/L	1.76	7328	ug/L	35.3	0.48%
Mn 257.610†	275.1	19.99	ug/L	0.325	399.9	ug/L	6.50	1.62%
Mo 202.031†	7.8	0.339	ug/L	0.2855	6.786	ug/L	5.7092	84.13%
Na 589.592†	27923.3	3714	ug/L	47.3	74290	ug/L	945.9	1.27%
Ni 231.604†	40.8	0.944	ug/L	0.1646	18.87	ug/L	3.291	17.44%
P 213.617†	12.7	3.264	ug/L	1.0736	65.29	ug/L	21.472	32.89%
Pb 220.353†	2.5	0.218	ug/L	0.7116	4.351	ug/L	14.2312	327.04%
Sb 206.836†	-0.2	-0.054	ug/L	1.5025	-1.088	ug/L	30.0494	>999.9%
Se 196.026†	-7.0	-1.813	ug/L	2.5640	-36.26	ug/L	51.279	141.42%
Sn 189.927†	5.7	0.644	ug/L	0.1865	12.87	ug/L	3.729	28.98%
Sr 421.552†	2963.6	5.831	ug/L	0.2519	116.6	ug/L	5.04	4.32%
Ti 337.279†	-0.3	-0.023	ug/L	0.2798	-0.461	ug/L	5.5966	>999.9%
Tl 190.801†	7.4	1.434	ug/L	0.7573	28.67	ug/L	15.146	52.83%
V 292.402†	65.1	0.123	ug/L	0.0906	2.451	ug/L	1.8116	73.91%
Zn 206.200†	666.8	24.43	ug/L	0.055	488.6	ug/L	1.10	0.23%
Li 670.784†	24140.7	1.574	ug/L	0.0087	31.49	ug/L	0.174	0.55%

Sequence No.: 44
Sample ID: AZ25346W04
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 65
Date Collected: 12/08/15 5:33:21 PM
Data Type: Reprocessed on 12/09/15 9:04:33 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	802373.7	97.26	%	0.094				0.10%
Y 371.029 Radial	48977.9	98.92	%	1.833				1.85%
Ag 338.289†	-66.5	-0.606	ug/L	1.3638	-0.606	ug/L	1.3638	225.02%
Al 308.215†	655.3	1323	ug/L	28.5	1323	ug/L	28.5	2.15%
As 188.979†	27.4	8.595	ug/L	0.8556	8.595	ug/L	0.8556	9.95%
B†	211.4	202.0	ug/L	5.05	202.0	ug/L	5.05	2.50%
Ba 233.527†	2478.5	15.05	ug/L	0.114	15.05	ug/L	0.114	0.75%
Be 313.107†	307.2	1.375	ug/L	0.0413	1.375	ug/L	0.0413	3.00%
Ca 315.887†	71750.3	18050	ug/L	356.0	18050	ug/L	356.0	1.97%
Cd 214.440†	268.9	-0.107	ug/L	0.0930	-0.107	ug/L	0.0930	86.95%
Co 228.616†	632.6	10.54	ug/L	0.235	10.54	ug/L	0.235	2.23%
Cr 267.716†	100.2	0.761	ug/L	0.0618	0.761	ug/L	0.0618	8.11%
Cu 327.393†	2580.7	31.51	ug/L	0.564	31.51	ug/L	0.564	1.79%
Fe 273.955†	276377.1	20180	ug/L	86.7	20180	ug/L	86.7	0.43%
K 766.490†	11504.9	6689	ug/L	133.5	6689	ug/L	133.5	2.00%
Mg 285.213†	48329.2	6580	ug/L	135.2	6580	ug/L	135.2	2.05%
Mn 257.610†	5060.9	391.6	ug/L	7.24	391.6	ug/L	7.24	1.85%
Mo 202.031†	-56.7	-0.424	ug/L	0.2180	-0.424	ug/L	0.2180	51.41%
Na 589.592†	498157.2	67600	ug/L	1298.6	67600	ug/L	1298.6	1.92%
Ni 231.604†	862.1	20.25	ug/L	0.083	20.25	ug/L	0.083	0.41%
P 213.617†	106.8	27.42	ug/L	1.213	27.42	ug/L	1.213	4.42%
Pb 220.353†	-8.8	-0.794	ug/L	0.1647	-0.794	ug/L	0.1647	20.75%
Sb 206.836†	-2.7	-0.659	ug/L	0.5710	-0.659	ug/L	0.5710	86.65%
Se 196.026†	-19.6	1.131	ug/L	1.0553	1.131	ug/L	1.0553	93.30%
Sn 189.927†	-72.9	-4.124	ug/L	1.2231	-4.124	ug/L	1.2231	29.66%
Sr 421.552†	46433.2	99.57	ug/L	2.257	99.57	ug/L	2.257	2.27%
Ti 337.279†	5.9	0.008	ug/L	0.6680	0.008	ug/L	0.6680	>999.9%
Tl 190.801†	1.0	0.195	ug/L	0.8740	0.195	ug/L	0.8740	447.71%
V 292.402†	980.2	1.004	ug/L	0.1295	1.004	ug/L	0.1295	12.89%
Zn 206.200†	11888.8	430.1	ug/L	0.90	430.1	ug/L	0.90	0.21%
Li 670.784†	531297.0	37.14	ug/L	0.108	37.14	ug/L	0.108	0.29%

Sequence No.: 28
Sample ID: AZ25346W04-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 51
Date Collected: 12/09/15 2:57:25 PM
Data Type: Reprocessed on 12/09/15 4:57:44 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	868140.4	102.2	%	0.87				0.85%
Y 371.029 Radial	56180.5	103.8	%	2.31				2.23%
Ag 338.289†	35.3	0.298	ug/L	0.5054	5.957	ug/L	10.1081	169.69%
Al 308.215†	40.0	77.93	ug/L	3.723	1559	ug/L	74.5	4.78%
As 188.979†	1.3	0.406	ug/L	0.6042	8.112	ug/L	12.0838	148.96%
B†	10.8	10.29	ug/L	1.068	205.7	ug/L	21.36	10.38%
Ba 233.527†	147.8	0.881	ug/L	0.0809	17.63	ug/L	1.618	9.18%
Be 313.107†	14.2	0.059	ug/L	0.0173	1.180	ug/L	0.3451	29.25%
Ca 315.887†	4329.2	1007	ug/L	26.9	20140	ug/L	537.9	2.67%
Cd 214.440†	24.1	0.036	ug/L	0.0735	0.727	ug/L	1.4706	202.22%
Co 228.616†	35.5	0.586	ug/L	0.0933	11.71	ug/L	1.866	15.93%
Cr 267.716†	-15.7	-0.182	ug/L	0.1894	-3.641	ug/L	3.7875	104.01%
Cu 327.393†	162.0	1.834	ug/L	0.2718	36.67	ug/L	5.436	14.82%
Fe 273.955†	15547.8	1111	ug/L	4.5	22220	ug/L	89.0	0.40%
K 766.490†	676.3	354.0	ug/L	45.50	7079	ug/L	910.0	12.85%
Mg 285.213†	2962.5	372.6	ug/L	10.35	7451	ug/L	207.1	2.78%
Mn 257.610†	288.9	21.00	ug/L	0.492	419.9	ug/L	9.84	2.34%
Mo 202.031†	-6.7	-0.143	ug/L	0.2119	-2.853	ug/L	4.2374	148.52%
Na 589.592†	28022.2	3728	ug/L	88.4	74550	ug/L	1767.1	2.37%
Ni 231.604†	55.6	1.277	ug/L	0.1673	25.55	ug/L	3.345	13.09%
P 213.617†	8.8	2.275	ug/L	0.5687	45.49	ug/L	11.373	25.00%
Pb 220.353†	7.5	0.647	ug/L	0.6705	12.94	ug/L	13.409	103.60%
Sb 206.836†	-2.0	-0.439	ug/L	0.3223	-8.776	ug/L	6.4467	73.46%
Se 196.026†	0.1	0.430	ug/L	3.6780	8.602	ug/L	73.5609	855.20%
Sn 189.927†	1.2	0.252	ug/L	0.5853	5.038	ug/L	11.7070	232.37%
Sr 421.552†	2928.1	5.761	ug/L	0.1312	115.2	ug/L	2.62	2.28%
Ti 337.279†	8.5	0.284	ug/L	0.2449	5.675	ug/L	4.8987	86.33%
Tl 190.801†	8.5	1.635	ug/L	1.0854	32.70	ug/L	21.708	66.38%
V 292.402†	112.2	0.348	ug/L	0.0900	6.956	ug/L	1.7996	25.87%
Zn 206.200†	667.5	24.46	ug/L	0.072	489.1	ug/L	1.43	0.29%
Li 670.784†	24658.9	1.608	ug/L	0.0149	32.16	ug/L	0.299	0.93%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-AQIDW-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25347

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C-TCLP	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	1	12/14/15	12/18/15
6010C-TCLP	BARIUM (BA)	302	50.0	4.00	0.75	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	1	12/14/15	12/18/15
6010C-TCLP	LEAD (PB)	2.2 J	100.0	4.00	1.58	ug/L	1	12/14/15	12/18/15
7470A/TCLP	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	1	12/14/15	12/15/15
6010C-TCLP	SELENIUM (SE)	5.00 U	50.0	5.00	3.17	ug/L	1	12/14/15	12/18/15
6010C-TCLP	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	1	12/14/15	12/18/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 14 **Autosampler Location: 42**
Sample ID: AZ25347W05 **Date Collected: 12/18/15 12:05:52 PM**
Analyst: RJS **Data Type: Reprocessed on 12/21/15 9:12:55 AM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Mean Data: AZ25347W05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	876184.5	100.1	%	0.91				0.91%
Y 371.029 Radial	806104.9	100.1	%	1.04				1.03%
Ag 338.289†	-35.7	-0.297	ug/L	0.2381	-0.297	ug/L	0.2381	80.15%
Al 308.215†	268.1	401.3	ug/L	5.52	401.3	ug/L	5.52	1.38%
As 188.979†	2.7	0.762	ug/L	0.4654	0.762	ug/L	0.4654	61.12%
B†	14393.6	279.2	ug/L	3.52	279.2	ug/L	3.52	1.26%
Ba 233.527†	44488.5	301.8	ug/L	0.37	301.8	ug/L	0.37	0.12%
Be 313.107†	40.2	0.156	ug/L	0.0036	0.156	ug/L	0.0036	2.31%
Ca 315.887†	32971.7	7248	ug/L	35.8	7248	ug/L	35.8	0.49%
Cd 214.440†	102.0	0.411	ug/L	0.0733	0.411	ug/L	0.0733	17.81%
Co 228.616†	693.5	11.02	ug/L	0.161	11.02	ug/L	0.161	1.46%
Cr 267.716†	70.2	0.471	ug/L	0.1001	0.471	ug/L	0.1001	21.25%
Cu 327.393†	1406.6	10.86	ug/L	0.429	10.86	ug/L	0.429	3.95%
Fe 273.955†	2637.7	135.7	ug/L	1.23	135.7	ug/L	1.23	0.91%
K 766.490†	7381.5	2447	ug/L	118.5	2447	ug/L	118.5	4.84%
Mg 285.213†	22690.0	2693	ug/L	11.1	2693	ug/L	11.1	0.41%
Mn 257.610†	2326.1	165.1	ug/L	1.29	165.1	ug/L	1.29	0.78%
Mo 202.031†	50.4	0.976	ug/L	0.1213	0.976	ug/L	0.1213	12.43%
Na 589.592†	374366.6	46540	ug/L	2181.6	46540	ug/L	2181.6	4.69%
Ni 231.604†	333.8	6.553	ug/L	0.1620	6.553	ug/L	0.1620	2.47%
P 213.617†	6.1	1.341	ug/L	0.3060	1.341	ug/L	0.3060	22.82%
Pb 220.353†	28.8	2.202	ug/L	0.6114	2.202	ug/L	0.6114	27.77%
Sb 206.836†	4.9	1.000	ug/L	0.1994	1.000	ug/L	0.1994	19.94%
Se 196.026†	4.2	1.106	ug/L	0.9248	1.106	ug/L	0.9248	83.63%
Sn 189.927†	0.9	0.390	ug/L	0.6831	0.390	ug/L	0.6831	175.20%
Sr 421.552†	21414.4	40.58	ug/L	1.600	40.58	ug/L	1.600	3.94%
Ti 337.279†	67.5	2.299	ug/L	0.1259	2.299	ug/L	0.1259	5.48%
Tl 190.801†	4.9	0.893	ug/L	0.3859	0.893	ug/L	0.3859	43.21%
V 292.402†	17.9	0.160	ug/L	0.1645	0.160	ug/L	0.1645	103.12%
Zn 206.200†	13960.3	357.5	ug/L	1.96	357.5	ug/L	1.96	0.55%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SOIDW-112015
Sample Collection Date: 11/20/15

ARF: 78007
APPL ID: AZ25348

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C-TCLP	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	1	12/14/15	12/18/15
6010C-TCLP	BARIUM (BA)	342	50.0	4.00	0.75	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CADMIUM (CD)	1.5 J	50.0	3.00	0.51	ug/L	1	12/14/15	12/18/15
6010C-TCLP	CHROMIUM (CR)	2.0 J	50.0	4.00	1.37	ug/L	1	12/14/15	12/18/15
6010C-TCLP	LEAD (PB)	12.6 J	100.0	4.00	1.58	ug/L	1	12/14/15	12/18/15
7470A/TCLP	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	1	12/14/15	12/15/15
6010C-TCLP	SELENIUM (SE)	4.9 J	50.0	5.00	3.17	ug/L	1	12/14/15	12/18/15
6010C-TCLP	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	1	12/14/15	12/18/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 17 **Autosampler Location: 43**
Sample ID: AZ25348S01 **Date Collected: 12/18/15 12:21:54 PM**
Analyst: RJS **Data Type: Reprocessed on 12/21/15 9:12:59 AM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Mean Data: AZ25348S01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	828962.3	94.73	%	0.482				0.51%
Y 371.029 Radial	760845.9	94.43	%	0.577				0.61%
Ag 338.289†	-120.8	-1.005	ug/L	0.3492	-1.005	ug/L	0.3492	34.76%
Al 308.215†	694.4	1006	ug/L	10.7	1006	ug/L	10.7	1.06%
As 188.979†	7.4	2.064	ug/L	0.3601	2.064	ug/L	0.3601	17.44%
B†	4576.2	88.77	ug/L	0.165	88.77	ug/L	0.165	0.19%
Ba 233.527†	50462.4	341.6	ug/L	1.22	341.6	ug/L	1.22	0.36%
Be 313.107†	339.2	1.317	ug/L	0.0076	1.317	ug/L	0.0076	0.58%
Ca 315.887†	34088.8	7467	ug/L	22.1	7467	ug/L	22.1	0.30%
Cd 214.440†	432.0	1.541	ug/L	0.0512	1.541	ug/L	0.0512	3.32%
Co 228.616†	8127.9	130.0	ug/L	0.42	130.0	ug/L	0.42	0.32%
Cr 267.716†	398.9	1.985	ug/L	0.2831	1.985	ug/L	0.2831	14.26%
Cu 327.393†	809.4	-2.602	ug/L	0.2860	-2.602	ug/L	0.2860	10.99%
Fe 273.955†	2484.5	112.9	ug/L	1.86	112.9	ug/L	1.86	1.65%
K 766.490†	7956.9	2710	ug/L	58.5	2710	ug/L	58.5	2.16%
Mg 285.213†	43156.9	4907	ug/L	13.0	4907	ug/L	13.0	0.26%
Mn 257.610†	21742.9	1544	ug/L	4.3	1544	ug/L	4.3	0.28%
Mo 202.031†	12.2	-15.23	ug/L	0.400	-15.23	ug/L	0.400	2.63%
Na 589.592†	8997189.3	1118000	ug/L	20000.4	1118000	ug/L	20000.4	1.79%
Ni 231.604†	1204.6	24.56	ug/L	0.239	24.56	ug/L	0.239	0.97%
P 213.617†	7.2	1.597	ug/L	1.0003	1.597	ug/L	1.0003	62.65%
Pb 220.353†	159.6	12.57	ug/L	0.586	12.57	ug/L	0.586	4.66%
Sb 206.836†	0.7	0.151	ug/L	1.6818	0.151	ug/L	1.6818	>999.9%
Se 196.026†	18.4	4.851	ug/L	1.7549	4.851	ug/L	1.7549	36.18%
Sn 189.927†	23.0	2.630	ug/L	0.8970	2.630	ug/L	0.8970	34.10%
Sr 421.552†	35859.0	67.41	ug/L	1.212	67.41	ug/L	1.212	1.80%
Ti 337.279†	95.2	4.037	ug/L	0.2633	4.037	ug/L	0.2633	6.52%
Tl 190.801†	-12.4	-2.280	ug/L	0.2875	-2.280	ug/L	0.2875	12.61%
V 292.402†	-104.4	0.803	ug/L	0.1479	0.803	ug/L	0.1479	18.41%
Zn 206.200†	7407.4	180.7	ug/L	0.96	180.7	ug/L	0.96	0.53%

METALS
Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/08/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 14:18	%R(1)	True CCV1	Found 14:56	%R(1)	True CCV2	Found 16:13	%R(1)	
Silver (Ag)	500	473.8	94.8	500	499.9	100	375	364.9	97.3	P
Aluminum (Al)	25000	24510	98.0	20000	20080	100	15000	15100	101	P
Arsenic (As)	1000	941.9	94.2	1000	1043	104	750	781.5	104	P
Boron (B)	1000	1042	104	1000	1046	105	750	781.5	104	P
Barium (Ba)	1000	979.1	97.9	1000	1026	103	750	759.8	101	P
Beryllium (Be)	1000	957.7	95.8	1000	1006	101	750	738.6	98.5	P
Calcium (Ca)	25000	25330	101	50000	50680	101	37500	37630	100	P
Cadmium (Cd)	1000	995.5	99.5	1000	1038	104	750	772.9	103	P
Cobalt (Co)	1000	997.2	99.7	1000	1030	103	750	767.4	102	P
Chromium (Cr)	1000	989.9	99.0	1000	1032	103	750	764.6	102	P
Copper (Cu)	1000	972.3	97.2	1000	1014	101	750	744.3	99.2	P
Iron (Fe)	25000	25190	101	20000	20390	102	15000	15090	101	P
Potassium (K)	25000	23560	94.2	20000	19940	99.7	15000	14710	98.1	P
Lithium (Li)	500	484	96.8	500	499.4	99.9	375	364	97.1	P
Magnesium (Mg)	25000	25320	101	50000	51300	103	37500	38080	102	P
Manganese (Mn)	1000	967.5	96.8	1000	1001	100	750	754.3	101	P
Sodium (Na)	25000	23820	95.3	25000	25170	101	18750	18670	99.6	P
Nickel (Ni)	1000	1020	102	1000	1033	103	750	770.9	103	P
Lead (Pb)	1000	1020	102	1000	1040	104	750	775.7	103	P
Antimony (Sb)	1000	983.9	98.4	1000	1004	100	750	748.2	99.8	P
Selenium (Se)	1000	1022	102	1000	1046	105	750	783.8	105	P
Thallium (Tl)	1000	1023	102	1000	1017	102	750	751.1	100	P
Vanadium (V)	1000	988.1	98.8	1000	1044	104	750	770.4	103	P
Zinc (Zn)	1000	1010	101	1000	1044	104	750	803.9	107	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/08/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 14:18	%R(1)	True CCV1	Found 17:04	%R(1)	True CCV2	Found 17:57	%R(1)	
Silver (Ag)	500	473.8	94.8	500	492	98.4	375	357.6	95.4	P
Aluminum (Al)	25000	24510	98.0	20000	19750	98.8	15000	15040	100	P
Arsenic (As)	1000	941.9	94.2	1000	1051	105	750	787.8	105	P
Boron (B)	1000	1042	104	1000	1038	104	750	785.8	105	P
Barium (Ba)	1000	979.1	97.9	1000	1015	102	750	755	101	P
Beryllium (Be)	1000	957.7	95.8	1000	998.3	99.8	750	745	99.3	P
Calcium (Ca)	25000	25330	101	50000	50080	100	37500	38000	101	P
Cadmium (Cd)	1000	995.5	99.5	1000	1031	103	750	771.3	103	P
Cobalt (Co)	1000	997.2	99.7	1000	1022	102	750	763.5	102	P
Chromium (Cr)	1000	989.9	99.0	1000	1020	102	750	759.2	101	P
Copper (Cu)	1000	972.3	97.2	1000	1000	100	750	734.4	97.9	P
Iron (Fe)	25000	25190	101	20000	20050	100	15000	14770	98.5	P
Potassium (K)	25000	23560	94.2	20000	19610	98.0	15000	14760	98.4	P
Lithium (Li)	500	484	96.8	500	492.2	98.4	375	363	96.8	P
Magnesium (Mg)	25000	25320	101	50000	50520	101	37500	38560	103	P
Manganese (Mn)	1000	967.5	96.8	1000	989.5	99.0	750	752.2	100	P
Sodium (Na)	25000	23820	95.3	25000	24850	99.4	18750	18810	100	P
Nickel (Ni)	1000	1020	102	1000	1025	103	750	787.3	105	P
Lead (Pb)	1000	1020	102	1000	1033	103	750	767.2	102	P
Antimony (Sb)	1000	983.9	98.4	1000	1006	101	750	733.9	97.9	P
Selenium (Se)	1000	1022	102	1000	1054	105	750	779.5	104	P
Thallium (Tl)	1000	1023	102	1000	997.5	99.8	750	725.1	96.7	P
Vanadium (V)	1000	988.1	98.8	1000	1033	103	750	766.8	102	P
Zinc (Zn)	1000	1010	101	1000	1036	104	750	803.3	107	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/08/15

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	14:26		15:01		16:20		17:09		15:05		
Silver (Ag)	15.00	U	15.00	U	15.00	U	15.00	U	15.00	U	P
Aluminum (Al)	300.00	U	300.00	U	300.00	U	300.00	U	300.00	U	P
Arsenic (As)	25.00	U	25.00	U	25.00	U	25.00	U	25.00	U	P
Boron (B)	50.00	U	50.00	U	50.00	U	50.00	U	50.00	U	P
Barium (Ba)	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	P
Beryllium (Be)	2.00	U	2.00	U	2.00	U	2.00	U	2.00	U	P
Calcium (Ca)	1000.00	U	1000.00	U	1000.00	U	1000.00	U	49.90	J	P
Cadmium (Cd)	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	P
Cobalt (Co)	15.00	U	15.00	U	15.00	U	15.00	U	15.00	U	P
Chromium (Cr)	15.00	U	15.00	U	15.00	U	15.00	U	15.00	U	P
Copper (Cu)	15.00	U	15.00	U	15.00	U	15.00	U	15.00	U	P
Iron (Fe)	100.00	U	100.00	U	100.00	U	100.00	U	100.00	U	P
Potassium (K)	3000.00	U	3000.00	U	3000.00	U	3000.00	U	3000.00	U	P
Lithium (Li)	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	P
Magnesium (Mg)	500.00	U	500.00	U	500.00	U	500.00	U	500.00	U	P
Manganese (Mn)	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U	5000.00	U	5000.00	U	P
Nickel (Ni)	40.00	U	40.00	U	.58	J	40.00	U	40.00	U	P
Lead (Pb)	15.00	U	15.00	U	15.00	U	15.00	U	15.00	U	P
Antimony (Sb)	20.00	U	3.85	J	20.00	U	20.00	U	20.00	U	P
Selenium (Se)	22.00	U	22.00	U	22.00	U	22.00	U	22.00	U	P
Thallium (Tl)	40.00	U	40.00	U	40.00	U	40.00	U	40.00	U	P
Vanadium (V)	15.00	U	15.00	U	15.00	U	15.00	U	15.00	U	P
Zinc (Zn)	150.00	U	150.00	U	150.00	U	150.00	U	150.00	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/08/15

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	14:26		18:04						15:16		
Silver (Ag)	15.00	U	15.00	U					15.00	U	P
Aluminum (Al)	300.00	U	300.00	U					300.00	U	P
Arsenic (As)	25.00	U	25.00	U					25.00	U	P
Boron (B)	50.00	U	50.00	U					50.00	U	P
Barium (Ba)	10.00	U	10.00	U					10.00	U	P
Beryllium (Be)	2.00	U	2.00	U					2.00	U	P
Calcium (Ca)	1000.00	U	1000.00	U					31.20	J	P
Cadmium (Cd)	5.00	U	5.00	U					5.00	U	P
Cobalt (Co)	15.00	U	15.00	U					15.00	U	P
Chromium (Cr)	15.00	U	15.00	U					15.00	U	P
Copper (Cu)	15.00	U	15.00	U					15.00	U	P
Iron (Fe)	100.00	U	100.00	U					100.00	U	P
Potassium (K)	3000.00	U	3000.00	U					3000.00	U	P
Lithium (Li)	1.00	U	1.00	U					1.00	U	P
Magnesium (Mg)	500.00	U	500.00	U					500.00	U	P
Manganese (Mn)	10.00	U	10.00	U					10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U					5000.00	U	P
Nickel (Ni)	40.00	U	.55	J					40.00	U	P
Lead (Pb)	15.00	U	15.00	U					15.00	U	P
Antimony (Sb)	20.00	U	20.00	U					20.00	U	P
Selenium (Se)	22.00	U	22.00	U					22.00	U	P
Thallium (Tl)	40.00	U	40.00	U					40.00	U	P
Vanadium (V)	15.00	U	15.00	U					15.00	U	P
Zinc (Zn)	150.00	U	150.00	U					150.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No.: 78007 SDG: 78007
ICP ID Number: Phoebe ICS Source: Environmental Express

Analysis Date: 12/08/15 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 14:46	Sol AB 14:51	%R(1)
Silver (Ag)		1000	0.4	1012	101
Aluminum (Al)	200000	200000	187500	184600	92.3
Arsenic (As)		500	2.852	510.2	102
Boron (B)			28.85	28.35	
Barium (Ba)		500	1.538	503	101
Beryllium (Be)		500	0.016	490.1	98.0
Calcium (Ca)	200000	200000	199600	196800	98.4
Cadmium (Cd)		1000	-0.69	981.2	98.1
Cobalt (Co)		500	1.484	514.3	103
Chromium (Cr)		500	-0.461	491.5	98.3
Copper (Cu)		500	-1.531	517.5	104
Iron (Fe)	200000	200000	182000	181200	90.6
Potassium (K)			0.718	43.55	
Lithium (Li)		0	0.107	0.111	
Magnesium (Mg)	200000	200000	189600	186600	93.3
Manganese (Mn)		500	0.943	484.2	96.8
Sodium (Na)			34.8	55.63	
Nickel (Ni)		1000	-0.382	983.6	98.4
Lead (Pb)		1000	0.592	1005	101
Antimony (Sb)		500	-1.414	497	99.4
Selenium (Se)		500	-2.456	511.5	102
Thallium (Tl)		500	-2.158	483.8	96.8
Vanadium (V)		500	-0.046	508.6	102
Zinc (Zn)		1000	-14.42	970.3	97.0

(1) Control Limits: Metals 80-120

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.
S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Matrix: water

Analysis Date: 12/08/15 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Calcium (Ca)	17430		18170		4.25		
Iron (Fe)	18810		19580		4.09		
Lithium (Li)	36.18		35.78		1.11		
Magnesium (Mg)	6328		6808		7.59		
Manganese (Mn)	368		381.4		3.64		

Comments:

12/08/15 15:49 AZ25346W05

12/08/15 16:09 AZ25346W05-1/5

Sequence No.: 26
Sample ID: AZ25346W05-1/5
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 49
Date Collected: 12/08/15 4:09:42 PM
Data Type: Reprocessed on 12/09/15 9:04:09 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05-1/5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	826234.8	100.2	%	0.73				0.73%
Y 371.029 Radial	49401.2	99.77	%	0.762				0.76%
Ag 338.289†	31.4	0.286	ug/L	0.7568	1.431	ug/L	3.7839	264.49%
Al 308.215†	135.0	272.6	ug/L	2.86	1363	ug/L	14.3	1.05%
As 188.979†	5.1	1.598	ug/L	0.6113	7.991	ug/L	3.0564	38.25%
B†	43.5	40.88	ug/L	1.573	204.4	ug/L	7.87	3.85%
Ba 233.527†	502.8	3.075	ug/L	0.0410	15.38	ug/L	0.205	1.33%
Be 313.107†	61.5	0.275	ug/L	0.0255	1.376	ug/L	0.1274	9.26%
Ca 315.887†	14449.2	3634	ug/L	62.4	18170	ug/L	312.2	1.72%
Cd 214.440†	47.6	-0.042	ug/L	0.0550	-0.211	ug/L	0.2749	130.08%
Co 228.616†	113.8	1.893	ug/L	0.4002	9.463	ug/L	2.0009	21.14%
Cr 267.716†	9.0	0.033	ug/L	0.1651	0.163	ug/L	0.8253	506.50%
Cu 327.393†	493.1	6.021	ug/L	0.0257	30.11	ug/L	0.129	0.43%
Fe 273.955†	53645.6	3916	ug/L	22.4	19580	ug/L	112.2	0.57%
K 766.490†	2334.6	1357	ug/L	42.6	6787	ug/L	212.8	3.14%
Mg 285.213†	10003.3	1362	ug/L	10.3	6808	ug/L	51.6	0.76%
Mn 257.610†	985.9	76.29	ug/L	0.977	381.4	ug/L	4.88	1.28%
Mo 202.031†	-3.7	0.165	ug/L	0.3108	0.825	ug/L	1.5540	188.48%
Na 589.592†	103008.6	13980	ug/L	273.6	69890	ug/L	1367.9	1.96%
Ni 231.604†	179.3	4.202	ug/L	0.3886	21.01	ug/L	1.943	9.25%
P 213.617†	6.5	1.661	ug/L	0.8728	8.304	ug/L	4.3641	52.55%
Pb 220.353†	-1.3	-0.113	ug/L	0.4304	-0.563	ug/L	2.1520	382.27%
Sb 206.836†	-0.0	-0.003	ug/L	0.3968	-0.014	ug/L	1.9840	>999.9%
Se 196.026†	1.1	1.798	ug/L	2.9956	8.990	ug/L	14.9780	166.60%
Sn 189.927†	-12.8	-0.656	ug/L	1.0830	-3.279	ug/L	5.4151	165.15%
Sr 421.552†	9395.5	20.15	ug/L	0.256	100.7	ug/L	1.28	1.27%
Ti 337.279†	-9.9	-0.437	ug/L	0.2243	-2.184	ug/L	1.1216	51.36%
Tl 190.801†	-2.5	-0.503	ug/L	0.5089	-2.516	ug/L	2.5443	101.13%
V 292.402†	194.0	0.216	ug/L	0.1758	1.081	ug/L	0.8791	81.30%
Zn 206.200†	2517.7	91.09	ug/L	0.948	455.5	ug/L	4.74	1.04%
Li 670.784†	102359.8	7.156	ug/L	0.0136	35.78	ug/L	0.068	0.19%

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Analysis Date: 12/08/15 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver (Ag)	75-125	82.32		-0.545		100.000	82.3		
Aluminum (Al)	75-125	2813		1267		2000.000	77.3		
Arsenic (As)	75-125	222.3		8.345		250.000	85.6		
Boron (B)	75-125	394.9		195.7		250.000	79.7		
Barium (Ba)	75-125	228.3		14.78		250.000	85.4		
Beryllium (Be)	75-125	42.15		1.331		50.000	81.6		
Cadmium (Cd)	75-125	42.63		-0.16		50.000	85.3		
Cobalt (Co)	75-125	233.3		9.912		250.000	89.4		
Chromium (Cr)	75-125	211.9		0.738		250.000	84.5		
Copper (Cu)	75-125	237.1		28.1		250.000	83.6		
Potassium (K)	75-125	10170		6549		5000.000	72.4		M
Nickel (Ni)	75-125	235.8		19.26		250.000	86.6		
Lead (Pb)	75-125	212.6		-1.258		250.000	85.0		
Antimony (Sb)	75-125	216		-0.758		250.000	86.4		
Selenium (Se)	75-125	209.9		1.141		250.000	83.5		
Thallium (Tl)	75-125	205.3		-0.113		250.000	82.1		
Vanadium (V)	75-125	223.1		1.048		250.000	88.8		
Zinc (Zn)	75-125	836.8		417		500.000	84.0		

Comments:

12/08/15 15:49 AZ25346W05

12/08/15 16:04 AZ25346W05-A

Sequence No.: 25
Sample ID: AZ25346W05-A
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 48
Date Collected: 12/08/15 4:04:38 PM
Data Type: Reprocessed on 12/09/15 9:04:08 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05-A

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	788112.5	95.53	%	1.345				1.41%
Y 371.029 Radial	50136.4	101.3	%	0.33				0.32%
Ag 338.289†	9028.3	82.32	ug/L	1.396	82.32	ug/L	1.396	1.70%
Al 308.215†	1393.0	2813	ug/L	10.2	2813	ug/L	10.2	0.36%
As 188.979†	708.7	222.3	ug/L	2.91	222.3	ug/L	2.91	1.31%
B†	500.8	394.9	ug/L	5.70	394.9	ug/L	5.70	1.44%
Ba 233.527†	32146.5	228.3	ug/L	3.69	228.3	ug/L	3.69	1.62%
Be 313.107†	9419.6	42.15	ug/L	0.251	42.15	ug/L	0.251	0.59%
Ca 315.887†	147829.3	37190	ug/L	511.7	37190	ug/L	511.7	1.38%
Cd 214.440†	9555.1	42.63	ug/L	0.672	42.63	ug/L	0.672	1.58%
Co 228.616†	13622.5	233.3	ug/L	2.62	233.3	ug/L	2.62	1.12%
Cr 267.716†	19479.9	211.9	ug/L	2.38	211.9	ug/L	2.38	1.12%
Cu 327.393†	19419.1	237.1	ug/L	3.17	237.1	ug/L	3.17	1.34%
Fe 273.955†	264261.5	19290	ug/L	328.4	19290	ug/L	328.4	1.70%
K 766.490†	17493.1	10170	ug/L	105.3	10170	ug/L	105.3	1.03%
Mg 285.213†	200398.3	27210	ug/L	357.1	27210	ug/L	357.1	1.31%
Mn 257.610†	7006.7	540.8	ug/L	2.63	540.8	ug/L	2.63	0.49%
Mo 202.031†	6499.8	221.0	ug/L	2.59	221.0	ug/L	2.59	1.17%
Na 589.592†	602419.1	81740	ug/L	1057.1	81740	ug/L	1057.1	1.29%
Ni 231.604†	10359.9	235.8	ug/L	3.15	235.8	ug/L	3.15	1.34%
P 213.617†	6583.3	1691	ug/L	18.4	1691	ug/L	18.4	1.09%
Pb 220.353†	2363.4	212.6	ug/L	1.85	212.6	ug/L	1.85	0.87%
Sb 206.836†	895.4	216.0	ug/L	3.00	216.0	ug/L	3.00	1.39%
Se 196.026†	630.4	209.9	ug/L	3.01	209.9	ug/L	3.01	1.43%
Sn 189.927†	2412.5	226.0	ug/L	3.69	226.0	ug/L	3.69	1.63%
Sr 421.552†	138988.0	298.1	ug/L	4.75	298.1	ug/L	4.75	1.59%
Ti 337.279†	5280.1	208.0	ug/L	1.67	208.0	ug/L	1.67	0.80%
Tl 190.801†	1011.2	205.3	ug/L	2.95	205.3	ug/L	2.95	1.44%
V 292.402†	39684.1	223.1	ug/L	3.70	223.1	ug/L	3.70	1.66%
Zn 206.200†	23128.4	836.8	ug/L	14.45	836.8	ug/L	14.45	1.73%
Li 670.784†	1885750.0	131.8	ug/L	1.23	131.8	ug/L	1.23	0.93%

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.
S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Matrix: water

Analysis Date: 12/08/15 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Calcium (Ca)	18050		18700		3.60		
Iron (Fe)	20180		20760		2.87		
Lithium (Li)	37.14		35.88		3.39		
Magnesium (Mg)	6580		7074		7.51		
Manganese (Mn)	391.6		400.1		2.17		

Comments:

12/08/15 17:33 AZ25346W04

12/08/15 17:53 AZ25346W04-1/5

Sequence No.: 48
Sample ID: AZ25346W04-1/5
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 69
Date Collected: 12/08/15 5:53:09 PM
Data Type: Reprocessed on 12/09/15 9:04:38 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04-1/5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	826229.6	100.2	%	0.79				0.79%
Y 371.029 Radial	49241.4	99.45	%	0.079				0.08%
Ag 338.289†	-75.3	-0.687	ug/L	0.2570	-3.435	ug/L	1.2852	37.42%
Al 308.215†	138.6	279.9	ug/L	10.06	1400	ug/L	50.3	3.60%
As 188.979†	6.7	2.095	ug/L	0.4487	10.47	ug/L	2.244	21.42%
B†	48.4	44.91	ug/L	3.614	224.5	ug/L	18.07	8.05%
Ba 233.527†	508.7	3.086	ug/L	0.0703	15.43	ug/L	0.351	2.28%
Be 313.107†	62.0	0.278	ug/L	0.0075	1.388	ug/L	0.0377	2.72%
Ca 315.887†	14872.5	3741	ug/L	30.7	18700	ug/L	153.6	0.82%
Cd 214.440†	58.7	-0.007	ug/L	0.0449	-0.034	ug/L	0.2245	660.68%
Co 228.616†	131.1	2.186	ug/L	0.2282	10.93	ug/L	1.141	10.44%
Cr 267.716†	14.2	0.086	ug/L	0.1185	0.432	ug/L	0.5925	137.05%
Cu 327.393†	539.1	6.582	ug/L	0.4672	32.91	ug/L	2.336	7.10%
Fe 273.955†	56871.6	4152	ug/L	15.4	20760	ug/L	76.8	0.37%
K 766.490†	2425.3	1410	ug/L	31.8	7050	ug/L	159.1	2.26%
Mg 285.213†	10393.5	1415	ug/L	1.5	7074	ug/L	7.5	0.11%
Mn 257.610†	1034.2	80.03	ug/L	0.214	400.1	ug/L	1.07	0.27%
Mo 202.031†	-16.6	-0.253	ug/L	0.1472	-1.264	ug/L	0.7360	58.25%
Na 589.592†	103932.4	14100	ug/L	102.8	70510	ug/L	513.9	0.73%
Ni 231.604†	174.9	4.109	ug/L	0.1457	20.55	ug/L	0.729	3.55%
P 213.617†	15.1	3.872	ug/L	1.0051	19.36	ug/L	5.026	25.96%
Pb 220.353†	-5.9	-0.535	ug/L	0.3315	-2.674	ug/L	1.6577	62.00%
Sb 206.836†	-1.5	-0.357	ug/L	1.3014	-1.787	ug/L	6.5068	364.10%
Se 196.026†	-7.7	-0.951	ug/L	2.1902	-4.757	ug/L	10.9512	230.22%
Sn 189.927†	-7.6	-0.165	ug/L	0.7251	-0.826	ug/L	3.6254	439.12%
Sr 421.552†	9644.3	20.68	ug/L	0.105	103.4	ug/L	0.53	0.51%
Ti 337.279†	-10.8	-0.474	ug/L	0.6922	-2.371	ug/L	3.4608	145.97%
Tl 190.801†	2.1	0.422	ug/L	0.2201	2.110	ug/L	1.1006	52.16%
V 292.402†	183.1	0.099	ug/L	0.0775	0.496	ug/L	0.3874	78.14%
Zn 206.200†	2536.5	91.77	ug/L	0.302	458.9	ug/L	1.51	0.33%
Li 670.784†	102649.0	7.176	ug/L	0.0014	35.88	ug/L	0.007	0.02%

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Analysis Date: 12/08/15 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver (Ag)	75-125	81.65		-0.606		100.000	81.7		
Aluminum (Al)	75-125	2957		1323		2000.000	81.7		
Arsenic (As)	75-125	228.4		8.595		250.000	87.9		
Boron (B)	75-125	419.5		202		250.000	87.0		
Barium (Ba)	75-125	226.8		15.05		250.000	84.7		
Beryllium (Be)	75-125	43.94		1.375		50.000	85.1		
Cadmium (Cd)	75-125	42.86		-0.107		50.000	85.7		
Cobalt (Co)	75-125	234.1		10.54		250.000	89.4		
Chromium (Cr)	75-125	211.1		0.761		250.000	84.1		
Copper (Cu)	75-125	239.4		31.51		250.000	83.2		
Potassium (K)	75-125	10770		6689		5000.000	81.6		
Nickel (Ni)	75-125	236.3		20.25		250.000	86.4		
Lead (Pb)	75-125	211		-0.794		250.000	84.4		
Antimony (Sb)	75-125	212.9		-0.659		250.000	85.2		
Selenium (Se)	75-125	204.8		1.131		250.000	81.5		
Thallium (Tl)	75-125	199.1		0.195		250.000	79.6		
Vanadium (V)	75-125	222.4		1.004		250.000	88.6		
Zinc (Zn)	75-125	838.9		430.1		500.000	81.8		

Comments:

12/08/15 17:33 AZ25346W04

12/08/15 17:48 AZ25346W04-A

Sequence No.: 47
Sample ID: AZ25346W04-A
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 68
Date Collected: 12/08/15 5:48:11 PM
Data Type: Reprocessed on 12/09/15 9:04:37 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04-A

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	796097.4	96.50	%	1.197				1.24%
Y 371.029 Radial	48379.8	97.71	%	3.236				3.31%
Ag 338.289†	8954.7	81.65	ug/L	1.690	81.65	ug/L	1.690	2.07%
Al 308.215†	1464.7	2957	ug/L	86.2	2957	ug/L	86.2	2.91%
As 188.979†	728.2	228.4	ug/L	3.55	228.4	ug/L	3.55	1.55%
B†	534.3	419.5	ug/L	7.45	419.5	ug/L	7.45	1.78%
Ba 233.527†	31960.0	226.8	ug/L	3.78	226.8	ug/L	3.78	1.66%
Be 313.107†	9820.4	43.94	ug/L	1.411	43.94	ug/L	1.411	3.21%
Ca 315.887†	157634.1	39650	ug/L	1142.3	39650	ug/L	1142.3	2.88%
Cd 214.440†	9615.6	42.86	ug/L	0.485	42.86	ug/L	0.485	1.13%
Co 228.616†	13667.4	234.1	ug/L	2.55	234.1	ug/L	2.55	1.09%
Cr 267.716†	19412.4	211.1	ug/L	2.64	211.1	ug/L	2.64	1.25%
Cu 327.393†	19607.5	239.4	ug/L	4.21	239.4	ug/L	4.21	1.76%
Fe 273.955†	272972.7	19930	ug/L	28.9	19930	ug/L	28.9	0.14%
K 766.490†	18531.6	10770	ug/L	264.2	10770	ug/L	264.2	2.45%
Mg 285.213†	213534.1	28990	ug/L	800.1	28990	ug/L	800.1	2.76%
Mn 257.610†	7545.4	582.4	ug/L	17.60	582.4	ug/L	17.60	3.02%
Mo 202.031†	6450.7	219.4	ug/L	1.90	219.4	ug/L	1.90	0.86%
Na 589.592†	638647.1	86650	ug/L	2274.9	86650	ug/L	2274.9	2.63%
Ni 231.604†	10379.9	236.3	ug/L	2.60	236.3	ug/L	2.60	1.10%
P 213.617†	6548.2	1682	ug/L	20.1	1682	ug/L	20.1	1.19%
Pb 220.353†	2345.6	211.0	ug/L	2.35	211.0	ug/L	2.35	1.11%
Sb 206.836†	882.7	212.9	ug/L	3.20	212.9	ug/L	3.20	1.50%
Se 196.026†	614.3	204.8	ug/L	1.05	204.8	ug/L	1.05	0.51%
Sn 189.927†	2405.5	225.7	ug/L	2.06	225.7	ug/L	2.06	0.91%
Sr 421.552†	146651.2	314.5	ug/L	8.11	314.5	ug/L	8.11	2.58%
Ti 337.279†	5490.4	216.3	ug/L	6.50	216.3	ug/L	6.50	3.00%
Tl 190.801†	980.7	199.1	ug/L	2.00	199.1	ug/L	2.00	1.01%
V 292.402†	39596.3	222.4	ug/L	3.04	222.4	ug/L	3.04	1.37%
Zn 206.200†	23187.5	838.9	ug/L	13.99	838.9	ug/L	13.99	1.67%
Li 670.784†	1907534.9	133.4	ug/L	0.44	133.4	ug/L	0.44	0.33%

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/09/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:12	%R(1)	True CCV1	Found 13:44	%R(1)	True CCV2	Found 14:31	%R(1)	
Sodium (Na)	25000	24320	97.3	25000	25200	101	18750	19790	106	P
Zinc (Zn)	1000	995.9	99.6	1000	1026	103	750	812.1	108	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/09/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:12	%R(1)	True CCV1	Found 15:23	%R(1)	True	Found	%R(1)	
Sodium (Na)	25000	24320	97.3	25000	25680	103				P
Zinc (Zn)	1000	995.9	99.6	1000	1028	103				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/09/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C			C		
	13:21		13:49		14:35		15:28						
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U	5000.00	U					P
Zinc (Zn)	150.00	U	150.00	U	150.00	U	150.00	U					P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No.: 78007 SDG: 78007
ICP ID Number: Phoebe ICS Source: Environmental Express

Analysis Date: 12/09/15 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 13:34	Sol AB 13:39	%R(1)
Aluminum (Al)	200000	200000	187400	188400	94.2
Calcium (Ca)	200000	200000	198600	199100	99.5
Iron (Fe)	200000	200000	180400	178000	89.0
Magnesium (Mg)	200000	200000	187700	188300	94.2
Sodium (Na)			32.62	35.96	
Zinc (Zn)		1000	-13.48	944.1	94.4

(1) Control Limits: Metals 80-120

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.
S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No.: 78007 SDG: 78007
Matrix: water

Analysis Date: 12/09/15 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Sodium (Na)	74290		71610		3.61		

Comments:

12/09/15 14:10 AZ25346W05-1/20

12/09/15 14:27 AZ25346W05-1/100

Sequence No.: 21
Sample ID: AZ25346W05-1/100
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 100X

Autosampler Location: 46
Date Collected: 12/09/15 2:27:29 PM
Data Type: Reprocessed on 12/09/15 4:57:34 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05-1/100

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	871651.6	102.6	%	0.11				0.11%
Y 371.029 Radial	54643.3	100.9	%	1.36				1.34%
Ag 338.289†	12.4	0.105	ug/L	0.7007	10.48	ug/L	70.073	668.44%
Al 308.215†	7.6	14.83	ug/L	5.694	1483	ug/L	569.4	38.39%
As 188.979†	6.1	1.898	ug/L	0.4467	189.8	ug/L	44.67	23.54%
B†	8.9	6.382	ug/L	0.6743	638.2	ug/L	67.43	10.57%
Ba 233.527†	42.6	0.271	ug/L	0.0491	27.05	ug/L	4.910	18.15%
Be 313.107†	2.6	0.011	ug/L	0.0068	1.076	ug/L	0.6764	62.85%
Ca 315.887†	840.7	195.6	ug/L	4.79	19560	ug/L	479.4	2.45%
Cd 214.440†	23.8	0.096	ug/L	0.0308	9.615	ug/L	3.0782	32.01%
Co 228.616†	0.7	0.010	ug/L	0.0388	1.038	ug/L	3.8787	373.51%
Cr 267.716†	-10.0	-0.109	ug/L	0.2668	-10.92	ug/L	26.680	244.42%
Cu 327.393†	23.2	0.262	ug/L	0.1540	26.22	ug/L	15.401	58.74%
Fe 273.955†	2764.6	197.5	ug/L	0.57	19750	ug/L	56.6	0.29%
K 766.490†	138.7	72.60	ug/L	20.727	7260	ug/L	2072.7	28.55%
Mg 285.213†	567.4	71.34	ug/L	0.319	7134	ug/L	31.9	0.45%
Mn 257.610†	50.3	3.655	ug/L	0.4730	365.5	ug/L	47.30	12.94%
Mo 202.031†	19.8	0.681	ug/L	0.1080	68.13	ug/L	10.802	15.85%
Na 589.592†	5383.4	716.1	ug/L	6.54	71610	ug/L	654.4	0.91%
Ni 231.604†	8.8	0.202	ug/L	0.3265	20.23	ug/L	32.655	161.41%
P 213.617†	8.1	2.087	ug/L	0.4795	208.7	ug/L	47.95	22.97%
Pb 220.353†	3.3	0.289	ug/L	0.1555	28.94	ug/L	15.553	53.74%
Sb 206.836†	7.9	1.780	ug/L	0.3337	178.0	ug/L	33.37	18.75%
Se 196.026†	-4.8	-1.426	ug/L	2.7456	-142.6	ug/L	274.56	192.48%
Sn 189.927†	12.0	1.091	ug/L	0.3525	109.1	ug/L	35.25	32.31%
Sr 421.552†	617.0	1.214	ug/L	0.3071	121.4	ug/L	30.71	25.29%
Ti 337.279†	12.6	0.440	ug/L	0.1671	44.02	ug/L	16.707	37.95%
Tl 190.801†	6.5	1.248	ug/L	0.8537	124.8	ug/L	85.37	68.38%
V 292.402†	-6.2	-0.069	ug/L	0.3436	-6.931	ug/L	34.3648	495.82%
Zn 206.200†	152.3	5.580	ug/L	0.0237	558.0	ug/L	2.37	0.42%
Li 670.784†	4217.7	0.275	ug/L	0.0056	27.51	ug/L	0.558	2.03%

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Analysis Date: 12/09/15 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Zinc (Zn)	75-125	9495		488.6		10000.000	90.1		

Comments:

12/09/15 14:10 AZ25346W05-1/20

12/09/15 14:22 AZ25346W05-A-1/20

Sequence No.: 20
Sample ID: AZ25346W05-A-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 45
Date Collected: 12/09/15 2:22:28 PM
Data Type: Reprocessed on 12/09/15 4:57:33 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05-A-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	835893.8	98.39	%	0.182				0.19%
Y 371.029 Radial	54243.8	100.2	%	0.80				0.80%
Ag 338.289†	10019.2	84.63	ug/L	0.938	1693	ug/L	18.8	1.11%
Al 308.215†	980.5	1911	ug/L	19.1	38230	ug/L	381.7	1.00%
As 188.979†	664.7	206.3	ug/L	1.62	4126	ug/L	32.3	0.78%
B†	369.0	245.0	ug/L	4.06	4900	ug/L	81.3	1.66%
Ba 233.527†	31584.1	220.5	ug/L	3.04	4410	ug/L	60.9	1.38%
Be 313.107†	10825.2	44.82	ug/L	0.911	896.4	ug/L	18.21	2.03%
Ca 315.887†	101736.9	23670	ug/L	485.5	473500	ug/L	9709.9	2.05%
Cd 214.440†	9959.2	45.57	ug/L	0.120	911.4	ug/L	2.41	0.26%
Co 228.616†	13094.2	222.5	ug/L	2.89	4451	ug/L	57.8	1.30%
Cr 267.716†	21115.6	222.3	ug/L	1.86	4445	ug/L	37.2	0.84%
Cu 327.393†	18967.6	214.7	ug/L	3.23	4294	ug/L	64.6	1.51%
Fe 273.955†	26146.8	1868	ug/L	20.6	37360	ug/L	412.4	1.10%
K 766.490†	9036.2	4729	ug/L	58.4	94590	ug/L	1167.7	1.23%
Mg 285.213†	189182.1	23710	ug/L	480.7	474300	ug/L	9613.6	2.03%
Mn 257.610†	3419.9	246.9	ug/L	2.71	4939	ug/L	54.3	1.10%
Mo 202.031†	6525.9	219.8	ug/L	0.25	4396	ug/L	5.1	0.12%
Na 589.592†	194797.9	25910	ug/L	472.5	518100	ug/L	9450.4	1.82%
Ni 231.604†	10333.9	230.6	ug/L	0.87	4611	ug/L	17.3	0.38%
P 213.617†	7016.4	1804	ug/L	3.8	36080	ug/L	75.6	0.21%
Pb 220.353†	2558.8	222.1	ug/L	0.17	4442	ug/L	3.3	0.07%
Sb 206.836†	899.7	201.6	ug/L	2.05	4033	ug/L	41.1	1.02%
Se 196.026†	705.0	219.1	ug/L	2.91	4382	ug/L	58.3	1.33%
Sn 189.927†	2339.7	210.0	ug/L	0.51	4199	ug/L	10.1	0.24%
Sr 421.552†	117254.1	230.8	ug/L	4.57	4615	ug/L	91.4	1.98%
Ti 337.279†	6296.9	219.9	ug/L	2.23	4399	ug/L	44.7	1.02%
Tl 190.801†	1151.4	221.9	ug/L	0.52	4438	ug/L	10.4	0.23%
V 292.402†	42069.1	229.2	ug/L	2.46	4583	ug/L	49.1	1.07%
Zn 206.200†	12957.9	474.8	ug/L	5.22	9495	ug/L	104.3	1.10%
Li 670.784†	1461012.6	95.29	ug/L	0.324	1906	ug/L	6.5	0.34%

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.
S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No.: 78007 SDG: 78007
Matrix: water

Analysis Date: 12/09/15 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Sodium (Na)	74550		72380		2.91		

Comments:

12/09/15 14:57 AZ25346W04-1/20

12/09/15 15:14 AZ25346W04-1/100

Sequence No.: 32
Sample ID: AZ25346W04-1/100
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 100X

Autosampler Location: 55
Date Collected: 12/09/15 3:14:52 PM
Data Type: Reprocessed on 12/09/15 4:57:49 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04-1/100

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	864647.4	101.8	%	1.78				1.75%
Y 371.029 Radial	56123.0	103.7	%	2.64				2.54%
Ag 338.289†	-12.5	-0.105	ug/L	1.0941	-10.53	ug/L	109.414	>999.9%
Al 308.215†	9.8	19.01	ug/L	1.327	1901	ug/L	132.7	6.98%
As 188.979†	5.0	1.544	ug/L	0.7534	154.4	ug/L	75.34	48.80%
B†	7.8	5.704	ug/L	0.1841	570.4	ug/L	18.41	3.23%
Ba 233.527†	34.3	0.210	ug/L	0.0796	21.01	ug/L	7.959	37.89%
Be 313.107†	-0.9	-0.004	ug/L	0.0062	-0.373	ug/L	0.6154	164.91%
Ca 315.887†	858.2	199.7	ug/L	4.46	19970	ug/L	445.9	2.23%
Cd 214.440†	-4.2	-0.033	ug/L	0.0233	-3.302	ug/L	2.3336	70.67%
Co 228.616†	-9.0	-0.155	ug/L	0.1787	-15.54	ug/L	17.868	114.99%
Cr 267.716†	-12.8	-0.139	ug/L	0.1421	-13.87	ug/L	14.212	102.50%
Cu 327.393†	62.7	0.710	ug/L	0.3725	70.96	ug/L	37.252	52.50%
Fe 273.955†	3006.7	214.8	ug/L	1.95	21480	ug/L	194.9	0.91%
K 766.490†	117.2	61.34	ug/L	25.573	6134	ug/L	2557.3	41.69%
Mg 285.213†	579.0	72.81	ug/L	2.580	7281	ug/L	258.0	3.54%
Mn 257.610†	54.1	3.931	ug/L	0.2179	393.1	ug/L	21.79	5.54%
Mo 202.031†	25.1	0.859	ug/L	0.4865	85.91	ug/L	48.651	56.63%
Na 589.592†	5441.1	723.8	ug/L	13.96	72380	ug/L	1395.6	1.93%
Ni 231.604†	4.9	0.117	ug/L	0.3961	11.73	ug/L	39.608	337.54%
P 213.617†	2.4	0.629	ug/L	1.3159	62.90	ug/L	131.587	209.20%
Pb 220.353†	1.6	0.143	ug/L	0.2819	14.30	ug/L	28.194	197.10%
Sb 206.836†	9.3	2.076	ug/L	0.4077	207.6	ug/L	40.77	19.63%
Se 196.026†	-5.6	-1.661	ug/L	1.5077	-166.1	ug/L	150.77	90.78%
Sn 189.927†	16.1	1.454	ug/L	0.1393	145.4	ug/L	13.93	9.58%
Sr 421.552†	614.7	1.210	ug/L	0.0620	121.0	ug/L	6.20	5.13%
Ti 337.279†	8.9	0.309	ug/L	0.6584	30.86	ug/L	65.838	213.33%
Tl 190.801†	5.5	1.061	ug/L	0.7686	106.1	ug/L	76.86	72.43%
V 292.402†	-3.6	-0.056	ug/L	0.3118	-5.643	ug/L	31.1787	552.52%
Zn 206.200†	146.1	5.354	ug/L	0.1633	535.4	ug/L	16.33	3.05%
Li 670.784†	4441.3	0.290	ug/L	0.0104	28.97	ug/L	1.035	3.57%

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-MW18-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Analysis Date: 12/09/15 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Zinc (Zn)	75-125	9530		489.1		10000.000	90.4		

Comments:

12/09/15 14:57 AZ25346W04-1/20

12/09/15 15:09 AZ25346W04-A-1/20

Sequence No.: 31
Sample ID: AZ25346W04-A-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 54
Date Collected: 12/09/15 3:09:53 PM
Data Type: Reprocessed on 12/09/15 4:57:48 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04-A-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	837870.3	98.62	%	0.775				0.79%
Y 371.029 Radial	55668.3	102.8	%	1.42				1.38%
Ag 338.289†	10137.2	85.62	ug/L	0.655	1712	ug/L	13.1	0.77%
Al 308.215†	956.1	1864	ug/L	43.1	37280	ug/L	862.9	2.31%
As 188.979†	669.9	207.9	ug/L	1.48	4158	ug/L	29.5	0.71%
B†	356.4	237.0	ug/L	2.60	4740	ug/L	52.0	1.10%
Ba 233.527†	31829.1	222.2	ug/L	0.51	4444	ug/L	10.2	0.23%
Be 313.107†	10884.4	45.07	ug/L	1.371	901.3	ug/L	27.41	3.04%
Ca 315.887†	101555.2	23630	ug/L	761.4	472600	ug/L	15227.1	3.22%
Cd 214.440†	9985.0	45.68	ug/L	0.211	913.6	ug/L	4.22	0.46%
Co 228.616†	13152.9	223.6	ug/L	0.55	4471	ug/L	11.0	0.25%
Cr 267.716†	21130.8	222.4	ug/L	1.15	4449	ug/L	23.0	0.52%
Cu 327.393†	19152.0	216.8	ug/L	1.71	4336	ug/L	34.2	0.79%
Fe 273.955†	27272.7	1949	ug/L	10.3	38970	ug/L	205.9	0.53%
K 766.490†	9091.9	4759	ug/L	140.8	95170	ug/L	2816.0	2.96%
Mg 285.213†	188183.4	23590	ug/L	735.5	471800	ug/L	14710.8	3.12%
Mn 257.610†	3332.6	240.6	ug/L	5.27	4812	ug/L	105.5	2.19%
Mo 202.031†	6567.9	221.2	ug/L	0.86	4424	ug/L	17.2	0.39%
Na 589.592†	194085.2	25810	ug/L	866.3	516200	ug/L	17325.3	3.36%
Ni 231.604†	10380.1	231.6	ug/L	1.00	4632	ug/L	19.9	0.43%
P 213.617†	7056.7	1814	ug/L	7.4	36290	ug/L	147.4	0.41%
Pb 220.353†	2574.6	223.5	ug/L	1.78	4470	ug/L	35.6	0.80%
Sb 206.836†	907.0	203.3	ug/L	2.05	4066	ug/L	40.9	1.01%
Se 196.026†	713.3	221.7	ug/L	1.70	4434	ug/L	34.0	0.77%
Sn 189.927†	2364.3	212.1	ug/L	1.22	4242	ug/L	24.4	0.57%
Sr 421.552†	117204.9	230.7	ug/L	7.37	4613	ug/L	147.4	3.20%
Ti 337.279†	6148.8	214.8	ug/L	4.69	4295	ug/L	93.8	2.18%
Tl 190.801†	1156.5	222.9	ug/L	1.16	4458	ug/L	23.3	0.52%
V 292.402†	42142.0	229.5	ug/L	0.36	4591	ug/L	7.3	0.16%
Zn 206.200†	13005.2	476.5	ug/L	2.82	9530	ug/L	56.4	0.59%
Li 670.784†	1456318.6	94.98	ug/L	0.742	1900	ug/L	14.8	0.78%

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/18/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:14	%R(1)	True CCV1	Found 11:46	%R(1)	True CCV2	Found 12:51	%R(1)	
Silver (Ag)	250	247.7	99.1	250	257.9	103	187.5	199.3	106	P
Arsenic (As)	500	492.8	98.6	500	505.7	101	375	393.6	105	P
Barium (Ba)	500	506.7	101	500	518.8	104	375	399	106	P
Cadmium (Cd)	500	511.9	102	500	520.1	104	375	400.7	107	P
Chromium (Cr)	500	510.6	102	500	516.2	103	375	398.4	106	P
Lead (Pb)	500	513	103	500	517.6	104	375	404.1	108	P
Selenium (Se)	500	507.4	101	500	511.9	102	375	397.8	106	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/18/15

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	11:20		11:53		12:54				11:57		
Silver (Ag)	1.00	U	1.00	U	1.00	U			1.00	U	P
Arsenic (As)	5.00	U	5.00	U	5.00	U			5.00	U	P
Barium (Ba)	5.00	U	5.00	U	5.00	U			5.00	U	P
Cadmium (Cd)	.53	J	5.00	U	5.00	U			5.00	U	P
Chromium (Cr)	5.00	U	5.00	U	5.00	U			5.00	U	P
Lead (Pb)	10.00	U	10.00	U	10.00	U			10.00	U	P
Selenium (Se)	5.00	U	5.00	U	5.00	U			5.00	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/18/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C				C	
	11:20		11:53		12:54						12:11		
Silver (Ag)	1.00	U	1.00	U	1.00	U					1.00	U	P
Arsenic (As)	5.00	U	5.00	U	5.00	U					5.00	U	P
Barium (Ba)	5.00	U	5.00	U	5.00	U					5.40	*	*
Cadmium (Cd)	.53	J	5.00	U	5.00	U					5.00	U	P
Chromium (Cr)	5.00	U	5.00	U	5.00	U					5.00	U	P
Lead (Pb)	10.00	U	10.00	U	10.00	U					10.00	U	P
Selenium (Se)	5.00	U	5.00	U	5.00	U					3.50	J	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No.: 78007 SDG: 78007
ICP ID Number: Phoebe ICS Source: Environmental Express

Analysis Date: 12/18/15 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 11:37	Sol AB 11:42	%R(1)
Silver (Ag)		500	-0.621	546.8	109
Aluminum (Al)	100000	100000	97850	104300	104
Arsenic (As)		250	0.495	253.1	101
Barium (Ba)		250	-3.077	269.9	108
Calcium (Ca)	100000	100000	102000	107300	107
Cadmium (Cd)		500	0.349	542	108
Chromium (Cr)		250	0.822	286.5	115
Iron (Fe)	100000	100000	91540	95680	95.7
Magnesium (Mg)	100000	100000	97000	102200	102
Lead (Pb)		500	0.489	551.5	110
Selenium (Se)		250	1.965	270.8	108

(1) Control Limits: Metals 80-120

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.
S67-SOIDW-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No.: 78007 SDG: 78007
Matrix: water

Analysis Date: 12/18/15 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Silver (Ag)	-1.005		-0.085		NA		
Arsenic (As)	2.064		11.45		NA		
Barium (Ba)	341.6		391.9		14.7		M
Cadmium (Cd)	1.541		1.995		NA		
Chromium (Cr)	1.985		4.082		NA		
Lead (Pb)	12.57		20.14		NA		
Selenium (Se)	4.851		7.052		NA		

Comments:

12/18/15 12:21 AZ25348S01

12/18/15 12:43 AZ25348S01-1/5

Sequence No.: 21
Sample ID: AZ25348S01-1/5
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 47
Date Collected: 12/18/15 12:43:31 PM
Data Type: Reprocessed on 12/21/15 9:13:04 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25348S01-1/5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	844488.3	96.51	%	0.374				0.39%
Y 371.029 Radial	775303.4	96.23	%	0.398				0.41%
Ag 338.289†	-2.1	-0.017	ug/L	0.2304	-0.085	ug/L	1.1520	>999.9%
Al 308.215†	134.8	194.2	ug/L	11.20	970.9	ug/L	55.98	5.77%
As 188.979†	8.2	2.290	ug/L	0.9202	11.45	ug/L	4.601	40.19%
B†	1137.1	22.06	ug/L	0.043	110.3	ug/L	0.21	0.19%
Ba 233.527†	11577.5	78.38	ug/L	0.703	391.9	ug/L	3.51	0.90%
Be 313.107†	69.4	0.270	ug/L	0.0263	1.348	ug/L	0.1313	9.74%
Ca 315.887†	7043.7	1542	ug/L	11.8	7712	ug/L	59.0	0.77%
Cd 214.440†	108.9	0.399	ug/L	0.0792	1.995	ug/L	0.3958	19.84%
Co 228.616†	1831.0	29.29	ug/L	0.241	146.4	ug/L	1.21	0.82%
Cr 267.716†	124.9	0.816	ug/L	0.1290	4.082	ug/L	0.6448	15.80%
Cu 327.393†	258.5	0.058	ug/L	0.8531	0.289	ug/L	4.2656	>999.9%
Fe 273.955†	489.1	21.83	ug/L	0.709	109.1	ug/L	3.55	3.25%
K 766.490†	1725.1	588.0	ug/L	39.82	2940	ug/L	199.1	6.77%
Mg 285.213†	9169.4	1040	ug/L	5.4	5201	ug/L	27.0	0.52%
Mn 257.610†	4490.8	319.0	ug/L	2.70	1595	ug/L	13.5	0.85%
Mo 202.031†	25.1	-2.681	ug/L	0.5561	-13.40	ug/L	2.780	20.74%
Na 589.592†	2008736.4	249700	ug/L	15835.9	1248000	ug/L	79179.6	6.34%
Ni 231.604†	286.8	5.871	ug/L	0.3508	29.35	ug/L	1.754	5.98%
P 213.617†	11.1	2.453	ug/L	0.7037	12.26	ug/L	3.519	28.69%
Pb 220.353†	50.7	4.027	ug/L	1.4859	20.14	ug/L	7.429	36.90%
Sb 206.836†	8.0	1.656	ug/L	1.0179	8.282	ug/L	5.0893	61.45%
Se 196.026†	5.4	1.410	ug/L	1.2574	7.052	ug/L	6.2871	89.15%
Sn 189.927†	8.8	0.908	ug/L	0.2454	4.539	ug/L	1.2271	27.04%
Sr 421.552†	7511.3	14.11	ug/L	0.693	70.55	ug/L	3.465	4.91%
Ti 337.279†	20.5	0.879	ug/L	0.5489	4.393	ug/L	2.7444	62.48%
Tl 190.801†	-4.8	-0.884	ug/L	0.4802	-4.419	ug/L	2.4010	54.34%
V 292.402†	-81.0	-0.110	ug/L	0.1290	-0.548	ug/L	0.6449	117.67%
Zn 206.200†	1565.2	38.27	ug/L	0.116	191.3	ug/L	0.58	0.30%

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-SOIDW-112015

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Analysis Date: 12/18/15 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver (Ag)	75-125	80.77		-1.005		100.000	80.8		
Arsenic (As)	75-125	215.1		2.064		250.000	85.2		
Barium (Ba)	75-125	530.9		341.6		250.000	75.7		
Cadmium (Cd)	75-125	43.33		1.541		50.000	83.6		
Chromium (Cr)	75-125	202.3		1.985		250.000	80.1		
Lead (Pb)	75-125	212.3		12.57		250.000	79.9		
Selenium (Se)	75-125	223.8		4.851		250.000	87.6		

Comments:

12/18/15 12:21 AZ25348S01

12/18/15 12:38 AZ25348S01-A

Sequence No.: 20
Sample ID: AZ25348S01-A
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 12/18/15 12:38:07 PM
Data Type: Reprocessed on 12/21/15 9:13:03 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25348S01-A

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	824331.0	94.20	%	0.801				0.85%
Y 371.029 Radial	753464.5	93.52	%	0.977				1.04%
Ag 338.289†	9708.3	80.77	ug/L	0.853	80.77	ug/L	0.853	1.06%
Al 308.215†	1869.5	2777	ug/L	25.8	2777	ug/L	25.8	0.93%
As 188.979†	771.3	215.1	ug/L	1.96	215.1	ug/L	1.96	0.91%
B†	14719.3	285.5	ug/L	2.40	285.5	ug/L	2.40	0.84%
Ba 233.527†	78363.2	530.9	ug/L	2.39	530.9	ug/L	2.39	0.45%
Be 313.107†	11858.0	46.04	ug/L	0.216	46.04	ug/L	0.216	0.47%
Ca 315.887†	133411.5	29300	ug/L	690.7	29300	ug/L	690.7	2.36%
Cd 214.440†	9910.7	43.33	ug/L	0.450	43.33	ug/L	0.450	1.04%
Co 228.616†	20105.9	321.9	ug/L	3.19	321.9	ug/L	3.19	0.99%
Cr 267.716†	20442.5	202.3	ug/L	1.24	202.3	ug/L	1.24	0.61%
Cu 327.393†	26405.4	204.6	ug/L	1.01	204.6	ug/L	1.01	0.49%
Fe 273.955†	18053.3	897.1	ug/L	4.82	897.1	ug/L	4.82	0.54%
K 766.490†	22443.8	7504	ug/L	218.1	7504	ug/L	218.1	2.91%
Mg 285.213†	227989.1	26910	ug/L	579.2	26910	ug/L	579.2	2.15%
Mn 257.610†	24863.4	1765	ug/L	8.6	1765	ug/L	8.6	0.49%
Mo 202.031†	6346.8	188.7	ug/L	2.01	188.7	ug/L	2.01	1.07%
Na 589.592†	9328909.4	1160000	ug/L	19791.2	1160000	ug/L	19791.2	1.71%
Ni 231.604†	11142.7	229.1	ug/L	2.25	229.1	ug/L	2.25	0.98%
P 213.617†	8062.9	1777	ug/L	16.7	1777	ug/L	16.7	0.94%
Pb 220.353†	2617.2	212.3	ug/L	2.41	212.3	ug/L	2.41	1.14%
Sb 206.836†	981.6	202.0	ug/L	1.38	202.0	ug/L	1.38	0.68%
Se 196.026†	849.6	223.8	ug/L	3.67	223.8	ug/L	3.67	1.64%
Sn 189.927†	2284.7	206.4	ug/L	2.61	206.4	ug/L	2.61	1.27%
Sr 421.552†	151384.3	286.6	ug/L	5.99	286.6	ug/L	5.99	2.09%
Ti 337.279†	6555.4	226.7	ug/L	1.03	226.7	ug/L	1.03	0.46%
Tl 190.801†	1038.8	190.3	ug/L	0.57	190.3	ug/L	0.57	0.30%
V 292.402†	40260.3	212.5	ug/L	1.64	212.5	ug/L	1.64	0.77%
Zn 206.200†	23176.4	586.2	ug/L	6.15	586.2	ug/L	6.15	1.05%

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/07/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:00	%R(1)	True CCV1	Found 13:04	%R(1)	True CCV1	Found 13:21	%R(1)	
Mercury (Hg)	4	4.008	100	5	4.798	96.0	5	4.767	95.3	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/07/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:00	%R(1)	True CCV1	Found 14:46	%R(1)	True CCV1	Found 15:16	%R(1)	
Mercury (Hg)	4	4.008	100	5	5.009	100	5	5.063	101	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/07/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C				C	
	13:02		13:06		13:23		14:48				13:17		
Mercury (Hg)	.20	U	.20	U	.20	U	.20	U			.20	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/07/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	13:02		15:18						13:17		
Mercury (Hg)	.20	U	.20	U					.20	U	P

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/14/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 9:38	%R(1)	True CCV1	Found 9:43	%R(1)	True CCV1	Found 9:59	%R(1)	
Mercury (Hg)	4	4.17	104	5	5.124	102	5	5.097	102	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/14/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 9:38	%R(1)	True CCV1	Found 10:29	%R(1)	True CCV1	Found 10:48	%R(1)	
Mercury (Hg)	4	4.17	104	5	5.095	102	5	5.063	101	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/14/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C				C	
	09:40		09:45		10:02		10:31				09:51		
Mercury (Hg)	.20	U	.20	U	.20	U	.20	U			.20	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 12/14/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	09:40		10:50						09:51		
Mercury (Hg)	.20	U	.20	U					.20	U	P

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/15/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 9:07	%R(1)	True CCV1	Found 9:11	%R(1)	True CCV1	Found 9:32	%R(1)	
Mercury (Hg)	4	4.129	103	5	5.109	102	5	5.126	103	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 12/15/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 9:07	%R(1)	True CCV1	Found 10:23	%R(1)	True CCV1	Found 11:00	%R(1)	
Mercury (Hg)	4	4.129	103	5	5.24	105	5	5.323	106	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analysis Date: 12/15/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C		C			
	09:09		09:13		09:34		10:26				09:26		
Mercury (Hg)	2.00	U	2.00	U	2.00	U	2.00	U			.0020	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analysis Date: 12/15/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	09:09		11:02						09:26		
Mercury (Hg)	2.00	U	2.00	U					.0020	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 78007 SDG: 78007

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analysis Date: 12/15/15

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C				C	
	09:09		09:13		09:34						09:24		
Mercury (Hg)	2.00	U	2.00	U	2.00	U					.0020	U	P

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: ICP Continuous

Results Data Set (original): 151208A6010X
Results Library (original): C:\PE\chemist\RESULTS\Results.mdb
Results Data Set (reprocessed):
Results Library (reprocessed):

Sequence No.: 1 Autosampler Location: 1
Sample ID: CalBlk 151208RJS I:PB O:R Date Collected: 12/08/15 2:02:56 PM
Analyst: Data Type: Reprocessed on 12/09/15 9:03:35 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: CalBlk 151208RJS I:PB O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	824957.3	7447.97	0.90%	100.0	%
Y 371.029 Radial	49512.6	899.16	1.82%	100.0	%
Ag 338.289†	-77.3	31.70	41.00%	[0.00]	ug/L
Al 308.215†	10.7	1.48	13.81%	[0.00]	ug/L
As 188.979†	1.1	2.41	226.12%	[0.00]	ug/L
B†	19.0	3.03	15.94%	[0.00]	ug/L
Ba 233.527†	149.1	8.64	5.79%	[0.00]	ug/L
Be 313.107†	25.6	1.98	7.72%	[0.00]	ug/L
Ca 315.887†	-73.2	5.18	7.08%	[0.00]	ug/L
Cd 214.440†	259.6	1.21	0.46%	[0.00]	ug/L
Co 228.616†	108.0	16.06	14.87%	[0.00]	ug/L
Cr 267.716†	465.2	17.22	3.70%	[0.00]	ug/L
Cu 327.393†	-700.0	4.91	0.70%	[0.00]	ug/L
Fe 273.955†	-141.7	6.59	4.65%	[0.00]	ug/L
K 766.490†	-474.8	29.72	6.26%	[0.00]	ug/L
Mg 285.213†	-68.0	5.61	8.25%	[0.00]	ug/L
Mn 257.610†	-79.9	4.01	5.03%	[0.00]	ug/L
Mo 202.031†	94.7	9.17	9.69%	[0.00]	ug/L
Na 589.592†	-50.3	103.50	205.67%	[0.00]	ug/L
Ni 231.604†	-209.8	14.99	7.14%	[0.00]	ug/L
P 213.617†	-19.6	4.38	22.41%	[0.00]	ug/L
Pb 220.353†	-7.7	4.32	56.04%	[0.00]	ug/L
Sb 206.836†	-4.2	5.82	138.52%	[0.00]	ug/L
Se 196.026†	9.0	4.10	45.75%	[0.00]	ug/L
Sn 189.927†	77.2	7.31	9.47%	[0.00]	ug/L
Sr 421.552†	1039.7	116.71	11.22%	[0.00]	ug/L
Ti 337.279†	-266.5	19.66	7.38%	[0.00]	ug/L
Tl 190.801†	-6.6	1.59	24.14%	[0.00]	ug/L
V 292.402†	-364.9	19.14	5.25%	[0.00]	ug/L
Zn 206.200†	-367.4	3.07	0.83%	[0.00]	ug/L
Li 670.784†	1419.7	183.35	12.91%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 151208RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 12/08/15 2:07:02 PM
Data Type: Reprocessed on 12/09/15 9:03:36 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 151208RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	819584.3	6539.08	0.80%	99.35	%
Y 371.029 Radial	49511.0	206.74	0.42%	100.00	%
Ag 338.289†	22.9	16.16	70.72%	[1.00]	ug/L
Al 308.215†	47.1	1.96	4.16%	[100.00]	ug/L
As 188.979†	10.0	2.94	29.31%	[3.50]	ug/L
B†	65.0	0.51	0.78%	[50.00]	ug/L
Ba 233.527†	674.7	10.21	1.51%	[5.00]	ug/L
Be 313.107†	415.7	5.99	1.44%	[2.00]	ug/L
Ca 315.887†	470.5	11.33	2.41%	[100.00]	ug/L
Cd 214.440†	1102.2	4.85	0.44%	[5.00]	ug/L
Co 228.616†	295.6	26.49	8.96%	[5.00]	ug/L
Cr 267.716†	479.3	13.80	2.88%	[5.00]	ug/L
Cu 327.393†	393.3	24.93	6.34%	[5.00]	ug/L
Fe 273.955†	687.2	3.40	0.49%	[50.00]	ug/L
K 766.490†	1551.3	31.46	2.03%	[1000.00]	ug/L
Mg 285.213†	374.2	6.64	1.77%	[50]	ug/L
Mn 257.610†	61.3	5.62	9.16%	[5.00]	ug/L
Mo 202.031†	131.7	6.95	5.27%	[5.00]	ug/L
Na 589.592†	7000.8	260.70	3.72%	[1000.00]	ug/L
Ni 231.604†	215.4	22.32	10.36%	[5.00]	ug/L
P 213.617†	82.3	1.84	2.23%	[25.00]	ug/L
Pb 220.353†	35.7	8.28	23.18%	[3.00]	ug/L
Sb 206.836†	19.2	5.20	27.06%	[5.00]	ug/L
Se 196.026†	5.5	10.01	180.83%	[5.00]	ug/L
Sn 189.927†	72.2	10.20	14.13%	[5.00]	ug/L
Sr 421.552†	2176.6	54.62	2.51%	[5.00]	ug/L
Ti 337.279†	111.3	9.99	8.97%	[5.00]	ug/L
Tl 190.801†	27.6	8.03	29.14%	[5.00]	ug/L
V 292.402†	839.0	42.97	5.12%	[5.00]	ug/L
Zn 206.200†	628.1	3.11	0.50%	[20.00]	ug/L
Li 670.784†	230663.0	337.56	0.15%	[1.00]	ug/L

Sequence No.: 3
Sample ID: STD 2 151208RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/08/15 2:11:08 PM
Data Type: Reprocessed on 12/09/15 9:03:37 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 151208RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	771248.6	3427.81	0.44%	93.49	%
Y 371.029 Radial	48845.6	937.06	1.92%	98.65	%
Ag 338.289†	54686.4	274.63	0.50%	[500.0]	ug/L
Al 308.215†	9626.8	259.69	2.70%	[20000.00]	ug/L
As 188.979†	3236.8	5.96	0.18%	[1000.00]	ug/L
B†	1434.0	42.65	2.97%	[1000.00]	ug/L
Ba 233.527†	140661.1	651.69	0.46%	[1000.00]	ug/L
Be 313.107†	221093.4	5020.57	2.27%	[1000.00]	ug/L
Ca 315.887†	196168.4	4392.67	2.24%	[50000]	ug/L
Cd 214.440†	223169.5	1043.69	0.47%	[1000.00]	ug/L
Co 228.616†	59221.1	150.12	0.25%	[1000.00]	ug/L
Cr 267.716†	93436.7	301.77	0.32%	[1000.00]	ug/L
Cu 327.393†	81679.0	283.85	0.35%	[1000.00]	ug/L
Fe 273.955†	278555.9	1079.28	0.39%	[20000]	ug/L
K 766.490†	33244.7	805.60	2.42%	[20000]	ug/L
Mg 285.213†	366462.0	8577.52	2.34%	[50000]	ug/L
Mn 257.610†	12669.1	335.20	2.65%	[1000.00]	ug/L
Mo 202.031†	30413.8	92.92	0.31%	[1000.00]	ug/L
Na 589.592†	180157.2	3869.08	2.15%	[25000]	ug/L
Ni 231.604†	44921.2	276.75	0.62%	[1000.00]	ug/L
P 213.617†	19746.8	21.83	0.11%	[5000]	ug/L
Pb 220.353†	11510.8	31.21	0.27%	[1000.00]	ug/L
Sb 206.836†	4232.0	15.18	0.36%	[1000.00]	ug/L
Se 196.026†	3200.8	7.91	0.25%	[1000.00]	ug/L
Sn 189.927†	11235.6	33.19	0.30%	[1000.00]	ug/L
Sr 421.552†	456590.7	10670.15	2.34%	[1000.00]	ug/L
Ti 337.279†	24514.3	658.25	2.69%	[1000.00]	ug/L
Tl 190.801†	5117.5	20.51	0.40%	[1000.00]	ug/L
V 292.402†	179658.0	281.36	0.16%	[1000.00]	ug/L
Zn 206.200†	28319.0	104.91	0.37%	[1000.00]	ug/L
Li 670.784†	7097213.7	12701.26	0.18%	[500.0]	ug/L

Sequence No.: 4
Sample ID: STD 3 151208RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/08/15 2:15:25 PM
Data Type: Reprocessed on 12/09/15 9:03:39 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 151208RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	769983.4	10390.47	1.35%	93.34	%
Y 371.029 Radial	46994.6	1004.13	2.14%	94.91	%
Ag 338.289†	109750.8	1858.92	1.69%	[1000.00]	ug/L
Al 308.215†	19950.2	146.74	0.74%	[40000.00]	ug/L
As 188.979†	6352.2	35.43	0.56%	[2000.00]	ug/L
B†	2958.7	20.42	0.69%	[2000.00]	ug/L
Ba 233.527†	277950.5	4492.45	1.62%	[2000.00]	ug/L
Be 313.107†	448197.8	2326.47	0.52%	[2000.00]	ug/L
Ca 315.887†	398736.8	5263.75	1.32%	[100000.0]	ug/L
Cd 214.440†	434229.9	6188.45	1.43%	[2000.00]	ug/L
Co 228.616†	116072.1	1754.08	1.51%	[2000.00]	ug/L
Cr 267.716†	182835.1	2860.98	1.56%	[2000.00]	ug/L
Cu 327.393†	163901.2	2835.26	1.73%	[2000.00]	ug/L
Fe 273.955†	545616.8	9814.04	1.80%	[40000]	ug/L
K 766.490†	69382.4	1046.02	1.51%	[40000]	ug/L
Mg 285.213†	738066.4	9149.19	1.24%	[100000]	ug/L
Mn 257.610†	26053.7	202.78	0.78%	[2000.00]	ug/L
Mo 202.031†	58819.9	822.85	1.40%	[2000.00]	ug/L
Na 589.592†	370531.8	5073.52	1.37%	[50000]	ug/L
Ni 231.604†	87442.4	1349.06	1.54%	[2000.00]	ug/L
P 213.617†	38794.4	495.11	1.28%	[10000]	ug/L
Pb 220.353†	22030.5	395.50	1.80%	[2000.00]	ug/L
Sb 206.836†	8248.0	84.29	1.02%	[2000.00]	ug/L
Se 196.026†	6133.5	54.19	0.88%	[2000.00]	ug/L
Sn 189.927†	21716.7	205.20	0.94%	[2000.00]	ug/L
Sr 421.552†	936481.4	11584.11	1.24%	[2000.00]	ug/L
Ti 337.279†	51037.9	286.82	0.56%	[2000.00]	ug/L
Tl 190.801†	9756.3	264.82	2.71%	[2000.00]	ug/L
V 292.402†	356065.0	5917.36	1.66%	[2000.00]	ug/L
Zn 206.200†	54938.7	876.20	1.59%	[2000.00]	ug/L
Li 670.784†	14330879.9	74252.32	0.52%	[1000.00]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	109.7	0.00000	0.999999	
Al 308.215	3	Lin Thru 0	0.0	0.4953	0.00000	0.999901	
As 188.979	3	Lin Thru 0	0.0	3.188	0.00000	0.999971	
B	3	Lin Thru 0	0.0	1.470	0.00000	0.999920	
Ba 233.527	3	Lin Thru 0	0.0	139.3	0.00000	0.999988	
Be 313.107	3	Lin Thru 0	0.0	223.5	0.00000	0.999986	
Ca 315.887	3	Lin Thru 0	0.0	3.975	0.00000	0.999979	
Cd 214.440	3	Lin Thru 0	0.0	218.3	0.00000	0.999938	
Co 228.616	3	Lin Thru 0	0.0	58.27	0.00000	0.999967	
Cr 267.716	3	Lin Thru 0	0.0	91.82	0.00000	0.999961	
Cu 327.393	3	Lin Thru 0	0.0	81.90	0.00000	0.999999	
Fe 273.955	3	Lin Thru 0	0.0	13.70	0.00000	0.999965	
K 766.490	3	Lin Thru 0	0.0	1.720	0.00000	0.999856	
Mg 285.213	3	Lin Thru 0	0.0	7.370	0.00000	0.999996	
Mn 257.610	3	Lin Thru 0	0.0	12.96	0.00000	0.999939	
Mo 202.031	3	Lin Thru 0	0.0	29.61	0.00000	0.999908	
Na 589.592	3	Lin Thru 0	0.0	7.370	0.00000	0.999938	
Ni 231.604	3	Lin Thru 0	0.0	43.96	0.00000	0.999940	
P 213.617	3	Lin Thru 0	0.0	3.893	0.00000	0.999974	
Pb 220.353	3	Lin Thru 0	0.0	11.11	0.00000	0.999841	
Sb 206.836	3	Lin Thru 0	0.0	4.146	0.00000	0.999946	
Se 196.026	3	Lin Thru 0	0.0	3.094	0.00000	0.999849	

Sn 189.927	3	Lin Thru 0	0.0	10.93	0.00000	0.999904
Sr 421.552	3	Lin Thru 0	0.0	465.9	0.00000	0.999950
Ti 337.279	3	Lin Thru 0	0.0	25.32	0.00000	0.999874
Tl 190.801	3	Lin Thru 0	0.0	4.926	0.00000	0.999811
V 292.402	3	Lin Thru 0	0.0	178.4	0.00000	0.999993
Zn 206.200	3	Lin Thru 0	0.0	27.64	0.00000	0.999924
Li 670.784	3	Lin Thru 0	0.0	14300	0.00000	0.999901

Sequence No.: 5
Sample ID: ICV 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 12/08/15 2:18:40 PM
Data Type: Reprocessed on 12/09/15 9:03:40 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	783248.5	94.94	%	1.024				1.08%
Y 371.029 Radial	48425.5	97.80	%	0.101				0.10%
Ag 338.289†	51968.6	473.8	ug/L	2.88	473.8	ug/L	2.88	0.61%
QC value within limits for Ag 338.289 Recovery = 94.77%								
Al 308.215†	12137.8	24510	ug/L	57.5	24510	ug/L	57.5	0.23%
QC value within limits for Al 308.215 Recovery = 98.03%								
As 188.979†	3002.9	941.9	ug/L	10.03	941.9	ug/L	10.03	1.07%
QC value within limits for As 188.979 Recovery = 94.19%								
B†	1432.0	1042	ug/L	10.0	1042	ug/L	10.0	0.96%
QC value within limits for B Recovery = 104.20%								
Ba 233.527†	136774.8	979.1	ug/L	0.98	979.1	ug/L	0.98	0.10%
QC value within limits for Ba 233.527 Recovery = 97.91%								
Be 313.107†	214040.2	957.7	ug/L	6.94	957.7	ug/L	6.94	0.72%
QC value within limits for Be 313.107 Recovery = 95.77%								
Ca 315.887†	100730.6	25330	ug/L	212.7	25330	ug/L	212.7	0.84%
QC value within limits for Ca 315.887 Recovery = 101.34%								
Cd 214.440†	217505.9	995.5	ug/L	2.22	995.5	ug/L	2.22	0.22%
QC value within limits for Cd 214.440 Recovery = 99.55%								
Co 228.616†	58142.9	997.2	ug/L	1.12	997.2	ug/L	1.12	0.11%
QC value within limits for Co 228.616 Recovery = 99.72%								
Cr 267.716†	90813.2	989.9	ug/L	2.19	989.9	ug/L	2.19	0.22%
QC value within limits for Cr 267.716 Recovery = 98.99%								
Cu 327.393†	79631.4	972.3	ug/L	7.79	972.3	ug/L	7.79	0.80%
QC value within limits for Cu 327.393 Recovery = 97.23%								
Fe 273.955†	345020.8	25190	ug/L	7.5	25190	ug/L	7.5	0.03%
QC value within limits for Fe 273.955 Recovery = 100.75%								
K 766.490†	40525.0	23560	ug/L	335.8	23560	ug/L	335.8	1.43%
QC value within limits for K 766.490 Recovery = 94.24%								
Mg 285.213†	186385.0	25320	ug/L	216.7	25320	ug/L	216.7	0.86%
QC value within limits for Mg 285.213 Recovery = 101.27%								
Mn 257.610†	12525.8	967.5	ug/L	2.95	967.5	ug/L	2.95	0.30%
QC value within limits for Mn 257.610 Recovery = 96.75%								
Mo 202.031†	28854.8	976.6	ug/L	9.79	976.6	ug/L	9.79	1.00%
QC value within limits for Mo 202.031 Recovery = 97.66%								
Na 589.592†	175607.6	23820	ug/L	267.8	23820	ug/L	267.8	1.12%
QC value within limits for Na 589.592 Recovery = 95.27%								
Ni 231.604†	44871.9	1020	ug/L	2.1	1020	ug/L	2.1	0.21%
QC value within limits for Ni 231.604 Recovery = 101.96%								
P 213.617†	19355.4	4971	ug/L	49.2	4971	ug/L	49.2	0.99%
QC value within limits for P 213.617 Recovery = 99.43%								
Pb 220.353†	11335.5	1020	ug/L	11.8	1020	ug/L	11.8	1.16%
QC value within limits for Pb 220.353 Recovery = 101.99%								
Sb 206.836†	4078.6	983.9	ug/L	9.40	983.9	ug/L	9.40	0.96%
QC value within limits for Sb 206.836 Recovery = 98.39%								
Se 196.026†	3134.8	1022	ug/L	8.1	1022	ug/L	8.1	0.79%
QC value within limits for Se 196.026 Recovery = 102.24%								
Sn 189.927†	5372.7	495.3	ug/L	5.98	495.3	ug/L	5.98	1.21%
QC value within limits for Sn 189.927 Recovery = 99.06%								
Sr 421.552†	451519.8	969.1	ug/L	10.04	969.1	ug/L	10.04	1.04%
QC value within limits for Sr 421.552 Recovery = 96.91%								
Ti 337.279†	23655.2	933.9	ug/L	3.37	933.9	ug/L	3.37	0.36%
QC value within limits for Ti 337.279 Recovery = 93.39%								
Tl 190.801†	5038.2	1023	ug/L	11.1	1023	ug/L	11.1	1.08%
QC value within limits for Tl 190.801 Recovery = 102.28%								
V 292.402†	173241.7	988.1	ug/L	0.78	988.1	ug/L	0.78	0.08%
QC value within limits for V 292.402 Recovery = 98.81%								
Zn 206.200†	27914.6	1010	ug/L	3.4	1010	ug/L	3.4	0.34%
QC value within limits for Zn 206.200 Recovery = 101.00%								

Li 670.784†	6923556.2	484.0 ug/L	7.00	484.0 ug/L	7.00	1.45%

QC value within limits for Li 670.784 Recovery = 96.81%

All analyte(s) passed QC.

Sequence No.: 6
Sample ID: ICB 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/08/15 2:26:56 PM
Data Type: Reprocessed on 12/09/15 9:03:42 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	823849.4	99.87	%	1.140				1.14%
Y 371.029 Radial	51187.4	103.4	%	2.89				2.80%
Ag 338.289†	-4.4	-0.040	ug/L	0.2748	-0.040	ug/L	0.2748	690.26%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-1.0	-1.954	ug/L	1.7923	-1.954	ug/L	1.7923	91.73%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	5.9	1.861	ug/L	0.4063	1.861	ug/L	0.4063	21.83%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	0.8	0.524	ug/L	2.2887	0.524	ug/L	2.2887	436.87%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	2.3	0.016	ug/L	0.0614	0.016	ug/L	0.0614	382.85%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	9.0	0.040	ug/L	0.0074	0.040	ug/L	0.0074	18.58%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	11.8	2.967	ug/L	3.6935	2.967	ug/L	3.6935	124.47%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	54.9	0.252	ug/L	0.0786	0.252	ug/L	0.0786	31.20%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	0.5	0.011	ug/L	0.1603	0.011	ug/L	0.1603	>999.9%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	2.4	0.026	ug/L	0.0805	0.026	ug/L	0.0805	308.21%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	30.3	0.369	ug/L	0.8020	0.369	ug/L	0.8020	217.12%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	6.7	0.488	ug/L	0.3634	0.488	ug/L	0.3634	74.41%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	12.6	7.342	ug/L	12.3183	7.342	ug/L	12.3183	167.77%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	13.0	1.770	ug/L	0.4937	1.770	ug/L	0.4937	27.90%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	3.2	0.249	ug/L	0.0379	0.249	ug/L	0.0379	15.24%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	27.7	0.935	ug/L	0.2912	0.935	ug/L	0.2912	31.14%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-91.1	-12.37	ug/L	23.560	-12.37	ug/L	23.560	190.49%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	3.0	0.067	ug/L	0.4931	0.067	ug/L	0.4931	735.83%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-5.1	-1.304	ug/L	0.7370	-1.304	ug/L	0.7370	56.52%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	1.5	0.138	ug/L	0.7430	0.138	ug/L	0.7430	538.74%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	8.5	2.058	ug/L	1.2150	2.058	ug/L	1.2150	59.03%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-2.3	-0.749	ug/L	1.4383	-0.749	ug/L	1.4383	192.06%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	4.2	0.381	ug/L	0.8178	0.381	ug/L	0.8178	214.76%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-17.8	-0.038	ug/L	0.2327	-0.038	ug/L	0.2327	610.43%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-0.7	-0.029	ug/L	0.2269	-0.029	ug/L	0.2269	787.38%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	2.6	0.528	ug/L	0.6786	0.528	ug/L	0.6786	128.55%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-19.1	-0.094	ug/L	0.3788	-0.094	ug/L	0.3788	403.44%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-3.6	-0.132	ug/L	0.2353	-0.132	ug/L	0.2353	178.41%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	266.7	0.019 ug/L	0.0155	0.019 ug/L	0.0155	83.29%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICSA 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/08/15 2:46:41 PM
Data Type: Reprocessed on 12/09/15 9:03:46 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	742569.7	90.01	%	0.836				0.93%
Y 371.029 Radial	47099.2	95.13	%	0.655				0.69%
Ag 338.289†	43.9	0.400	ug/L	0.0718	0.400	ug/L	0.0718	17.94%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	92870.3	187500	ug/L	384.8	187500	ug/L	384.8	0.21%
QC value within limits for Al 308.215 Recovery = 93.76%								
As 188.979†	9.1	2.852	ug/L	1.3808	2.852	ug/L	1.3808	48.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	-692.5	28.85	ug/L	7.939	28.85	ug/L	7.939	27.52%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	3695.1	1.538	ug/L	0.3773	1.538	ug/L	0.3773	24.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.5	0.016	ug/L	0.0081	0.016	ug/L	0.0081	51.61%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	793275.4	199600	ug/L	334.7	199600	ug/L	334.7	0.17%
QC value within limits for Ca 315.887 Recovery = 99.78%								
Cd 214.440†	2101.5	-0.690	ug/L	0.0467	-0.690	ug/L	0.0467	6.77%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	242.5	1.484	ug/L	0.1514	1.484	ug/L	0.1514	10.20%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	45.6	-0.461	ug/L	0.3426	-0.461	ug/L	0.3426	74.37%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-125.4	-1.531	ug/L	0.0630	-1.531	ug/L	0.0630	4.12%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	2492772.8	182000	ug/L	72.6	182000	ug/L	72.6	0.04%
QC value within limits for Fe 273.955 Recovery = 90.99%								
K 766.490†	1.2	0.718	ug/L	17.8222	0.718	ug/L	17.8222	>999.9%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1396020.7	189600	ug/L	274.9	189600	ug/L	274.9	0.14%
QC value within limits for Mg 285.213 Recovery = 94.81%								
Mn 257.610†	-35.9	0.943	ug/L	0.4137	0.943	ug/L	0.4137	43.85%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-410.6	-3.218	ug/L	0.3798	-3.218	ug/L	0.3798	11.80%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	133.0	34.80	ug/L	7.111	34.80	ug/L	7.111	20.43%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-266.6	-0.382	ug/L	0.3535	-0.382	ug/L	0.3535	92.60%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	43.2	11.09	ug/L	1.179	11.09	ug/L	1.179	10.63%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	6.6	0.592	ug/L	0.8375	0.592	ug/L	0.8375	141.48%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-5.9	-1.414	ug/L	0.1710	-1.414	ug/L	0.1710	12.09%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-233.2	-2.456	ug/L	0.9766	-2.456	ug/L	0.9766	39.76%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-224.6	-3.716	ug/L	1.2750	-3.716	ug/L	1.2750	34.31%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	391.7	0.586	ug/L	0.0588	0.586	ug/L	0.0588	10.03%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	36.7	-1.961	ug/L	0.2779	-1.961	ug/L	0.2779	14.17%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	-10.6	-2.158	ug/L	1.3983	-2.158	ug/L	1.3983	64.79%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	7169.8	-0.046	ug/L	0.2807	-0.046	ug/L	0.2807	610.96%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-398.5	-14.42	ug/L	0.171	-14.42	ug/L	0.171	1.18%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	1526.7	0.107 ug/L	0.0236	0.107 ug/L	0.0236	22.08%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: ICSAB 151208RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 12/08/15 2:51:41 PM
Data Type: Reprocessed on 12/09/15 9:03:48 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 151208RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	743113.5	90.08	%	0.580				0.64%
Y 371.029 Radial	47277.2	95.49	%	0.845				0.88%
Ag 338.289†	110944.7	1012	ug/L	2.2	1012	ug/L	2.2	0.21%
QC value within limits for Ag 338.289 Recovery = 101.16%								
Al 308.215†	91410.0	184600	ug/L	2357.2	184600	ug/L	2357.2	1.28%
QC value within limits for Al 308.215 Recovery = 92.28%								
As 188.979†	1626.8	510.2	ug/L	1.47	510.2	ug/L	1.47	0.29%
QC value within limits for As 188.979 Recovery = 102.05%								
B†	-689.7	28.35	ug/L	9.206	28.35	ug/L	9.206	32.47%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	73479.1	503.0	ug/L	0.68	503.0	ug/L	0.68	0.14%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	109541.9	490.1	ug/L	7.64	490.1	ug/L	7.64	1.56%
QC value within limits for Be 313.107 Recovery = 98.03%								
Ca 315.887†	782362.3	196800	ug/L	2796.3	196800	ug/L	2796.3	1.42%
QC value within limits for Ca 315.887 Recovery = 98.40%								
Cd 214.440†	216430.3	981.2	ug/L	2.08	981.2	ug/L	2.08	0.21%
QC value within limits for Cd 214.440 Recovery = 98.12%								
Co 228.616†	30073.7	514.3	ug/L	5.32	514.3	ug/L	5.32	1.04%
QC value within limits for Co 228.616 Recovery = 102.87%								
Cr 267.716†	45160.6	491.5	ug/L	1.91	491.5	ug/L	1.91	0.39%
QC value within limits for Cr 267.716 Recovery = 98.29%								
Cu 327.393†	42380.5	517.5	ug/L	2.04	517.5	ug/L	2.04	0.39%
QC value within limits for Cu 327.393 Recovery = 103.50%								
Fe 273.955†	2482606.7	181200	ug/L	358.0	181200	ug/L	358.0	0.20%
QC value within limits for Fe 273.955 Recovery = 90.62%								
K 766.490†	74.9	43.55	ug/L	26.818	43.55	ug/L	26.818	61.58%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1373859.0	186600	ug/L	2555.8	186600	ug/L	2555.8	1.37%
QC value within limits for Mg 285.213 Recovery = 93.31%								
Mn 257.610†	6222.2	484.2	ug/L	9.32	484.2	ug/L	9.32	1.92%
QC value within limits for Mn 257.610 Recovery = 96.83%								
Mo 202.031†	14157.4	489.1	ug/L	4.97	489.1	ug/L	4.97	1.02%
QC value within limits for Mo 202.031 Recovery = 97.82%								
Na 589.592†	298.0	55.63	ug/L	12.905	55.63	ug/L	12.905	23.20%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	43034.4	983.6	ug/L	1.42	983.6	ug/L	1.42	0.14%
QC value within limits for Ni 231.604 Recovery = 98.36%								
P 213.617†	29.1	7.472	ug/L	0.9148	7.472	ug/L	0.9148	12.24%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	11167.3	1005	ug/L	8.8	1005	ug/L	8.8	0.87%
QC value within limits for Pb 220.353 Recovery = 100.48%								
Sb 206.836†	2060.5	497.0	ug/L	7.65	497.0	ug/L	7.65	1.54%
QC value within limits for Sb 206.836 Recovery = 99.41%								
Se 196.026†	1357.5	511.5	ug/L	13.28	511.5	ug/L	13.28	2.60%
QC value within limits for Se 196.026 Recovery = 102.29%								
Sn 189.927†	-234.5	-4.584	ug/L	0.6388	-4.584	ug/L	0.6388	13.93%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	384.5	0.585	ug/L	0.0878	0.585	ug/L	0.0878	15.01%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	51.4	-1.281	ug/L	0.8252	-1.281	ug/L	0.8252	64.43%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	2383.2	483.8	ug/L	4.49	483.8	ug/L	4.49	0.93%
QC value within limits for Tl 190.801 Recovery = 96.76%								
V 292.402†	95800.8	508.6	ug/L	1.04	508.6	ug/L	1.04	0.20%
QC value within limits for V 292.402 Recovery = 101.73%								
Zn 206.200†	26819.8	970.3	ug/L	4.43	970.3	ug/L	4.43	0.46%
QC value within limits for Zn 206.200 Recovery = 97.03%								

Li 670.784†	1589.9	0.111 ug/L	0.0179	0.111 ug/L	0.0179	16.11%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCV1 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/08/15 2:56:35 PM
Data Type: Reprocessed on 12/09/15 9:03:49 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	767272.1	93.01	%	1.996				2.15%
Y 371.029 Radial	47918.0	96.78	%	0.384				0.40%
Ag 338.289†	54825.3	499.9	ug/L	17.08	499.9	ug/L	17.08	3.42%
QC value within limits for Ag 338.289 Recovery = 99.98%								
Al 308.215†	9943.1	20080	ug/L	197.5	20080	ug/L	197.5	0.98%
QC value within limits for Al 308.215 Recovery = 100.38%								
As 188.979†	3325.8	1043	ug/L	31.0	1043	ug/L	31.0	2.97%
QC value within limits for As 188.979 Recovery = 104.31%								
B†	1459.3	1046	ug/L	23.7	1046	ug/L	23.7	2.26%
QC value within limits for B Recovery = 104.59%								
Ba 233.527†	143248.4	1026	ug/L	37.0	1026	ug/L	37.0	3.61%
QC value within limits for Ba 233.527 Recovery = 102.62%								
Be 313.107†	224887.1	1006	ug/L	14.1	1006	ug/L	14.1	1.40%
QC value within limits for Be 313.107 Recovery = 100.62%								
Ca 315.887†	201492.1	50680	ug/L	662.9	50680	ug/L	662.9	1.31%
QC value within limits for Ca 315.887 Recovery = 101.37%								
Cd 214.440†	226824.7	1038	ug/L	36.5	1038	ug/L	36.5	3.51%
QC value within limits for Cd 214.440 Recovery = 103.85%								
Co 228.616†	60079.5	1030	ug/L	37.7	1030	ug/L	37.7	3.66%
QC value within limits for Co 228.616 Recovery = 103.04%								
Cr 267.716†	94722.6	1032	ug/L	38.0	1032	ug/L	38.0	3.68%
QC value within limits for Cr 267.716 Recovery = 103.23%								
Cu 327.393†	83070.1	1014	ug/L	34.7	1014	ug/L	34.7	3.42%
QC value within limits for Cu 327.393 Recovery = 101.43%								
Fe 273.955†	279346.8	20390	ug/L	742.3	20390	ug/L	742.3	3.64%
QC value within limits for Fe 273.955 Recovery = 101.97%								
K 766.490†	34293.7	19940	ug/L	244.4	19940	ug/L	244.4	1.23%
QC value within limits for K 766.490 Recovery = 99.69%								
Mg 285.213†	377935.0	51300	ug/L	672.3	51300	ug/L	672.3	1.31%
QC value within limits for Mg 285.213 Recovery = 102.60%								
Mn 257.610†	12974.8	1001	ug/L	8.6	1001	ug/L	8.6	0.86%
QC value within limits for Mn 257.610 Recovery = 100.07%								
Mo 202.031†	30642.3	1037	ug/L	31.2	1037	ug/L	31.2	3.01%
QC value within limits for Mo 202.031 Recovery = 103.66%								
Na 589.592†	185590.8	25170	ug/L	343.1	25170	ug/L	343.1	1.36%
QC value within limits for Na 589.592 Recovery = 100.67%								
Ni 231.604†	45469.1	1033	ug/L	38.8	1033	ug/L	38.8	3.76%
QC value within limits for Ni 231.604 Recovery = 103.29%								
P 213.617†	19764.0	5076	ug/L	142.9	5076	ug/L	142.9	2.82%
QC value within limits for P 213.617 Recovery = 101.53%								
Pb 220.353†	11554.8	1040	ug/L	29.8	1040	ug/L	29.8	2.86%
QC value within limits for Pb 220.353 Recovery = 103.96%								
Sb 206.836†	4161.3	1004	ug/L	31.5	1004	ug/L	31.5	3.14%
QC value within limits for Sb 206.836 Recovery = 100.38%								
Se 196.026†	3217.6	1046	ug/L	33.4	1046	ug/L	33.4	3.19%
QC value within limits for Se 196.026 Recovery = 104.63%								
Sn 189.927†	11300.3	1041	ug/L	29.2	1041	ug/L	29.2	2.80%
QC value within limits for Sn 189.927 Recovery = 104.07%								
Sr 421.552†	467878.2	1004	ug/L	14.1	1004	ug/L	14.1	1.41%
QC value within limits for Sr 421.552 Recovery = 100.41%								
Ti 337.279†	25082.7	989.9	ug/L	9.54	989.9	ug/L	9.54	0.96%
QC value within limits for Ti 337.279 Recovery = 98.99%								
Tl 190.801†	5009.6	1017	ug/L	27.4	1017	ug/L	27.4	2.69%
QC value within limits for Tl 190.801 Recovery = 101.70%								
V 292.402†	182772.7	1044	ug/L	35.9	1044	ug/L	35.9	3.44%
QC value within limits for V 292.402 Recovery = 104.37%								
Zn 206.200†	28847.5	1044	ug/L	37.1	1044	ug/L	37.1	3.55%
QC value within limits for Zn 206.200 Recovery = 104.37%								

Li 670.784†	7143847.3	499.4 ug/L	12.17	499.4 ug/L	12.17	2.44%

QC value within limits for Li 670.784 Recovery = 99.89%

All analyte(s) passed QC.

Sequence No.: 12
Sample ID: CCB 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/08/15 3:01:45 PM
Data Type: Reprocessed on 12/09/15 9:03:51 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	825290.5	100.0	%	0.92				0.92%
Y 371.029 Radial	50166.4	101.3	%	2.67				2.64%
Ag 338.289†	28.8	0.262	ug/L	0.7165	0.262	ug/L	0.7165	273.17%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	2.6	5.159	ug/L	10.6667	5.159	ug/L	10.6667	206.77%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	4.0	1.268	ug/L	0.9708	1.268	ug/L	0.9708	76.54%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	4.0	2.726	ug/L	5.4623	2.726	ug/L	5.4623	200.36%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-6.3	-0.046	ug/L	0.0667	-0.046	ug/L	0.0667	144.84%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	13.8	0.062	ug/L	0.0034	0.062	ug/L	0.0034	5.44%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	71.2	17.91	ug/L	2.004	17.91	ug/L	2.004	11.19%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	85.2	0.391	ug/L	0.1308	0.391	ug/L	0.1308	33.49%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	4.5	0.082	ug/L	0.1736	0.082	ug/L	0.1736	210.51%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-11.9	-0.130	ug/L	0.0496	-0.130	ug/L	0.0496	38.17%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	14.1	0.172	ug/L	0.5937	0.172	ug/L	0.5937	346.06%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	37.4	2.727	ug/L	0.5374	2.727	ug/L	0.5374	19.71%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	34.3	19.95	ug/L	38.728	19.95	ug/L	38.728	194.15%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	64.2	8.709	ug/L	0.8690	8.709	ug/L	0.8690	9.98%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	2.5	0.195	ug/L	0.5526	0.195	ug/L	0.5526	283.66%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	43.5	1.470	ug/L	0.3453	1.470	ug/L	0.3453	23.48%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	111.9	15.17	ug/L	9.717	15.17	ug/L	9.717	64.03%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	12.8	0.291	ug/L	0.3538	0.291	ug/L	0.3538	121.70%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-8.8	-2.259	ug/L	0.5938	-2.259	ug/L	0.5938	26.29%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-1.3	-0.120	ug/L	0.0422	-0.120	ug/L	0.0422	35.25%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	16.0	3.853	ug/L	0.4482	3.853	ug/L	0.4482	11.63%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-4.5	-1.448	ug/L	5.4547	-1.448	ug/L	5.4547	376.61%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	3.8	0.348	ug/L	0.7005	0.348	ug/L	0.7005	201.14%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	96.0	0.206	ug/L	0.0939	0.206	ug/L	0.0939	45.59%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-12.2	-0.483	ug/L	0.2913	-0.483	ug/L	0.2913	60.35%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	1.1	0.225	ug/L	0.4876	0.225	ug/L	0.4876	216.68%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-11.3	-0.044	ug/L	0.0464	-0.044	ug/L	0.0464	105.81%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-15.2	-0.551	ug/L	0.0825	-0.551	ug/L	0.0825	14.97%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	144.4	0.010 ug/L	0.0061	0.010 ug/L	0.0061	60.92%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 27
Sample ID: CCV2 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 12/08/15 4:13:50 PM
Data Type: Reprocessed on 12/09/15 9:04:10 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	794907.3	96.36	%	0.600				0.62%
Y 371.029 Radial	49032.4	99.03	%	0.459				0.46%
Ag 338.289†	40017.3	364.9	ug/L	2.10	364.9	ug/L	2.10	0.58%
QC value within limits for Ag 338.289 Recovery = 97.30%								
Al 308.215†	7479.2	15100	ug/L	47.4	15100	ug/L	47.4	0.31%
QC value within limits for Al 308.215 Recovery = 100.67%								
As 188.979†	2491.7	781.5	ug/L	4.60	781.5	ug/L	4.60	0.59%
QC value within limits for As 188.979 Recovery = 104.20%								
B†	1091.0	781.5	ug/L	12.87	781.5	ug/L	12.87	1.65%
QC value within limits for B Recovery = 104.20%								
Ba 233.527†	106057.7	759.8	ug/L	5.66	759.8	ug/L	5.66	0.75%
QC value within limits for Ba 233.527 Recovery = 101.30%								
Be 313.107†	165081.0	738.6	ug/L	12.40	738.6	ug/L	12.40	1.68%
QC value within limits for Be 313.107 Recovery = 98.48%								
Ca 315.887†	149606.7	37630	ug/L	577.8	37630	ug/L	577.8	1.54%
QC value within limits for Ca 315.887 Recovery = 100.36%								
Cd 214.440†	168818.5	772.9	ug/L	6.43	772.9	ug/L	6.43	0.83%
QC value within limits for Cd 214.440 Recovery = 103.05%								
Co 228.616†	44746.0	767.4	ug/L	6.62	767.4	ug/L	6.62	0.86%
QC value within limits for Co 228.616 Recovery = 102.32%								
Cr 267.716†	70159.6	764.6	ug/L	5.54	764.6	ug/L	5.54	0.72%
QC value within limits for Cr 267.716 Recovery = 101.94%								
Cu 327.393†	60956.9	744.3	ug/L	5.84	744.3	ug/L	5.84	0.78%
QC value within limits for Cu 327.393 Recovery = 99.24%								
Fe 273.955†	206709.7	15090	ug/L	128.9	15090	ug/L	128.9	0.85%
QC value within limits for Fe 273.955 Recovery = 100.60%								
K 766.490†	25304.1	14710	ug/L	278.4	14710	ug/L	278.4	1.89%
QC value within limits for K 766.490 Recovery = 98.08%								
Mg 285.213†	280511.5	38080	ug/L	576.1	38080	ug/L	576.1	1.51%
QC value within limits for Mg 285.213 Recovery = 101.54%								
Mn 257.610†	9780.0	754.3	ug/L	2.16	754.3	ug/L	2.16	0.29%
QC value within limits for Mn 257.610 Recovery = 100.57%								
Mo 202.031†	22678.4	767.2	ug/L	3.81	767.2	ug/L	3.81	0.50%
QC value within limits for Mo 202.031 Recovery = 102.29%								
Na 589.592†	137697.2	18670	ug/L	320.8	18670	ug/L	320.8	1.72%
QC value within limits for Na 589.592 Recovery = 99.59%								
Ni 231.604†	33935.4	770.9	ug/L	6.52	770.9	ug/L	6.52	0.85%
QC value within limits for Ni 231.604 Recovery = 102.78%								
P 213.617†	14662.2	3766	ug/L	16.0	3766	ug/L	16.0	0.43%
QC value within limits for P 213.617 Recovery = 100.42%								
Pb 220.353†	8621.6	775.7	ug/L	3.41	775.7	ug/L	3.41	0.44%
QC value within limits for Pb 220.353 Recovery = 103.43%								
Sb 206.836†	3101.6	748.2	ug/L	2.65	748.2	ug/L	2.65	0.35%
QC value within limits for Sb 206.836 Recovery = 99.76%								
Se 196.026†	2410.5	783.8	ug/L	4.67	783.8	ug/L	4.67	0.60%
QC value within limits for Se 196.026 Recovery = 104.50%								
Sn 189.927†	8395.5	773.2	ug/L	2.87	773.2	ug/L	2.87	0.37%
QC value within limits for Sn 189.927 Recovery = 103.10%								
Sr 421.552†	346616.3	743.8	ug/L	12.52	743.8	ug/L	12.52	1.68%
QC value within limits for Sr 421.552 Recovery = 99.18%								
Ti 337.279†	18928.8	747.0	ug/L	2.05	747.0	ug/L	2.05	0.27%
QC value within limits for Ti 337.279 Recovery = 99.60%								
Tl 190.801†	3699.7	751.1	ug/L	2.88	751.1	ug/L	2.88	0.38%
QC value within limits for Tl 190.801 Recovery = 100.14%								
V 292.402†	134903.3	770.4	ug/L	6.68	770.4	ug/L	6.68	0.87%
QC value within limits for V 292.402 Recovery = 102.72%								
Zn 206.200†	22219.9	803.9	ug/L	3.63	803.9	ug/L	3.63	0.45%
QC value within limits for Zn 206.200 Recovery = 107.19%								

Li 670.784†	5206163.0	364.0 ug/L	2.10	364.0 ug/L	2.10	0.58%

QC value within limits for Li 670.784 Recovery = 97.06%
All analyte(s) passed QC.

Sequence No.: 28
Sample ID: CCB 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 12/08/15 4:20:07 PM
Data Type: Reprocessed on 12/09/15 9:04:12 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	839978.5	101.8	%	0.79				0.78%
Y 371.029 Radial	50352.4	101.7	%	1.19				1.17%
Ag 338.289†	-34.3	-0.313	ug/L	0.5527	-0.313	ug/L	0.5527	176.71%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	4.2	8.526	ug/L	2.6291	8.526	ug/L	2.6291	30.84%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.1	0.649	ug/L	0.1233	0.649	ug/L	0.1233	18.98%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	2.7	1.870	ug/L	3.2512	1.870	ug/L	3.2512	173.89%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-5.8	-0.042	ug/L	0.0791	-0.042	ug/L	0.0791	188.27%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	1.5	0.007	ug/L	0.0141	0.007	ug/L	0.0141	203.96%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	35.5	8.924	ug/L	4.3776	8.924	ug/L	4.3776	49.06%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-5.1	-0.023	ug/L	0.0595	-0.023	ug/L	0.0595	254.86%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	3.5	0.062	ug/L	0.3322	0.062	ug/L	0.3322	535.77%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-6.2	-0.068	ug/L	0.0752	-0.068	ug/L	0.0752	110.87%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	44.4	0.542	ug/L	0.4019	0.542	ug/L	0.4019	74.19%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	4.7	0.347	ug/L	0.2834	0.347	ug/L	0.2834	81.75%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	42.1	24.51	ug/L	31.637	24.51	ug/L	31.637	129.10%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	28.6	3.874	ug/L	0.7188	3.874	ug/L	0.7188	18.55%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	0.8	0.065	ug/L	0.2278	0.065	ug/L	0.2278	351.16%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	16.0	0.540	ug/L	0.3154	0.540	ug/L	0.3154	58.37%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	260.2	35.29	ug/L	12.681	35.29	ug/L	12.681	35.93%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	25.6	0.582	ug/L	0.3532	0.582	ug/L	0.3532	60.72%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-21.0	-5.403	ug/L	0.8795	-5.403	ug/L	0.8795	16.28%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-1.8	-0.165	ug/L	0.4194	-0.165	ug/L	0.4194	253.88%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.8	0.193	ug/L	0.7103	0.193	ug/L	0.7103	368.82%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-2.0	-0.645	ug/L	1.8045	-0.645	ug/L	1.8045	279.62%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-12.7	-1.164	ug/L	0.6112	-1.164	ug/L	0.6112	52.49%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	15.4	0.033	ug/L	0.2945	0.033	ug/L	0.2945	891.67%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	0.4	0.015	ug/L	0.1729	0.015	ug/L	0.1729	>999.9%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	0.9	0.188	ug/L	0.2329	0.188	ug/L	0.2329	124.02%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	20.9	0.124	ug/L	0.0355	0.124	ug/L	0.0355	28.60%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-35.5	-1.284	ug/L	0.0981	-1.284	ug/L	0.0981	7.64%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	160.6	0.011 ug/L	0.0094	0.011 ug/L	0.0094	83.94%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 38
Sample ID: CCV1 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/08/15 5:04:46 PM
Data Type: Reprocessed on 12/09/15 9:04:25 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	791294.0	95.92	%	0.272				0.28%
Y 371.029 Radial	49984.1	101.0	%	1.83				1.81%
Ag 338.289†	53957.3	492.0	ug/L	1.63	492.0	ug/L	1.63	0.33%
QC value within limits for Ag 338.289 Recovery = 98.39%								
Al 308.215†	9783.6	19750	ug/L	440.9	19750	ug/L	440.9	2.23%
QC value within limits for Al 308.215 Recovery = 98.77%								
As 188.979†	3352.2	1051	ug/L	6.7	1051	ug/L	6.7	0.64%
QC value within limits for As 188.979 Recovery = 105.14%								
B†	1448.6	1038	ug/L	22.5	1038	ug/L	22.5	2.16%
QC value within limits for B Recovery = 103.77%								
Ba 233.527†	141707.8	1015	ug/L	0.7	1015	ug/L	0.7	0.07%
QC value within limits for Ba 233.527 Recovery = 101.52%								
Be 313.107†	223110.7	998.3	ug/L	29.76	998.3	ug/L	29.76	2.98%
QC value within limits for Be 313.107 Recovery = 99.83%								
Ca 315.887†	199073.8	50080	ug/L	1367.3	50080	ug/L	1367.3	2.73%
QC value within limits for Ca 315.887 Recovery = 100.15%								
Cd 214.440†	225296.6	1031	ug/L	4.4	1031	ug/L	4.4	0.42%
QC value within limits for Cd 214.440 Recovery = 103.15%								
Co 228.616†	59569.4	1022	ug/L	0.8	1022	ug/L	0.8	0.08%
QC value within limits for Co 228.616 Recovery = 102.16%								
Cr 267.716†	93621.4	1020	ug/L	3.0	1020	ug/L	3.0	0.30%
QC value within limits for Cr 267.716 Recovery = 102.03%								
Cu 327.393†	81932.6	1000	ug/L	6.9	1000	ug/L	6.9	0.69%
QC value within limits for Cu 327.393 Recovery = 100.04%								
Fe 273.955†	274577.5	20050	ug/L	74.7	20050	ug/L	74.7	0.37%
QC value within limits for Fe 273.955 Recovery = 100.23%								
K 766.490†	33730.6	19610	ug/L	543.2	19610	ug/L	543.2	2.77%
QC value within limits for K 766.490 Recovery = 98.05%								
Mg 285.213†	372168.7	50520	ug/L	1430.0	50520	ug/L	1430.0	2.83%
QC value within limits for Mg 285.213 Recovery = 101.03%								
Mn 257.610†	12830.6	989.5	ug/L	21.52	989.5	ug/L	21.52	2.17%
QC value within limits for Mn 257.610 Recovery = 98.95%								
Mo 202.031†	30395.0	1028	ug/L	5.6	1028	ug/L	5.6	0.54%
QC value within limits for Mo 202.031 Recovery = 102.82%								
Na 589.592†	183251.9	24850	ug/L	668.7	24850	ug/L	668.7	2.69%
QC value within limits for Na 589.592 Recovery = 99.40%								
Ni 231.604†	45107.2	1025	ug/L	2.1	1025	ug/L	2.1	0.21%
QC value within limits for Ni 231.604 Recovery = 102.47%								
P 213.617†	19744.7	5071	ug/L	27.4	5071	ug/L	27.4	0.54%
QC value within limits for P 213.617 Recovery = 101.43%								
Pb 220.353†	11482.5	1033	ug/L	6.1	1033	ug/L	6.1	0.59%
QC value within limits for Pb 220.353 Recovery = 103.31%								
Sb 206.836†	4170.2	1006	ug/L	7.5	1006	ug/L	7.5	0.74%
QC value within limits for Sb 206.836 Recovery = 100.59%								
Se 196.026†	3241.3	1054	ug/L	11.2	1054	ug/L	11.2	1.06%
QC value within limits for Se 196.026 Recovery = 105.38%								
Sn 189.927†	11272.7	1038	ug/L	5.4	1038	ug/L	5.4	0.52%
QC value within limits for Sn 189.927 Recovery = 103.81%								
Sr 421.552†	460510.6	988.3	ug/L	27.71	988.3	ug/L	27.71	2.80%
QC value within limits for Sr 421.552 Recovery = 98.83%								
Ti 337.279†	24715.3	975.4	ug/L	21.05	975.4	ug/L	21.05	2.16%
QC value within limits for Ti 337.279 Recovery = 97.54%								
Tl 190.801†	4913.9	997.5	ug/L	4.82	997.5	ug/L	4.82	0.48%
QC value within limits for Tl 190.801 Recovery = 99.75%								
V 292.402†	180858.0	1033	ug/L	0.2	1033	ug/L	0.2	0.02%
QC value within limits for V 292.402 Recovery = 103.29%								
Zn 206.200†	28641.0	1036	ug/L	4.3	1036	ug/L	4.3	0.42%
QC value within limits for Zn 206.200 Recovery = 103.62%								

Li 670.784†	7040479.7	492.2 ug/L	2.53	492.2 ug/L	2.53	0.51%

QC value within limits for Li 670.784 Recovery = 98.44%

All analyte(s) passed QC.

Sequence No.: 39
Sample ID: CCB 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/08/15 5:09:46 PM
Data Type: Reprocessed on 12/09/15 9:04:27 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	840652.8	101.9	%	0.08				0.08%
Y 371.029 Radial	51264.4	103.5	%	3.67				3.55%
Ag 338.289†	-57.1	-0.521	ug/L	1.0443	-0.521	ug/L	1.0443	200.57%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	1.9	3.803	ug/L	4.0752	3.803	ug/L	4.0752	107.15%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	0.9	0.295	ug/L	0.5409	0.295	ug/L	0.5409	183.14%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	6.6	4.474	ug/L	3.6726	4.474	ug/L	3.6726	82.10%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-8.2	-0.059	ug/L	0.0970	-0.059	ug/L	0.0970	163.10%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	11.5	0.052	ug/L	0.0142	0.052	ug/L	0.0142	27.56%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	44.7	11.23	ug/L	2.869	11.23	ug/L	2.869	25.54%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	28.4	0.131	ug/L	0.0848	0.131	ug/L	0.0848	64.79%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	11.4	0.201	ug/L	0.0529	0.201	ug/L	0.0529	26.25%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-0.7	-0.008	ug/L	0.2622	-0.008	ug/L	0.2622	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	58.2	0.710	ug/L	0.4404	0.710	ug/L	0.4404	61.99%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	8.2	0.596	ug/L	0.1463	0.596	ug/L	0.1463	24.54%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	67.7	39.37	ug/L	7.688	39.37	ug/L	7.688	19.53%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	42.3	5.745	ug/L	0.1342	5.745	ug/L	0.1342	2.34%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	4.8	0.369	ug/L	0.2792	0.369	ug/L	0.2792	75.67%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	52.4	1.769	ug/L	0.6248	1.769	ug/L	0.6248	35.31%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	173.8	23.55	ug/L	5.967	23.55	ug/L	5.967	25.33%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	17.7	0.402	ug/L	0.4473	0.402	ug/L	0.4473	111.20%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-16.2	-4.161	ug/L	0.2152	-4.161	ug/L	0.2152	5.17%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-6.3	-0.562	ug/L	0.0208	-0.562	ug/L	0.0208	3.70%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	10.1	2.430	ug/L	0.6217	2.430	ug/L	0.6217	25.59%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	6.6	2.126	ug/L	2.0961	2.126	ug/L	2.0961	98.58%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	2.7	0.249	ug/L	0.4311	0.249	ug/L	0.4311	173.26%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	44.4	0.095	ug/L	0.1743	0.095	ug/L	0.1743	182.95%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-9.9	-0.391	ug/L	0.5315	-0.391	ug/L	0.5315	135.81%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.0	0.813	ug/L	1.3631	0.813	ug/L	1.3631	167.74%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-7.3	-0.016	ug/L	0.1675	-0.016	ug/L	0.1675	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-45.9	-1.660	ug/L	0.0514	-1.660	ug/L	0.0514	3.10%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	136.3	0.010 ug/L	0.0073	0.010 ug/L	0.0073	76.52%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 49
Sample ID: CCV2 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 12/08/15 5:57:17 PM
Data Type: Reprocessed on 12/09/15 9:04:40 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	793207.3	96.15	%	0.343				0.36%
Y 371.029 Radial	49176.7	99.32	%	0.817				0.82%
Ag 338.289†	39217.9	357.6	ug/L	5.40	357.6	ug/L	5.40	1.51%
QC value within limits for Ag 338.289 Recovery = 95.36%								
Al 308.215†	7447.1	15040	ug/L	146.8	15040	ug/L	146.8	0.98%
QC value within limits for Al 308.215 Recovery = 100.24%								
As 188.979†	2511.8	787.8	ug/L	3.44	787.8	ug/L	3.44	0.44%
QC value within limits for As 188.979 Recovery = 105.05%								
B†	1098.7	785.8	ug/L	15.06	785.8	ug/L	15.06	1.92%
QC value within limits for B Recovery = 104.77%								
Ba 233.527†	105392.2	755.0	ug/L	4.07	755.0	ug/L	4.07	0.54%
QC value within limits for Ba 233.527 Recovery = 100.67%								
Be 313.107†	166495.9	745.0	ug/L	2.11	745.0	ug/L	2.11	0.28%
QC value within limits for Be 313.107 Recovery = 99.33%								
Ca 315.887†	151072.6	38000	ug/L	179.9	38000	ug/L	179.9	0.47%
QC value within limits for Ca 315.887 Recovery = 101.34%								
Cd 214.440†	168472.0	771.3	ug/L	3.42	771.3	ug/L	3.42	0.44%
QC value within limits for Cd 214.440 Recovery = 102.84%								
Co 228.616†	44518.6	763.5	ug/L	4.82	763.5	ug/L	4.82	0.63%
QC value within limits for Co 228.616 Recovery = 101.80%								
Cr 267.716†	69663.3	759.2	ug/L	4.96	759.2	ug/L	4.96	0.65%
QC value within limits for Cr 267.716 Recovery = 101.22%								
Cu 327.393†	60142.9	734.4	ug/L	7.56	734.4	ug/L	7.56	1.03%
QC value within limits for Cu 327.393 Recovery = 97.92%								
Fe 273.955†	202345.0	14770	ug/L	65.7	14770	ug/L	65.7	0.44%
QC value within limits for Fe 273.955 Recovery = 98.48%								
K 766.490†	25387.3	14760	ug/L	115.6	14760	ug/L	115.6	0.78%
QC value within limits for K 766.490 Recovery = 98.40%								
Mg 285.213†	284101.6	38560	ug/L	168.5	38560	ug/L	168.5	0.44%
QC value within limits for Mg 285.213 Recovery = 102.83%								
Mn 257.610†	9753.8	752.2	ug/L	6.80	752.2	ug/L	6.80	0.90%
QC value within limits for Mn 257.610 Recovery = 100.30%								
Mo 202.031†	22536.4	762.4	ug/L	3.32	762.4	ug/L	3.32	0.44%
QC value within limits for Mo 202.031 Recovery = 101.65%								
Na 589.592†	138688.1	18810	ug/L	93.2	18810	ug/L	93.2	0.50%
QC value within limits for Na 589.592 Recovery = 100.31%								
Ni 231.604†	34657.9	787.3	ug/L	2.76	787.3	ug/L	2.76	0.35%
QC value within limits for Ni 231.604 Recovery = 104.98%								
P 213.617†	14524.7	3731	ug/L	19.9	3731	ug/L	19.9	0.53%
QC value within limits for P 213.617 Recovery = 99.48%								
Pb 220.353†	8527.3	767.2	ug/L	2.63	767.2	ug/L	2.63	0.34%
QC value within limits for Pb 220.353 Recovery = 102.30%								
Sb 206.836†	3042.3	733.9	ug/L	3.66	733.9	ug/L	3.66	0.50%
QC value within limits for Sb 206.836 Recovery = 97.85%								
Se 196.026†	2397.9	779.5	ug/L	4.81	779.5	ug/L	4.81	0.62%
QC value within limits for Se 196.026 Recovery = 103.94%								
Sn 189.927†	8379.4	771.8	ug/L	2.69	771.8	ug/L	2.69	0.35%
QC value within limits for Sn 189.927 Recovery = 102.91%								
Sr 421.552†	347587.4	745.9	ug/L	2.77	745.9	ug/L	2.77	0.37%
QC value within limits for Sr 421.552 Recovery = 99.46%								
Ti 337.279†	18708.2	738.3	ug/L	7.59	738.3	ug/L	7.59	1.03%
QC value within limits for Ti 337.279 Recovery = 98.44%								
Tl 190.801†	3571.7	725.1	ug/L	3.19	725.1	ug/L	3.19	0.44%
QC value within limits for Tl 190.801 Recovery = 96.68%								
V 292.402†	134260.2	766.8	ug/L	3.77	766.8	ug/L	3.77	0.49%
QC value within limits for V 292.402 Recovery = 102.23%								
Zn 206.200†	22202.6	803.3	ug/L	2.32	803.3	ug/L	2.32	0.29%
QC value within limits for Zn 206.200 Recovery = 107.11%								

Li 670.784†	5192748.2	363.0 ug/L	1.23	363.0 ug/L	1.23	0.34%

QC value within limits for Li 670.784 Recovery = 96.81%
All analyte(s) passed QC.

Sequence No.: 50
Sample ID: CCB 151208RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 12/08/15 6:04:45 PM
Data Type: Reprocessed on 12/09/15 9:04:41 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151208RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	834186.2	101.1	%	0.77				0.76%
Y 371.029 Radial	50039.5	101.1	%	3.25				3.21%
Ag 338.289†	-57.5	-0.525	ug/L	0.8947	-0.525	ug/L	0.8947	170.58%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	1.7	3.393	ug/L	5.8946	3.393	ug/L	5.8946	173.70%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-3.5	-1.099	ug/L	0.6713	-1.099	ug/L	0.6713	61.10%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	-3.3	-2.253	ug/L	1.2907	-2.253	ug/L	1.2907	57.28%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-10.1	-0.073	ug/L	0.0391	-0.073	ug/L	0.0391	53.60%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.8	0.017	ug/L	0.0212	0.017	ug/L	0.0212	124.27%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	38.1	9.578	ug/L	2.9976	9.578	ug/L	2.9976	31.30%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	9.1	0.042	ug/L	0.0669	0.042	ug/L	0.0669	160.33%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-1.9	-0.031	ug/L	0.2228	-0.031	ug/L	0.2228	720.20%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-9.0	-0.099	ug/L	0.1979	-0.099	ug/L	0.1979	200.78%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	9.1	0.111	ug/L	1.0172	0.111	ug/L	1.0172	913.64%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	1.3	0.093	ug/L	0.4116	0.093	ug/L	0.4116	441.64%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	33.2	19.28	ug/L	24.921	19.28	ug/L	24.921	129.23%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	19.7	2.678	ug/L	1.2736	2.678	ug/L	1.2736	47.56%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-1.5	-0.116	ug/L	0.2731	-0.116	ug/L	0.2731	236.43%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	3.0	0.102	ug/L	0.4249	0.102	ug/L	0.4249	414.58%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	173.7	23.56	ug/L	8.997	23.56	ug/L	8.997	38.19%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	24.3	0.553	ug/L	0.1257	0.553	ug/L	0.1257	22.75%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-25.0	-6.418	ug/L	0.4559	-6.418	ug/L	0.4559	7.10%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-7.1	-0.636	ug/L	0.3040	-0.636	ug/L	0.3040	47.79%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.0	0.241	ug/L	0.5115	0.241	ug/L	0.5115	212.57%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2.3	0.756	ug/L	2.1782	0.756	ug/L	2.1782	288.00%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-7.4	-0.672	ug/L	0.2746	-0.672	ug/L	0.2746	40.86%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-48.1	-0.103	ug/L	0.3428	-0.103	ug/L	0.3428	332.01%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-11.3	-0.448	ug/L	0.3961	-0.448	ug/L	0.3961	88.45%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	2.1	0.425	ug/L	0.7584	0.425	ug/L	0.7584	178.59%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-28.9	-0.161	ug/L	0.1638	-0.161	ug/L	0.1638	101.74%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-58.2	-2.104	ug/L	0.0703	-2.104	ug/L	0.0703	3.34%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	68.0	0.005 ug/L	0.0037	0.005 ug/L	0.0037	78.82%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: ICP Continuous

Results Data Set (original): 151209A6010X
Results Library (original): C:\PE\chemist\RESULTS\Results.mdb
Results Data Set (reprocessed):
Results Library (reprocessed):

Sequence No.: 1 Autosampler Location: 1
Sample ID: CalBlk 151209RJS I:PB O:R Date Collected: 12/09/15 12:56:08 PM
Analyst: Data Type: Reprocessed on 12/09/15 4:57:07 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: CalBlk 151209RJS I:PB O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	849600.4	5938.84	0.70%	100.0	%
Y 371.029 Radial	54137.8	1335.24	2.47%	100.0	%
Ag 338.289†	-92.4	54.90	59.43%	[0.00]	ug/L
Al 308.215†	5.8	1.45	25.19%	[0.00]	ug/L
As 188.979†	0.5	1.51	305.72%	[0.00]	ug/L
B†	6.5	1.09	16.86%	[0.00]	ug/L
Ba 233.527†	118.2	7.82	6.62%	[0.00]	ug/L
Be 313.107†	25.5	1.84	7.20%	[0.00]	ug/L
Ca 315.887†	-72.7	4.10	5.64%	[0.00]	ug/L
Cd 214.440†	238.7	5.47	2.29%	[0.00]	ug/L
Co 228.616†	103.6	7.22	6.97%	[0.00]	ug/L
Cr 267.716†	438.6	3.79	0.86%	[0.00]	ug/L
Cu 327.393†	-378.9	57.38	15.14%	[0.00]	ug/L
Fe 273.955†	-137.4	2.14	1.56%	[0.00]	ug/L
K 766.490†	-419.7	95.68	22.80%	[0.00]	ug/L
Mg 285.213†	-66.8	9.71	14.55%	[0.00]	ug/L
Mn 257.610†	-71.8	2.39	3.33%	[0.00]	ug/L
Mo 202.031†	83.2	6.65	8.00%	[0.00]	ug/L
Na 589.592†	-50.6	19.83	39.18%	[0.00]	ug/L
Ni 231.604†	-210.8	3.56	1.69%	[0.00]	ug/L
P 213.617†	-20.5	3.63	17.75%	[0.00]	ug/L
Pb 220.353†	-6.1	9.02	147.69%	[0.00]	ug/L
Sb 206.836†	-7.7	3.89	50.82%	[0.00]	ug/L
Se 196.026†	5.8	8.75	150.07%	[0.00]	ug/L
Sn 189.927†	83.4	5.79	6.95%	[0.00]	ug/L
Sr 421.552†	901.3	89.92	9.98%	[0.00]	ug/L
Ti 337.279†	-259.7	9.57	3.69%	[0.00]	ug/L
Tl 190.801†	-8.9	3.62	40.83%	[0.00]	ug/L
V 292.402†	-623.4	90.60	14.53%	[0.00]	ug/L
Zn 206.200†	-403.1	3.30	0.82%	[0.00]	ug/L
Li 670.784†	1318.6	231.21	17.53%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 151209RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 12/09/15 1:00:14 PM
Data Type: Reprocessed on 12/09/15 4:57:08 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 151209RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	845266.2	7055.92	0.83%	99.49	%
Y 371.029 Radial	53670.0	789.16	1.47%	99.14	%
Ag 338.289†	140.5	38.12	27.13%	[1.00]	ug/L
Al 308.215†	53.9	2.02	3.75%	[100.00]	ug/L
As 188.979†	12.7	3.69	29.11%	[3.50]	ug/L
B†	73.5	8.82	12.01%	[50.00]	ug/L
Ba 233.527†	706.7	14.01	1.98%	[5.00]	ug/L
Be 313.107†	456.3	11.66	2.56%	[2.00]	ug/L
Ca 315.887†	488.5	7.04	1.44%	[100.00]	ug/L
Cd 214.440†	1078.4	19.36	1.80%	[5.00]	ug/L
Co 228.616†	303.3	15.23	5.02%	[5.00]	ug/L
Cr 267.716†	477.5	12.93	2.71%	[5.00]	ug/L
Cu 327.393†	392.5	28.60	7.29%	[5.00]	ug/L
Fe 273.955†	699.6	4.50	0.64%	[50.00]	ug/L
K 766.490†	1751.4	36.89	2.11%	[1000.00]	ug/L
Mg 285.213†	428.0	8.20	1.92%	[50]	ug/L
Mn 257.610†	65.3	6.10	9.35%	[5.00]	ug/L
Mo 202.031†	133.8	6.19	4.62%	[5.00]	ug/L
Na 589.592†	7235.5	80.36	1.11%	[1000.00]	ug/L
Ni 231.604†	231.6	7.45	3.22%	[5.00]	ug/L
P 213.617†	89.8	2.93	3.27%	[25.00]	ug/L
Pb 220.353†	37.2	10.10	27.12%	[3.00]	ug/L
Sb 206.836†	17.6	7.18	40.83%	[5.00]	ug/L
Se 196.026†	12.3	4.80	38.96%	[5.00]	ug/L
Sn 189.927†	57.3	4.81	8.41%	[5.00]	ug/L
Sr 421.552†	2485.5	115.84	4.66%	[5.00]	ug/L
Ti 337.279†	121.5	7.21	5.94%	[5.00]	ug/L
Tl 190.801†	27.3	1.89	6.91%	[5.00]	ug/L
V 292.402†	997.4	101.64	10.19%	[5.00]	ug/L
Zn 206.200†	563.6	3.63	0.64%	[20.00]	ug/L
Li 670.784†	222905.2	262.81	0.12%	[1.00]	ug/L

Sequence No.: 3
Sample ID: STD 2 151209RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/09/15 1:04:28 PM
Data Type: Reprocessed on 12/09/15 4:57:09 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 151209RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	787906.8	25973.72	3.30%	92.74	%
Y 371.029 Radial	54272.5	993.86	1.83%	100.2	%
Ag 338.289†	60984.0	1789.94	2.94%	[500.0]	ug/L
Al 308.215†	10407.3	245.75	2.36%	[20000.00]	ug/L
As 188.979†	3325.1	137.36	4.13%	[1000.00]	ug/L
B†	1552.1	48.18	3.10%	[1000.00]	ug/L
Ba 233.527†	149980.9	4741.68	3.16%	[1000.00]	ug/L
Be 313.107†	248266.5	8143.84	3.28%	[1000.00]	ug/L
Ca 315.887†	221740.4	7029.10	3.17%	[50000]	ug/L
Cd 214.440†	231194.3	7339.61	3.17%	[1000.00]	ug/L
Co 228.616†	61761.1	1991.37	3.22%	[1000.00]	ug/L
Cr 267.716†	99527.9	3434.66	3.45%	[1000.00]	ug/L
Cu 327.393†	90737.3	2675.68	2.95%	[1000.00]	ug/L
Fe 273.955†	294758.2	9817.68	3.33%	[20000]	ug/L
K 766.490†	38761.7	1258.33	3.25%	[20000]	ug/L
Mg 285.213†	415623.9	13074.65	3.15%	[50000]	ug/L
Mn 257.610†	14112.2	314.87	2.23%	[1000.00]	ug/L
Mo 202.031†	32155.0	1407.42	4.38%	[1000.00]	ug/L
Na 589.592†	192562.9	5725.20	2.97%	[25000]	ug/L
Ni 231.604†	47102.9	1537.60	3.26%	[1000.00]	ug/L
P 213.617†	20798.3	895.39	4.31%	[5000]	ug/L
Pb 220.353†	12139.2	497.84	4.10%	[1000.00]	ug/L
Sb 206.836†	4635.6	205.34	4.43%	[1000.00]	ug/L
Se 196.026†	3359.1	134.75	4.01%	[1000.00]	ug/L
Sn 189.927†	11738.5	520.69	4.44%	[1000.00]	ug/L
Sr 421.552†	520650.2	16141.68	3.10%	[1000.00]	ug/L
Ti 337.279†	28984.2	661.57	2.28%	[1000.00]	ug/L
Tl 190.801†	5468.5	233.52	4.27%	[1000.00]	ug/L
V 292.402†	194609.8	6309.65	3.24%	[1000.00]	ug/L
Zn 206.200†	28867.5	901.50	3.12%	[1000.00]	ug/L
Li 670.784†	7776469.1	322857.67	4.15%	[500.0]	ug/L

Sequence No.: 4
Sample ID: STD 3 151209RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/09/15 1:08:45 PM
Data Type: Reprocessed on 12/09/15 4:57:11 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 151209RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	792635.1	2045.60	0.26%	93.30	%
Y 371.029 Radial	53456.6	487.09	0.91%	98.74	%
Ag 338.289†	117501.1	292.52	0.25%	[1000.00]	ug/L
Al 308.215†	20446.5	328.31	1.61%	[40000.00]	ug/L
As 188.979†	6393.2	24.89	0.39%	[2000.00]	ug/L
B†	3051.1	48.71	1.60%	[2000.00]	ug/L
Ba 233.527†	282936.2	1427.22	0.50%	[2000.00]	ug/L
Be 313.107†	479672.3	19189.04	4.00%	[2000.00]	ug/L
Ca 315.887†	426248.9	13831.57	3.24%	[100000.0]	ug/L
Cd 214.440†	430990.4	1424.93	0.33%	[2000.00]	ug/L
Co 228.616†	116083.2	588.13	0.51%	[2000.00]	ug/L
Cr 267.716†	187730.2	649.38	0.35%	[2000.00]	ug/L
Cu 327.393†	175495.7	1277.83	0.73%	[2000.00]	ug/L
Fe 273.955†	552396.8	2067.91	0.37%	[40000]	ug/L
K 766.490†	76154.2	2779.70	3.65%	[40000]	ug/L
Mg 285.213†	789484.0	25833.71	3.27%	[100000]	ug/L
Mn 257.610†	27432.5	421.66	1.54%	[2000.00]	ug/L
Mo 202.031†	58229.3	482.89	0.83%	[2000.00]	ug/L
Na 589.592†	373566.8	13291.91	3.56%	[50000]	ug/L
Ni 231.604†	88289.4	370.03	0.42%	[2000.00]	ug/L
P 213.617†	38218.8	257.09	0.67%	[10000]	ug/L
Pb 220.353†	22730.5	49.39	0.22%	[2000.00]	ug/L
Sb 206.836†	8836.6	31.92	0.36%	[2000.00]	ug/L
Se 196.026†	6347.1	30.86	0.49%	[2000.00]	ug/L
Sn 189.927†	22454.2	81.04	0.36%	[2000.00]	ug/L
Sr 421.552†	1009177.5	36556.64	3.62%	[2000.00]	ug/L
Ti 337.279†	56958.7	1009.60	1.77%	[2000.00]	ug/L
Tl 190.801†	10238.6	27.87	0.27%	[2000.00]	ug/L
V 292.402†	370901.9	1303.83	0.35%	[2000.00]	ug/L
Zn 206.200†	53797.9	233.95	0.43%	[2000.00]	ug/L
Li 670.784†	15277786.8	37509.69	0.25%	[1000.00]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	118.4	0.00000	0.999886	
Al 308.215	3	Lin Thru 0	0.0	0.5130	0.00000	0.999974	
As 188.979	3	Lin Thru 0	0.0	3.222	0.00000	0.999873	
B	3	Lin Thru 0	0.0	1.531	0.00000	0.999975	
Ba 233.527	3	Lin Thru 0	0.0	143.2	0.00000	0.999717	
Be 313.107	3	Lin Thru 0	0.0	241.5	0.00000	0.999903	
Ca 315.887	3	Lin Thru 0	0.0	4.297	0.00000	0.999871	
Cd 214.440	3	Lin Thru 0	0.0	218.6	0.00000	0.999588	
Co 228.616	3	Lin Thru 0	0.0	58.79	0.00000	0.999680	
Cr 267.716	3	Lin Thru 0	0.0	95.00	0.00000	0.999716	
Cu 327.393	3	Lin Thru 0	0.0	88.35	0.00000	0.999908	
Fe 273.955	3	Lin Thru 0	0.0	14.00	0.00000	0.999648	
K 766.490	3	Lin Thru 0	0.0	1.911	0.00000	0.999973	
Mg 285.213	3	Lin Thru 0	0.0	7.978	0.00000	0.999781	
Mn 257.610	3	Lin Thru 0	0.0	13.80	0.00000	0.999934	
Mo 202.031	3	Lin Thru 0	0.0	29.72	0.00000	0.999164	
Na 589.592	3	Lin Thru 0	0.0	7.517	0.00000	0.999924	
Ni 231.604	3	Lin Thru 0	0.0	44.74	0.00000	0.999650	
P 213.617	3	Lin Thru 0	0.0	3.889	0.00000	0.999397	
Pb 220.353	3	Lin Thru 0	0.0	11.52	0.00000	0.999639	
Sb 206.836	3	Lin Thru 0	0.0	4.462	0.00000	0.999810	
Se 196.026	3	Lin Thru 0	0.0	3.211	0.00000	0.999733	

Sn 189.927	3	Lin Thru 0	0.0	11.33	0.00000	0.999837
Sr 421.552	3	Lin Thru 0	0.0	507.8	0.00000	0.999920
Ti 337.279	3	Lin Thru 0	0.0	28.58	0.00000	0.999975
Tl 190.801	3	Lin Thru 0	0.0	5.189	0.00000	0.999638
V 292.402	3	Lin Thru 0	0.0	187.3	0.00000	0.999809
Zn 206.200	3	Lin Thru 0	0.0	27.29	0.00000	0.999584
Li 670.784	3	Lin Thru 0	0.0	15330	0.00000	0.999901

Sequence No.: 5
Sample ID: ICV 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 12/09/15 1:12:55 PM
Data Type: Reprocessed on 12/09/15 4:57:12 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	817814.0	96.26	%	1.074				1.12%
Y 371.029 Radial	53575.9	98.96	%	0.900				0.91%
Ag 338.289†	55525.0	469.0	ug/L	2.80	469.0	ug/L	2.80	0.60%
QC value within limits for Ag 338.289 Recovery = 93.80%								
Al 308.215†	12841.8	25030	ug/L	336.2	25030	ug/L	336.2	1.34%
QC value within limits for Al 308.215 Recovery = 100.13%								
As 188.979†	2904.0	901.2	ug/L	7.13	901.2	ug/L	7.13	0.79%
QC value within limits for As 188.979 Recovery = 90.12%								
B†	1510.0	1054	ug/L	24.1	1054	ug/L	24.1	2.29%
QC value within limits for B Recovery = 105.36%								
Ba 233.527†	139907.1	974.5	ug/L	1.73	974.5	ug/L	1.73	0.18%
QC value within limits for Ba 233.527 Recovery = 97.45%								
Be 313.107†	234269.3	970.0	ug/L	20.45	970.0	ug/L	20.45	2.11%
QC value within limits for Be 313.107 Recovery = 97.00%								
Ca 315.887†	110234.9	25640	ug/L	425.7	25640	ug/L	425.7	1.66%
QC value within limits for Ca 315.887 Recovery = 102.58%								
Cd 214.440†	216789.5	990.8	ug/L	2.72	990.8	ug/L	2.72	0.27%
QC value within limits for Cd 214.440 Recovery = 99.08%								
Co 228.616†	58201.0	989.4	ug/L	1.40	989.4	ug/L	1.40	0.14%
QC value within limits for Co 228.616 Recovery = 98.94%								
Cr 267.716†	92818.8	977.9	ug/L	1.81	977.9	ug/L	1.81	0.18%
QC value within limits for Cr 267.716 Recovery = 97.79%								
Cu 327.393†	84814.6	960.0	ug/L	1.11	960.0	ug/L	1.11	0.12%
QC value within limits for Cu 327.393 Recovery = 96.00%								
Fe 273.955†	349226.8	24950	ug/L	45.6	24950	ug/L	45.6	0.18%
QC value within limits for Fe 273.955 Recovery = 99.81%								
K 766.490†	45932.3	24040	ug/L	476.9	24040	ug/L	476.9	1.98%
QC value within limits for K 766.490 Recovery = 96.16%								
Mg 285.213†	205655.8	25800	ug/L	484.0	25800	ug/L	484.0	1.88%
QC value within limits for Mg 285.213 Recovery = 103.22%								
Mn 257.610†	13622.1	988.1	ug/L	13.75	988.1	ug/L	13.75	1.39%
QC value within limits for Mn 257.610 Recovery = 98.81%								
Mo 202.031†	28916.7	975.0	ug/L	11.89	975.0	ug/L	11.89	1.22%
QC value within limits for Mo 202.031 Recovery = 97.50%								
Na 589.592†	182900.2	24320	ug/L	519.0	24320	ug/L	519.0	2.13%
QC value within limits for Na 589.592 Recovery = 97.28%								
Ni 231.604†	45060.0	1006	ug/L	3.3	1006	ug/L	3.3	0.33%
QC value within limits for Ni 231.604 Recovery = 100.61%								
P 213.617†	19378.0	4982	ug/L	63.3	4982	ug/L	63.3	1.27%
QC value within limits for P 213.617 Recovery = 99.64%								
Pb 220.353†	11408.8	990.3	ug/L	11.53	990.3	ug/L	11.53	1.16%
QC value within limits for Pb 220.353 Recovery = 99.03%								
Sb 206.836†	4187.5	938.5	ug/L	12.85	938.5	ug/L	12.85	1.37%
QC value within limits for Sb 206.836 Recovery = 93.85%								
Se 196.026†	3151.9	990.6	ug/L	8.55	990.6	ug/L	8.55	0.86%
QC value within limits for Se 196.026 Recovery = 99.06%								
Sn 189.927†	5363.8	477.4	ug/L	6.87	477.4	ug/L	6.87	1.44%
QC value within limits for Sn 189.927 Recovery = 95.48%								
Sr 421.552†	500902.0	986.4	ug/L	19.29	986.4	ug/L	19.29	1.96%
QC value within limits for Sr 421.552 Recovery = 98.64%								
Ti 337.279†	27405.3	958.4	ug/L	14.06	958.4	ug/L	14.06	1.47%
QC value within limits for Ti 337.279 Recovery = 95.84%								
Tl 190.801†	5142.1	990.9	ug/L	12.78	990.9	ug/L	12.78	1.29%
QC value within limits for Tl 190.801 Recovery = 99.09%								
V 292.402†	179909.5	977.3	ug/L	1.56	977.3	ug/L	1.56	0.16%
QC value within limits for V 292.402 Recovery = 97.73%								
Zn 206.200†	27181.7	995.9	ug/L	1.56	995.9	ug/L	1.56	0.16%
QC value within limits for Zn 206.200 Recovery = 99.59%								

Li 670.784†	7200498.1	469.6 ug/L	6.70	469.6 ug/L	6.70	1.43%

QC value within limits for Li 670.784 Recovery = 93.92%

All analyte(s) passed QC.

Sequence No.: 6 **Autosampler Location: 1**
Sample ID: ICB 151209RJS I:PB O:RJS **Date Collected: 12/09/15 1:21:11 PM**
Analyst: **Data Type: Reprocessed on 12/09/15 4:57:14 PM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Mean Data: ICB 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	862425.4	101.5	%	0.29				0.29%
Y 371.029 Radial	55374.4	102.3	%	1.80				1.76%
Ag 338.289†	9.3	0.079	ug/L	0.4821	0.079	ug/L	0.4821	613.17%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	3.2	6.203	ug/L	0.6138	6.203	ug/L	0.6138	9.90%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	8.8	2.739	ug/L	0.5513	2.739	ug/L	0.5513	20.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	9.7	6.365	ug/L	3.4754	6.365	ug/L	3.4754	54.60%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	27.7	0.194	ug/L	0.1822	0.194	ug/L	0.1822	94.05%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	10.4	0.043	ug/L	0.0231	0.043	ug/L	0.0231	53.62%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	29.2	6.786	ug/L	3.0936	6.786	ug/L	3.0936	45.59%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	128.9	0.590	ug/L	0.0913	0.590	ug/L	0.0913	15.47%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-2.3	-0.035	ug/L	0.2056	-0.035	ug/L	0.2056	591.32%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	1.8	0.021	ug/L	0.2544	0.021	ug/L	0.2544	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	14.8	0.167	ug/L	0.4167	0.167	ug/L	0.4167	249.17%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	18.8	1.340	ug/L	0.3129	1.340	ug/L	0.3129	23.35%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-0.9	-0.495	ug/L	17.9989	-0.495	ug/L	17.9989	>999.9%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	22.7	2.848	ug/L	0.4605	2.848	ug/L	0.4605	16.17%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-6.3	-0.457	ug/L	0.4802	-0.457	ug/L	0.4802	105.12%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	44.4	1.494	ug/L	0.0542	1.494	ug/L	0.0542	3.63%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	74.1	9.849	ug/L	9.2404	9.849	ug/L	9.2404	93.82%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	14.5	0.323	ug/L	0.2586	0.323	ug/L	0.2586	79.95%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	3.7	0.943	ug/L	0.4174	0.943	ug/L	0.4174	44.27%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	4.4	0.385	ug/L	0.2673	0.385	ug/L	0.2673	69.35%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	9.8	2.196	ug/L	0.4837	2.196	ug/L	0.4837	22.03%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.2	0.060	ug/L	2.2147	0.060	ug/L	2.2147	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	6.2	0.549	ug/L	0.7583	0.549	ug/L	0.7583	138.20%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	88.6	0.174	ug/L	0.2457	0.174	ug/L	0.2457	140.86%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	0.7	0.024	ug/L	0.3217	0.024	ug/L	0.3217	>999.9%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	8.4	1.618	ug/L	0.6717	1.618	ug/L	0.6717	41.51%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	122.7	0.676	ug/L	0.0929	0.676	ug/L	0.0929	13.75%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	38.0	1.393	ug/L	0.1466	1.393	ug/L	0.1466	10.53%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	370.6	0.024 ug/L	0.0053	0.024 ug/L	0.0053	21.79%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICSA 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/09/15 1:34:39 PM
Data Type: Reprocessed on 12/09/15 4:57:18 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	778352.2	91.61	%	0.341				0.37%
Y 371.029 Radial	52588.0	97.14	%	1.888				1.94%
Ag 338.289†	-8.5	-0.071	ug/L	0.3085	-0.071	ug/L	0.3085	431.87%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	96155.1	187400	ug/L	6540.9	187400	ug/L	6540.9	3.49%
QC value within limits for Al 308.215 Recovery = 93.72%								
As 188.979†	10.8	3.342	ug/L	1.4408	3.342	ug/L	1.4408	43.11%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	-788.0	-19.55	ug/L	16.845	-19.55	ug/L	16.845	86.16%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	4095.3	3.837	ug/L	0.4511	3.837	ug/L	0.4511	11.75%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-0.2	-0.001	ug/L	0.0143	-0.001	ug/L	0.0143	>999.9%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	853326.7	198600	ug/L	6869.0	198600	ug/L	6869.0	3.46%
QC value within limits for Ca 315.887 Recovery = 99.28%								
Cd 214.440†	2071.5	-0.738	ug/L	0.1822	-0.738	ug/L	0.1822	24.70%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	263.3	1.821	ug/L	0.1669	1.821	ug/L	0.1669	9.17%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	100.2	0.108	ug/L	0.3518	0.108	ug/L	0.3518	326.63%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-141.4	-1.600	ug/L	0.1589	-1.600	ug/L	0.1589	9.93%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	2524280.4	180400	ug/L	455.2	180400	ug/L	455.2	0.25%
QC value within limits for Fe 273.955 Recovery = 90.18%								
K 766.490†	-2.8	-1.465	ug/L	19.6815	-1.465	ug/L	19.6815	>999.9%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1495807.9	187700	ug/L	6199.3	187700	ug/L	6199.3	3.30%
QC value within limits for Mg 285.213 Recovery = 93.84%								
Mn 257.610†	-45.5	0.392	ug/L	0.7811	0.392	ug/L	0.7811	199.36%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-388.1	-2.515	ug/L	0.3879	-2.515	ug/L	0.3879	15.42%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	120.9	32.62	ug/L	4.497	32.62	ug/L	4.497	13.78%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-239.9	0.261	ug/L	0.1969	0.261	ug/L	0.1969	75.56%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	49.7	12.78	ug/L	1.277	12.78	ug/L	1.277	9.99%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	2.7	0.233	ug/L	1.0115	0.233	ug/L	1.0115	434.09%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.2	0.040	ug/L	0.7869	0.040	ug/L	0.7869	>999.9%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-226.5	1.719	ug/L	0.9358	1.719	ug/L	0.9358	54.44%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-230.7	-3.639	ug/L	0.9075	-3.639	ug/L	0.9075	24.94%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	565.1	0.853	ug/L	0.0312	0.853	ug/L	0.0312	3.66%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	76.5	-0.701	ug/L	0.4325	-0.701	ug/L	0.4325	61.73%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	-9.3	-1.790	ug/L	1.0469	-1.790	ug/L	1.0469	58.49%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	7552.0	0.448	ug/L	0.3784	0.448	ug/L	0.3784	84.50%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-367.9	-13.48	ug/L	0.227	-13.48	ug/L	0.227	1.68%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	1655.0	0.108 ug/L	0.0061	0.108 ug/L	0.0061	5.62%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: ICSAB 151209RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 12/09/15 1:39:32 PM
Data Type: Reprocessed on 12/09/15 4:57:20 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 151209RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	781148.9	91.94	%	0.913				0.99%
Y 371.029 Radial	52929.9	97.77	%	1.519				1.55%
Ag 338.289†	116834.3	986.8	ug/L	2.50	986.8	ug/L	2.50	0.25%
QC value within limits for Ag 338.289 Recovery = 98.68%								
Al 308.215†	96630.3	188400	ug/L	3728.2	188400	ug/L	3728.2	1.98%
QC value within limits for Al 308.215 Recovery = 94.18%								
As 188.979†	1535.9	476.6	ug/L	3.75	476.6	ug/L	3.75	0.79%
QC value within limits for As 188.979 Recovery = 95.33%								
B†	-783.2	-23.84	ug/L	2.265	-23.84	ug/L	2.265	9.50%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	73929.0	492.3	ug/L	0.63	492.3	ug/L	0.63	0.13%
QC value within limits for Ba 233.527 Recovery = 98.46%								
Be 313.107†	120780.7	500.1	ug/L	9.28	500.1	ug/L	9.28	1.85%
QC value within limits for Be 313.107 Recovery = 100.02%								
Ca 315.887†	855513.6	199100	ug/L	3562.5	199100	ug/L	3562.5	1.79%
QC value within limits for Ca 315.887 Recovery = 99.53%								
Cd 214.440†	210738.4	954.0	ug/L	0.41	954.0	ug/L	0.41	0.04%
QC value within limits for Cd 214.440 Recovery = 95.40%								
Co 228.616†	29448.8	499.2	ug/L	4.47	499.2	ug/L	4.47	0.90%
QC value within limits for Co 228.616 Recovery = 99.85%								
Cr 267.716†	45684.9	480.5	ug/L	0.85	480.5	ug/L	0.85	0.18%
QC value within limits for Cr 267.716 Recovery = 96.09%								
Cu 327.393†	44906.2	508.3	ug/L	1.21	508.3	ug/L	1.21	0.24%
QC value within limits for Cu 327.393 Recovery = 101.66%								
Fe 273.955†	2491896.8	178000	ug/L	52.9	178000	ug/L	52.9	0.03%
QC value within limits for Fe 273.955 Recovery = 89.02%								
K 766.490†	-65.9	-34.49	ug/L	18.940	-34.49	ug/L	18.940	54.91%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1500403.5	188300	ug/L	3625.4	188300	ug/L	3625.4	1.93%
QC value within limits for Mg 285.213 Recovery = 94.13%								
Mn 257.610†	6716.1	490.4	ug/L	8.86	490.4	ug/L	8.86	1.81%
QC value within limits for Mn 257.610 Recovery = 98.08%								
Mo 202.031†	13999.8	481.8	ug/L	5.10	481.8	ug/L	5.10	1.06%
QC value within limits for Mo 202.031 Recovery = 96.35%								
Na 589.592†	164.7	35.96	ug/L	3.233	35.96	ug/L	3.233	8.99%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	42888.3	963.3	ug/L	1.70	963.3	ug/L	1.70	0.18%
QC value within limits for Ni 231.604 Recovery = 96.33%								
P 213.617†	26.8	6.880	ug/L	1.7548	6.880	ug/L	1.7548	25.51%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	11105.1	964.0	ug/L	8.82	964.0	ug/L	8.82	0.92%
QC value within limits for Pb 220.353 Recovery = 96.40%								
Sb 206.836†	2094.4	469.4	ug/L	6.39	469.4	ug/L	6.39	1.36%
QC value within limits for Sb 206.836 Recovery = 93.88%								
Se 196.026†	1308.7	478.7	ug/L	6.65	478.7	ug/L	6.65	1.39%
QC value within limits for Se 196.026 Recovery = 95.73%								
Sn 189.927†	-244.1	-4.472	ug/L	0.6311	-4.472	ug/L	0.6311	14.11%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	524.7	0.758	ug/L	0.0331	0.758	ug/L	0.0331	4.36%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	71.4	-0.830	ug/L	0.0692	-0.830	ug/L	0.0692	8.34%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	2433.0	468.9	ug/L	7.96	468.9	ug/L	7.96	1.70%
QC value within limits for Tl 190.801 Recovery = 93.77%								
V 292.402†	98244.8	496.6	ug/L	1.52	496.6	ug/L	1.52	0.31%
QC value within limits for V 292.402 Recovery = 99.32%								
Zn 206.200†	25767.6	944.1	ug/L	0.83	944.1	ug/L	0.83	0.09%
QC value within limits for Zn 206.200 Recovery = 94.41%								

Li 670.784†	1656.1	0.108 ug/L	0.0091	0.108 ug/L	0.0091	8.46%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCV1 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/09/15 1:44:29 PM
Data Type: Reprocessed on 12/09/15 4:57:21 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	806465.0	94.92	%	0.924				0.97%
Y 371.029 Radial	53844.5	99.46	%	2.309				2.32%
Ag 338.289†	59311.1	501.0	ug/L	2.86	501.0	ug/L	2.86	0.57%
QC value within limits for Ag 338.289 Recovery = 100.19%								
Al 308.215†	10464.1	20400	ug/L	614.4	20400	ug/L	614.4	3.01%
QC value within limits for Al 308.215 Recovery = 101.99%								
As 188.979†	3226.4	1001	ug/L	12.9	1001	ug/L	12.9	1.29%
QC value within limits for As 188.979 Recovery = 100.13%								
B†	1531.1	1053	ug/L	42.5	1053	ug/L	42.5	4.03%
QC value within limits for B Recovery = 105.33%								
Ba 233.527†	144887.6	1010	ug/L	2.6	1010	ug/L	2.6	0.26%
QC value within limits for Ba 233.527 Recovery = 100.99%								
Be 313.107†	243651.8	1009	ug/L	37.2	1009	ug/L	37.2	3.69%
QC value within limits for Be 313.107 Recovery = 100.88%								
Ca 315.887†	217493.1	50610	ug/L	1816.1	50610	ug/L	1816.1	3.59%
QC value within limits for Ca 315.887 Recovery = 101.21%								
Cd 214.440†	222770.6	1018	ug/L	3.5	1018	ug/L	3.5	0.34%
QC value within limits for Cd 214.440 Recovery = 101.85%								
Co 228.616†	59807.7	1017	ug/L	3.1	1017	ug/L	3.1	0.31%
QC value within limits for Co 228.616 Recovery = 101.67%								
Cr 267.716†	96054.9	1012	ug/L	4.7	1012	ug/L	4.7	0.47%
QC value within limits for Cr 267.716 Recovery = 101.18%								
Cu 327.393†	88096.0	997.2	ug/L	7.08	997.2	ug/L	7.08	0.71%
QC value within limits for Cu 327.393 Recovery = 99.72%								
Fe 273.955†	284777.8	20350	ug/L	110.1	20350	ug/L	110.1	0.54%
QC value within limits for Fe 273.955 Recovery = 101.74%								
K 766.490†	38180.4	19980	ug/L	709.1	19980	ug/L	709.1	3.55%
QC value within limits for K 766.490 Recovery = 99.92%								
Mg 285.213†	410685.4	51500	ug/L	1815.8	51500	ug/L	1815.8	3.53%
QC value within limits for Mg 285.213 Recovery = 102.99%								
Mn 257.610†	14070.1	1019	ug/L	30.3	1019	ug/L	30.3	2.97%
QC value within limits for Mn 257.610 Recovery = 101.91%								
Mo 202.031†	31100.1	1048	ug/L	13.3	1048	ug/L	13.3	1.27%
QC value within limits for Mo 202.031 Recovery = 104.81%								
Na 589.592†	189543.7	25200	ug/L	888.0	25200	ug/L	888.0	3.52%
QC value within limits for Na 589.592 Recovery = 100.79%								
Ni 231.604†	45770.6	1022	ug/L	3.5	1022	ug/L	3.5	0.34%
QC value within limits for Ni 231.604 Recovery = 102.17%								
P 213.617†	20121.3	5173	ug/L	61.5	5173	ug/L	61.5	1.19%
QC value within limits for P 213.617 Recovery = 103.47%								
Pb 220.353†	11770.3	1022	ug/L	11.9	1022	ug/L	11.9	1.16%
QC value within limits for Pb 220.353 Recovery = 102.17%								
Sb 206.836†	4462.8	1000	ug/L	13.7	1000	ug/L	13.7	1.37%
QC value within limits for Sb 206.836 Recovery = 100.02%								
Se 196.026†	3262.1	1022	ug/L	14.4	1022	ug/L	14.4	1.40%
QC value within limits for Se 196.026 Recovery = 102.22%								
Sn 189.927†	11356.1	1010	ug/L	12.6	1010	ug/L	12.6	1.25%
QC value within limits for Sn 189.927 Recovery = 100.96%								
Sr 421.552†	512000.3	1008	ug/L	35.0	1008	ug/L	35.0	3.47%
QC value within limits for Sr 421.552 Recovery = 100.81%								
Ti 337.279†	29062.5	1016	ug/L	30.0	1016	ug/L	30.0	2.95%
QC value within limits for Ti 337.279 Recovery = 101.61%								
Tl 190.801†	5287.5	1019	ug/L	11.5	1019	ug/L	11.5	1.13%
QC value within limits for Tl 190.801 Recovery = 101.90%								
V 292.402†	187860.2	1022	ug/L	3.4	1022	ug/L	3.4	0.34%
QC value within limits for V 292.402 Recovery = 102.20%								
Zn 206.200†	28002.7	1026	ug/L	3.7	1026	ug/L	3.7	0.36%
QC value within limits for Zn 206.200 Recovery = 102.60%								

Li 670.784†	7606274.2	496.1 ug/L	7.40	496.1 ug/L	7.40	1.49%

QC value within limits for Li 670.784 Recovery = 99.21%
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: CCB 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/09/15 1:49:28 PM
Data Type: Reprocessed on 12/09/15 4:57:23 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	862858.1	101.6	%	0.56				0.55%
Y 371.029 Radial	55703.8	102.9	%	3.19				3.10%
Ag 338.289†	14.2	0.120	ug/L	0.4896	0.120	ug/L	0.4896	408.27%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	1.9	3.644	ug/L	3.4287	3.644	ug/L	3.4287	94.09%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.1	0.656	ug/L	1.3084	0.656	ug/L	1.3084	199.60%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	13.0	8.537	ug/L	5.6254	8.537	ug/L	5.6254	65.89%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	27.3	0.189	ug/L	0.0473	0.189	ug/L	0.0473	24.97%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	17.4	0.072	ug/L	0.0141	0.072	ug/L	0.0141	19.61%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	64.7	15.04	ug/L	1.428	15.04	ug/L	1.428	9.50%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	176.5	0.808	ug/L	0.1115	0.808	ug/L	0.1115	13.80%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	3.1	0.059	ug/L	0.3909	0.059	ug/L	0.3909	666.78%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-12.4	-0.130	ug/L	0.1208	-0.130	ug/L	0.1208	92.60%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-21.2	-0.240	ug/L	0.1704	-0.240	ug/L	0.1704	70.97%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	77.7	5.549	ug/L	0.3004	5.549	ug/L	0.3004	5.41%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	0.2	0.117	ug/L	28.2341	0.117	ug/L	28.2341	>999.9%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	85.0	10.66	ug/L	0.781	10.66	ug/L	0.781	7.33%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-2.2	-0.160	ug/L	0.7297	-0.160	ug/L	0.7297	456.21%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	75.0	2.524	ug/L	0.3748	2.524	ug/L	0.3748	14.85%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	14.0	1.850	ug/L	17.8884	1.850	ug/L	17.8884	966.96%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	22.5	0.502	ug/L	0.1552	0.502	ug/L	0.1552	30.90%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	1.5	0.395	ug/L	0.3315	0.395	ug/L	0.3315	83.97%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	10.7	0.933	ug/L	0.2841	0.933	ug/L	0.2841	30.45%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	8.6	1.930	ug/L	1.0450	1.930	ug/L	1.0450	54.14%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.7	-0.226	ug/L	3.9413	-0.226	ug/L	3.9413	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	17.2	1.516	ug/L	0.6053	1.516	ug/L	0.6053	39.92%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	183.8	0.362	ug/L	0.2419	0.362	ug/L	0.2419	66.83%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	14.0	0.488	ug/L	0.5539	0.488	ug/L	0.5539	113.40%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	15.1	2.903	ug/L	0.4473	2.903	ug/L	0.4473	15.41%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	56.1	0.332	ug/L	0.1102	0.332	ug/L	0.1102	33.19%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	59.0	2.162	ug/L	0.1059	2.162	ug/L	0.1059	4.90%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	369.8	0.024 ug/L	0.0031	0.024 ug/L	0.0031	12.67%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 22
Sample ID: CCV2 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 12/09/15 2:31:42 PM
Data Type: Reprocessed on 12/09/15 4:57:36 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	829717.0	97.66	%	0.559				0.57%
Y 371.029 Radial	53971.0	99.69	%	1.274				1.28%
Ag 338.289†	44364.7	374.7	ug/L	0.61	374.7	ug/L	0.61	0.16%
QC value within limits for Ag 338.289 Recovery = 99.93%								
Al 308.215†	8131.6	15850	ug/L	180.8	15850	ug/L	180.8	1.14%
QC value within limits for Al 308.215 Recovery = 105.67%								
As 188.979†	2457.9	762.8	ug/L	7.27	762.8	ug/L	7.27	0.95%
QC value within limits for As 188.979 Recovery = 101.70%								
B†	1196.9	821.9	ug/L	4.97	821.9	ug/L	4.97	0.61%
QC value within limits for B Recovery = 109.59%								
Ba 233.527†	109987.9	766.7	ug/L	1.18	766.7	ug/L	1.18	0.15%
QC value within limits for Ba 233.527 Recovery = 102.22%								
Be 313.107†	190034.1	786.8	ug/L	8.44	786.8	ug/L	8.44	1.07%
QC value within limits for Be 313.107 Recovery = 104.91%								
Ca 315.887†	170790.0	39740	ug/L	496.7	39740	ug/L	496.7	1.25%
QC value within limits for Ca 315.887 Recovery = 105.97%								
Cd 214.440†	169974.6	777.1	ug/L	1.77	777.1	ug/L	1.77	0.23%
QC value within limits for Cd 214.440 Recovery = 103.61%								
Co 228.616†	45646.2	775.9	ug/L	1.50	775.9	ug/L	1.50	0.19%
QC value within limits for Co 228.616 Recovery = 103.46%								
Cr 267.716†	72650.3	765.2	ug/L	0.89	765.2	ug/L	0.89	0.12%
QC value within limits for Cr 267.716 Recovery = 102.03%								
Cu 327.393†	66445.2	752.1	ug/L	1.35	752.1	ug/L	1.35	0.18%
QC value within limits for Cu 327.393 Recovery = 100.28%								
Fe 273.955†	215159.8	15370	ug/L	27.3	15370	ug/L	27.3	0.18%
QC value within limits for Fe 273.955 Recovery = 102.49%								
K 766.490†	29953.0	15680	ug/L	131.6	15680	ug/L	131.6	0.84%
QC value within limits for K 766.490 Recovery = 104.51%								
Mg 285.213†	321834.7	40360	ug/L	498.6	40360	ug/L	498.6	1.24%
QC value within limits for Mg 285.213 Recovery = 107.61%								
Mn 257.610†	10915.4	790.5	ug/L	7.98	790.5	ug/L	7.98	1.01%
QC value within limits for Mn 257.610 Recovery = 105.40%								
Mo 202.031†	23186.6	781.4	ug/L	4.82	781.4	ug/L	4.82	0.62%
QC value within limits for Mo 202.031 Recovery = 104.19%								
Na 589.592†	148862.5	19790	ug/L	200.8	19790	ug/L	200.8	1.01%
QC value within limits for Na 589.592 Recovery = 105.55%								
Ni 231.604†	34838.0	777.7	ug/L	1.32	777.7	ug/L	1.32	0.17%
QC value within limits for Ni 231.604 Recovery = 103.69%								
P 213.617†	15041.3	3867	ug/L	28.8	3867	ug/L	28.8	0.74%
QC value within limits for P 213.617 Recovery = 103.13%								
Pb 220.353†	8870.0	770.0	ug/L	5.18	770.0	ug/L	5.18	0.67%
QC value within limits for Pb 220.353 Recovery = 102.66%								
Sb 206.836†	3303.8	740.5	ug/L	3.78	740.5	ug/L	3.78	0.51%
QC value within limits for Sb 206.836 Recovery = 98.73%								
Se 196.026†	2450.1	767.6	ug/L	5.54	767.6	ug/L	5.54	0.72%
QC value within limits for Se 196.026 Recovery = 102.35%								
Sn 189.927†	8503.1	756.2	ug/L	4.36	756.2	ug/L	4.36	0.58%
QC value within limits for Sn 189.927 Recovery = 100.83%								
Sr 421.552†	400865.6	789.3	ug/L	10.34	789.3	ug/L	10.34	1.31%
QC value within limits for Sr 421.552 Recovery = 105.24%								
Ti 337.279†	22571.8	789.1	ug/L	8.81	789.1	ug/L	8.81	1.12%
QC value within limits for Ti 337.279 Recovery = 105.22%								
Tl 190.801†	3932.1	757.7	ug/L	5.01	757.7	ug/L	5.01	0.66%
QC value within limits for Tl 190.801 Recovery = 101.03%								
V 292.402†	141944.7	772.1	ug/L	1.43	772.1	ug/L	1.43	0.18%
QC value within limits for V 292.402 Recovery = 102.94%								
Zn 206.200†	22164.7	812.1	ug/L	5.48	812.1	ug/L	5.48	0.68%
QC value within limits for Zn 206.200 Recovery = 108.28%								

Li 670.784†	5512002.3	359.5 ug/L	1.05	359.5 ug/L	1.05	0.29%

QC value within limits for Li 670.784 Recovery = 95.86%
All analyte(s) passed QC.

Sequence No.: 23
Sample ID: CCB 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/09/15 2:35:57 PM
Data Type: Reprocessed on 12/09/15 4:57:37 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	864980.0	101.8	%	0.96				0.95%
Y 371.029 Radial	55553.1	102.6	%	0.37				0.36%
Ag 338.289†	-26.2	-0.222	ug/L	0.8266	-0.222	ug/L	0.8266	372.83%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	2.7	5.227	ug/L	6.2745	5.227	ug/L	6.2745	120.05%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-0.4	-0.129	ug/L	0.5099	-0.129	ug/L	0.5099	396.72%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	23.6	15.44	ug/L	1.365	15.44	ug/L	1.365	8.84%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	14.8	0.102	ug/L	0.0718	0.102	ug/L	0.0718	70.41%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	12.1	0.050	ug/L	0.0347	0.050	ug/L	0.0347	69.34%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	51.1	11.89	ug/L	3.463	11.89	ug/L	3.463	29.13%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	110.3	0.506	ug/L	0.1329	0.506	ug/L	0.1329	26.28%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-7.2	-0.117	ug/L	0.1439	-0.117	ug/L	0.1439	122.78%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-3.0	-0.031	ug/L	0.0575	-0.031	ug/L	0.0575	184.07%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	23.3	0.264	ug/L	0.2889	0.264	ug/L	0.2889	109.35%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	33.3	2.380	ug/L	0.6430	2.380	ug/L	0.6430	27.01%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	18.2	9.538	ug/L	18.8440	9.538	ug/L	18.8440	197.58%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	48.0	6.022	ug/L	1.2424	6.022	ug/L	1.2424	20.63%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	0.8	0.058	ug/L	0.4411	0.058	ug/L	0.4411	759.58%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	73.9	2.487	ug/L	0.2823	2.487	ug/L	0.2823	11.35%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	108.5	14.42	ug/L	12.504	14.42	ug/L	12.504	86.69%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	6.9	0.154	ug/L	0.2549	0.154	ug/L	0.2549	165.79%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-3.7	-0.943	ug/L	1.3121	-0.943	ug/L	1.3121	139.15%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	10.7	0.928	ug/L	0.2779	0.928	ug/L	0.2779	29.95%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	9.0	2.014	ug/L	0.5250	2.014	ug/L	0.5250	26.07%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-7.4	-2.316	ug/L	3.9644	-2.316	ug/L	3.9644	171.18%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	13.3	1.179	ug/L	0.2687	1.179	ug/L	0.2687	22.79%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	35.1	0.069	ug/L	0.1954	0.069	ug/L	0.1954	283.32%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	10.0	0.349	ug/L	0.1104	0.349	ug/L	0.1104	31.62%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	12.3	2.368	ug/L	0.3160	2.368	ug/L	0.3160	13.35%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	44.1	0.269	ug/L	0.2582	0.269	ug/L	0.2582	95.87%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	27.8	1.019	ug/L	0.1797	1.019	ug/L	0.1797	17.63%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	336.2	0.022 ug/L	0.0039	0.022 ug/L	0.0039	17.92%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 34
Sample ID: CCV1 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/09/15 3:23:13 PM
Data Type: Reprocessed on 12/09/15 4:57:52 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	829641.3	97.65	%	1.172				1.20%
Y 371.029 Radial	54801.4	101.2	%	1.52				1.50%
Ag 338.289†	58965.8	498.0	ug/L	2.27	498.0	ug/L	2.27	0.45%
QC value within limits for Ag 338.289 Recovery = 99.61%								
Al 308.215†	10592.3	20650	ug/L	401.6	20650	ug/L	401.6	1.95%
QC value within limits for Al 308.215 Recovery = 103.24%								
As 188.979†	3248.2	1008	ug/L	13.5	1008	ug/L	13.5	1.34%
QC value within limits for As 188.979 Recovery = 100.80%								
B†	1560.1	1072	ug/L	29.6	1072	ug/L	29.6	2.77%
QC value within limits for B Recovery = 107.19%								
Ba 233.527†	144892.8	1010	ug/L	0.7	1010	ug/L	0.7	0.07%
QC value within limits for Ba 233.527 Recovery = 101.00%								
Be 313.107†	248373.1	1028	ug/L	17.9	1028	ug/L	17.9	1.74%
QC value within limits for Be 313.107 Recovery = 102.84%								
Ca 315.887†	221726.3	51590	ug/L	785.1	51590	ug/L	785.1	1.52%
QC value within limits for Ca 315.887 Recovery = 103.18%								
Cd 214.440†	222881.0	1019	ug/L	2.4	1019	ug/L	2.4	0.23%
QC value within limits for Cd 214.440 Recovery = 101.90%								
Co 228.616†	59914.0	1018	ug/L	1.2	1018	ug/L	1.2	0.12%
QC value within limits for Co 228.616 Recovery = 101.85%								
Cr 267.716†	95695.8	1008	ug/L	0.9	1008	ug/L	0.9	0.09%
QC value within limits for Cr 267.716 Recovery = 100.80%								
Cu 327.393†	88310.3	999.6	ug/L	5.17	999.6	ug/L	5.17	0.52%
QC value within limits for Cu 327.393 Recovery = 99.96%								
Fe 273.955†	283230.7	20240	ug/L	35.3	20240	ug/L	35.3	0.17%
QC value within limits for Fe 273.955 Recovery = 101.19%								
K 766.490†	38842.7	20330	ug/L	378.8	20330	ug/L	378.8	1.86%
QC value within limits for K 766.490 Recovery = 101.65%								
Mg 285.213†	416784.4	52260	ug/L	841.7	52260	ug/L	841.7	1.61%
QC value within limits for Mg 285.213 Recovery = 104.52%								
Mn 257.610†	14247.6	1032	ug/L	19.8	1032	ug/L	19.8	1.92%
QC value within limits for Mn 257.610 Recovery = 103.19%								
Mo 202.031†	30667.9	1034	ug/L	13.3	1034	ug/L	13.3	1.28%
QC value within limits for Mo 202.031 Recovery = 103.36%								
Na 589.592†	193180.2	25680	ug/L	467.3	25680	ug/L	467.3	1.82%
QC value within limits for Na 589.592 Recovery = 102.73%								
Ni 231.604†	45680.2	1020	ug/L	1.6	1020	ug/L	1.6	0.15%
QC value within limits for Ni 231.604 Recovery = 101.97%								
P 213.617†	19953.2	5130	ug/L	69.9	5130	ug/L	69.9	1.36%
QC value within limits for P 213.617 Recovery = 102.60%								
Pb 220.353†	11645.0	1011	ug/L	12.5	1011	ug/L	12.5	1.24%
QC value within limits for Pb 220.353 Recovery = 101.08%								
Sb 206.836†	4409.9	988.4	ug/L	13.28	988.4	ug/L	13.28	1.34%
QC value within limits for Sb 206.836 Recovery = 98.84%								
Se 196.026†	3240.3	1015	ug/L	16.1	1015	ug/L	16.1	1.59%
QC value within limits for Se 196.026 Recovery = 101.53%								
Sn 189.927†	11264.7	1002	ug/L	13.1	1002	ug/L	13.1	1.31%
QC value within limits for Sn 189.927 Recovery = 100.17%								
Sr 421.552†	520673.6	1025	ug/L	16.6	1025	ug/L	16.6	1.62%
QC value within limits for Sr 421.552 Recovery = 102.52%								
Ti 337.279†	29383.7	1027	ug/L	20.3	1027	ug/L	20.3	1.97%
QC value within limits for Ti 337.279 Recovery = 102.73%								
Tl 190.801†	5156.1	993.6	ug/L	13.39	993.6	ug/L	13.39	1.35%
QC value within limits for Tl 190.801 Recovery = 99.36%								
V 292.402†	187610.8	1020	ug/L	1.8	1020	ug/L	1.8	0.18%
QC value within limits for V 292.402 Recovery = 102.05%								
Zn 206.200†	28061.3	1028	ug/L	4.4	1028	ug/L	4.4	0.43%
QC value within limits for Zn 206.200 Recovery = 102.82%								

Li 670.784†	7452725.3	486.1 ug/L	8.13	486.1 ug/L	8.13	1.67%

QC value within limits for Li 670.784 Recovery = 97.21%
All analyte(s) passed QC.

Sequence No.: 35
Sample ID: CCB 151209RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/09/15 3:28:13 PM
Data Type: Reprocessed on 12/09/15 4:57:53 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151209RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	881481.4	103.8	%	0.47				0.45%
Y 371.029 Radial	56433.6	104.2	%	1.34				1.28%
Ag 338.289†	29.0	0.245	ug/L	0.2405	0.245	ug/L	0.2405	98.20%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-0.2	-0.375	ug/L	5.4376	-0.375	ug/L	5.4376	>999.9%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.8	0.883	ug/L	0.0365	0.883	ug/L	0.0365	4.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	19.4	12.66	ug/L	5.477	12.66	ug/L	5.477	43.26%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	18.6	0.129	ug/L	0.0191	0.129	ug/L	0.0191	14.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	12.8	0.053	ug/L	0.0018	0.053	ug/L	0.0018	3.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	46.6	10.84	ug/L	3.677	10.84	ug/L	3.677	33.93%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	98.3	0.450	ug/L	0.0657	0.450	ug/L	0.0657	14.59%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-12.4	-0.206	ug/L	0.0879	-0.206	ug/L	0.0879	42.63%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-23.2	-0.244	ug/L	0.0320	-0.244	ug/L	0.0320	13.12%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	30.3	0.343	ug/L	0.1878	0.343	ug/L	0.1878	54.80%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	38.0	2.715	ug/L	0.1718	2.715	ug/L	0.1718	6.33%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	36.1	18.90	ug/L	12.947	18.90	ug/L	12.947	68.52%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	41.9	5.251	ug/L	1.0761	5.251	ug/L	1.0761	20.49%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-0.1	-0.007	ug/L	0.1299	-0.007	ug/L	0.1299	>999.9%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	64.9	2.182	ug/L	0.2583	2.182	ug/L	0.2583	11.83%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	124.9	16.60	ug/L	3.713	16.60	ug/L	3.713	22.38%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	6.4	0.142	ug/L	0.1868	0.142	ug/L	0.1868	131.48%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-6.0	-1.549	ug/L	0.9676	-1.549	ug/L	0.9676	62.47%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	8.1	0.702	ug/L	0.4635	0.702	ug/L	0.4635	65.99%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	8.4	1.892	ug/L	0.4693	1.892	ug/L	0.4693	24.80%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-4.9	-1.520	ug/L	3.0635	-1.520	ug/L	3.0635	201.55%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	9.1	0.805	ug/L	0.9407	0.805	ug/L	0.9407	116.90%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	41.8	0.082	ug/L	0.0170	0.082	ug/L	0.0170	20.60%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	10.7	0.375	ug/L	0.1829	0.375	ug/L	0.1829	48.71%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	12.2	2.350	ug/L	0.5617	2.350	ug/L	0.5617	23.90%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	30.6	0.191	ug/L	0.0340	0.191	ug/L	0.0340	17.83%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	37.2	1.362	ug/L	0.0323	1.362	ug/L	0.0323	2.37%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784†	282.8	0.018 ug/L	0.0068	0.018 ug/L	0.0068	37.09%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 1
Sample ID: CalBlk 151218RJS I:PB O:R
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/18/15 10:53:00 AM
Data Type: Reprocessed on 12/21/15 9:12:37 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CalBlk 151218RJS I:PB O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	875070.0	29356.57	3.35%	100.0	%
Y 371.029 Radial	805683.6	29229.94	3.63%	100.0	%
Ag 338.289†	-362.6	70.09	19.33%	[0.00]	ug/L
Al 308.215†	68.2	10.36	15.21%	[0.00]	ug/L
As 188.979†	4.0	4.26	105.33%	[0.00]	ug/L
B†	-179.0	11.23	6.27%	[0.00]	ug/L
Ba 233.527†	163.3	56.19	34.41%	[0.00]	ug/L
Be 313.107†	-86.7	2.95	3.41%	[0.00]	ug/L
Ca 315.887†	167.1	23.62	14.14%	[0.00]	ug/L
Cd 214.440†	231.3	4.16	1.80%	[0.00]	ug/L
Co 228.616†	89.2	5.24	5.87%	[0.00]	ug/L
Cr 267.716†	292.4	25.20	8.62%	[0.00]	ug/L
Cu 327.393†	204.2	32.55	15.94%	[0.00]	ug/L
Fe 273.955†	-205.8	9.27	4.51%	[0.00]	ug/L
K 766.490†	-233.3	139.12	59.62%	[0.00]	ug/L
Mg 285.213†	-70.0	2.22	3.18%	[0.00]	ug/L
Mn 257.610†	-74.8	1.21	1.62%	[0.00]	ug/L
Mo 202.031†	80.5	9.80	12.17%	[0.00]	ug/L
Na 589.592†	-27.2	3.15	11.58%	[0.00]	ug/L
Ni 231.604†	30.3	20.13	66.38%	[0.00]	ug/L
P 213.617†	10.3	3.47	33.60%	[0.00]	ug/L
Pb 220.353†	-6.5	15.56	239.05%	[0.00]	ug/L
Sb 206.836†	-17.8	4.36	24.53%	[0.00]	ug/L
Se 196.026†	8.2	3.41	41.58%	[0.00]	ug/L
Sn 189.927†	29.4	4.39	14.95%	[0.00]	ug/L
Sr 421.552†	313.3	42.36	13.52%	[0.00]	ug/L
Ti 337.279†	-233.1	15.85	6.80%	[0.00]	ug/L
Tl 190.801†	-7.2	1.88	26.26%	[0.00]	ug/L
V 292.402†	-495.7	56.35	11.37%	[0.00]	ug/L
Zn 206.200†	-811.7	21.31	2.62%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 151218RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 12/18/15 10:57:11 AM
Data Type: Reprocessed on 12/21/15 9:12:39 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 151218RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	876982.6	37421.31	4.27%	100.2	%
Y 371.029 Radial	806908.3	36758.04	4.56%	100.2	%
Ag 338.289†	47.9	65.64	137.16%	[0.5]	ug/L
Al 308.215†	24.6	11.69	47.54%	[50]	ug/L
As 188.979†	9.0	3.75	41.69%	[2]	ug/L
B†	1277.8	69.29	5.42%	[25]	ug/L
Ba 233.527†	196.7	21.81	11.09%	[1.5]	ug/L
Be 313.107†	260.1	10.26	3.95%	[1]	ug/L
Ca 315.887†	65.1	2.18	3.35%	[50]	ug/L
Cd 214.440†	75.5	30.56	40.51%	[0.25]	ug/L
Co 228.616†	177.1	19.93	11.25%	[2.5]	ug/L
Cr 267.716†	64.0	17.61	27.52%	[0.5]	ug/L
Cu 327.393†	354.1	90.64	25.59%	[2.5]	ug/L
Fe 273.955†	486.9	33.15	6.81%	[25]	ug/L
K 766.490†	1366.9	129.97	9.51%	[25]	ug/L
Mg 285.213†	233.9	13.41	5.73%	[25]	ug/L
Mn 257.610†	11.5	5.74	49.91%	[1]	ug/L
Mo 202.031†	29.1	19.45	66.77%	[1]	ug/L
Na 589.592†	4260.0	377.94	8.87%	[500]	ug/L
Ni 231.604†	58.1	9.03	15.54%	[1]	ug/L
P 213.617†	52.1	1.75	3.36%	[12.5]	ug/L
Pb 220.353†	13.0	14.08	108.34%	[1.5]	ug/L
Sb 206.836†	4.9	1.59	32.17%	[2]	ug/L
Se 196.026†	8.2	1.55	18.80%	[2]	ug/L
Sn 189.927†	30.6	1.61	5.28%	[3]	ug/L
Sr 421.552†	588.6	37.48	6.37%	[1]	ug/L
Ti 337.279†	69.8	12.45	17.84%	[2.5]	ug/L
Tl 190.801†	10.2	2.09	20.44%	[2]	ug/L
V 292.402†	97.4	44.07	45.23%	[0.5]	ug/L
Zn 206.200†	1065.8	21.62	2.03%	[25]	ug/L

Sequence No.: 3
Sample ID: STD 2 151218RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/18/15 11:01:22 AM
Data Type: Reprocessed on 12/21/15 9:12:40 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 151218RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	845662.1	20069.42	2.37%	96.64	%
Y 371.029 Radial	774511.5	20297.96	2.62%	96.13	%
Ag 338.289†	30879.6	765.63	2.48%	[250]	ug/L
Al 308.215†	6678.6	774.96	11.60%	[10000]	ug/L
As 188.979†	1837.3	40.22	2.19%	[500]	ug/L
B†	26195.2	321.41	1.23%	[500]	ug/L
Ba 233.527†	76235.0	1863.06	2.44%	[500]	ug/L
Be 313.107†	129328.3	8364.14	6.47%	[500]	ug/L
Ca 315.887†	114394.0	7265.10	6.35%	[25000]	ug/L
Cd 214.440†	118132.2	2660.08	2.25%	[500]	ug/L
Co 228.616†	33359.3	737.24	2.21%	[500]	ug/L
Cr 267.716†	51630.8	1269.66	2.46%	[500]	ug/L
Cu 327.393†	63200.8	1576.67	2.49%	[500]	ug/L
Fe 273.955†	200038.2	4571.45	2.29%	[10000]	ug/L
K 766.490†	29898.3	1549.08	5.18%	[10000]	ug/L
Mg 285.213†	213222.1	13305.56	6.24%	[25000]	ug/L
Mn 257.610†	7094.2	808.23	11.39%	[500]	ug/L
Mo 202.031†	15844.5	310.06	1.96%	[500]	ug/L
Na 589.592†	101732.9	5744.44	5.65%	[12500]	ug/L
Ni 231.604†	25598.0	557.67	2.18%	[500]	ug/L
P 213.617†	11625.1	249.70	2.15%	[2500]	ug/L
Pb 220.353†	6393.0	140.41	2.20%	[500]	ug/L
Sb 206.836†	2493.2	51.89	2.08%	[500]	ug/L
Se 196.026†	1956.9	49.49	2.53%	[500]	ug/L
Sn 189.927†	5743.7	122.77	2.14%	[500]	ug/L
Sr 421.552†	265227.5	16135.39	6.08%	[500]	ug/L
Ti 337.279†	14450.6	1658.26	11.48%	[500]	ug/L
Tl 190.801†	2819.8	53.47	1.90%	[500]	ug/L
V 292.402†	99690.9	2450.35	2.46%	[500]	ug/L
Zn 206.200†	20703.2	453.55	2.19%	[500]	ug/L

Sequence No.: 4
Sample ID: STD 3 151218RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/18/15 11:04:42 AM
Data Type: Reprocessed on 12/21/15 9:12:41 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 151218RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	846354.8	5915.08	0.70%	96.72	%
Y 371.029 Radial	774885.0	6199.78	0.80%	96.18	%
Ag 338.289†	59684.3	775.76	1.30%	[500]	ug/L
Al 308.215†	13231.7	329.95	2.49%	[20000]	ug/L
As 188.979†	3563.1	27.24	0.76%	[1000]	ug/L
B†	51340.0	1065.43	2.08%	[1000]	ug/L
Ba 233.527†	146111.8	2305.74	1.58%	[1000]	ug/L
Be 313.107†	257284.1	3406.74	1.32%	[1000]	ug/L
Ca 315.887†	227071.6	2719.89	1.20%	[50000]	ug/L
Cd 214.440†	225063.1	3452.80	1.53%	[1000]	ug/L
Co 228.616†	61066.4	905.77	1.48%	[1000]	ug/L
Cr 267.716†	98866.1	1523.83	1.54%	[1000]	ug/L
Cu 327.393†	122121.1	1540.97	1.26%	[1000]	ug/L
Fe 273.955†	382768.2	6424.68	1.68%	[20000]	ug/L
K 766.490†	60518.5	1959.72	3.24%	[20000]	ug/L
Mg 285.213†	418109.0	5723.16	1.37%	[50000]	ug/L
Mn 257.610†	14050.1	353.96	2.52%	[1000]	ug/L
Mo 202.031†	30778.8	305.11	0.99%	[1000]	ug/L
Na 589.592†	200533.4	3550.25	1.77%	[25000]	ug/L
Ni 231.604†	47465.0	763.40	1.61%	[1000]	ug/L
P 213.617†	22550.0	134.58	0.60%	[5000]	ug/L
Pb 220.353†	12199.0	74.82	0.61%	[1000]	ug/L
Sb 206.836†	4827.1	26.32	0.55%	[1000]	ug/L
Se 196.026†	3766.6	21.25	0.56%	[1000]	ug/L
Sn 189.927†	11151.8	91.23	0.82%	[1000]	ug/L
Sr 421.552†	525554.5	6692.21	1.27%	[1000]	ug/L
Ti 337.279†	28994.0	708.16	2.44%	[1000]	ug/L
Tl 190.801†	5413.9	64.25	1.19%	[1000]	ug/L
V 292.402†	193153.8	3032.73	1.57%	[1000]	ug/L
Zn 206.200†	38283.9	561.77	1.47%	[1000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	120.2	0.00000	0.999905	
Al 308.215	3	Lin Thru 0	0.0	0.6628	0.00000	0.999993	
As 188.979	3	Lin Thru 0	0.0	3.585	0.00000	0.999923	
B	3	Lin Thru 0	0.0	51.55	0.00000	0.999967	
Ba 233.527	3	Lin Thru 0	0.0	147.4	0.00000	0.999851	
Be 313.107	3	Lin Thru 0	0.0	257.6	0.00000	0.999998	
Ca 315.887	3	Lin Thru 0	0.0	4.548	0.00000	0.999995	
Cd 214.440	3	Lin Thru 0	0.0	227.3	0.00000	0.999806	
Co 228.616	3	Lin Thru 0	0.0	62.20	0.00000	0.999340	
Cr 267.716	3	Lin Thru 0	0.0	99.75	0.00000	0.999845	
Cu 327.393	3	Lin Thru 0	0.0	123.0	0.00000	0.999903	
Fe 273.955	3	Lin Thru 0	0.0	19.31	0.00000	0.999839	
K 766.490	3	Lin Thru 0	0.0	3.019	0.00000	0.999806	
Mg 285.213	3	Lin Thru 0	0.0	8.396	0.00000	0.999968	
Mn 257.610	3	Lin Thru 0	0.0	14.08	0.00000	0.999992	
Mo 202.031	3	Lin Thru 0	0.0	30.96	0.00000	0.999931	
Na 589.592	3	Lin Thru 0	0.0	8.045	0.00000	0.999982	
Ni 231.604	3	Lin Thru 0	0.0	48.21	0.00000	0.999521	
P 213.617	3	Lin Thru 0	0.0	4.538	0.00000	0.999924	
Pb 220.353	3	Lin Thru 0	0.0	12.32	0.00000	0.999818	
Sb 206.836	3	Lin Thru 0	0.0	4.859	0.00000	0.999914	
Se 196.026	3	Lin Thru 0	0.0	3.796	0.00000	0.999880	
Sn 189.927	3	Lin Thru 0	0.0	11.22	0.00000	0.999928	

Sr 421.552	3	Lin Thru 0	0.0	526.5	0.00000	0.999993
Ti 337.279	3	Lin Thru 0	0.0	28.98	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.459	0.00000	0.999863
V 292.402	3	Lin Thru 0	0.0	194.4	0.00000	0.999918
Zn 206.200	3	Lin Thru 0	0.0	38.91	0.00000	0.999483

Sequence No.: 5
Sample ID: ICV 151218RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 12/18/15 11:14:23 AM
Data Type: Reprocessed on 12/21/15 9:12:42 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 151218RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	854858.0	97.69	%	1.425				1.46%
Y 371.029 Radial	784334.8	97.35	%	1.506				1.55%
Ag 338.289†	29770.5	247.7	ug/L	5.59	247.7	ug/L	5.59	2.26%
QC value within limits for Ag 338.289 Recovery = 99.07%								
Al 308.215†	8083.1	12200	ug/L	880.0	12200	ug/L	880.0	7.21%
QC value within limits for Al 308.215 Recovery = 97.61%								
As 188.979†	1767.0	492.8	ug/L	6.64	492.8	ug/L	6.64	1.35%
QC value within limits for As 188.979 Recovery = 98.57%								
B†	26406.2	512.2	ug/L	5.53	512.2	ug/L	5.53	1.08%
QC value within limits for B Recovery = 102.45%								
Ba 233.527†	74995.8	506.7	ug/L	10.89	506.7	ug/L	10.89	2.15%
QC value within limits for Ba 233.527 Recovery = 101.35%								
Be 313.107†	120777.9	468.9	ug/L	47.89	468.9	ug/L	47.89	10.21%
QC value within limits for Be 313.107 Recovery = 93.79%								
Ca 315.887†	57960.4	12740	ug/L	936.9	12740	ug/L	936.9	7.35%
QC value within limits for Ca 315.887 Recovery = 101.92%								
Cd 214.440†	116406.1	511.9	ug/L	9.11	511.9	ug/L	9.11	1.78%
QC value within limits for Cd 214.440 Recovery = 102.37%								
Co 228.616†	32838.3	526.5	ug/L	7.88	526.5	ug/L	7.88	1.50%
QC value within limits for Co 228.616 Recovery = 105.29%								
Cr 267.716†	50988.4	510.6	ug/L	11.25	510.6	ug/L	11.25	2.20%
QC value within limits for Cr 267.716 Recovery = 102.12%								
Cu 327.393†	62535.3	509.2	ug/L	11.78	509.2	ug/L	11.78	2.31%
QC value within limits for Cu 327.393 Recovery = 101.83%								
Fe 273.955†	250125.2	12910	ug/L	246.3	12910	ug/L	246.3	1.91%
QC value within limits for Fe 273.955 Recovery = 103.26%								
K 766.490†	36117.2	11950	ug/L	820.8	11950	ug/L	820.8	6.87%
QC value within limits for K 766.490 Recovery = 95.62%								
Mg 285.213†	106814.0	12740	ug/L	903.0	12740	ug/L	903.0	7.09%
QC value within limits for Mg 285.213 Recovery = 101.89%								
Mn 257.610†	6717.4	477.5	ug/L	34.08	477.5	ug/L	34.08	7.14%
QC value within limits for Mn 257.610 Recovery = 95.51%								
Mo 202.031†	15010.5	485.1	ug/L	5.34	485.1	ug/L	5.34	1.10%
QC value within limits for Mo 202.031 Recovery = 97.01%								
Na 589.592†	95593.0	11820	ug/L	1211.7	11820	ug/L	1211.7	10.25%
QC value within limits for Na 589.592 Recovery = 94.54%								
Ni 231.604†	25591.3	528.0	ug/L	7.66	528.0	ug/L	7.66	1.45%
QC value within limits for Ni 231.604 Recovery = 105.59%								
P 213.617†	11420.6	2517	ug/L	36.1	2517	ug/L	36.1	1.43%
QC value within limits for P 213.617 Recovery = 100.67%								
Pb 220.353†	6289.1	513.0	ug/L	5.75	513.0	ug/L	5.75	1.12%
QC value within limits for Pb 220.353 Recovery = 102.60%								
Sb 206.836†	2362.6	486.2	ug/L	6.10	486.2	ug/L	6.10	1.25%
QC value within limits for Sb 206.836 Recovery = 97.25%								
Se 196.026†	1926.1	507.4	ug/L	6.16	507.4	ug/L	6.16	1.21%
QC value within limits for Se 196.026 Recovery = 101.48%								
Sn 189.927†	2759.4	249.4	ug/L	3.68	249.4	ug/L	3.68	1.48%
QC value within limits for Sn 189.927 Recovery = 99.74%								
Sr 421.552†	252505.6	479.4	ug/L	48.69	479.4	ug/L	48.69	10.16%
QC value within limits for Sr 421.552 Recovery = 95.88%								
Ti 337.279†	13375.4	461.3	ug/L	31.46	461.3	ug/L	31.46	6.82%
QC value within limits for Ti 337.279 Recovery = 92.27%								
Tl 190.801†	2823.3	517.2	ug/L	4.22	517.2	ug/L	4.22	0.82%
QC value within limits for Tl 190.801 Recovery = 103.43%								
V 292.402†	98091.9	512.0	ug/L	10.93	512.0	ug/L	10.93	2.13%
QC value within limits for V 292.402 Recovery = 102.39%								
Zn 206.200†	20290.3	522.1	ug/L	7.36	522.1	ug/L	7.36	1.41%
QC value within limits for Zn 206.200 Recovery = 104.43%								

All analyte(s) passed QC.

Sequence No.: 6
Sample ID: ICB 151218RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/18/15 11:20:51 AM
Data Type: Reprocessed on 12/21/15 9:12:44 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 151218RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	885810.4	101.2	%	1.01				1.00%
Y 371.029 Radial	815901.2	101.3	%	1.23				1.21%
Ag 338.289†	34.5	0.287	ug/L	0.5154	0.287	ug/L	0.5154	179.64%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-8.5	-12.83	ug/L	20.376	-12.83	ug/L	20.376	158.82%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.2	0.893	ug/L	1.2732	0.893	ug/L	1.2732	142.54%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	115.0	2.231	ug/L	0.1711	2.231	ug/L	0.1711	7.67%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-24.3	-0.166	ug/L	0.1179	-0.166	ug/L	0.1179	70.99%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	2.0	0.008	ug/L	0.0035	0.008	ug/L	0.0035	44.18%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-3.5	-0.761	ug/L	3.3815	-0.761	ug/L	3.3815	444.59%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	119.9	0.528	ug/L	0.0463	0.528	ug/L	0.0463	8.77%
QC value greater than the upper limit for Cd 214.440 Recovery = Not calculated								
Co 228.616†	15.3	0.249	ug/L	0.2051	0.249	ug/L	0.2051	82.53%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	21.7	0.216	ug/L	0.0987	0.216	ug/L	0.0987	45.70%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	38.5	0.314	ug/L	0.8142	0.314	ug/L	0.8142	259.56%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	23.0	1.219	ug/L	0.4050	1.219	ug/L	0.4050	33.22%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-72.5	-24.00	ug/L	29.530	-24.00	ug/L	29.530	123.03%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	19.2	2.292	ug/L	0.7502	2.292	ug/L	0.7502	32.73%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-2.5	-0.176	ug/L	0.0468	-0.176	ug/L	0.0468	26.60%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	35.2	1.138	ug/L	0.1403	1.138	ug/L	0.1403	12.33%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	32.5	4.042	ug/L	18.9215	4.042	ug/L	18.9215	468.14%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	17.1	0.352	ug/L	0.2585	0.352	ug/L	0.2585	73.43%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	4.6	1.021	ug/L	1.4143	1.021	ug/L	1.4143	138.50%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-4.3	-0.348	ug/L	0.8772	-0.348	ug/L	0.8772	252.09%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-3.6	-0.737	ug/L	0.9550	-0.737	ug/L	0.9550	129.53%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-2.3	-0.615	ug/L	1.2634	-0.615	ug/L	1.2634	205.40%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	11.7	1.041	ug/L	0.3867	1.041	ug/L	0.3867	37.14%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	124.9	0.237	ug/L	0.0265	0.237	ug/L	0.0265	11.16%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	2.5	0.086	ug/L	0.1389	0.086	ug/L	0.1389	160.89%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	8.2	1.498	ug/L	0.6283	1.498	ug/L	0.6283	41.95%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-61.8	-0.301	ug/L	0.5077	-0.301	ug/L	0.5077	168.61%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	20.9	0.540	ug/L	0.2457	0.540	ug/L	0.2457	45.51%
QC value within limits for Zn 206.200 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 8 **Autosampler Location: 6**
Sample ID: ICSA 151218RJS I:PB O:RJS **Date Collected: 12/18/15 11:37:07 AM**
Analyst: **Data Type: Reprocessed on 12/21/15 9:12:47 AM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Mean Data: ICSA 151218RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	836096.7	95.55	%	1.585				1.66%
Y 371.029 Radial	762972.3	94.70	%	1.757				1.85%
Ag 338.289†	-74.6	-0.621	ug/L	0.2849	-0.621	ug/L	0.2849	45.91%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	64876.3	97850	ug/L	1830.9	97850	ug/L	1830.9	1.87%
QC value within limits for Al 308.215 Recovery = 97.85%								
As 188.979†	1.8	0.495	ug/L	1.4684	0.495	ug/L	1.4684	296.86%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	252.9	4.906	ug/L	0.2980	4.906	ug/L	0.2980	6.08%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	2117.2	-3.077	ug/L	0.2490	-3.077	ug/L	0.2490	8.09%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1.9	-0.007	ug/L	0.0104	-0.007	ug/L	0.0104	139.46%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	463840.0	102000	ug/L	1904.2	102000	ug/L	1904.2	1.87%
QC value within limits for Ca 315.887 Recovery = 101.97%								
Cd 214.440†	1070.8	0.349	ug/L	0.1147	0.349	ug/L	0.1147	32.90%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	160.1	-1.457	ug/L	0.1369	-1.457	ug/L	0.1369	9.40%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-151.6	0.822	ug/L	0.1091	0.822	ug/L	0.1091	13.28%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-761.2	-1.070	ug/L	1.4905	-1.070	ug/L	1.4905	139.27%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	1768181.0	91540	ug/L	2130.5	91540	ug/L	2130.5	2.33%
QC value within limits for Fe 273.955 Recovery = 91.54%								
K 766.490†	-1.6	-71.83	ug/L	38.798	-71.83	ug/L	38.798	54.01%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	813417.4	97000	ug/L	1910.4	97000	ug/L	1910.4	1.97%
QC value within limits for Mg 285.213 Recovery = 97.00%								
Mn 257.610†	-19.6	0.642	ug/L	0.2054	0.642	ug/L	0.2054	31.98%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-171.6	-1.383	ug/L	0.4076	-1.383	ug/L	0.4076	29.48%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	195.5	-402.6	ug/L	4.36	-402.6	ug/L	4.36	1.08%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-137.6	0.252	ug/L	0.3330	0.252	ug/L	0.3330	131.98%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-3.2	-0.707	ug/L	0.9419	-0.707	ug/L	0.9419	133.21%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-150.7	0.489	ug/L	2.2698	0.489	ug/L	2.2698	464.04%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-19.3	-3.964	ug/L	1.5230	-3.964	ug/L	1.5230	38.42%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	7.5	1.965	ug/L	1.6876	1.965	ug/L	1.6876	85.86%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-51.2	-0.766	ug/L	0.1446	-0.766	ug/L	0.1446	18.88%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	305.5	-0.467	ug/L	0.0247	-0.467	ug/L	0.0247	5.29%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	20.0	-1.284	ug/L	0.3818	-1.284	ug/L	0.3818	29.74%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	-2.1	-0.386	ug/L	0.7587	-0.386	ug/L	0.7587	196.68%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	3909.9	-0.098	ug/L	0.2363	-0.098	ug/L	0.2363	242.00%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-100.0	-14.65	ug/L	0.904	-14.65	ug/L	0.904	6.17%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICSAB 151218RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 12/18/15 11:42:25 AM
Data Type: Reprocessed on 12/21/15 9:12:49 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 151218RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	793768.8	90.71	%	8.260				9.11%
Y 371.029 Radial	720686.7	89.45	%	8.985				10.04%
Ag 338.289†	65722.7	546.8	ug/L	48.33	546.8	ug/L	48.33	8.84%
QC value within limits for Ag 338.289 Recovery = 109.36%								
Al 308.215†	69144.0	104300	ug/L	12485.8	104300	ug/L	12485.8	11.97%
QC value within limits for Al 308.215 Recovery = 104.30%								
As 188.979†	907.5	253.1	ug/L	23.40	253.1	ug/L	23.40	9.24%
QC value within limits for As 188.979 Recovery = 101.24%								
B†	15.9	0.309	ug/L	0.1749	0.309	ug/L	0.1749	56.52%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	42439.9	269.9	ug/L	24.58	269.9	ug/L	24.58	9.11%
QC value within limits for Ba 233.527 Recovery = 107.97%								
Be 313.107†	73471.0	285.3	ug/L	25.07	285.3	ug/L	25.07	8.79%
QC value within limits for Be 313.107 Recovery = 114.10%								
Ca 315.887†	487984.1	107300	ug/L	9707.2	107300	ug/L	9707.2	9.05%
QC value within limits for Ca 315.887 Recovery = 107.28%								
Cd 214.440†	124206.0	542.0	ug/L	47.20	542.0	ug/L	47.20	8.71%
QC value within limits for Cd 214.440 Recovery = 108.41%								
Co 228.616†	17555.6	277.9	ug/L	28.33	277.9	ug/L	28.33	10.20%
QC value within limits for Co 228.616 Recovery = 111.17%								
Cr 267.716†	28385.9	286.5	ug/L	29.44	286.5	ug/L	29.44	10.28%
QC value within limits for Cr 267.716 Recovery = 114.59%								
Cu 327.393†	34062.4	281.4	ug/L	25.32	281.4	ug/L	25.32	9.00%
QC value within limits for Cu 327.393 Recovery = 112.57%								
Fe 273.955†	1848465.3	95680	ug/L	8174.9	95680	ug/L	8174.9	8.54%
QC value within limits for Fe 273.955 Recovery = 95.68%								
K 766.490†	220.9	-3.379	ug/L	8.4419	-3.379	ug/L	8.4419	249.85%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	856831.7	102200	ug/L	9212.5	102200	ug/L	9212.5	9.02%
QC value within limits for Mg 285.213 Recovery = 102.17%								
Mn 257.610†	3906.1	279.6	ug/L	32.64	279.6	ug/L	32.64	11.67%
QC value within limits for Mn 257.610 Recovery = 111.83%								
Mo 202.031†	7927.0	260.3	ug/L	25.46	260.3	ug/L	25.46	9.78%
QC value within limits for Mo 202.031 Recovery = 104.11%								
Na 589.592†	97.5	-432.9	ug/L	32.91	-432.9	ug/L	32.91	7.60%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	26724.5	555.9	ug/L	57.21	555.9	ug/L	57.21	10.29%
QC value within limits for Ni 231.604 Recovery = 111.18%								
P 213.617†	-13.3	-2.923	ug/L	0.4711	-2.923	ug/L	0.4711	16.12%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	6616.4	551.5	ug/L	55.79	551.5	ug/L	55.79	10.12%
QC value within limits for Pb 220.353 Recovery = 110.30%								
Sb 206.836†	1225.8	252.3	ug/L	21.70	252.3	ug/L	21.70	8.60%
QC value within limits for Sb 206.836 Recovery = 100.91%								
Se 196.026†	1028.1	270.8	ug/L	27.32	270.8	ug/L	27.32	10.09%
QC value within limits for Se 196.026 Recovery = 108.33%								
Sn 189.927†	-53.8	-0.794	ug/L	0.3259	-0.794	ug/L	0.3259	41.04%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	344.5	-0.447	ug/L	0.1106	-0.447	ug/L	0.1106	24.72%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-3.6	-2.201	ug/L	1.4782	-2.201	ug/L	1.4782	67.16%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	1493.8	273.6	ug/L	26.38	273.6	ug/L	26.38	9.64%
QC value within limits for Tl 190.801 Recovery = 109.46%								
V 292.402†	56893.2	277.3	ug/L	24.65	277.3	ug/L	24.65	8.89%
QC value within limits for V 292.402 Recovery = 110.91%								
Zn 206.200†	21741.7	547.3	ug/L	53.74	547.3	ug/L	53.74	9.82%
QC value within limits for Zn 206.200 Recovery = 109.45%								

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCV1 151218RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 12/18/15 11:46:46 AM
Data Type: Reprocessed on 12/21/15 9:12:50 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 151218RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	859351.6	98.20	%	1.024				1.04%
Y 371.029 Radial	788806.5	97.91	%	1.169				1.19%
Ag 338.289†	30996.1	257.9	ug/L	1.06	257.9	ug/L	1.06	0.41%
QC value within limits for Ag 338.289 Recovery = 103.15%								
Al 308.215†	6869.1	10370	ug/L	112.4	10370	ug/L	112.4	1.08%
QC value within limits for Al 308.215 Recovery = 103.67%								
As 188.979†	1813.0	505.7	ug/L	8.67	505.7	ug/L	8.67	1.72%
QC value within limits for As 188.979 Recovery = 101.13%								
B†	26038.5	505.1	ug/L	6.87	505.1	ug/L	6.87	1.36%
QC value within limits for B Recovery = 101.02%								
Ba 233.527†	76703.5	518.8	ug/L	0.96	518.8	ug/L	0.96	0.18%
QC value within limits for Ba 233.527 Recovery = 103.76%								
Be 313.107†	133578.9	518.6	ug/L	12.92	518.6	ug/L	12.92	2.49%
QC value within limits for Be 313.107 Recovery = 103.73%								
Ca 315.887†	120488.9	26490	ug/L	362.4	26490	ug/L	362.4	1.37%
QC value within limits for Ca 315.887 Recovery = 105.95%								
Cd 214.440†	118251.4	520.1	ug/L	1.61	520.1	ug/L	1.61	0.31%
QC value within limits for Cd 214.440 Recovery = 104.02%								
Co 228.616†	33151.4	531.4	ug/L	8.40	531.4	ug/L	8.40	1.58%
QC value within limits for Co 228.616 Recovery = 106.29%								
Cr 267.716†	51565.0	516.2	ug/L	1.93	516.2	ug/L	1.93	0.37%
QC value within limits for Cr 267.716 Recovery = 103.23%								
Cu 327.393†	63298.0	514.8	ug/L	1.65	514.8	ug/L	1.65	0.32%
QC value within limits for Cu 327.393 Recovery = 102.96%								
Fe 273.955†	201269.8	10370	ug/L	20.0	10370	ug/L	20.0	0.19%
QC value within limits for Fe 273.955 Recovery = 103.75%								
K 766.490†	31355.7	10370	ug/L	122.6	10370	ug/L	122.6	1.18%
QC value within limits for K 766.490 Recovery = 103.73%								
Mg 285.213†	220014.8	26220	ug/L	465.7	26220	ug/L	465.7	1.78%
QC value within limits for Mg 285.213 Recovery = 104.86%								
Mn 257.610†	7307.7	518.7	ug/L	10.37	518.7	ug/L	10.37	2.00%
QC value within limits for Mn 257.610 Recovery = 103.74%								
Mo 202.031†	15734.5	508.3	ug/L	7.17	508.3	ug/L	7.17	1.41%
QC value within limits for Mo 202.031 Recovery = 101.65%								
Na 589.592†	104094.8	12890	ug/L	291.0	12890	ug/L	291.0	2.26%
QC value within limits for Na 589.592 Recovery = 103.15%								
Ni 231.604†	25328.6	522.2	ug/L	8.87	522.2	ug/L	8.87	1.70%
QC value within limits for Ni 231.604 Recovery = 104.43%								
P 213.617†	11547.4	2545	ug/L	41.7	2545	ug/L	41.7	1.64%
QC value within limits for P 213.617 Recovery = 101.78%								
Pb 220.353†	6351.7	517.6	ug/L	7.40	517.6	ug/L	7.40	1.43%
QC value within limits for Pb 220.353 Recovery = 103.51%								
Sb 206.836†	2481.9	510.8	ug/L	9.71	510.8	ug/L	9.71	1.90%
QC value within limits for Sb 206.836 Recovery = 102.16%								
Se 196.026†	1943.3	511.9	ug/L	7.60	511.9	ug/L	7.60	1.48%
QC value within limits for Se 196.026 Recovery = 102.39%								
Sn 189.927†	5696.7	512.0	ug/L	8.74	512.0	ug/L	8.74	1.71%
QC value within limits for Sn 189.927 Recovery = 102.40%								
Sr 421.552†	274387.3	520.9	ug/L	10.87	520.9	ug/L	10.87	2.09%
QC value within limits for Sr 421.552 Recovery = 104.17%								
Ti 337.279†	15005.3	517.4	ug/L	7.66	517.4	ug/L	7.66	1.48%
QC value within limits for Ti 337.279 Recovery = 103.48%								
Tl 190.801†	2825.6	517.6	ug/L	4.29	517.6	ug/L	4.29	0.83%
QC value within limits for Tl 190.801 Recovery = 103.52%								
V 292.402†	99759.9	521.5	ug/L	1.04	521.5	ug/L	1.04	0.20%
QC value within limits for V 292.402 Recovery = 104.29%								
Zn 206.200†	20533.2	528.1	ug/L	8.21	528.1	ug/L	8.21	1.55%
QC value within limits for Zn 206.200 Recovery = 105.62%								

All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 1**
Sample ID: CCB 151218RJS I:PB O:RJS **Date Collected: 12/18/15 11:53:16 AM**
Analyst: **Data Type: Reprocessed on 12/21/15 9:12:51 AM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Mean Data: CCB 151218RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	896305.8	102.4	%	2.41				2.35%
Y 371.029 Radial	825734.4	102.5	%	2.57				2.51%
Ag 338.289†	45.4	0.377	ug/L	0.1164	0.377	ug/L	0.1164	30.86%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-10.5	-15.80	ug/L	12.719	-15.80	ug/L	12.719	80.51%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	-0.2	-0.050	ug/L	0.6354	-0.050	ug/L	0.6354	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	88.5	1.716	ug/L	0.1658	1.716	ug/L	0.1658	9.66%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-35.5	-0.241	ug/L	0.0315	-0.241	ug/L	0.0315	13.05%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	3.7	0.014	ug/L	0.0061	0.014	ug/L	0.0061	43.12%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-59.9	-13.18	ug/L	2.648	-13.18	ug/L	2.648	20.09%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	94.5	0.416	ug/L	0.1094	0.416	ug/L	0.1094	26.33%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	9.1	0.148	ug/L	0.1908	0.148	ug/L	0.1908	129.20%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-0.7	-0.006	ug/L	0.0938	-0.006	ug/L	0.0938	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-99.5	-0.808	ug/L	1.1592	-0.808	ug/L	1.1592	143.48%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	25.7	1.328	ug/L	0.6309	1.328	ug/L	0.6309	47.51%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	0.0	0.008	ug/L	36.8681	0.008	ug/L	36.8681	>999.9%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	36.3	4.330	ug/L	0.8715	4.330	ug/L	0.8715	20.13%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	2.7	0.191	ug/L	0.1361	0.191	ug/L	0.1361	71.38%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	19.8	0.641	ug/L	0.1856	0.641	ug/L	0.1856	28.96%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	82.4	10.23	ug/L	14.056	10.23	ug/L	14.056	137.47%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	10.4	0.214	ug/L	0.1138	0.214	ug/L	0.1138	53.09%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-2.4	-0.526	ug/L	1.1299	-0.526	ug/L	1.1299	214.93%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	11.7	0.949	ug/L	0.8263	0.949	ug/L	0.8263	87.11%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-2.1	-0.427	ug/L	0.4513	-0.427	ug/L	0.4513	105.77%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-4.4	-1.150	ug/L	0.7942	-1.150	ug/L	0.7942	69.04%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	4.9	0.437	ug/L	0.4578	0.437	ug/L	0.4578	104.65%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	15.6	0.030	ug/L	0.0334	0.030	ug/L	0.0334	112.32%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	8.4	0.290	ug/L	0.2493	0.290	ug/L	0.2493	85.96%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.4	0.815	ug/L	0.2514	0.815	ug/L	0.2514	30.86%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	2.7	0.022	ug/L	0.0522	0.022	ug/L	0.0522	240.27%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	19.7	0.504	ug/L	0.5016	0.504	ug/L	0.5016	99.51%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 22
Sample ID: CCV2 151218RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 12/18/15 12:51:03 PM
Data Type: Reprocessed on 12/21/15 9:13:06 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 151218RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	869739.7	99.39	%	1.471				1.48%
Y 371.029 Radial	798922.8	99.16	%	1.638				1.65%
Ag 338.289†	23959.7	199.3	ug/L	1.74	199.3	ug/L	1.74	0.87%
QC value within limits for Ag 338.289 Recovery = 106.31%								
Al 308.215†	5360.6	8091	ug/L	121.8	8091	ug/L	121.8	1.51%
QC value within limits for Al 308.215 Recovery = 107.87%								
As 188.979†	1411.0	393.6	ug/L	4.72	393.6	ug/L	4.72	1.20%
QC value within limits for As 188.979 Recovery = 104.95%								
B†	20465.9	397.0	ug/L	3.96	397.0	ug/L	3.96	1.00%
QC value within limits for B Recovery = 105.87%								
Ba 233.527†	58986.3	399.0	ug/L	4.47	399.0	ug/L	4.47	1.12%
QC value within limits for Ba 233.527 Recovery = 106.39%								
Be 313.107†	103256.5	400.9	ug/L	6.96	400.9	ug/L	6.96	1.74%
QC value within limits for Be 313.107 Recovery = 106.91%								
Ca 315.887†	91776.2	20180	ug/L	356.9	20180	ug/L	356.9	1.77%
QC value within limits for Ca 315.887 Recovery = 107.60%								
Cd 214.440†	91092.7	400.7	ug/L	4.16	400.7	ug/L	4.16	1.04%
QC value within limits for Cd 214.440 Recovery = 106.84%								
Co 228.616†	24902.7	399.1	ug/L	5.04	399.1	ug/L	5.04	1.26%
QC value within limits for Co 228.616 Recovery = 106.44%								
Cr 267.716†	39803.5	398.4	ug/L	4.80	398.4	ug/L	4.80	1.20%
QC value within limits for Cr 267.716 Recovery = 106.25%								
Cu 327.393†	48954.7	398.2	ug/L	4.15	398.2	ug/L	4.15	1.04%
QC value within limits for Cu 327.393 Recovery = 106.18%								
Fe 273.955†	155041.4	7992	ug/L	93.8	7992	ug/L	93.8	1.17%
QC value within limits for Fe 273.955 Recovery = 106.56%								
K 766.490†	23860.1	7893	ug/L	181.8	7893	ug/L	181.8	2.30%
QC value within limits for K 766.490 Recovery = 105.24%								
Mg 285.213†	170772.4	20350	ug/L	407.2	20350	ug/L	407.2	2.00%
QC value within limits for Mg 285.213 Recovery = 108.52%								
Mn 257.610†	5736.6	407.2	ug/L	4.36	407.2	ug/L	4.36	1.07%
QC value within limits for Mn 257.610 Recovery = 108.59%								
Mo 202.031†	11992.3	387.4	ug/L	6.89	387.4	ug/L	6.89	1.78%
QC value within limits for Mo 202.031 Recovery = 103.30%								
Na 589.592†	82170.0	10180	ug/L	188.2	10180	ug/L	188.2	1.85%
QC value within limits for Na 589.592 Recovery = 108.57%								
Ni 231.604†	19339.6	398.7	ug/L	2.99	398.7	ug/L	2.99	0.75%
QC value within limits for Ni 231.604 Recovery = 106.31%								
P 213.617†	8983.3	1980	ug/L	30.7	1980	ug/L	30.7	1.55%
QC value within limits for P 213.617 Recovery = 105.58%								
Pb 220.353†	4959.5	404.1	ug/L	4.44	404.1	ug/L	4.44	1.10%
QC value within limits for Pb 220.353 Recovery = 107.77%								
Sb 206.836†	1937.1	398.7	ug/L	5.26	398.7	ug/L	5.26	1.32%
QC value within limits for Sb 206.836 Recovery = 106.31%								
Se 196.026†	1509.9	397.8	ug/L	5.17	397.8	ug/L	5.17	1.30%
QC value within limits for Se 196.026 Recovery = 106.07%								
Sn 189.927†	4503.3	404.7	ug/L	6.29	404.7	ug/L	6.29	1.55%
QC value within limits for Sn 189.927 Recovery = 107.92%								
Sr 421.552†	211397.9	401.3	ug/L	8.51	401.3	ug/L	8.51	2.12%
QC value within limits for Sr 421.552 Recovery = 107.01%								
Ti 337.279†	11778.7	406.2	ug/L	7.87	406.2	ug/L	7.87	1.94%
QC value within limits for Ti 337.279 Recovery = 108.31%								
Tl 190.801†	2227.9	408.1	ug/L	6.12	408.1	ug/L	6.12	1.50%
QC value within limits for Tl 190.801 Recovery = 108.83%								
V 292.402†	76961.6	402.2	ug/L	3.57	402.2	ug/L	3.57	0.89%
QC value within limits for V 292.402 Recovery = 107.26%								
Zn 206.200†	15511.8	398.9	ug/L	3.84	398.9	ug/L	3.84	0.96%
QC value within limits for Zn 206.200 Recovery = 106.38%								

All analyte(s) passed QC.

Sequence No.: 23 **Autosampler Location: 1**
Sample ID: CCB 151218RJS I:PB O:RJS **Date Collected: 12/18/15 12:54:15 PM**
Analyst: **Data Type: Reprocessed on 12/21/15 9:13:07 AM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Mean Data: CCB 151218RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	960409.1	109.8	%	10.58				9.64%
Y 371.029 Radial	889452.1	110.4	%	11.40				10.32%
Ag 338.289†	27.4	0.228	ug/L	0.7265	0.228	ug/L	0.7265	318.24%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-13.1	-19.81	ug/L	18.437	-19.81	ug/L	18.437	93.08%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.3	0.917	ug/L	0.7802	0.917	ug/L	0.7802	85.06%
QC value within limits for As 188.979 Recovery = Not calculated								
B†	260.0	5.043	ug/L	0.5108	5.043	ug/L	0.5108	10.13%
QC value within limits for B Recovery = Not calculated								
Ba 233.527†	-18.7	-0.128	ug/L	0.1073	-0.128	ug/L	0.1073	84.07%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	14.2	0.055	ug/L	0.0266	0.055	ug/L	0.0266	48.31%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	-67.6	-14.88	ug/L	0.772	-14.88	ug/L	0.772	5.19%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	18.5	0.081	ug/L	0.0817	0.081	ug/L	0.0817	100.62%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	10.5	0.170	ug/L	0.1471	0.170	ug/L	0.1471	86.29%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-9.2	-0.094	ug/L	0.4510	-0.094	ug/L	0.4510	478.35%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	80.6	0.656	ug/L	0.8573	0.656	ug/L	0.8573	130.62%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	34.1	1.749	ug/L	0.5056	1.749	ug/L	0.5056	28.91%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	19.4	6.453	ug/L	33.9138	6.453	ug/L	33.9138	525.56%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	37.9	4.482	ug/L	0.8809	4.482	ug/L	0.8809	19.65%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	8.4	0.598	ug/L	0.6010	0.598	ug/L	0.6010	100.53%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	39.7	1.279	ug/L	0.6814	1.279	ug/L	0.6814	53.26%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	1615.3	200.8	ug/L	24.19	200.8	ug/L	24.19	12.05%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	10.7	0.218	ug/L	0.2037	0.218	ug/L	0.2037	93.56%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	3.1	0.673	ug/L	0.7127	0.673	ug/L	0.7127	105.92%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	13.6	1.108	ug/L	0.2605	1.108	ug/L	0.2605	23.52%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-1.3	-0.275	ug/L	0.7084	-0.275	ug/L	0.7084	257.13%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-1.7	-0.452	ug/L	0.6833	-0.452	ug/L	0.6833	151.05%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	11.6	1.033	ug/L	0.5686	1.033	ug/L	0.5686	55.02%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	13.7	0.026	ug/L	0.1264	0.026	ug/L	0.1264	484.93%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	19.6	0.678	ug/L	0.6548	0.678	ug/L	0.6548	96.63%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	7.7	1.407	ug/L	0.4904	1.407	ug/L	0.4904	34.86%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	33.6	0.189	ug/L	0.1612	0.189	ug/L	0.1612	85.31%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	47.3	1.212	ug/L	1.9952	1.212	ug/L	1.9952	164.67%
QC value within limits for Zn 206.200 Recovery = Not calculated								

All analyte(s) passed QC.

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: AA FIMS-MHS

Results Data Set (original): 151207A-7470
Results Library (original): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb
Results Data Set (reprocessed): 151207A-7470X
Results Library (reprocessed): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb

Method Loaded
Method Name: ANA 7470 Method Last Saved: 12/07/15 12:39:37 PM
Method Description: EPA 7470A

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib. Blank Date Collected: 12/07/15 12:45:44 PM
Analyst: Data Type: Reprocessed on 12/07/15 3:48:39 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib. Blank Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0002	0.0015	0.0002	12:46:33 PM	Yes
2		[0.00]	0.0001	0.0001	0.0001	12:47:02 PM	Yes
3		[0.00]	0.0001	0.0001	0.0001	12:47:31 PM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0001				
%RSD:		0.00%	62.37				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.2 Date Collected: 12/07/15 12:47:50 PM
Analyst: Data Type: Reprocessed on 12/07/15 3:48:39 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.2 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0015	0.0065	0.0017	12:48:40 PM	Yes
2		[0.2]	0.0016	0.0068	0.0017	12:49:09 PM	Yes
3		[0.2]	0.0016	0.0067	0.0017	12:49:37 PM	Yes
Mean:		[0.2]	0.0016				
SD:		0.000	0.0000				
%RSD:		0.00%	0.55				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.00778 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.5 Date Collected: 12/07/15 12:49:57 PM
Analyst: Data Type: Reprocessed on 12/07/15 3:48:40 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.5 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0039	0.0156	0.0041	12:50:46 PM	Yes
2		[0.5]	0.0040	0.0155	0.0041	12:51:15 PM	Yes
3		[0.5]	0.0039	0.0158	0.0041	12:51:44 PM	Yes
Mean:		[0.5]	0.0039				

SD: 0.000 0.0000
%RSD: 0.00% 0.16
Standard number 2 applied. [0.5]
Correlation Coef.: 0.999921 Slope: 0.00788 Intercept: 0.00000

Sequence No.: 4
Sample ID: 1
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/07/15 12:52:03 PM
Data Type: Reprocessed on 12/07/15 3:48:40 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1]	0.0079	0.0316	0.0081	12:52:53 PM	Yes
2		[1]	0.0079	0.0311	0.0080	12:53:22 PM	Yes
3		[1]	0.0079	0.0314	0.0080	12:53:51 PM	Yes
Mean:		[1]	0.0079				
SD:		0.00	0.0000				
%RSD:		0.00%	0.36				

Standard number 3 applied. [1]
Correlation Coef.: 0.999979 Slope: 0.00791 Intercept: 0.00000

Sequence No.: 5
Sample ID: 2
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 12/07/15 12:54:11 PM
Data Type: Reprocessed on 12/07/15 3:48:40 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 2 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.0162	0.0631	0.0163	12:55:01 PM	Yes
2		[2]	0.0161	0.0621	0.0162	12:55:30 PM	Yes
3		[2]	0.0162	0.0639	0.0163	12:55:58 PM	Yes
Mean:		[2]	0.0161				
SD:		0.00	0.0001				
%RSD:		0.00%	0.52				

Standard number 4 applied. [2]
Correlation Coef.: 0.999888 Slope: 0.00803 Intercept: 0.00000

Sequence No.: 6
Sample ID: 5
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/07/15 12:56:18 PM
Data Type: Reprocessed on 12/07/15 3:48:40 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 5 **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5]	0.0380	0.1481	0.0381	12:57:09 PM	Yes
2		[5]	0.0379	0.1467	0.0380	12:57:38 PM	Yes
3		[5]	0.0378	0.1425	0.0379	12:58:06 PM	Yes
Mean:		[5]	0.0379				
SD:		0.00	0.0001				
%RSD:		0.00%	0.29				

Standard number 5 applied. [5]
Correlation Coef.: 0.999482 Slope: 0.00766 Intercept: 0.00000

Sequence No.: 7
Sample ID: 10
Analyst:

Autosampler Location: 7
Date Collected: 12/07/15 12:58:27 PM
Data Type: Reprocessed on 12/07/15 3:48:40 PM

Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 10 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10]	0.0807	0.3141	0.0808	12:59:17 PM	Yes
2		[10]	0.0794	0.3097	0.0795	12:59:46 PM	Yes
3		[10]	0.0794	0.3074	0.0795	1:00:15 PM	Yes
Mean:		[10]	0.0799				
SD:		0.00	0.0008				
%RSD:		0.00%	0.94				

Standard number 6 applied. [10]
Correlation Coef.: 0.999625 Slope: 0.00791 Intercept: 0.00000

Calibration data for Hg 253.7 Equation: Linear Through Zero

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib. Blank	0.0000	0	0.0000	0.00	62.37
0.2	0.0016	0.2	0.1966	0.00	0.55
0.5	0.0039	0.5	0.4987	0.00	0.16
1	0.0079	1.0	1.0008	0.00	0.36
2	0.0161	2.0	2.0406	0.00	0.52
5	0.0379	5.0	4.7903	0.00	0.29
10	0.0799	10.0	10.0914	0.00	0.94

Correlation Coef.: 0.999625 Slope: 0.00791 Intercept: 0.00000

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Sequence No.: 8 Autosampler Location: 9
Sample ID: ICV 12/07/15 RE Date Collected: 12/07/15 1:00:36 PM
Analyst: Data Type: Reprocessed on 12/07/15 3:48:41 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICV 12/07/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.005	4.005	0.0317	0.1245	0.0318	1:01:25 PM	Yes
2	3.999	3.999	0.0316	0.1231	0.0318	1:01:54 PM	Yes
3	4.020	4.020	0.0318	0.1230	0.0319	1:02:23 PM	Yes
Mean:	4.008	4.008	0.0317				
SD:	0.0108	0.0108	0.0001				
%RSD:	0.27%	0.27%	0.27				

QC value within limits for Hg 253.7 Recovery = 100.20%
All analyte(s) passed QC.

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Sequence No.: 9 Autosampler Location: 1
Sample ID: ICB 12/07/15 RE Date Collected: 12/07/15 1:02:42 PM
Analyst: Data Type: Reprocessed on 12/07/15 3:48:41 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICB 12/07/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0079	0.0079	0.0001	0.0008	0.0002	1:03:31 PM	Yes
2	-0.0094	-0.0094	-0.0001	0.0000	0.0000	1:04:00 PM	Yes
3	-0.0004	-0.0004	-0.0000	0.0008	0.0001	1:04:29 PM	Yes
Mean:	-0.0006	-0.0006	-0.0000				
SD:	0.00864	0.00864	0.0001				
%RSD:	>999.9%	>999.9%	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: AA FIMS-MHS

Results Data Set (original): 151211A-7470
Results Library (original): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb
Results Data Set (reprocessed): 151211A-7470XX
Results Library (reprocessed): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib. Blank Date Collected: 12/14/15 9:23:45 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:22 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib. Blank Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	0.0003	0.0001	9:24:47 AM	Yes
2		[0.00]	-0.0001	-0.0001	0.0000	9:25:15 AM	Yes
3		[0.00]	0.0000	0.0011	0.0002	9:25:44 AM	Yes
Mean:		[0.00]	-0.0000				
SD:		0.0000	0.0001				
%RSD:		0.00%	>999.9%				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.2 Date Collected: 12/14/15 9:26:03 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:22 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.2 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0013	0.0058	0.0014	9:26:53 AM	Yes
2		[0.2]	0.0016	0.0062	0.0017	9:27:21 AM	Yes
3		[0.2]	0.0015	0.0065	0.0016	9:27:50 AM	Yes
Mean:		[0.2]	0.0015				
SD:		0.000	0.0001				
%RSD:		0.00%	8.19				

Standard number 1 applied. [0.2]
Correlation Coef.: 0.999826 Slope: 0.00774 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.5 Date Collected: 12/14/15 9:28:10 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:22 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.5 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0038	0.0140	0.0039	9:28:59 AM	Yes
2		[0.5]	0.0039	0.0152	0.0040	9:29:28 AM	Yes
3		[0.5]	0.0039	0.0150	0.0040	9:29:57 AM	Yes
Mean:		[0.5]	0.0039				
SD:		0.000	0.0000				
%RSD:		0.00%	0.87				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999826 Slope: 0.00774 Intercept: 0.00000

Sequence No.: 4
Sample ID: 1
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/14/15 9:30:16 AM
Data Type: Reprocessed on 12/14/15 12:17:22 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1]	0.0077	0.0299	0.0078	9:31:07 AM	Yes
2		[1]	0.0078	0.0314	0.0079	9:31:35 AM	Yes
3		[1]	0.0078	0.0315	0.0079	9:32:04 AM	Yes
Mean:		[1]	0.0078				
SD:		0.00	0.0001				
%RSD:		0.00%	1.12				

Standard number 3 applied. [1]
Correlation Coef.: 0.999826 Slope: 0.00774 Intercept: 0.00000

Sequence No.: 5
Sample ID: 2
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 12/14/15 9:32:23 AM
Data Type: Reprocessed on 12/14/15 12:17:23 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 2 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.0157	0.0607	0.0158	9:33:14 AM	Yes
2		[2]	0.0158	0.0609	0.0159	9:33:42 AM	Yes
3		[2]	0.0159	0.0608	0.0160	9:34:11 AM	Yes
Mean:		[2]	0.0158				
SD:		0.00	0.0001				
%RSD:		0.00%	0.49				

Standard number 4 applied. [2]
Correlation Coef.: 0.999826 Slope: 0.00774 Intercept: 0.00000

Sequence No.: 6
Sample ID: 5
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/14/15 9:34:31 AM
Data Type: Reprocessed on 12/14/15 12:17:23 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 5 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5]	0.0400	0.1512	0.0401	9:35:21 AM	Yes
2		[5]	0.0392	0.1485	0.0393	9:35:50 AM	Yes
3		[5]	0.0400	0.1499	0.0401	9:36:19 AM	Yes
Mean:		[5]	0.0397				
SD:		0.00	0.0005				
%RSD:		0.00%	1.24				

Standard number 5 applied. [5]
Correlation Coef.: 0.999826 Slope: 0.00774 Intercept: 0.00000

Sequence No.: 7
Sample ID: 10
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 12/14/15 9:36:40 AM
Data Type: Reprocessed on 12/14/15 12:17:23 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 10 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10]	0.0769	0.2941	0.0770	9:37:31 AM	Yes
2		[10]	0.0769	0.2943	0.0770	9:37:59 AM	Yes
3		[10]	0.0767	0.2921	0.0768	9:38:28 AM	Yes
Mean:		[10]	0.0768				
SD:		0.00	0.0002				
%RSD:		0.00%	0.20				

Standard number 6 applied. [10]
Correlation Coef.: 0.999826 Slope: 0.00774 Intercept: 0.00000

Calibration data for Hg 253.7 Equation: Linear Through Zero

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib. Blank	0.0000	0	0.0000	0.00	>999.9%
0.2	0.0015	0.2	0.1910	0.00	8.19
0.5	0.0039	0.5	0.4994	0.00	0.87
1	0.0078	1.0	1.0038	0.00	1.12
2	0.0158	2.0	2.0376	0.00	0.49
5	0.0397	5.0	5.1328	0.00	1.24
10	0.0768	10.0	9.9234	0.00	0.20

Correlation Coef.: 0.999826 Slope: 0.00774 Intercept: 0.00000

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Sequence No.: 8 Autosampler Location: 9
Sample ID: ICV 12/14/15 RE Date Collected: 12/14/15 9:38:49 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:23 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICV 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.130	4.130	0.0320	0.1209	0.0321	9:39:38 AM	Yes
2	4.218	4.218	0.0327	0.1206	0.0328	9:40:07 AM	Yes
3	4.161	4.161	0.0322	0.1200	0.0323	9:40:36 AM	Yes
Mean:	4.170	4.170	0.0323				
SD:	0.0446	0.0446	0.0003				
%RSD:	1.07%	1.07%	1.07				

QC value within limits for Hg 253.7 Recovery = 104.24%
All analyte(s) passed QC.

==========

Sequence No.: 9 Autosampler Location: 1
Sample ID: ICB 12/14/15 RE Date Collected: 12/14/15 9:40:55 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:23 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICB 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0052	-0.0052	-0.0000	-0.0001	0.0001	9:41:45 AM	Yes
2	0.0012	0.0012	0.0000	0.0002	0.0001	9:42:13 AM	Yes
3	-0.0079	-0.0079	-0.0001	-0.0002	0.0000	9:42:42 AM	Yes
Mean:	-0.0040	-0.0040	-0.0000				
SD:	0.00470	0.00470	0.0000				
%RSD:	117.74%	117.74%	117.74				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 10 Autosampler Location: 6
Sample ID: CCV 12/14/15 RE Date Collected: 12/14/15 9:43:02 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:24 PM

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: AA FIMS-MHS

Results Data Set (original): 151214A-7470
Results Library (original): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb
Results Data Set (reprocessed): 151214A-7470X
Results Library (reprocessed): C:\Users\Public\PerkinElmer\AA\Data\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib. Blank Date Collected: 12/15/15 8:52:26 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:54 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: Calib. Blank Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0014	0.0003	8:53:28 AM	Yes
2		[0.00]	-0.0001	-0.0005	0.0000	8:53:56 AM	Yes
3		[0.00]	-0.0000	0.0002	0.0001	8:54:25 AM	Yes
Mean:		[0.00]	0.0000				
SD:		0.0000	0.0001				
%RSD:		0.00%	>999.9%				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.2 Date Collected: 12/15/15 8:54:45 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:54 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.2 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0015	0.0074	0.0016	8:55:34 AM	Yes
2		[0.2]	0.0015	0.0068	0.0016	8:56:03 AM	Yes
3		[0.2]	0.0014	0.0061	0.0016	8:56:31 AM	Yes
Mean:		[0.2]	0.0015				
SD:		0.000	0.0000				
%RSD:		0.00%	2.03				

Standard number 1 applied. [0.2]
Correlation Coef.: 0.999929 Slope: 0.00756 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.5 Date Collected: 12/15/15 8:56:51 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:54 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 0.5 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0038	0.0165	0.0040	8:57:40 AM	Yes
2		[0.5]	0.0038	0.0165	0.0040	8:58:09 AM	Yes
3		[0.5]	0.0036	0.0146	0.0037	8:58:38 AM	Yes
Mean:		[0.5]	0.0038				
SD:		0.000	0.0001				
%RSD:		0.00%	3.40				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999929 Slope: 0.00756 Intercept: 0.00000

Sequence No.: 4 Autosampler Location: 4
Sample ID: 1 Date Collected: 12/15/15 8:58:57 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:54 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 1 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1]	0.0076	0.0308	0.0077	8:59:47 AM	Yes
2		[1]	0.0078	0.0331	0.0079	9:00:15 AM	Yes
3		[1]	0.0077	0.0327	0.0078	9:00:45 AM	Yes
Mean:		[1]	0.0077				
SD:		0.00	0.0001				
%RSD:		0.00%	1.35				

Standard number 3 applied. [1]
Correlation Coef.: 0.999929 Slope: 0.00756 Intercept: 0.00000

Sequence No.: 5 Autosampler Location: 5
Sample ID: 2 Date Collected: 12/15/15 9:01:04 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:55 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 2 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2]	0.0156	0.0639	0.0157	9:01:55 AM	Yes
2		[2]	0.0155	0.0621	0.0157	9:02:24 AM	Yes
3		[2]	0.0154	0.0610	0.0156	9:02:53 AM	Yes
Mean:		[2]	0.0155				
SD:		0.00	0.0001				
%RSD:		0.00%	0.44				

Standard number 4 applied. [2]
Correlation Coef.: 0.999929 Slope: 0.00756 Intercept: 0.00000

Sequence No.: 6 Autosampler Location: 6
Sample ID: 5 Date Collected: 12/15/15 9:03:13 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:55 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 5 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5]	0.0382	0.1535	0.0384	9:04:04 AM	Yes
2		[5]	0.0385	0.1539	0.0387	9:04:32 AM	Yes
3		[5]	0.0382	0.1539	0.0384	9:05:01 AM	Yes
Mean:		[5]	0.0383				
SD:		0.00	0.0002				
%RSD:		0.00%	0.46				

Standard number 5 applied. [5]
Correlation Coef.: 0.999929 Slope: 0.00756 Intercept: 0.00000

Sequence No.: 7 Autosampler Location: 7
Sample ID: 10 Date Collected: 12/15/15 9:05:21 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:55 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 10 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10]	0.0757	0.3044	0.0758	9:06:13 AM	Yes
2		[10]	0.0755	0.3030	0.0756	9:06:41 AM	Yes
3		[10]	0.0746	0.2992	0.0747	9:07:10 AM	Yes
Mean:		[10]	0.0752				
SD:		0.00	0.0006				
%RSD:		0.00%	0.79				

Standard number 6 applied. [10]
Correlation Coef.: 0.999929 Slope: 0.00756 Intercept: 0.00000

Calibration data for Hg 253.7 Equation: Linear Through Zero

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib. Blank	0.0000	0	0.000	0.00	>999.9%
0.2	0.0015	0.2	0.194	0.00	2.03
0.5	0.0038	0.5	0.498	0.00	3.40
1	0.0077	1.0	1.014	0.00	1.35
2	0.0155	2.0	2.051	0.00	0.44
5	0.0383	5.0	5.071	0.00	0.46
10	0.0752	10.0	9.952	0.00	0.79

Correlation Coef.: 0.999929 Slope: 0.00756 Intercept: 0.00000

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Sequence No.: 8 Autosampler Location: 9
Sample ID: ICV 12/14/15 RE Date Collected: 12/15/15 9:07:30 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:56 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICV 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.101	4.101	0.0310	0.1225	0.0311	9:08:20 AM	Yes
2	4.159	4.159	0.0314	0.1282	0.0316	9:08:49 AM	Yes
3	4.129	4.129	0.0312	0.1244	0.0314	9:09:17 AM	Yes
Mean:	4.129	4.129	0.0312				
SD:	0.0292	0.0292	0.0002				
%RSD:	0.71%	0.71%	0.71				

QC value within limits for Hg 253.7 Recovery = 103.24%
All analyte(s) passed QC.

==========

Sequence No.: 9 Autosampler Location: 1
Sample ID: ICB 12/14/15 RE Date Collected: 12/15/15 9:09:37 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:56 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: ICB 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.010	-0.010	-0.0001	-0.0005	0.0001	9:10:26 AM	Yes
2	-0.013	-0.013	-0.0001	-0.0006	0.0000	9:10:55 AM	Yes
3	-0.001	-0.001	-0.0000	0.0009	0.0001	9:11:24 AM	Yes
Mean:	-0.008	-0.008	-0.0001				
SD:	0.0061	0.0061	0.0000				
%RSD:	73.58%	73.58%	73.58				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 10 Autosampler Location: 6
Sample ID: CCV 12/14/15 RE Date Collected: 12/15/15 9:11:44 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:56 AM

METALS
Raw Data

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	80.0 U	300	80.0	27.4	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ANTIMONY (SB)	5.00 U	20.0	5.00	2.90	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ARSENIC (AS)	10.00 U	25.0	10.00	4.30	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BARIUM (BA)	4.00 U	10.0	4.00	0.75	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BERYLLIUM (BE)	1.00 U	2.0	1.00	0.45	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	BORON (B)	40.00 U	50.0	40.00	21.80	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CADMIUM (CD)	3.00 U	5.0	3.00	0.51	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CALCIUM (CA)	31.2 J	1000	75.0	27.5	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	CHROMIUM (CR)	4.00 U	15.0	4.00	1.37	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	COBALT (CO)	3.00 U	15.0	3.00	0.63	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	COPPER (CU)	4.00 U	15.0	4.00	1.71	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	IRON (FE)	25.0 U	100	25.0	21.0	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	LEAD (PB)	4.00 U	15.0	4.00	1.58	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	LITHIUM (LI)	0.80 U	1.0	0.80	0.40	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	NICKEL (NI)	3.00 U	40.0	3.00	0.42	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SELENIUM (SE)	10.00 U	22.0	10.00	4.60	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SILVER (AG)	0.90 U	15.0	0.90	0.85	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	THALLIUM (TL)	10.00 U	40.0	10.00	4.80	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	VANADIUM (V)	4.00 U	15.0	4.00	0.97	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ZINC (ZN)	20.0 U	150	20.0	13.7	ug/L	12/08/15	12/08/15	#61C14-151208A1-AZ25346
6010C	ALUMINUM (AL) (DI	80.0 U	300	80.0	27.4	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ANTIMONY (SB) (DI	5.00 U	20.0	5.00	2.90	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ARSENIC (AS) (DIS	10.00 U	25.0	10.00	4.30	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BARIUM (BA) (DISS	4.00 U	10.0	4.00	0.75	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BERYLLIUM (BE) (D	1.00 U	2.0	1.00	0.45	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	BORON (B) (DISSO	40.00 U	50.0	40.00	21.80	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	CADMIUM (CD) (DIS	3.00 U	5.0	3.00	0.51	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	CALCIUM (CA) (DIS	49.9 J	1000	75.0	27.5	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346

J = Estimated value.

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908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CHROMIUM (CR) (D	4.00 U	15.0	4.00	1.37	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	COBALT (CO) (DISS	3.00 U	15.0	3.00	0.63	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	COPPER (CU) (DIS	4.00 U	15.0	4.00	1.71	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	IRON (FE) (DISSOL	25.0 U	100	25.0	21.0	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	LEAD (PB) (DISSOL	4.00 U	15.0	4.00	1.58	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	LITHIUM (LI) (DISSO	0.80 U	1.0	0.80	0.40	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	MAGNESIUM (MG) (	30.0 U	500	30.0	12.9	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	MANGANESE (MN) (	4.00 U	10.0	4.00	1.23	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	NICKEL (NI) (DISSO	3.00 U	40.0	3.00	0.42	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	POTASSIUM (K) (DI	500.0 U	3000	500.0	220.0	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SELENIUM (SE) (DI	10.00 U	22.0	10.00	4.60	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SILVER (AG) (DISS	0.90 U	15.0	0.90	0.85	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	SODIUM (NA) (DISS	500.0 U	5000	500.0	111.1	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	THALLIUM (TL) (DIS	10.00 U	40.0	10.00	4.80	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	VANADIUM (V) (DIS	4.00 U	15.0	4.00	0.97	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
6010C	ZINC (ZN) (DISSOL	20.0 U	150	20.0	13.7	ug/L	12/08/15	12/08/15	#61C14-151208A-AZ25346
7470A	MERCURY (HG) (DI	0.15 U	0.2	0.15	0.06	ug/L	12/11/15	12/14/15	#HGDOD-151211A-AZ25346
7470A	MERCURY (HG)	0.15 U	0.2	0.15	0.06	ug/L	12/05/15	12/07/15	HGDOD-151205B1-AZ25346
6010C-TC	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	BARIUM (BA)	4.00 U	50.0	4.00	0.75	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	LEAD (PB)	4.00 U	100.0	4.00	1.58	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	SELENIUM (SE)	5.00 U	50.0	5.00	3.17	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TC	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	12/14/15	12/18/15	#6010C-151214A-AZ25347
7470A	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	12/14/15	12/15/15	#TCLPG-151214A1-AZ25347
6010C-TC	ARSENIC (AS)	4.00 U	50.0	4.00	2.45	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	BARIUM (BA)	5.4 J	50.0	4.00	0.75	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	CADMIUM (CD)	3.00 U	50.0	3.00	0.51	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	CHROMIUM (CR)	4.00 U	50.0	4.00	1.37	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348

J = Estimated value.

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908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C-TC	LEAD (PB)	4.00 U	100.0	4.00	1.58	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	SELENIUM (SE)	3.5 J	50.0	5.00	3.17	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TC	SILVER (AG)	0.90 U	10.0	0.90	0.58	ug/L	12/14/15	12/18/15	#6010C-151214A1-AZ25348
7470A	MERCURY (HG)	0.00015 U	0.0020	0.00015	0.00006	mg/L	12/14/15	12/15/15	#TCLPG-151214A-AZ25348

Metals SC-Blank-REG MDLs
Printed: 12/21/15 2:46:26 PM

Sequence No.: 13 **Autosampler Location: 38**
Sample ID: 151208A-3010F-BLK **Date Collected: 12/08/15 3:05:50 PM**
Analyst: RJS **Data Type: Reprocessed on 12/09/15 9:03:52 AM**
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Mean Data: 151208A-3010F-BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	826347.1	100.2	%	1.09				1.08%
Y 371.029 Radial	49301.1	99.57	%	1.594				1.60%
Ag 338.289†	-20.7	-0.189	ug/L	1.1962	-0.189	ug/L	1.1962	634.08%
Al 308.215†	4.5	9.041	ug/L	6.3676	9.041	ug/L	6.3676	70.43%
As 188.979†	-0.7	-0.235	ug/L	1.3200	-0.235	ug/L	1.3200	561.50%
B†	-1.3	-0.893	ug/L	3.4050	-0.893	ug/L	3.4050	381.36%
Ba 233.527†	6.0	0.042	ug/L	0.0404	0.042	ug/L	0.0404	96.57%
Be 313.107†	5.8	0.026	ug/L	0.0066	0.026	ug/L	0.0066	25.55%
Ca 315.887†	198.2	49.85	ug/L	1.814	49.85	ug/L	1.814	3.64%
Cd 214.440†	40.7	0.187	ug/L	0.0272	0.187	ug/L	0.0272	14.59%
Co 228.616†	12.5	0.217	ug/L	0.0316	0.217	ug/L	0.0316	14.58%
Cr 267.716†	-11.3	-0.123	ug/L	0.1052	-0.123	ug/L	0.1052	85.35%
Cu 327.393†	35.1	0.428	ug/L	0.2687	0.428	ug/L	0.2687	62.76%
Fe 273.955†	56.6	4.130	ug/L	0.3562	4.130	ug/L	0.3562	8.63%
K 766.490†	19.0	11.02	ug/L	15.282	11.02	ug/L	15.282	138.70%
Mg 285.213†	43.3	5.878	ug/L	0.9404	5.878	ug/L	0.9404	16.00%
Mn 257.610†	-1.1	-0.084	ug/L	0.3443	-0.084	ug/L	0.3443	410.77%
Mo 202.031†	25.5	0.862	ug/L	0.4934	0.862	ug/L	0.4934	57.25%
Na 589.592†	-21.4	-2.919	ug/L	20.4357	-2.919	ug/L	20.4357	700.06%
Ni 231.604†	-11.5	-0.263	ug/L	0.1502	-0.263	ug/L	0.1502	57.18%
P 213.617†	-11.8	-3.032	ug/L	1.0295	-3.032	ug/L	1.0295	33.96%
Pb 220.353†	1.8	0.160	ug/L	0.0608	0.160	ug/L	0.0608	37.91%
Sb 206.836†	3.9	0.941	ug/L	1.0032	0.941	ug/L	1.0032	106.55%
Se 196.026†	-0.9	-0.304	ug/L	1.5670	-0.304	ug/L	1.5670	515.21%
Sn 189.927†	32.9	3.016	ug/L	0.8662	3.016	ug/L	0.8662	28.72%
Sr 421.552†	-67.5	-0.145	ug/L	0.0447	-0.145	ug/L	0.0447	30.78%
Ti 337.279†	-4.7	-0.186	ug/L	0.8427	-0.186	ug/L	0.8427	452.57%
Tl 190.801†	5.5	1.113	ug/L	0.2176	1.113	ug/L	0.2176	19.55%
V 292.402†	-1.1	0.004	ug/L	0.1201	0.004	ug/L	0.1201	>999.9%
Zn 206.200†	36.9	1.334	ug/L	0.0672	1.334	ug/L	0.0672	5.03%
Li 670.784†	66.2	0.005	ug/L	0.0060	0.005	ug/L	0.0060	128.91%

Sequence No.: 15
Sample ID: 151208A-3010-BLK
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 59
Date Collected: 12/08/15 3:16:31 PM
Data Type: Reprocessed on 12/09/15 9:03:55 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 151208A-3010-BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	830977.8	100.7	%	0.71				0.70%
Y 371.029 Radial	49609.9	100.2	%	1.36				1.36%
Ag 338.289†	-79.5	-0.725	ug/L	0.5966	-0.725	ug/L	0.5966	82.31%
Al 308.215†	5.2	10.49	ug/L	5.637	10.49	ug/L	5.637	53.76%
As 188.979†	2.0	0.622	ug/L	0.3353	0.622	ug/L	0.3353	53.89%
B†	-1.2	-0.820	ug/L	3.2950	-0.820	ug/L	3.2950	401.98%
Ba 233.527†	-3.5	-0.026	ug/L	0.0582	-0.026	ug/L	0.0582	225.96%
Be 313.107†	0.8	0.004	ug/L	0.0083	0.004	ug/L	0.0083	221.13%
Ca 315.887†	124.0	31.19	ug/L	5.722	31.19	ug/L	5.722	18.35%
Cd 214.440†	2.7	0.012	ug/L	0.0579	0.012	ug/L	0.0579	480.12%
Co 228.616†	9.7	0.167	ug/L	0.4381	0.167	ug/L	0.4381	263.02%
Cr 267.716†	-14.6	-0.160	ug/L	0.1644	-0.160	ug/L	0.1644	103.02%
Cu 327.393†	28.3	0.345	ug/L	0.0714	0.345	ug/L	0.0714	20.70%
Fe 273.955†	19.2	1.401	ug/L	0.1179	1.401	ug/L	0.1179	8.42%
K 766.490†	14.6	8.497	ug/L	15.4063	8.497	ug/L	15.4063	181.31%
Mg 285.213†	25.3	3.429	ug/L	1.0215	3.429	ug/L	1.0215	29.79%
Mn 257.610†	0.3	0.026	ug/L	0.3285	0.026	ug/L	0.3285	>999.9%
Mo 202.031†	-4.1	-0.139	ug/L	0.0664	-0.139	ug/L	0.0664	47.63%
Na 589.592†	43.9	5.951	ug/L	16.1749	5.951	ug/L	16.1749	271.80%
Ni 231.604†	8.6	0.194	ug/L	0.2745	0.194	ug/L	0.2745	141.43%
P 213.617†	-10.8	-2.764	ug/L	1.4992	-2.764	ug/L	1.4992	54.24%
Pb 220.353†	-0.0	0.000	ug/L	0.1792	0.000	ug/L	0.1792	>999.9%
Sb 206.836†	-3.1	-0.751	ug/L	0.8541	-0.751	ug/L	0.8541	113.79%
Se 196.026†	4.1	1.310	ug/L	4.1854	1.310	ug/L	4.1854	319.52%
Sn 189.927†	7.1	0.653	ug/L	0.4521	0.653	ug/L	0.4521	69.24%
Sr 421.552†	-9.2	-0.020	ug/L	0.1580	-0.020	ug/L	0.1580	788.32%
Ti 337.279†	-6.3	-0.251	ug/L	0.5767	-0.251	ug/L	0.5767	230.01%
Tl 190.801†	2.8	0.563	ug/L	0.8803	0.563	ug/L	0.8803	156.35%
V 292.402†	-26.4	-0.151	ug/L	0.0510	-0.151	ug/L	0.0510	33.67%
Zn 206.200†	12.9	0.468	ug/L	0.1032	0.468	ug/L	0.1032	22.04%
Li 670.784†	143.9	0.010	ug/L	0.0060	0.010	ug/L	0.0060	59.72%

Sequence No.: 15
Sample ID: 151214A-3010T-BLK
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 38
Date Collected: 12/18/15 12:11:04 PM
Data Type: Reprocessed on 12/21/15 9:12:57 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 151214A-3010T-BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	762214.9	87.10	%	0.446				0.51%
Y 371.029 Radial	695755.9	86.36	%	0.587				0.68%
Ag 338.289†	-98.2	-0.817	ug/L	0.3440	-0.817	ug/L	0.3440	42.10%
Al 308.215†	-7.8	-55.32	ug/L	11.960	-55.32	ug/L	11.960	21.62%
As 188.979†	1.1	0.310	ug/L	0.1603	0.310	ug/L	0.1603	51.78%
B†	65.7	1.275	ug/L	0.1879	1.275	ug/L	0.1879	14.74%
Ba 233.527†	923.2	5.398	ug/L	0.0978	5.398	ug/L	0.0978	1.81%
Be 313.107†	-10.3	-0.040	ug/L	0.0091	-0.040	ug/L	0.0091	22.67%
Ca 315.887†	73.6	-16.21	ug/L	4.325	-16.21	ug/L	4.325	26.68%
Cd 214.440†	101.4	0.033	ug/L	0.0262	0.033	ug/L	0.0262	78.47%
Co 228.616†	33.0	-0.052	ug/L	0.1215	-0.052	ug/L	0.1215	231.54%
Cr 267.716†	107.1	-0.211	ug/L	0.2973	-0.211	ug/L	0.2973	140.82%
Cu 327.393†	627.0	-5.197	ug/L	0.6490	-5.197	ug/L	0.6490	12.49%
Fe 273.955†	94.5	-12.81	ug/L	0.332	-12.81	ug/L	0.332	2.59%
K 766.490†	1300.9	521.6	ug/L	57.20	521.6	ug/L	57.20	10.97%
Mg 285.213†	56.7	-268.6	ug/L	3.78	-268.6	ug/L	3.78	1.41%
Mn 257.610†	-3.7	-0.222	ug/L	0.4177	-0.222	ug/L	0.4177	188.14%
Mo 202.031†	138.1	-14.19	ug/L	0.366	-14.19	ug/L	0.366	2.58%
Na 589.592†	10632003.5	1322000	ug/L	9188.5	1322000	ug/L	9188.5	0.70%
Ni 231.604†	30.3	1.519	ug/L	0.3107	1.519	ug/L	0.3107	20.46%
P 213.617†	2.6	0.577	ug/L	1.5315	0.577	ug/L	1.5315	265.22%
Pb 220.353†	5.6	0.319	ug/L	2.0908	0.319	ug/L	2.0908	656.10%
Sb 206.836†	0.1	0.030	ug/L	1.4028	0.030	ug/L	1.4028	>999.9%
Se 196.026†	13.3	3.501	ug/L	2.2160	3.501	ug/L	2.2160	63.30%
Sn 189.927†	46.6	4.472	ug/L	0.9531	4.472	ug/L	0.9531	21.31%
Sr 421.552†	3034.9	5.018	ug/L	0.1441	5.018	ug/L	0.1441	2.87%
Ti 337.279†	-20.6	0.293	ug/L	0.2174	0.293	ug/L	0.2174	74.23%
Tl 190.801†	-3.2	-0.583	ug/L	0.3320	-0.583	ug/L	0.3320	56.92%
V 292.402†	-132.5	0.585	ug/L	0.1005	0.585	ug/L	0.1005	17.18%
Zn 206.200†	34.7	2.968	ug/L	0.2756	2.968	ug/L	0.2756	9.28%

Sequence No.: 12
Sample ID: 151214A-3010T-BLK 2
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 12/18/15 11:57:26 AM
Data Type: Reprocessed on 12/21/15 9:12:53 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 151214A-3010T-BLK 2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	902381.5	103.1	%	1.20				1.16%
Y 371.029 Radial	832042.4	103.3	%	1.32				1.28%
Ag 338.289†	20.5	0.170	ug/L	0.1471	0.170	ug/L	0.1471	86.35%
Al 308.215†	-4.9	-7.482	ug/L	10.0435	-7.482	ug/L	10.0435	134.23%
As 188.979†	-0.2	-0.046	ug/L	0.2320	-0.046	ug/L	0.2320	499.53%
B†	39.6	0.769	ug/L	0.1002	0.769	ug/L	0.1002	13.04%
Ba 233.527†	-26.1	-0.178	ug/L	0.1226	-0.178	ug/L	0.1226	68.84%
Be 313.107†	4.0	0.015	ug/L	0.0166	0.015	ug/L	0.0166	107.20%
Ca 315.887†	363.8	79.99	ug/L	4.317	79.99	ug/L	4.317	5.40%
Cd 214.440†	56.9	0.250	ug/L	0.0460	0.250	ug/L	0.0460	18.39%
Co 228.616†	3.5	0.054	ug/L	0.1794	0.054	ug/L	0.1794	330.65%
Cr 267.716†	34.2	0.341	ug/L	0.1670	0.341	ug/L	0.1670	49.03%
Cu 327.393†	70.7	0.574	ug/L	0.3946	0.574	ug/L	0.3946	68.68%
Fe 273.955†	64.2	3.338	ug/L	0.1631	3.338	ug/L	0.1631	4.89%
K 766.490†	-9.9	-3.295	ug/L	59.9078	-3.295	ug/L	59.9078	>999.9%
Mg 285.213†	97.7	11.63	ug/L	0.404	11.63	ug/L	0.404	3.47%
Mn 257.610†	6.3	0.445	ug/L	0.0799	0.445	ug/L	0.0799	17.96%
Mo 202.031†	22.1	0.714	ug/L	0.3717	0.714	ug/L	0.3717	52.09%
Na 589.592†	260.9	32.44	ug/L	14.529	32.44	ug/L	14.529	44.79%
Ni 231.604†	11.9	0.239	ug/L	0.3133	0.239	ug/L	0.3133	131.16%
P 213.617†	-2.6	-0.566	ug/L	1.1288	-0.566	ug/L	1.1288	199.30%
Pb 220.353†	-0.5	-0.045	ug/L	1.6131	-0.045	ug/L	1.6131	>999.9%
Sb 206.836†	0.0	0.008	ug/L	0.7124	0.008	ug/L	0.7124	>999.9%
Se 196.026†	-2.1	-0.561	ug/L	1.7111	-0.561	ug/L	1.7111	304.78%
Sn 189.927†	10.8	0.969	ug/L	0.2364	0.969	ug/L	0.2364	24.41%
Sr 421.552†	37.6	0.071	ug/L	0.1771	0.071	ug/L	0.1771	250.40%
Ti 337.279†	22.8	0.786	ug/L	0.3490	0.786	ug/L	0.3490	44.42%
Tl 190.801†	11.9	2.188	ug/L	0.8388	2.188	ug/L	0.8388	38.34%
V 292.402†	-22.6	-0.105	ug/L	0.0873	-0.105	ug/L	0.0873	83.06%
Zn 206.200†	104.8	2.691	ug/L	0.4514	2.691	ug/L	0.4514	16.77%

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 7470A	MERCURY (HG)	0.004	0.0039	97.5	80-120	12/14/15	12/15/15	#TCLPG-151214A1-AZ25347

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 7470A	MERCURY (HG)	0.004	0.0041	103	80-120	12/14/15	12/15/15	#TCLPG-151214A-AZ25348

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL) (DISSOLVED)	2000	1880	94.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ANTIMONY (SB) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ARSENIC (AS) (DISSOLVED)	250	228	91.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BARIUM (BA) (DISSOLVED)	250	230	92.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BERYLLIUM (BE) (DISSOLVED)	50.0	46.1	92.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	BORON (B) (DISSOLVED)	250	231	92.4	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CADMIUM (CD) (DISSOLVED)	50.0	46.8	93.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CALCIUM (CA) (DISSOLVED)	25000	23900	95.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	CHROMIUM (CR) (DISSOLVED)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	COBALT (CO) (DISSOLVED)	250	232	92.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	COPPER (CU) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	IRON (FE) (DISSOLVED)	1000	930	93.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	LEAD (PB) (DISSOLVED)	250	236	94.4	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	LITHIUM (LI) (DISSOLVED)	100.0	95.8	95.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	MAGNESIUM (MG) (DISSOLVED)	25000	24300	97.2	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	MANGANESE (MN) (DISSOLVED	250	229	91.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	NICKEL (NI) (DISSOLVED)	250	239	95.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	POTASSIUM (K) (DISSOLVED)	5000	4590	91.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	SELENIUM (SE) (DISSOLVED)	250	224	89.6	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346

Comments: _____

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	SILVER (AG) (DISSOLVED)	100.0	86.7	86.7	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	THALLIUM (TL) (DISSOLVED)	250	230	92.0	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	VANADIUM (V) (DISSOLVED)	250	242	96.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ZINC (ZN) (DISSOLVED)	500	464	92.8	80-120	12/08/15	12/08/15	#61C14-151208A-AZ25346
EPA 6010C	ALUMINUM (AL)	2000	1980	99.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ANTIMONY (SB)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ARSENIC (AS)	250	241	96.4	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BARIUM (BA)	250	242	96.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BERYLLIUM (BE)	50.0	48.3	96.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	BORON (B)	250	239	95.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CADMIUM (CD)	50.0	48.9	97.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CALCIUM (CA)	25000	25100	100	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	CHROMIUM (CR)	250	247	98.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	COBALT (CO)	250	244	97.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	COPPER (CU)	250	236	94.4	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	IRON (FE)	1000	972	97.2	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	LEAD (PB)	250	247	98.8	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	LITHIUM (LI)	100.0	102	102	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	MAGNESIUM (MG)	25000	25300	101	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	MANGANESE (MN)	250	243	97.2	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	NICKEL (NI)	250	245	98.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	POTASSIUM (K)	5000	4780	95.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	SELENIUM (SE)	250	234	93.6	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	SILVER (AG)	100.0	90.3	90.3	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	THALLIUM (TL)	250	240	96.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	VANADIUM (V)	250	256	102	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 6010C	ZINC (ZN)	500	490	98.0	80-120	12/08/15	12/08/15	#61C14-151208A1-AZ25346
EPA 7470A	MERCURY (HG) (DISSOLVED)	4.00	4.0	100	80-120	12/11/15	12/14/15	#HGDOD-151211A-AZ25346
EPA 7470A	MERCURY (HG)	4.00	4.0	100	80-120	12/05/15	12/07/15	#HGDOD-151205B1-AZ25346

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6010C-TCL	ARSENIC (AS)	250	228	91.2	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	BARIUM (BA)	250	234	93.6	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	CADMIUM (CD)	50.0	47.5	95.0	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	CHROMIUM (CR)	250	239	95.6	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	LEAD (PB)	250	238	95.2	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	SELENIUM (SE)	250	222	88.8	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347
6010C-TCL	SILVER (AG)	100.0	90.5	90.5	80-120	12/14/15	12/18/15	#6010C-151214A-AZ25347

Comments: _____

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6010C-TCL	ARSENIC (AS)	250	251	100	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	BARIUM (BA)	250	233	93.2	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	CADMIUM (CD)	50.0	48.0	96.0	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	CHROMIUM (CR)	250	231	92.4	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	LEAD (PB)	250	231	92.4	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	SELENIUM (SE)	250	256	102	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348
6010C-TCL	SILVER (AG)	100.0	94.5	94.5	80-120	12/14/15	12/18/15	#6010C-151214A1-AZ25348

Comments: _____

Sequence No.: 14
Sample ID: 151208A-3010F-LCS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 12/08/15 3:10:45 PM
Data Type: Reprocessed on 12/09/15 9:03:54 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 151208A-3010F-LCS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	795145.9	96.39	%	0.670				0.70%
Y 371.029 Radial	48027.2	97.00	%	1.877				1.94%
Ag 338.289†	9512.4	86.73	ug/L	1.732	86.73	ug/L	1.732	2.00%
Al 308.215†	931.4	1881	ug/L	31.0	1881	ug/L	31.0	1.65%
As 188.979†	725.5	227.6	ug/L	1.38	227.6	ug/L	1.38	0.61%
B†	338.0	231.1	ug/L	6.03	231.1	ug/L	6.03	2.61%
Ba 233.527†	32037.3	230.0	ug/L	2.44	230.0	ug/L	2.44	1.06%
Be 313.107†	10299.5	46.08	ug/L	1.304	46.08	ug/L	1.304	2.83%
Ca 315.887†	95072.7	23920	ug/L	657.9	23920	ug/L	657.9	2.75%
Cd 214.440†	10203.0	46.82	ug/L	0.349	46.82	ug/L	0.349	0.74%
Co 228.616†	13547.5	232.3	ug/L	3.40	232.3	ug/L	3.40	1.47%
Cr 267.716†	21513.3	234.3	ug/L	3.46	234.3	ug/L	3.46	1.48%
Cu 327.393†	18301.5	223.5	ug/L	3.79	223.5	ug/L	3.79	1.69%
Fe 273.955†	12733.3	929.6	ug/L	12.34	929.6	ug/L	12.34	1.33%
K 766.490†	7897.3	4591	ug/L	101.4	4591	ug/L	101.4	2.21%
Mg 285.213†	178818.9	24260	ug/L	643.7	24260	ug/L	643.7	2.65%
Mn 257.610†	2984.9	229.4	ug/L	5.27	229.4	ug/L	5.27	2.30%
Mo 202.031†	6866.1	232.0	ug/L	1.57	232.0	ug/L	1.57	0.68%
Na 589.592†	172255.9	23370	ug/L	580.5	23370	ug/L	580.5	2.48%
Ni 231.604†	10508.5	238.5	ug/L	1.55	238.5	ug/L	1.55	0.65%
P 213.617†	7069.9	1816	ug/L	12.6	1816	ug/L	12.6	0.69%
Pb 220.353†	2622.7	236.0	ug/L	1.67	236.0	ug/L	1.67	0.71%
Sb 206.836†	930.4	224.4	ug/L	2.98	224.4	ug/L	2.98	1.33%
Se 196.026†	694.9	223.7	ug/L	4.69	223.7	ug/L	4.69	2.10%
Sn 189.927†	2503.5	232.4	ug/L	1.93	232.4	ug/L	1.93	0.83%
Sr 421.552†	109568.2	235.0	ug/L	5.89	235.0	ug/L	5.89	2.50%
Ti 337.279†	5649.5	222.8	ug/L	5.25	222.8	ug/L	5.25	2.35%
Tl 190.801†	1133.2	230.0	ug/L	1.19	230.0	ug/L	1.19	0.52%
V 292.402†	42274.2	242.0	ug/L	2.46	242.0	ug/L	2.46	1.02%
Zn 206.200†	12832.3	464.3	ug/L	7.11	464.3	ug/L	7.11	1.53%
Li 670.784†	1370492.6	95.81	ug/L	0.456	95.81	ug/L	0.456	0.48%

Sequence No.: 16
Sample ID: 151208A-3010-LCS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 60
Date Collected: 12/08/15 3:20:38 PM
Data Type: Reprocessed on 12/09/15 9:03:56 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 151208A-3010-LCS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	796338.9	96.53	%	0.044				0.05%
Y 371.029 Radial	47913.8	96.77	%	2.297				2.37%
Ag 338.289†	9903.4	90.30	ug/L	0.992	90.30	ug/L	0.992	1.10%
Al 308.215†	982.7	1984	ug/L	51.1	1984	ug/L	51.1	2.58%
As 188.979†	768.8	241.1	ug/L	1.36	241.1	ug/L	1.36	0.56%
B†	349.3	238.8	ug/L	5.34	238.8	ug/L	5.34	2.24%
Ba 233.527†	33678.2	241.8	ug/L	1.28	241.8	ug/L	1.28	0.53%
Be 313.107†	10798.1	48.31	ug/L	1.245	48.31	ug/L	1.245	2.58%
Ca 315.887†	99664.5	25070	ug/L	725.5	25070	ug/L	725.5	2.89%
Cd 214.440†	10657.8	48.91	ug/L	0.087	48.91	ug/L	0.087	0.18%
Co 228.616†	14234.3	244.1	ug/L	2.14	244.1	ug/L	2.14	0.88%
Cr 267.716†	22676.7	247.0	ug/L	2.48	247.0	ug/L	2.48	1.00%
Cu 327.393†	19286.6	235.5	ug/L	1.24	235.5	ug/L	1.24	0.52%
Fe 273.955†	13312.6	971.9	ug/L	5.12	971.9	ug/L	5.12	0.53%
K 766.490†	8212.3	4775	ug/L	87.9	4775	ug/L	87.9	1.84%
Mg 285.213†	186202.8	25260	ug/L	705.1	25260	ug/L	705.1	2.79%
Mn 257.610†	3164.7	243.2	ug/L	6.89	243.2	ug/L	6.89	2.83%
Mo 202.031†	7217.2	243.9	ug/L	0.05	243.9	ug/L	0.05	0.02%
Na 589.592†	179941.6	24410	ug/L	631.0	24410	ug/L	631.0	2.58%
Ni 231.604†	10773.3	244.5	ug/L	3.29	244.5	ug/L	3.29	1.35%
P 213.617†	7422.9	1907	ug/L	4.5	1907	ug/L	4.5	0.24%
Pb 220.353†	2745.3	247.0	ug/L	0.70	247.0	ug/L	0.70	0.28%
Sb 206.836†	970.9	234.2	ug/L	0.50	234.2	ug/L	0.50	0.21%
Se 196.026†	727.8	234.3	ug/L	1.46	234.3	ug/L	1.46	0.62%
Sn 189.927†	2613.4	242.7	ug/L	0.50	242.7	ug/L	0.50	0.21%
Sr 421.552†	114279.2	245.1	ug/L	6.70	245.1	ug/L	6.70	2.73%
Ti 337.279†	5965.5	235.2	ug/L	7.82	235.2	ug/L	7.82	3.32%
Tl 190.801†	1183.9	240.3	ug/L	1.32	240.3	ug/L	1.32	0.55%
V 292.402†	44651.6	255.6	ug/L	1.90	255.6	ug/L	1.90	0.74%
Zn 206.200†	13536.9	489.8	ug/L	4.78	489.8	ug/L	4.78	0.98%
Li 670.784†	1455800.8	101.8	ug/L	0.18	101.8	ug/L	0.18	0.17%

Sequence No.: 16
Sample ID: 151214A-3010T-LCS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 40
Date Collected: 12/18/15 12:16:29 PM
Data Type: Reprocessed on 12/21/15 9:12:58 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 151214A-3010T-LCS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	754548.0	86.23	%	0.263				0.30%
Y 371.029 Radial	687509.3	85.33	%	0.328				0.38%
Ag 338.289†	11355.3	94.47	ug/L	0.508	94.47	ug/L	0.508	0.54%
Al 308.215†	1371.5	2024	ug/L	22.2	2024	ug/L	22.2	1.10%
As 188.979†	898.5	250.6	ug/L	2.46	250.6	ug/L	2.46	0.98%
B†	11861.5	230.1	ug/L	0.88	230.1	ug/L	0.88	0.38%
Ba 233.527†	34429.3	232.7	ug/L	0.37	232.7	ug/L	0.37	0.16%
Be 313.107†	13296.5	51.63	ug/L	0.384	51.63	ug/L	0.384	0.74%
Ca 315.887†	115934.4	25450	ug/L	768.3	25450	ug/L	768.3	3.02%
Cd 214.440†	10989.0	48.04	ug/L	0.171	48.04	ug/L	0.171	0.36%
Co 228.616†	14347.9	229.3	ug/L	0.93	229.3	ug/L	0.93	0.40%
Cr 267.716†	23217.1	230.8	ug/L	0.42	230.8	ug/L	0.42	0.18%
Cu 327.393†	30423.6	236.2	ug/L	1.42	236.2	ug/L	1.42	0.60%
Fe 273.955†	18207.7	900.0	ug/L	4.04	900.0	ug/L	4.04	0.45%
K 766.490†	17927.7	6022	ug/L	208.0	6022	ug/L	208.0	3.45%
Mg 285.213†	214851.6	25310	ug/L	817.1	25310	ug/L	817.1	3.23%
Mn 257.610†	3582.1	253.5	ug/L	1.58	253.5	ug/L	1.58	0.63%
Mo 202.031†	7342.1	218.0	ug/L	0.34	218.0	ug/L	0.34	0.15%
Na 589.592†	10814297.8	1344000	ug/L	28838.7	1344000	ug/L	28838.7	2.15%
Ni 231.604†	11442.6	236.3	ug/L	0.92	236.3	ug/L	0.92	0.39%
P 213.617†	9220.7	2032	ug/L	10.8	2032	ug/L	10.8	0.53%
Pb 220.353†	2838.3	230.5	ug/L	1.83	230.5	ug/L	1.83	0.80%
Sb 206.836†	1132.8	233.1	ug/L	1.23	233.1	ug/L	1.23	0.53%
Se 196.026†	972.9	256.3	ug/L	3.39	256.3	ug/L	3.39	1.32%
Sn 189.927†	2597.8	234.4	ug/L	1.05	234.4	ug/L	1.05	0.45%
Sr 421.552†	137053.9	259.3	ug/L	7.94	259.3	ug/L	7.94	3.06%
Ti 337.279†	7423.6	256.8	ug/L	1.64	256.8	ug/L	1.64	0.64%
Tl 190.801†	1201.4	220.1	ug/L	1.07	220.1	ug/L	1.07	0.49%
V 292.402†	46672.1	246.0	ug/L	0.50	246.0	ug/L	0.50	0.20%
Zn 206.200†	18941.6	489.1	ug/L	1.65	489.1	ug/L	1.65	0.34%

Sequence No.: 13
Sample ID: 151214A-3010T-LCS 2
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 41
Date Collected: 12/18/15 12:01:38 PM
Data Type: Reprocessed on 12/21/15 9:12:54 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 151214A-3010T-LCS 2

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	870213.4	99.45	%	0.742				0.75%
Y 371.029 Radial	799981.2	99.29	%	0.819				0.82%
Ag 338.289†	10879.6	90.51	ug/L	0.927	90.51	ug/L	0.927	1.02%
Al 308.215†	1294.8	1953	ug/L	2.6	1953	ug/L	2.6	0.13%
As 188.979†	818.2	228.2	ug/L	2.76	228.2	ug/L	2.76	1.21%
B†	11351.7	220.2	ug/L	0.36	220.2	ug/L	0.36	0.16%
Ba 233.527†	34521.4	234.2	ug/L	0.76	234.2	ug/L	0.76	0.32%
Be 313.107†	12502.0	48.54	ug/L	0.103	48.54	ug/L	0.103	0.21%
Ca 315.887†	109440.8	24060	ug/L	505.2	24060	ug/L	505.2	2.10%
Cd 214.440†	10772.5	47.50	ug/L	0.428	47.50	ug/L	0.428	0.90%
Co 228.616†	14487.1	232.2	ug/L	1.99	232.2	ug/L	1.99	0.86%
Cr 267.716†	23899.1	239.0	ug/L	1.46	239.0	ug/L	1.46	0.61%
Cu 327.393†	28400.9	230.1	ug/L	1.96	230.1	ug/L	1.96	0.85%
Fe 273.955†	18780.7	947.3	ug/L	7.38	947.3	ug/L	7.38	0.78%
K 766.490†	14023.3	4638	ug/L	81.0	4638	ug/L	81.0	1.75%
Mg 285.213†	203410.0	24220	ug/L	509.5	24220	ug/L	509.5	2.10%
Mn 257.610†	3433.5	243.0	ug/L	0.41	243.0	ug/L	0.41	0.17%
Mo 202.031†	7274.7	234.5	ug/L	1.92	234.5	ug/L	1.92	0.82%
Na 589.592†	191211.4	23770	ug/L	495.6	23770	ug/L	495.6	2.08%
Ni 231.604†	11329.6	233.1	ug/L	1.60	233.1	ug/L	1.60	0.68%
P 213.617†	8482.4	1869	ug/L	19.7	1869	ug/L	19.7	1.05%
Pb 220.353†	2932.8	238.3	ug/L	2.23	238.3	ug/L	2.23	0.93%
Sb 206.836†	1091.6	224.7	ug/L	3.50	224.7	ug/L	3.50	1.56%
Se 196.026†	841.6	221.7	ug/L	3.39	221.7	ug/L	3.39	1.53%
Sn 189.927†	2593.3	233.5	ug/L	3.52	233.5	ug/L	3.52	1.51%
Sr 421.552†	127251.2	241.4	ug/L	4.89	241.4	ug/L	4.89	2.03%
Ti 337.279†	6912.4	238.2	ug/L	0.36	238.2	ug/L	0.36	0.15%
Tl 190.801†	1302.4	238.6	ug/L	1.40	238.6	ug/L	1.40	0.58%
V 292.402†	47132.1	247.2	ug/L	0.77	247.2	ug/L	0.77	0.31%
Zn 206.200†	17942.4	461.5	ug/L	2.20	461.5	ug/L	2.20	0.48%

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202993**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	ALUMINUM (AL) (DISS	2000	1270	3200	3230	96.5	98.0	0.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ANTIMONY (SB) (DISS	250	ND	233	239	93.2	95.6	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ARSENIC (AS) (DISSO	250	8.3	251	255	97.1	98.7	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BARIUM (BA) (DISSOL	250	14.8	255	260	96.1	98.1	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BERYLLIUM (BE) (DIS	50.0	1.3	49.9	50.4	97.2	98.2	1.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	BORON (B) (DISSOLV	250	196	440	443	97.6	98.8	0.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CADMIUM (CD) (DISS	50.0	ND	47.7	47.4	95.4	94.8	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CALCIUM (CA) (DISSO	25000	17400	42000	42100	98.4	98.8	0.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	CHROMIUM (CR) (DIS	250	0.74	238	243	94.9	96.9	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	COBALT (CO) (DISSOL	250	9.9	252	256	96.8	98.4	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	COPPER (CU) (DISSO	250	28.1	266	271	95.2	97.2	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	IRON (FE) (DISSOLVE	1000	18800	19800	20100	100	130 #	1.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	LEAD (PB) (DISSOLVE	250	ND	238	244	95.2	97.6	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	LITHIUM (LI) (DISSOLV	100.0	36.2	141	144	105	108	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	MAGNESIUM (MG) (DI	25000	6330	31500	31500	101	101	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	MANGANESE (MN) (DI	250	368	604	610	94.4	96.8	1.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	NICKEL (NI) (DISSOLV	250	19.3	257	262	95.1	97.1	1.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	POTASSIUM (K) (DISS	5000	6550	11300	11300	95.0	95.0	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202993**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	SELENIUM (SE) (DISS	250	1.1	233	239	92.8	95.2	2.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	SILVER (AG) (DISSOL	100.0	ND	89.0	92.2	89.0	92.2	3.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	THALLIUM (TL) (DISSO	250	ND	230	236	92.0	94.4	2.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	VANADIUM (V) (DISSO	250	1.0	251	256	100	102	2.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ZINC (ZN) (DISSOLVE	500	417	892	911	95.0	98.8	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202993	AZ25346
EPA 6010C	ALUMINUM (AL)	2000	1320	3290	3270	98.5	97.5	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ANTIMONY (SB)	250	ND	244	239	97.6	95.6	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ARSENIC (AS)	250	8.6	266	263	103	102	1.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BARIUM (BA)	250	15.1	264	262	99.6	98.8	0.8	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BERYLLIUM (BE)	50.0	1.4	51.5	50.6	100	98.4	1.8	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	BORON (B)	250	202	457	453	102	100	0.9	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CADMIUM (CD)	50.0	ND	48.8	48.0	97.6	96.0	1.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CALCIUM (CA)	25000	18100	43500	43300	102	101	0.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	CHROMIUM (CR)	250	0.76	248	245	98.9	97.7	1.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	COBALT (CO)	250	10.5	262	258	101	99.0	1.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	COPPER (CU)	250	31.5	277	275	98.2	97.4	0.7	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	IRON (FE)	1000	20200	20700	20700	50.0 #	50.0 #	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	LEAD (PB)	250	ND	249	245	99.6	98.0	1.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346

= Recovery is outside QC limits.

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **151208W-25346 MS - 202994**

Sample ID: AZ25346

Client ID: S67-MW18-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	LITHIUM (LI)	100.0	37.1	145	145	108	108	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	MAGNESIUM (MG)	25000	6580	32600	32500	104	104	0.3	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	MANGANESE (MN)	250	392	631	627	95.6	94.0	0.6	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	NICKEL (NI)	250	20.3	267	266	98.7	98.3	0.4	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	POTASSIUM (K)	5000	6690	11600	11600	98.2	98.2	0.0	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	SELENIUM (SE)	250	1.1	244	245	97.2	97.6	0.4	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	SILVER (AG)	100.0	ND	93.3	92.1	93.3	92.1	1.3	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	THALLIUM (TL)	250	0.20	237	232	94.7	92.7	2.1	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	VANADIUM (V)	250	1.0	262	259	104	103	1.2	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 6010C	ZINC (ZN)	500	430	929	924	99.8	98.8	0.5	20	80-120	12/08/15	12/08/15	12/08/15	12/08/15	202994	AZ25346
EPA 7470A	MERCURY (HG) (DISS	4.00	ND	3.8	3.9	95.0	97.5	2.6	20	80-120	12/11/15	12/14/15	12/11/15	12/14/15	203130	AZ25346
EPA 7470A	MERCURY (HG)	4.00	ND	4.1	4.2	102	105	2.4	20	80-120	12/05/15	12/07/15	12/05/15	12/07/15	202932	AZ25346

= Recovery is outside QC limits.

Comments: _____

Sequence No.: 23
Sample ID: AZ25346W05 MS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 12/08/15 3:54:31 PM
Data Type: Reprocessed on 12/09/15 9:04:05 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05 MS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	792000.2	96.00	%	0.996				1.04%
Y 371.029 Radial	48014.8	96.97	%	3.109				3.21%
Ag 338.289†	9765.8	89.04	ug/L	1.864	89.04	ug/L	1.864	2.09%
Al 308.215†	1583.3	3197	ug/L	106.3	3197	ug/L	106.3	3.33%
As 188.979†	800.5	251.1	ug/L	1.92	251.1	ug/L	1.92	0.76%
B†	564.7	439.5	ug/L	19.26	439.5	ug/L	19.26	4.38%
Ba 233.527†	35860.6	254.9	ug/L	4.15	254.9	ug/L	4.15	1.63%
Be 313.107†	11146.8	49.87	ug/L	1.716	49.87	ug/L	1.716	3.44%
Ca 315.887†	167054.5	42020	ug/L	1169.1	42020	ug/L	1169.1	2.78%
Cd 214.440†	10667.8	47.70	ug/L	0.416	47.70	ug/L	0.416	0.87%
Co 228.616†	14694.1	251.7	ug/L	4.14	251.7	ug/L	4.14	1.64%
Cr 267.716†	21862.2	237.8	ug/L	4.01	237.8	ug/L	4.01	1.69%
Cu 327.393†	21760.8	265.7	ug/L	4.54	265.7	ug/L	4.54	1.71%
Fe 273.955†	270629.9	19760	ug/L	339.8	19760	ug/L	339.8	1.72%
K 766.490†	19511.6	11340	ug/L	276.2	11340	ug/L	276.2	2.43%
Mg 285.213†	231712.3	31460	ug/L	858.1	31460	ug/L	858.1	2.73%
Mn 257.610†	7828.5	604.1	ug/L	19.89	604.1	ug/L	19.89	3.29%
Mo 202.031†	6962.4	236.7	ug/L	1.15	236.7	ug/L	1.15	0.48%
Na 589.592†	662615.4	89900	ug/L	2217.4	89900	ug/L	2217.4	2.47%
Ni 231.604†	11280.4	256.7	ug/L	4.86	256.7	ug/L	4.86	1.89%
P 213.617†	7369.6	1893	ug/L	17.3	1893	ug/L	17.3	0.92%
Pb 220.353†	2648.1	238.3	ug/L	3.12	238.3	ug/L	3.12	1.31%
Sb 206.836†	965.7	233.0	ug/L	1.34	233.0	ug/L	1.34	0.58%
Se 196.026†	701.4	232.7	ug/L	5.90	232.7	ug/L	5.90	2.54%
Sn 189.927†	2583.6	242.3	ug/L	2.30	242.3	ug/L	2.30	0.95%
Sr 421.552†	159122.4	341.3	ug/L	8.28	341.3	ug/L	8.28	2.43%
Ti 337.279†	5984.5	235.8	ug/L	7.34	235.8	ug/L	7.34	3.11%
Tl 190.801†	1132.4	229.9	ug/L	2.92	229.9	ug/L	2.92	1.27%
V 292.402†	44622.7	251.1	ug/L	4.53	251.1	ug/L	4.53	1.80%
Zn 206.200†	24663.0	892.3	ug/L	13.14	892.3	ug/L	13.14	1.47%
Li 670.784†	2009486.0	140.5	ug/L	0.36	140.5	ug/L	0.36	0.26%

Sequence No.: 24
Sample ID: AZ25346W05 MSD
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 47
Date Collected: 12/08/15 3:59:31 PM
Data Type: Reprocessed on 12/09/15 9:04:07 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05 MSD

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	788996.4	95.64	%	0.378				0.40%
Y 371.029 Radial	48447.3	97.85	%	0.851				0.87%
Ag 338.289†	10107.0	92.15	ug/L	2.011	92.15	ug/L	2.011	2.18%
Al 308.215†	1598.6	3228	ug/L	26.8	3228	ug/L	26.8	0.83%
As 188.979†	813.8	255.2	ug/L	0.88	255.2	ug/L	0.88	0.35%
B†	568.3	443.0	ug/L	2.64	443.0	ug/L	2.64	0.60%
Ba 233.527†	36560.5	259.9	ug/L	2.65	259.9	ug/L	2.65	1.02%
Be 313.107†	11254.0	50.35	ug/L	0.379	50.35	ug/L	0.379	0.75%
Ca 315.887†	167171.1	42050	ug/L	501.1	42050	ug/L	501.1	1.19%
Cd 214.440†	10613.6	47.44	ug/L	0.731	47.44	ug/L	0.731	1.54%
Co 228.616†	14930.0	255.7	ug/L	3.24	255.7	ug/L	3.24	1.27%
Cr 267.716†	22344.2	243.1	ug/L	2.82	243.1	ug/L	2.82	1.16%
Cu 327.393†	22202.7	271.1	ug/L	3.20	271.1	ug/L	3.20	1.18%
Fe 273.955†	275231.8	20090	ug/L	235.6	20090	ug/L	235.6	1.17%
K 766.490†	19471.7	11320	ug/L	138.6	11320	ug/L	138.6	1.22%
Mg 285.213†	231755.7	31470	ug/L	322.3	31470	ug/L	322.3	1.02%
Mn 257.610†	7898.1	609.5	ug/L	4.20	609.5	ug/L	4.20	0.69%
Mo 202.031†	7119.0	242.0	ug/L	0.71	242.0	ug/L	0.71	0.29%
Na 589.592†	661230.4	89720	ug/L	966.4	89720	ug/L	966.4	1.08%
Ni 231.604†	11531.5	262.4	ug/L	4.26	262.4	ug/L	4.26	1.62%
P 213.617†	7525.5	1933	ug/L	6.9	1933	ug/L	6.9	0.36%
Pb 220.353†	2706.8	243.5	ug/L	1.51	243.5	ug/L	1.51	0.62%
Sb 206.836†	991.2	239.1	ug/L	0.91	239.1	ug/L	0.91	0.38%
Se 196.026†	721.7	239.4	ug/L	5.97	239.4	ug/L	5.97	2.49%
Sn 189.927†	2635.3	247.1	ug/L	1.25	247.1	ug/L	1.25	0.50%
Sr 421.552†	159128.8	341.3	ug/L	3.96	341.3	ug/L	3.96	1.16%
Ti 337.279†	6052.4	238.4	ug/L	2.02	238.4	ug/L	2.02	0.85%
Tl 190.801†	1162.7	236.0	ug/L	1.78	236.0	ug/L	1.78	0.75%
V 292.402†	45567.5	256.4	ug/L	3.03	256.4	ug/L	3.03	1.18%
Zn 206.200†	25170.3	910.7	ug/L	7.99	910.7	ug/L	7.99	0.88%
Li 670.784†	2053814.1	143.6	ug/L	0.09	143.6	ug/L	0.09	0.06%

Sequence No.: 18
Sample ID: AZ25346W05 MS-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 43
Date Collected: 12/09/15 2:14:12 PM
Data Type: Reprocessed on 12/09/15 4:57:31 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05 MS-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	859997.7	101.2	%	0.89				0.88%
Y 371.029 Radial	54897.4	101.4	%	1.16				1.14%
Ag 338.289†	649.6	5.487	ug/L	0.7076	109.7	ug/L	14.15	12.90%
Al 308.215†	94.7	184.6	ug/L	5.68	3692	ug/L	113.7	3.08%
As 188.979†	42.4	13.15	ug/L	0.251	263.1	ug/L	5.01	1.90%
B†	39.8	28.99	ug/L	1.497	579.7	ug/L	29.94	5.16%
Ba 233.527†	2054.7	14.21	ug/L	0.104	284.3	ug/L	2.09	0.73%
Be 313.107†	655.5	2.714	ug/L	0.0481	54.28	ug/L	0.963	1.77%
Ca 315.887†	10158.1	2364	ug/L	31.7	47270	ug/L	634.0	1.34%
Cd 214.440†	599.4	2.678	ug/L	0.0245	53.56	ug/L	0.490	0.92%
Co 228.616†	845.5	14.35	ug/L	0.119	287.1	ug/L	2.37	0.83%
Cr 267.716†	1242.9	13.07	ug/L	0.118	261.3	ug/L	2.37	0.91%
Cu 327.393†	1207.5	13.67	ug/L	0.330	273.4	ug/L	6.59	2.41%
Fe 273.955†	14999.9	1072	ug/L	2.5	21440	ug/L	50.3	0.23%
K 766.490†	1157.8	606.0	ug/L	14.62	12120	ug/L	292.4	2.41%
Mg 285.213†	14348.9	1800	ug/L	24.4	35990	ug/L	487.5	1.35%
Mn 257.610†	452.8	32.81	ug/L	0.458	656.2	ug/L	9.16	1.40%
Mo 202.031†	365.9	12.39	ug/L	0.162	247.9	ug/L	3.23	1.30%
Na 589.592†	37704.5	5015	ug/L	97.6	100300	ug/L	1951.7	1.95%
Ni 231.604†	656.6	14.68	ug/L	0.480	293.6	ug/L	9.61	3.27%
P 213.617†	401.3	103.2	ug/L	2.04	2064	ug/L	40.9	1.98%
Pb 220.353†	153.4	13.31	ug/L	0.702	266.3	ug/L	14.04	5.27%
Sb 206.836†	51.2	11.47	ug/L	0.618	229.4	ug/L	12.36	5.39%
Se 196.026†	37.8	12.08	ug/L	2.332	241.6	ug/L	46.64	19.31%
Sn 189.927†	148.3	13.43	ug/L	0.636	268.6	ug/L	12.73	4.74%
Sr 421.552†	9683.6	19.06	ug/L	0.566	381.1	ug/L	11.32	2.97%
Ti 337.279†	370.3	12.92	ug/L	0.624	258.4	ug/L	12.48	4.83%
Tl 190.801†	70.2	13.54	ug/L	0.609	270.8	ug/L	12.18	4.50%
V 292.402†	2540.4	13.61	ug/L	0.180	272.2	ug/L	3.61	1.33%
Zn 206.200†	1397.3	51.20	ug/L	0.322	1024	ug/L	6.4	0.63%
Li 670.784†	95686.7	6.241	ug/L	0.0463	124.8	ug/L	0.93	0.74%

Sequence No.: 19
Sample ID: AZ25346W05 MSD-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 44
Date Collected: 12/09/15 2:18:18 PM
Data Type: Reprocessed on 12/09/15 4:57:32 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W05 MSD-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	853000.6	100.4	%	0.76				0.75%
Y 371.029 Radial	54651.1	100.9	%	2.03				2.01%
Ag 338.289†	570.4	4.818	ug/L	0.9200	96.35	ug/L	18.400	19.10%
Al 308.215†	94.5	184.3	ug/L	4.27	3686	ug/L	85.5	2.32%
As 188.979†	40.7	12.64	ug/L	0.341	252.8	ug/L	6.82	2.70%
B†	32.0	23.92	ug/L	5.300	478.4	ug/L	106.00	22.16%
Ba 233.527†	2098.3	14.52	ug/L	0.151	290.3	ug/L	3.02	1.04%
Be 313.107†	656.1	2.717	ug/L	0.0396	54.33	ug/L	0.792	1.46%
Ca 315.887†	9961.2	2318	ug/L	35.7	46360	ug/L	713.2	1.54%
Cd 214.440†	602.0	2.690	ug/L	0.0554	53.80	ug/L	1.109	2.06%
Co 228.616†	850.4	14.44	ug/L	0.063	288.8	ug/L	1.26	0.44%
Cr 267.716†	1287.5	13.54	ug/L	0.181	270.7	ug/L	3.62	1.34%
Cu 327.393†	1229.6	13.92	ug/L	0.488	278.4	ug/L	9.76	3.51%
Fe 273.955†	15070.8	1077	ug/L	13.3	21540	ug/L	267.0	1.24%
K 766.490†	1204.4	630.4	ug/L	6.67	12610	ug/L	133.5	1.06%
Mg 285.213†	14122.1	1771	ug/L	37.7	35420	ug/L	753.8	2.13%
Mn 257.610†	460.3	33.35	ug/L	0.654	667.1	ug/L	13.08	1.96%
Mo 202.031†	370.5	12.55	ug/L	0.096	251.0	ug/L	1.92	0.76%
Na 589.592†	37916.8	5043	ug/L	107.3	100900	ug/L	2146.5	2.13%
Ni 231.604†	668.4	14.94	ug/L	0.318	298.9	ug/L	6.35	2.13%
P 213.617†	404.5	104.0	ug/L	1.44	2080	ug/L	28.8	1.39%
Pb 220.353†	159.7	13.86	ug/L	0.411	277.3	ug/L	8.22	2.97%
Sb 206.836†	58.6	13.14	ug/L	1.625	262.9	ug/L	32.50	12.36%
Se 196.026†	45.6	14.54	ug/L	0.801	290.8	ug/L	16.02	5.51%
Sn 189.927†	141.7	12.84	ug/L	0.483	256.8	ug/L	9.66	3.76%
Sr 421.552†	9652.0	18.99	ug/L	0.290	379.9	ug/L	5.80	1.53%
Ti 337.279†	367.5	12.82	ug/L	0.585	256.5	ug/L	11.69	4.56%
Tl 190.801†	72.0	13.87	ug/L	0.489	277.4	ug/L	9.78	3.53%
V 292.402†	2584.6	13.85	ug/L	0.118	277.0	ug/L	2.36	0.85%
Zn 206.200†	1421.9	52.10	ug/L	0.431	1042	ug/L	8.6	0.83%
Li 670.784†	97833.5	6.381	ug/L	0.1060	127.6	ug/L	2.12	1.66%

Sequence No.: 45
Sample ID: AZ25346W04 MS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 66
Date Collected: 12/08/15 5:38:13 PM
Data Type: Reprocessed on 12/09/15 9:04:35 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04 MS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	788820.6	95.62	%	0.526				0.55%
Y 371.029 Radial	48293.4	97.54	%	0.067				0.07%
Ag 338.289†	10229.9	93.27	ug/L	1.712	93.27	ug/L	1.712	1.84%
Al 308.215†	1627.5	3286	ug/L	16.4	3286	ug/L	16.4	0.50%
As 188.979†	847.5	265.8	ug/L	2.29	265.8	ug/L	2.29	0.86%
B†	586.3	456.9	ug/L	7.60	456.9	ug/L	7.60	1.66%
Ba 233.527†	37211.7	264.4	ug/L	2.31	264.4	ug/L	2.31	0.87%
Be 313.107†	11500.5	51.46	ug/L	0.380	51.46	ug/L	0.380	0.74%
Ca 315.887†	172798.0	43470	ug/L	331.6	43470	ug/L	331.6	0.76%
Cd 214.440†	10917.7	48.79	ug/L	0.924	48.79	ug/L	0.924	1.89%
Co 228.616†	15287.5	261.8	ug/L	2.21	261.8	ug/L	2.21	0.84%
Cr 267.716†	22838.4	248.4	ug/L	2.18	248.4	ug/L	2.18	0.88%
Cu 327.393†	22716.4	277.4	ug/L	4.03	277.4	ug/L	4.03	1.45%
Fe 273.955†	283585.0	20700	ug/L	73.3	20700	ug/L	73.3	0.35%
K 766.490†	20009.1	11630	ug/L	84.5	11630	ug/L	84.5	0.73%
Mg 285.213†	240338.9	32630	ug/L	221.1	32630	ug/L	221.1	0.68%
Mn 257.610†	8170.0	630.5	ug/L	2.81	630.5	ug/L	2.81	0.45%
Mo 202.031†	7311.9	248.6	ug/L	1.38	248.6	ug/L	1.38	0.56%
Na 589.592†	674768.0	91550	ug/L	807.8	91550	ug/L	807.8	0.88%
Ni 231.604†	11736.5	267.1	ug/L	1.74	267.1	ug/L	1.74	0.65%
P 213.617†	7708.6	1980	ug/L	9.4	1980	ug/L	9.4	0.47%
Pb 220.353†	2761.7	248.5	ug/L	1.13	248.5	ug/L	1.13	0.46%
Sb 206.836†	1012.7	244.3	ug/L	2.33	244.3	ug/L	2.33	0.95%
Se 196.026†	734.7	243.8	ug/L	2.54	243.8	ug/L	2.54	1.04%
Sn 189.927†	2714.5	254.5	ug/L	1.43	254.5	ug/L	1.43	0.56%
Sr 421.552†	164527.7	352.9	ug/L	2.72	352.9	ug/L	2.72	0.77%
Ti 337.279†	6199.0	244.2	ug/L	0.99	244.2	ug/L	0.99	0.41%
Tl 190.801†	1166.6	236.8	ug/L	1.49	236.8	ug/L	1.49	0.63%
V 292.402†	46497.3	261.7	ug/L	2.51	261.7	ug/L	2.51	0.96%
Zn 206.200†	25666.3	928.6	ug/L	9.44	928.6	ug/L	9.44	1.02%
Li 670.784†	2075083.4	145.1	ug/L	0.40	145.1	ug/L	0.40	0.28%

Sequence No.: 46
Sample ID: AZ25346W04 MSD
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 67
Date Collected: 12/08/15 5:43:12 PM
Data Type: Reprocessed on 12/09/15 9:04:36 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04 MSD

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	792612.2	96.08	%	0.888				0.92%
Y 371.029 Radial	48243.7	97.44	%	1.197				1.23%
Ag 338.289†	10102.0	92.11	ug/L	0.849	92.11	ug/L	0.849	0.92%
Al 308.215†	1617.2	3265	ug/L	48.3	3265	ug/L	48.3	1.48%
As 188.979†	839.2	263.2	ug/L	3.12	263.2	ug/L	3.12	1.19%
B†	580.2	452.7	ug/L	6.78	452.7	ug/L	6.78	1.50%
Ba 233.527†	36802.2	261.5	ug/L	4.44	261.5	ug/L	4.44	1.70%
Be 313.107†	11320.2	50.65	ug/L	0.662	50.65	ug/L	0.662	1.31%
Ca 315.887†	172179.7	43310	ug/L	1432.7	43310	ug/L	1432.7	3.31%
Cd 214.440†	10755.3	48.05	ug/L	0.780	48.05	ug/L	0.780	1.62%
Co 228.616†	15087.7	258.4	ug/L	4.08	258.4	ug/L	4.08	1.58%
Cr 267.716†	22528.2	245.1	ug/L	5.16	245.1	ug/L	5.16	2.11%
Cu 327.393†	22541.4	275.2	ug/L	5.11	275.2	ug/L	5.11	1.86%
Fe 273.955†	283450.1	20690	ug/L	29.6	20690	ug/L	29.6	0.14%
K 766.490†	19883.3	11560	ug/L	382.2	11560	ug/L	382.2	3.31%
Mg 285.213†	239552.8	32520	ug/L	1070.6	32520	ug/L	1070.6	3.29%
Mn 257.610†	8121.7	626.7	ug/L	7.51	626.7	ug/L	7.51	1.20%
Mo 202.031†	7169.9	243.8	ug/L	2.11	243.8	ug/L	2.11	0.86%
Na 589.592†	673381.3	91370	ug/L	3013.9	91370	ug/L	3013.9	3.30%
Ni 231.604†	11666.3	265.5	ug/L	3.28	265.5	ug/L	3.28	1.24%
P 213.617†	7609.6	1954	ug/L	18.5	1954	ug/L	18.5	0.95%
Pb 220.353†	2722.4	244.9	ug/L	2.65	244.9	ug/L	2.65	1.08%
Sb 206.836†	992.1	239.3	ug/L	2.00	239.3	ug/L	2.00	0.84%
Se 196.026†	737.3	244.7	ug/L	2.11	244.7	ug/L	2.11	0.86%
Sn 189.927†	2664.1	249.9	ug/L	3.07	249.9	ug/L	3.07	1.23%
Sr 421.552†	162788.1	349.2	ug/L	11.83	349.2	ug/L	11.83	3.39%
Ti 337.279†	6103.0	240.4	ug/L	2.76	240.4	ug/L	2.76	1.15%
Tl 190.801†	1144.6	232.4	ug/L	2.13	232.4	ug/L	2.13	0.92%
V 292.402†	45991.2	258.7	ug/L	3.49	258.7	ug/L	3.49	1.35%
Zn 206.200†	25534.3	923.8	ug/L	10.16	923.8	ug/L	10.16	1.10%
Li 670.784†	2069750.0	144.7	ug/L	1.16	144.7	ug/L	1.16	0.80%

Sequence No.: 29
Sample ID: AZ25346W04 MS-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 52
Date Collected: 12/09/15 3:01:39 PM
Data Type: Reprocessed on 12/09/15 4:57:45 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04 MS-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	860386.4	101.3	%	1.29				1.28%
Y 371.029 Radial	55001.6	101.6	%	0.63				0.62%
Ag 338.289†	625.9	5.286	ug/L	0.1569	105.7	ug/L	3.14	2.97%
Al 308.215†	98.0	191.0	ug/L	2.46	3820	ug/L	49.2	1.29%
As 188.979†	44.3	13.73	ug/L	1.125	274.7	ug/L	22.51	8.19%
B†	38.8	28.55	ug/L	4.427	571.1	ug/L	88.53	15.50%
Ba 233.527†	2147.8	14.85	ug/L	0.284	297.1	ug/L	5.69	1.92%
Be 313.107†	683.6	2.830	ug/L	0.0208	56.61	ug/L	0.415	0.73%
Ca 315.887†	10185.3	2370	ug/L	63.1	47400	ug/L	1261.6	2.66%
Cd 214.440†	609.1	2.718	ug/L	0.1109	54.36	ug/L	2.217	4.08%
Co 228.616†	868.4	14.74	ug/L	0.294	294.9	ug/L	5.87	1.99%
Cr 267.716†	1303.5	13.70	ug/L	0.277	274.1	ug/L	5.55	2.02%
Cu 327.393†	1289.0	14.59	ug/L	0.607	291.8	ug/L	12.14	4.16%
Fe 273.955†	16017.9	1145	ug/L	0.4	22890	ug/L	8.6	0.04%
K 766.490†	1226.2	641.8	ug/L	42.66	12840	ug/L	853.3	6.65%
Mg 285.213†	14419.2	1809	ug/L	38.9	36170	ug/L	778.8	2.15%
Mn 257.610†	486.4	35.25	ug/L	0.416	704.9	ug/L	8.32	1.18%
Mo 202.031†	377.5	12.79	ug/L	0.188	255.8	ug/L	3.77	1.47%
Na 589.592†	37842.3	5034	ug/L	151.8	100700	ug/L	3036.0	3.02%
Ni 231.604†	683.1	15.27	ug/L	0.382	305.5	ug/L	7.65	2.50%
P 213.617†	415.4	106.8	ug/L	1.92	2136	ug/L	38.3	1.79%
Pb 220.353†	159.9	13.88	ug/L	0.878	277.6	ug/L	17.56	6.32%
Sb 206.836†	59.5	13.33	ug/L	1.613	266.5	ug/L	32.26	12.10%
Se 196.026†	32.5	10.46	ug/L	4.136	209.2	ug/L	82.72	39.55%
Sn 189.927†	141.5	12.83	ug/L	0.776	256.5	ug/L	15.52	6.05%
Sr 421.552†	9931.2	19.54	ug/L	0.421	390.9	ug/L	8.43	2.16%
Ti 337.279†	381.2	13.30	ug/L	0.141	266.1	ug/L	2.81	1.06%
Tl 190.801†	73.0	14.07	ug/L	0.690	281.3	ug/L	13.81	4.91%
V 292.402†	2631.8	14.09	ug/L	0.142	281.8	ug/L	2.84	1.01%
Zn 206.200†	1431.5	52.45	ug/L	0.680	1049	ug/L	13.6	1.30%
Li 670.784†	98481.8	6.423	ug/L	0.0308	128.5	ug/L	0.62	0.48%

Sequence No.: 30
Sample ID: AZ25346W04 MSD-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 20X

Autosampler Location: 53
Date Collected: 12/09/15 3:05:46 PM
Data Type: Reprocessed on 12/09/15 4:57:46 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25346W04 MSD-1/20

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	858272.9	101.0	%	1.60				1.58%
Y 371.029 Radial	55493.3	102.5	%	1.35				1.32%
Ag 338.289†	548.7	4.635	ug/L	0.5505	92.69	ug/L	11.010	11.88%
Al 308.215†	100.7	196.2	ug/L	2.34	3925	ug/L	46.8	1.19%
As 188.979†	41.3	12.82	ug/L	0.401	256.4	ug/L	8.03	3.13%
B†	32.1	24.20	ug/L	2.707	484.1	ug/L	54.14	11.18%
Ba 233.527†	2120.9	14.67	ug/L	0.318	293.3	ug/L	6.36	2.17%
Be 313.107†	669.2	2.771	ug/L	0.0503	55.41	ug/L	1.006	1.82%
Ca 315.887†	10000.5	2327	ug/L	106.6	46540	ug/L	2132.1	4.58%
Cd 214.440†	614.6	2.743	ug/L	0.0612	54.86	ug/L	1.224	2.23%
Co 228.616†	866.0	14.70	ug/L	0.289	294.0	ug/L	5.78	1.96%
Cr 267.716†	1275.5	13.41	ug/L	0.384	268.2	ug/L	7.67	2.86%
Cu 327.393†	1256.9	14.23	ug/L	0.698	284.5	ug/L	13.97	4.91%
Fe 273.955†	16139.8	1153	ug/L	11.6	23060	ug/L	231.6	1.00%
K 766.490†	1130.7	591.8	ug/L	31.22	11840	ug/L	624.3	5.27%
Mg 285.213†	14163.4	1776	ug/L	90.7	35530	ug/L	1814.0	5.11%
Mn 257.610†	478.2	34.66	ug/L	0.810	693.2	ug/L	16.20	2.34%
Mo 202.031†	369.2	12.51	ug/L	0.585	250.3	ug/L	11.70	4.67%
Na 589.592†	37587.0	5000	ug/L	216.3	99990	ug/L	4326.0	4.33%
Ni 231.604†	669.8	14.98	ug/L	0.251	299.5	ug/L	5.02	1.68%
P 213.617†	409.5	105.3	ug/L	2.42	2106	ug/L	48.5	2.30%
Pb 220.353†	161.7	14.03	ug/L	0.585	280.7	ug/L	11.71	4.17%
Sb 206.836†	54.1	12.12	ug/L	0.967	242.3	ug/L	19.34	7.98%
Se 196.026†	41.1	13.15	ug/L	0.846	263.0	ug/L	16.93	6.44%
Sn 189.927†	137.6	12.48	ug/L	0.557	249.6	ug/L	11.13	4.46%
Sr 421.552†	9708.1	19.11	ug/L	0.919	382.1	ug/L	18.39	4.81%
Ti 337.279†	391.2	13.65	ug/L	0.309	273.0	ug/L	6.19	2.27%
Tl 190.801†	70.6	13.60	ug/L	0.198	271.9	ug/L	3.95	1.45%
V 292.402†	2596.4	13.89	ug/L	0.209	277.9	ug/L	4.18	1.51%
Zn 206.200†	1410.9	51.70	ug/L	0.644	1034	ug/L	12.9	1.25%
Li 670.784†	98402.2	6.418	ug/L	0.0851	128.4	ug/L	1.70	1.33%

Matrix Spike Recoveries

METALS

APPL ID: **151214S-25348 MS - 203323**

Sample ID: AZ25348

Client ID: S67-SOIDW-112015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6010C-TCL	ARSENIC (AS)	250	2.1	239	240	94.8	95.2	0.4	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	BARIUM (BA)	250	342	580	584	95.2	96.8	0.7	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	CADMIUM (CD)	50.0	1.5	47.0	47.1	91.0	91.2	0.2	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	CHROMIUM (CR)	250	2.0	223	225	88.4	89.2	0.9	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	LEAD (PB)	250	12.6	230	230	87.0	87.0	0.0	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	SELENIUM (SE)	250	4.9	243	247	95.2	96.8	1.6	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
6010C-TCL	SILVER (AG)	100.0	ND	89.5	90.6	89.5	90.6	1.2	20	80-120	12/14/15	12/18/15	12/14/15	12/18/15	203323	AZ25348
EPA 7470A	MERCURY (HG)	0.004	ND	0.0042	0.0041	105	103	2.4	15	80-120	12/14/15	12/15/15	12/14/15	12/15/15	203173	AZ25348

Comments: _____

Sequence No.: 18
Sample ID: AZ25348S01 MS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 44
Date Collected: 12/18/15 12:27:18 PM
Data Type: Reprocessed on 12/21/15 9:13:01 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25348S01 MS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	825436.6	94.33	%	0.484				0.51%
Y 371.029 Radial	756346.6	93.88	%	0.612				0.65%
Ag 338.289†	10761.1	89.53	ug/L	0.702	89.53	ug/L	0.702	0.78%
Al 308.215†	2049.6	3046	ug/L	25.6	3046	ug/L	25.6	0.84%
As 188.979†	857.9	239.3	ug/L	3.01	239.3	ug/L	3.01	1.26%
B†	16091.0	312.1	ug/L	0.31	312.1	ug/L	0.31	0.10%
Ba 233.527†	85676.6	580.4	ug/L	1.13	580.4	ug/L	1.13	0.19%
Be 313.107†	12904.7	50.10	ug/L	0.203	50.10	ug/L	0.203	0.40%
Ca 315.887†	147969.3	32500	ug/L	795.3	32500	ug/L	795.3	2.45%
Cd 214.440†	10742.8	46.98	ug/L	0.467	46.98	ug/L	0.467	0.99%
Co 228.616†	21926.2	351.1	ug/L	0.19	351.1	ug/L	0.19	0.05%
Cr 267.716†	22496.3	222.7	ug/L	0.74	222.7	ug/L	0.74	0.33%
Cu 327.393†	29508.3	229.1	ug/L	2.40	229.1	ug/L	2.40	1.05%
Fe 273.955†	19823.2	985.2	ug/L	3.83	985.2	ug/L	3.83	0.39%
K 766.490†	24855.3	8307	ug/L	168.1	8307	ug/L	168.1	2.02%
Mg 285.213†	253817.3	29970	ug/L	752.7	29970	ug/L	752.7	2.51%
Mn 257.610†	26702.7	1896	ug/L	7.7	1896	ug/L	7.7	0.41%
Mo 202.031†	6850.3	203.8	ug/L	1.98	203.8	ug/L	1.98	0.97%
Na 589.592†	9959981.3	1238000	ug/L	31479.6	1238000	ug/L	31479.6	2.54%
Ni 231.604†	11838.3	243.3	ug/L	0.08	243.3	ug/L	0.08	0.03%
P 213.617†	8728.3	1923	ug/L	19.9	1923	ug/L	19.9	1.03%
Pb 220.353†	2836.1	230.0	ug/L	3.41	230.0	ug/L	3.41	1.48%
Sb 206.836†	1075.5	221.3	ug/L	2.51	221.3	ug/L	2.51	1.13%
Se 196.026†	923.9	243.4	ug/L	4.50	243.4	ug/L	4.50	1.85%
Sn 189.927†	2452.7	221.6	ug/L	2.22	221.6	ug/L	2.22	1.00%
Sr 421.552†	169202.7	320.4	ug/L	8.40	320.4	ug/L	8.40	2.62%
Ti 337.279†	7109.9	245.8	ug/L	1.25	245.8	ug/L	1.25	0.51%
Tl 190.801†	1118.1	204.8	ug/L	1.59	204.8	ug/L	1.59	0.78%
V 292.402†	44566.9	235.1	ug/L	1.20	235.1	ug/L	1.20	0.51%
Zn 206.200†	25233.1	638.4	ug/L	5.41	638.4	ug/L	5.41	0.85%

Sequence No.: 19
Sample ID: AZ25348S01 MSD
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 45
Date Collected: 12/18/15 12:32:43 PM
Data Type: Reprocessed on 12/21/15 9:13:02 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ25348S01 MSD

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	826782.3	94.48	%	1.116				1.18%
Y 371.029 Radial	757970.8	94.08	%	1.323				1.41%
Ag 338.289†	10894.4	90.64	ug/L	0.722	90.64	ug/L	0.722	0.80%
Al 308.215†	2046.9	3043	ug/L	41.2	3043	ug/L	41.2	1.35%
As 188.979†	861.4	240.2	ug/L	3.86	240.2	ug/L	3.86	1.61%
B†	16254.0	315.3	ug/L	4.10	315.3	ug/L	4.10	1.30%
Ba 233.527†	86154.1	583.7	ug/L	5.77	583.7	ug/L	5.77	0.99%
Be 313.107†	12858.3	49.92	ug/L	0.874	49.92	ug/L	0.874	1.75%
Ca 315.887†	145223.8	31900	ug/L	1173.5	31900	ug/L	1173.5	3.68%
Cd 214.440†	10760.9	47.06	ug/L	0.456	47.06	ug/L	0.456	0.97%
Co 228.616†	22014.8	352.5	ug/L	3.30	352.5	ug/L	3.30	0.94%
Cr 267.716†	22760.2	225.4	ug/L	3.05	225.4	ug/L	3.05	1.35%
Cu 327.393†	29776.6	231.4	ug/L	2.53	231.4	ug/L	2.53	1.09%
Fe 273.955†	19927.2	990.7	ug/L	14.56	990.7	ug/L	14.56	1.47%
K 766.490†	24558.9	8208	ug/L	330.5	8208	ug/L	330.5	4.03%
Mg 285.213†	249999.4	29520	ug/L	1090.0	29520	ug/L	1090.0	3.69%
Mn 257.610†	26565.6	1886	ug/L	32.9	1886	ug/L	32.9	1.74%
Mo 202.031†	6870.3	204.6	ug/L	1.42	204.6	ug/L	1.42	0.69%
Na 589.592†	9855772.1	1225000	ug/L	43302.2	1225000	ug/L	43302.2	3.53%
Ni 231.604†	11843.4	243.4	ug/L	1.87	243.4	ug/L	1.87	0.77%
P 213.617†	8758.8	1930	ug/L	20.2	1930	ug/L	20.2	1.04%
Pb 220.353†	2830.1	229.5	ug/L	1.43	229.5	ug/L	1.43	0.62%
Sb 206.836†	1080.2	222.3	ug/L	2.03	222.3	ug/L	2.03	0.91%
Se 196.026†	936.0	246.6	ug/L	3.01	246.6	ug/L	3.01	1.22%
Sn 189.927†	2473.5	223.5	ug/L	2.62	223.5	ug/L	2.62	1.17%
Sr 421.552†	166123.7	314.5	ug/L	11.00	314.5	ug/L	11.00	3.50%
Ti 337.279†	7106.9	245.7	ug/L	3.50	245.7	ug/L	3.50	1.42%
Tl 190.801†	1116.9	204.6	ug/L	2.39	204.6	ug/L	2.39	1.17%
V 292.402†	44895.8	236.8	ug/L	1.16	236.8	ug/L	1.16	0.49%
Zn 206.200†	25297.7	640.1	ug/L	7.75	640.1	ug/L	7.75	1.21%

Sequence No.: 10
Sample ID: CCV 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/07/15 1:04:48 PM
Data Type: Reprocessed on 12/07/15 3:48:41 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/07/15 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.802	4.802	0.0380	0.1489	0.0381	1:05:39 PM	Yes
2	4.798	4.798	0.0380	0.1476	0.0381	1:06:08 PM	Yes
3	4.794	4.794	0.0379	0.1458	0.0381	1:06:36 PM	Yes
Mean:	4.798	4.798	0.0380				
SD:	0.0039	0.0039	0.0000				
%RSD:	0.08%	0.08%	0.08				

QC value within limits for Hg 253.7 Recovery = 95.96%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/07/15 1:06:56 PM
Data Type: Reprocessed on 12/07/15 3:48:41 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/07/15 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0068	-0.0068	-0.0001	0.0002	0.0001	1:07:46 PM	Yes
2	-0.0011	-0.0011	-0.0000	0.0008	0.0001	1:08:15 PM	Yes
3	-0.0148	-0.0148	-0.0001	-0.0006	0.0000	1:08:44 PM	Yes
Mean:	-0.0075	-0.0075	-0.0001				
SD:	0.00688	0.00688	0.0001				
%RSD:	91.36%	91.36%	91.36				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: 151207A BLK
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 17
Date Collected: 12/07/15 1:09:03 PM
Data Type: Reprocessed on 12/07/15 3:48:41 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151207A BLK — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0012	0.0012	0.0000	0.0002	0.0001	1:09:53 PM	Yes
2	-0.0056	-0.0056	-0.0000	-0.0003	0.0001	1:10:22 PM	Yes
3	-0.0052	-0.0052	-0.0000	0.0005	0.0001	1:10:50 PM	Yes
Mean:	-0.0032	-0.0032	-0.0000				
SD:	0.00383	0.00383	0.0000				
%RSD:	119.16%	119.16%	119.16				

Sequence No.: 13
Sample ID: 1512057 LCS
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 18
Date Collected: 12/07/15 1:11:09 PM
Data Type: Reprocessed on 12/07/15 3:48:41 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1512057 LCS — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.071	4.071	0.0322	0.1263	0.0323	1:11:58 PM	Yes
2	4.096	4.096	0.0324	0.1253	0.0325	1:12:27 PM	Yes
3	4.090	4.090	0.0324	0.1236	0.0325	1:12:56 PM	Yes

Matrix Recovery Check: 1512057 LCS

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.997	4.086	0.013	ug/L	102.2
Mean:	4.086	4.086	0.0323				
SD:	0.0128	0.0128	0.0001				
%RSD:	0.31%	0.31%	0.31				

Sequence No.: 14
Sample ID: 151205A BLK
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 19
Date Collected: 12/07/15 1:13:15 PM
Data Type: Reprocessed on 12/07/15 3:48:42 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151205A BLK **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0104	-0.0104	-0.0001	0.0001	0.0000	1:14:04 PM	Yes
2	-0.0084	-0.0084	-0.0001	0.0002	0.0001	1:14:33 PM	Yes
3	-0.0094	-0.0094	-0.0001	0.0001	0.0000	1:15:02 PM	Yes
Mean:	-0.0094	-0.0094	-0.0001				
SD:	0.00103	0.00103	0.0000				
%RSD:	10.93%	10.93%	10.93				

Sequence No.: 15
Sample ID: 151205A LCS
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 20
Date Collected: 12/07/15 1:15:21 PM
Data Type: Reprocessed on 12/07/15 3:48:42 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151205A LCS **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.004	4.004	0.0317	0.1234	0.0318	1:16:10 PM	Yes
2	3.970	3.970	0.0314	0.1226	0.0315	1:16:39 PM	Yes
3	3.981	3.981	0.0315	0.1220	0.0316	1:17:08 PM	Yes

Matrix Recovery Check: 151205A LCS

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.991	3.985	0.018	ug/L	99.9
Mean:	3.985	3.985	0.0315				
SD:	0.0175	0.0175	0.0001				
%RSD:	0.44%	0.44%	0.44				

Sequence No.: 16
Sample ID: 151205B BLK
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 21
Date Collected: 12/07/15 1:17:27 PM
Data Type: Reprocessed on 12/07/15 3:48:42 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151205B BLK **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0059	-0.0059	-0.0000	0.0002	0.0001	1:18:17 PM	Yes

2	-0.0099	-0.0099	-0.0001	-0.0002	0.0000	1:18:46 PM	Yes
3	-0.0124	-0.0124	-0.0001	-0.0004	0.0000	1:19:15 PM	Yes
Mean:	-0.0094	-0.0094	-0.0001				
SD:	0.00325	0.00325	0.0000				
%RSD:	34.60%	34.60%	34.60				

Sequence No.: 17
Sample ID: 151205B LCS
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 22
Date Collected: 12/07/15 1:19:34 PM
Data Type: Reprocessed on 12/07/15 3:48:42 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151205B LCS **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.024	4.024	0.0318	0.1253	0.0320	1:20:24 PM	Yes
2	3.993	3.993	0.0316	0.1229	0.0317	1:20:53 PM	Yes
3	4.042	4.042	0.0320	0.1235	0.0321	1:21:21 PM	Yes

Matrix Recovery Check: 151205B LCS

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.991	4.020	0.025	ug/L	100.7
Mean:	4.020	4.020	0.0318				
SD:	0.0251	0.0251	0.0002				
%RSD:	0.62%	0.62%	0.62				

Sequence No.: 18
Sample ID: CCV 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/07/15 1:21:41 PM
Data Type: Reprocessed on 12/07/15 3:48:42 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/07/15 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.797	4.797	0.0380	0.1488	0.0381	1:22:32 PM	Yes
2	4.745	4.745	0.0375	0.1454	0.0377	1:23:01 PM	Yes
3	4.758	4.758	0.0376	0.1452	0.0378	1:23:30 PM	Yes
Mean:	4.767	4.767	0.0377				
SD:	0.0272	0.0272	0.0002				
%RSD:	0.57%	0.57%	0.57				

QC value within limits for Hg 253.7 Recovery = 95.33%
All analyte(s) passed QC.

Sequence No.: 19
Sample ID: CCB 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/07/15 1:23:50 PM
Data Type: Reprocessed on 12/07/15 3:48:42 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/07/15 RE **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0073	-0.0073	-0.0001	0.0003	0.0001	1:24:39 PM	Yes
2	-0.0145	-0.0145	-0.0001	-0.0005	0.0000	1:25:08 PM	Yes
3	-0.0050	-0.0050	-0.0000	0.0004	0.0001	1:25:37 PM	Yes
Mean:	-0.0089	-0.0089	-0.0001				
SD:	0.00490	0.00490	0.0000				
%RSD:	54.80%	54.80%	54.80				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Replicate Data: AZ25204W08 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0557	-0.0011	-0.0000	0.0008	0.0001	2:45:27 PM	Yes
2	-0.1846	-0.0037	-0.0000	-0.0000	0.0001	2:45:56 PM	Yes
3	-0.0858	-0.0017	-0.0000	0.0008	0.0001	2:46:25 PM	Yes
Mean:	-0.1087	-0.0022	-0.0000				
SD:	0.06742	0.00135	0.0000				
%RSD:	62.02%	62.02%	62.02				

Sequence No.: 58
Sample ID: CCV 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/07/15 2:46:45 PM
Data Type: Reprocessed on 12/07/15 3:48:48 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/07/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.979	4.979	0.0394	0.1559	0.0395	2:47:36 PM	Yes
2	5.014	5.014	0.0397	0.1546	0.0398	2:48:05 PM	Yes
3	5.034	5.034	0.0398	0.1533	0.0400	2:48:33 PM	Yes
Mean:	5.009	5.009	0.0396				
SD:	0.0280	0.0280	0.0002				
%RSD:	0.56%	0.56%	0.56				

QC value within limits for Hg 253.7 Recovery = 100.18%
All analyte(s) passed QC.

Sequence No.: 59
Sample ID: CCB 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/07/15 2:48:54 PM
Data Type: Reprocessed on 12/07/15 3:48:48 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/07/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0024	0.0024	0.0000	0.0013	0.0001	2:49:43 PM	Yes
2	-0.0017	-0.0017	-0.0000	0.0009	0.0001	2:50:12 PM	Yes
3	-0.0006	-0.0006	-0.0000	0.0006	0.0001	2:50:41 PM	Yes
Mean:	0.0000	0.0000	0.0000				
SD:	0.00210	0.00210	0.0000				
%RSD:	>999.9%	>999.9%	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 60
Sample ID: AZ25205W08
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: 50X

Autosampler Location: 57
Date Collected: 12/07/15 2:51:01 PM
Data Type: Reprocessed on 12/07/15 3:48:48 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25205W08 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.2927	0.0059	0.0000	0.0012	0.0002	2:51:51 PM	Yes
2	-0.2651	-0.0053	-0.0000	0.0003	0.0001	2:52:20 PM	Yes
3	-0.2198	-0.0044	-0.0000	0.0002	0.0001	2:52:49 PM	Yes
Mean:	-0.0641	-0.0013	-0.0000				
SD:	0.30981	0.00620	0.0000				
%RSD:	483.41%	483.41%	483.41				

Mean:	0.0011	0.0000	0.0000
SD:	0.18430	0.00369	0.0000
%RSD:	>999.9%	>999.9%	>999.9%

Sequence No.: 65
Sample ID: AZ25342W02
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 62
Date Collected: 12/07/15 3:01:46 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25342W02 — **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0035	-0.0035	-0.0000	0.0004	0.0001	3:02:37 PM	Yes
2	-0.0058	-0.0058	-0.0000	0.0004	0.0001	3:03:06 PM	Yes
3	-0.0144	-0.0144	-0.0001	-0.0005	0.0000	3:03:35 PM	Yes
Mean:	-0.0079	-0.0079	-0.0001				
SD:	0.00577	0.00577	0.0000				
%RSD:	72.93%	72.93%	72.93				

Sequence No.: 66
Sample ID: AZ25343W01
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 12/07/15 3:03:56 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25343W01 — **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0062	-0.0062	-0.0000	0.0001	0.0001	3:04:45 PM	Yes
2	0.0105	0.0105	0.0001	0.0016	0.0002	3:05:13 PM	Yes
3	-0.0041	-0.0041	-0.0000	-0.0000	0.0001	3:05:42 PM	Yes
Mean:	0.0001	0.0001	0.0000				
SD:	0.00912	0.00912	0.0001				
%RSD:	>999.9%	>999.9%	>999.9%				

Sequence No.: 67
Sample ID: AZ25344W01
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 12/07/15 3:06:01 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25344W01 — **Analyte: Hg 253.7**

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0045	-0.0045	-0.0000	0.0005	0.0001	3:06:50 PM	Yes
2	-0.0099	-0.0099	-0.0001	-0.0003	0.0000	3:07:19 PM	Yes
3	0.0137	0.0137	0.0001	0.0024	0.0002	3:07:47 PM	Yes
Mean:	-0.0002	-0.0002	-0.0000				
SD:	0.01234	0.01234	0.0001				
%RSD:	>999.9%	>999.9%	>999.9%				

Sequence No.: 68
Sample ID: AZ25345W02
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 65
Date Collected: 12/07/15 3:08:06 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25345W02 — **Analyte: Hg 253.7**

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.0106	-0.0106	-0.0001	-0.0009	0.0000	3:08:56 PM	Yes
2	-0.0099	-0.0099	-0.0001	-0.0001	0.0000	3:09:24 PM	Yes
3	-0.0109	-0.0109	-0.0001	0.0000	0.0000	3:09:53 PM	Yes
Mean:	-0.0105	-0.0105	-0.0001				
SD:	0.00054	0.00054	0.0000				
%RSD:	5.19%	5.19%	5.19				

Sequence No.: 69
Sample ID: AZ25346W02
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 66
Date Collected: 12/07/15 3:10:12 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25346W02 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0101	-0.0101	-0.0001	-0.0002	0.0000	3:11:02 PM	Yes
2	-0.0010	-0.0010	-0.0000	0.0008	0.0001	3:11:30 PM	Yes
3	-0.0093	-0.0093	-0.0001	0.0001	0.0000	3:11:59 PM	Yes
Mean:	-0.0068	-0.0068	-0.0001				
SD:	0.00505	0.00505	0.0000				
%RSD:	74.26%	74.26%	74.26				

Sequence No.: 70
Sample ID: AZ25346W02 MS
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 67
Date Collected: 12/07/15 3:12:18 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25346W02 MS Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.135	4.135	0.0327	0.1266	0.0328	3:13:08 PM	Yes
2	4.109	4.109	0.0325	0.1255	0.0326	3:13:37 PM	Yes
3	4.107	4.107	0.0325	0.1253	0.0326	3:14:05 PM	Yes
Mean:	4.117	4.117	0.0326				
SD:	0.0154	0.0154	0.0001				
%RSD:	0.37%	0.37%	0.37				

Sequence No.: 71
Sample ID: AZ25346W02 MSD
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 68
Date Collected: 12/07/15 3:14:25 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25346W02 MSD Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.149	4.149	0.0328	0.1290	0.0330	3:15:14 PM	Yes
2	4.222	4.222	0.0334	0.1289	0.0335	3:15:43 PM	Yes
3	4.136	4.136	0.0327	0.1273	0.0329	3:16:12 PM	Yes
Mean:	4.169	4.169	0.0330				
SD:	0.0459	0.0459	0.0004				
%RSD:	1.10%	1.10%	1.10				

Sequence No.: 72
Sample ID: CCV 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/07/15 3:16:31 PM
Data Type: Reprocessed on 12/07/15 3:48:49 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/07/15 RE

Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.114	5.114	0.0405	0.1566	0.0406	3:17:22 PM	Yes
2	5.041	5.041	0.0399	0.1555	0.0400	3:17:51 PM	Yes
3	5.032	5.032	0.0398	0.1535	0.0399	3:18:20 PM	Yes
Mean:	5.063	5.063	0.0401				
SD:	0.0452	0.0452	0.0004				
%RSD:	0.89%	0.89%	0.89				

QC value within limits for Hg 253.7 Recovery = 101.25%
All analyte(s) passed QC.

Sequence No.: 73
Sample ID: CCB 12/07/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/07/15 3:18:40 PM
Data Type: Reprocessed on 12/07/15 3:48:50 PM

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/07/15 RE

Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0118	-0.0118	-0.0001	-0.0005	0.0000	3:19:30 PM	Yes
2	-0.0097	-0.0097	-0.0001	-0.0003	0.0000	3:19:59 PM	Yes
3	-0.0047	-0.0047	-0.0000	-0.0001	0.0001	3:20:28 PM	Yes
Mean:	-0.0087	-0.0087	-0.0001				
SD:	0.00370	0.00370	0.0000				
%RSD:	42.29%	42.29%	42.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.148	5.148	0.0399	0.1515	0.0400	9:43:52 AM	Yes
2	5.121	5.121	0.0397	0.1502	0.0398	9:44:21 AM	Yes
3	5.104	5.104	0.0395	0.1482	0.0396	9:44:49 AM	Yes
Mean:	5.124	5.124	0.0397				
SD:	0.0223	0.0223	0.0002				
%RSD:	0.43%	0.43%	0.43				

QC value within limits for Hg 253.7 Recovery = 102.49%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB 12/14/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 1
Date Collected: 12/14/15 9:45:10 AM
Data Type: Reprocessed on 12/14/15 12:17:24 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/14/15 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0099	0.0099	0.0001	0.0007	0.0002	9:45:59 AM	Yes
2	0.0146	0.0146	0.0001	0.0020	0.0002	9:46:28 AM	Yes
3	-0.0134	-0.0134	-0.0001	-0.0013	0.0000	9:46:57 AM	Yes
Mean:	0.0037	0.0037	0.0000				
SD:	0.01496	0.01496	0.0001				
%RSD:	405.24%	405.24%	405.24				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: 151211A BLK 7470
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 17
Date Collected: 12/14/15 9:47:17 AM
Data Type: Reprocessed on 12/14/15 12:17:24 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151211A BLK 7470 — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0016	0.0016	0.0000	0.0001	0.0001	9:48:06 AM	Yes
2	-0.0031	-0.0031	-0.0000	0.0002	0.0001	9:48:35 AM	Yes
3	0.0058	0.0058	0.0000	0.0005	0.0002	9:49:04 AM	Yes
Mean:	0.0014	0.0014	0.0000				
SD:	0.00449	0.00449	0.0000				
%RSD:	312.48%	312.48%	312.48				

Sequence No.: 13
Sample ID: 151211A LCS 7470
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 18
Date Collected: 12/14/15 9:49:23 AM
Data Type: Reprocessed on 12/14/15 12:17:24 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151211A LCS 7470 — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.891	3.891	0.0301	0.1126	0.0302	9:50:13 AM	Yes
2	3.923	3.923	0.0304	0.1123	0.0305	9:50:41 AM	Yes
3	3.937	3.937	0.0305	0.1140	0.0306	9:51:10 AM	Yes

Matrix Recovery Check: 151211A LCS 7470

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			4.001	3.917	0.024	ug/L	97.9
Mean:	3.917	3.917	0.0303				
SD:	0.0235	0.0235	0.0002				
%RSD:	0.60%	0.60%	0.60				

Sequence No.: 14
Sample ID: 151211A BLK 7470F
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 19
Date Collected: 12/14/15 9:51:29 AM
Data Type: Reprocessed on 12/14/15 12:17:24 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151211A BLK 7470F Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0017	0.0017	0.0000	0.0007	0.0001	9:52:19 AM	Yes
2	-0.0036	-0.0036	-0.0000	-0.0003	0.0001	9:52:47 AM	Yes
3	0.0064	0.0064	0.0000	0.0009	0.0002	9:53:16 AM	Yes
Mean:	0.0015	0.0015	0.0000				
SD:	0.00496	0.00496	0.0000				
%RSD:	327.95%	327.95%	327.95				

Sequence No.: 15
Sample ID: 151211A LCS 7470F
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 20
Date Collected: 12/14/15 9:53:35 AM
Data Type: Reprocessed on 12/14/15 12:17:25 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151211A LCS 7470F Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.005	4.005	0.0310	0.1167	0.0311	9:54:25 AM	Yes
2	3.993	3.993	0.0309	0.1157	0.0310	9:54:54 AM	Yes
3	4.001	4.001	0.0310	0.1150	0.0311	9:55:22 AM	Yes

Matrix Recovery Check: 151211A LCS 7470F

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			4.002	4.000	0.006	ug/L	100.0
Mean:	4.000	4.000	0.0310				
SD:	0.0064	0.0064	0.0000				
%RSD:	0.16%	0.16%	0.16				

Sequence No.: 16
Sample ID: 151211B BLK 7470L
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 21
Date Collected: 12/14/15 9:55:42 AM
Data Type: Reprocessed on 12/14/15 12:17:25 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151211B BLK 7470L Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0009	0.0009	0.0000	0.0004	0.0001	9:56:31 AM	Yes
2	0.0025	0.0025	0.0000	-0.0000	0.0001	9:57:00 AM	Yes
3	-0.0024	-0.0024	-0.0000	0.0004	0.0001	9:57:28 AM	Yes
Mean:	0.0003	0.0003	0.0000				
SD:	0.00251	0.00251	0.0000				
%RSD:	798.86%	798.86%	798.86				

Sequence No.: 17
Sample ID: 151211B LCS 7470L
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 22
Date Collected: 12/14/15 9:57:48 AM
Data Type: Reprocessed on 12/14/15 12:17:25 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151211B LCS 7470L — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.960	3.960	0.0307	0.1143	0.0308	9:58:38 AM	Yes
2	3.965	3.965	0.0307	0.1134	0.0308	9:59:07 AM	Yes
3	3.969	3.969	0.0307	0.1134	0.0308	9:59:35 AM	Yes

Matrix Recovery Check: 151211B LCS 7470L

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			4.000	3.964	0.004	ug/L	99.1
Mean:	3.964	3.964	0.0307				
SD:	0.0044	0.0044	0.0000				
%RSD:	0.11%	0.11%	0.11				

Sequence No.: 18
Sample ID: CCV 12/14/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/14/15 9:59:55 AM
Data Type: Reprocessed on 12/14/15 12:17:25 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.098	5.098	0.0395	0.1495	0.0396	10:00:45 AM	Yes
2	5.110	5.110	0.0396	0.1470	0.0397	10:01:14 AM	Yes
3	5.083	5.083	0.0394	0.1458	0.0395	10:01:43 AM	Yes
Mean:	5.097	5.097	0.0395				
SD:	0.0134	0.0134	0.0001				
%RSD:	0.26%	0.26%	0.26				

QC value within limits for Hg 253.7 Recovery = 101.94%
All analyte(s) passed QC.

Sequence No.: 19
Sample ID: CCB 12/14/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/14/15 10:02:04 AM
Data Type: Reprocessed on 12/14/15 12:17:25 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/14/15 RE — Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0011	-0.0011	-0.0000	-0.0001	0.0001	10:02:53 AM	Yes
2	-0.0070	-0.0070	-0.0001	-0.0003	0.0001	10:03:22 AM	Yes
3	-0.0131	-0.0131	-0.0001	-0.0011	0.0000	10:03:51 AM	Yes
Mean:	-0.0071	-0.0071	-0.0001				
SD:	0.00597	0.00597	0.0000				
%RSD:	84.54%	84.54%	84.54				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 20
Sample ID: AZ25402W10
Analyst: RE

Autosampler Location: 23
Date Collected: 12/14/15 10:04:10 AM
Data Type: Reprocessed on 12/14/15 12:17:26 PM

Sequence No.: 31
Sample ID: AZ25412W10
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 34
Date Collected: 12/14/15 10:27:39 AM
Data Type: Reprocessed on 12/14/15 12:17:28 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25412W10 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0042	-0.0042	-0.0000	0.0001	0.0001	10:28:28 AM	Yes
2	0.0011	0.0011	0.0000	-0.0001	0.0001	10:28:56 AM	Yes
3	0.0161	0.0161	0.0001	0.0018	0.0002	10:29:25 AM	Yes
Mean:	0.0043	0.0043	0.0000				
SD:	0.01053	0.01053	0.0001				
%RSD:	243.17%	243.17%	243.17				

Sequence No.: 32
Sample ID: CCV 12/14/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 12/14/15 10:29:44 AM
Data Type: Reprocessed on 12/14/15 12:17:28 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.067	5.067	0.0392	0.1472	0.0393	10:30:35 AM	Yes
2	5.095	5.095	0.0394	0.1476	0.0396	10:31:04 AM	Yes
3	5.123	5.123	0.0397	0.1485	0.0398	10:31:33 AM	Yes
Mean:	5.095	5.095	0.0394				
SD:	0.0280	0.0280	0.0002				
%RSD:	0.55%	0.55%	0.55				

QC value within limits for Hg 253.7 Recovery = 101.90%
All analyte(s) passed QC.

Sequence No.: 33
Sample ID: CCB 12/14/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/14/15 10:31:53 AM
Data Type: Reprocessed on 12/14/15 12:17:28 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0094	0.0094	0.0001	0.0014	0.0002	10:32:42 AM	Yes
2	-0.0039	-0.0039	-0.0000	0.0003	0.0001	10:33:11 AM	Yes
3	-0.0123	-0.0123	-0.0001	-0.0005	0.0000	10:33:40 AM	Yes
Mean:	-0.0023	-0.0023	-0.0000				
SD:	0.01094	0.01094	0.0001				
%RSD:	482.63%	482.63%	482.63				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 34
Sample ID: AZ25342W01
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 35
Date Collected: 12/14/15 10:33:59 AM
Data Type: Reprocessed on 12/14/15 12:17:28 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25342W01 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0092	-0.0092	-0.0001	-0.0005	0.0000	10:34:48 AM	Yes
2	-0.0105	-0.0105	-0.0001	-0.0011	0.0000	10:35:18 AM	Yes
3	0.0141	0.0141	0.0001	0.0013	0.0002	10:35:47 AM	Yes
Mean:	-0.0018	-0.0018	-0.0000				
SD:	0.01383	0.01383	0.0001				
%RSD:	748.24%	748.24%	748.24				

Sequence No.: 35 Autosampler Location: 36
Sample ID: AZ25343W02 Date Collected: 12/14/15 10:36:06 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:28 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25343W02 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0048	-0.0048	-0.0000	0.0000	0.0001	10:36:55 AM	Yes
2	0.0174	0.0174	0.0001	0.0022	0.0002	10:37:24 AM	Yes
3	-0.0053	-0.0053	-0.0000	0.0003	0.0001	10:37:52 AM	Yes
Mean:	0.0025	0.0025	0.0000				
SD:	0.01293	0.01293	0.0001				
%RSD:	526.66%	526.66%	526.66				

Sequence No.: 36 Autosampler Location: 37
Sample ID: AZ25344W02 Date Collected: 12/14/15 10:38:12 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:29 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25344W02 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0106	-0.0106	-0.0001	-0.0003	0.0000	10:39:01 AM	Yes
2	-0.0139	-0.0139	-0.0001	-0.0008	-0.0000	10:39:30 AM	Yes
3	0.0039	0.0039	0.0000	0.0009	0.0001	10:39:59 AM	Yes
Mean:	-0.0069	-0.0069	-0.0001				
SD:	0.00949	0.00949	0.0001				
%RSD:	137.89%	137.89%	137.89				

Sequence No.: 37 Autosampler Location: 38
Sample ID: AZ25345W01 Date Collected: 12/14/15 10:40:18 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:29 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25345W01 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0022	0.0022	0.0000	0.0006	0.0001	10:41:08 AM	Yes
2	0.0027	0.0027	0.0000	0.0005	0.0001	10:41:37 AM	Yes
3	0.0177	0.0177	0.0001	0.0021	0.0002	10:42:06 AM	Yes
Mean:	0.0075	0.0075	0.0001				
SD:	0.00883	0.00883	0.0001				
%RSD:	117.49%	117.49%	117.49				

Sequence No.: 38 Autosampler Location: 39
Sample ID: AZ25346W05 Date Collected: 12/14/15 10:42:25 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:29 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:

Dilution: Sample Prep Vol:

Replicate Data: AZ25346W05 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0047	0.0047	0.0000	0.0008	0.0001	10:43:15 AM	Yes
2	-0.0060	-0.0060	-0.0000	0.0001	0.0001	10:43:44 AM	Yes
3	-0.0100	-0.0100	-0.0001	-0.0001	0.0000	10:44:13 AM	Yes
Mean:	-0.0038	-0.0038	-0.0000				
SD:	0.00758	0.00758	0.0001				
%RSD:	200.71%	200.71%	200.71				

==========

Sequence No.: 39 Autosampler Location: 40
Sample ID: AZ25346W05 MS Date Collected: 12/14/15 10:44:32 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:29 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25346W05 MS Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.870	3.870	0.0300	0.1112	0.0301	10:45:23 AM	Yes
2	3.811	3.811	0.0295	0.1103	0.0296	10:45:51 AM	Yes
3	3.820	3.820	0.0296	0.1093	0.0297	10:46:20 AM	Yes

Matrix Recovery Check: AZ25346W05 MS

Analyte				Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7				3.996	3.833	0.032	ug/L	95.9
Mean:	3.833	3.833	0.0297					
SD:	0.0318	0.0318	0.0002					
%RSD:	0.83%	0.83%	0.83					

==========

Sequence No.: 40 Autosampler Location: 41
Sample ID: AZ25346W05 MSD Date Collected: 12/14/15 10:46:40 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:29 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25346W05 MSD Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.920	3.920	0.0304	0.1120	0.0305	10:47:30 AM	Yes
2	3.849	3.849	0.0298	0.1100	0.0299	10:47:59 AM	Yes
3	3.845	3.845	0.0298	0.1104	0.0299	10:48:28 AM	Yes

Duplicate Check: AZ25346W05 MSD

Analyte				Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7				3.833	3.871	0.042	ug/L	1.0
Mean:	3.871	3.871	0.0300					
SD:	0.0423	0.0423	0.0003					
%RSD:	1.09%	1.09%	1.09					

==========

Sequence No.: 41 Autosampler Location: 6
Sample ID: CCV 12/14/15 RE Date Collected: 12/14/15 10:48:48 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:29 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.047	5.047	0.0391	0.1478	0.0392	10:49:38 AM	Yes
2	5.068	5.068	0.0392	0.1455	0.0393	10:50:07 AM	Yes
3	5.075	5.075	0.0393	0.1461	0.0394	10:50:36 AM	Yes
Mean:	5.063	5.063	0.0392				
SD:	0.0147	0.0147	0.0001				
%RSD:	0.29%	0.29%	0.29				

QC value within limits for Hg 253.7 Recovery = 101.27%
All analyte(s) passed QC.

Sequence No.: 42 Autosampler Location: 1
Sample ID: CCB 12/14/15 RE Date Collected: 12/14/15 10:50:56 AM
Analyst: Data Type: Reprocessed on 12/14/15 12:17:30 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCB 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0010	-0.0010	-0.0000	0.0001	0.0001	10:51:46 AM	Yes
2	0.0013	0.0013	0.0000	0.0007	0.0001	10:52:15 AM	Yes
3	-0.0108	-0.0108	-0.0001	-0.0007	0.0000	10:52:44 AM	Yes
Mean:	-0.0035	-0.0035	-0.0000				
SD:	0.00641	0.00641	0.0000				
%RSD:	181.80%	181.80%	181.80				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 43 Autosampler Location: 42
Sample ID: AZ25668W09 Date Collected: 12/14/15 10:53:03 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:30 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25668W09 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0206	0.0206	0.0002	0.0019	0.0003	10:53:54 AM	Yes
2	0.0070	0.0070	0.0001	0.0006	0.0002	10:54:23 AM	Yes
3	0.0169	0.0169	0.0001	0.0016	0.0002	10:54:52 AM	Yes
Mean:	0.0149	0.0149	0.0001				
SD:	0.00705	0.00705	0.0001				
%RSD:	47.46%	47.46%	47.46				

Sequence No.: 44 Autosampler Location: 43
Sample ID: AZ25669W09 Date Collected: 12/14/15 10:55:12 AM
Analyst: RE Data Type: Reprocessed on 12/14/15 12:17:30 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25669W09 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0034	0.0034	0.0000	0.0005	0.0001	10:56:03 AM	Yes
2	-0.0135	-0.0135	-0.0001	-0.0011	0.0000	10:56:32 AM	Yes
3	0.0027	0.0027	0.0000	0.0004	0.0001	10:57:01 AM	Yes
Mean:	-0.0025	-0.0025	-0.0000				
SD:	0.00957	0.00957	0.0001				
%RSD:	386.34%	386.34%	386.34				

Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.109	5.109	0.0386	0.1549	0.0388	9:12:35 AM	Yes
2	5.125	5.125	0.0388	0.1548	0.0389	9:13:03 AM	Yes
3	5.091	5.091	0.0385	0.1525	0.0386	9:13:32 AM	Yes
Mean:	5.109	5.109	0.0386				
SD:	0.0170	0.0170	0.0001				
%RSD:	0.33%	0.33%	0.33				

QC value within limits for Hg 253.7 Recovery = 102.17%
All analyte(s) passed QC.

==========

Sequence No.: 11 Autosampler Location: 1
Sample ID: CCB 12/11/15 RE Date Collected: 12/15/15 9:13:52 AM
Analyst: Data Type: Reprocessed on 12/15/15 11:13:56 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCB 12/11/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.015	-0.015	-0.0001	-0.0008	0.0000	9:14:42 AM	Yes
2	0.008	0.008	0.0001	0.0008	0.0002	9:15:10 AM	Yes
3	-0.013	-0.013	-0.0001	-0.0006	0.0000	9:15:39 AM	Yes
Mean:	-0.007	-0.007	-0.0001				
SD:	0.0132	0.0132	0.0001				
%RSD:	197.42%	197.42%	197.42				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 12 Autosampler Location: 17
Sample ID: 151210A BLK 245.1 Date Collected: 12/15/15 9:15:59 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:13:56 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 151210A BLK 245.1 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.005	-0.005	-0.0000	-0.0004	0.0001	9:16:48 AM	Yes
2	-0.000	-0.000	-0.0000	-0.0004	0.0001	9:17:17 AM	Yes
3	-0.002	-0.002	-0.0000	0.0007	0.0001	9:17:46 AM	Yes
Mean:	-0.002	-0.002	-0.0000				
SD:	0.0023	0.0023	0.0000				
%RSD:	103.40%	103.40%	103.40				

==========

Sequence No.: 13 Autosampler Location: 18
Sample ID: 151210A LCS 245.1 Date Collected: 12/15/15 9:18:05 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:13:57 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 151210A LCS 245.1 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.944	3.944	0.0298	0.1183	0.0300	9:18:54 AM	Yes
2	3.970	3.970	0.0300	0.1207	0.0302	9:19:22 AM	Yes
3	3.903	3.903	0.0295	0.1156	0.0296	9:19:51 AM	Yes

Matrix Recovery Check: 151210A LCS 245.1

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.998	3.939	0.034	ug/L	98.5
Mean:	3.939	3.939	0.0298				
SD:	0.0337	0.0337	0.0003				
%RSD:	0.86%	0.86%	0.86				

Sequence No.: 14
Sample ID: 151214A BLK 7470
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 19
Date Collected: 12/15/15 9:20:10 AM
Data Type: Reprocessed on 12/15/15 11:13:57 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151214A BLK 7470 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.004	-0.004	-0.0000	0.0000	0.0001	9:20:59 AM	Yes
2	-0.012	-0.012	-0.0001	-0.0017	0.0000	9:21:28 AM	Yes
3	-0.011	-0.011	-0.0001	-0.0015	0.0001	9:21:57 AM	Yes
Mean:	-0.009	-0.009	-0.0001				
SD:	0.0044	0.0044	0.0000				
%RSD:	48.94%	48.94%	48.94				

Sequence No.: 15
Sample ID: 151214A LCS 7470
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 20
Date Collected: 12/15/15 9:22:16 AM
Data Type: Reprocessed on 12/15/15 11:13:57 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151214A LCS 7470 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.906	3.906	0.0295	0.1174	0.0297	9:23:05 AM	Yes
2	3.909	3.909	0.0296	0.1160	0.0297	9:23:34 AM	Yes
3	3.917	3.917	0.0296	0.1175	0.0298	9:24:03 AM	Yes

Matrix Recovery Check: 151214A LCS 7470

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.991	3.911	0.006	ug/L	98.0
Mean:	3.911	3.911	0.0296				
SD:	0.0059	0.0059	0.0000				
%RSD:	0.15%	0.15%	0.15				

Sequence No.: 16
Sample ID: 151214A BLK 7470TCLP
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 21
Date Collected: 12/15/15 9:24:22 AM
Data Type: Reprocessed on 12/15/15 11:13:57 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 151214A BLK 7470TCLP Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0001	0.0017	0.0002	9:25:12 AM	Yes
2	-0.012	-0.012	-0.0001	-0.0016	0.0000	9:25:41 AM	Yes
3	-0.013	-0.013	-0.0001	-0.0007	0.0000	9:26:10 AM	Yes
Mean:	-0.006	-0.006	-0.0000				
SD:	0.0124	0.0124	0.0001				
%RSD:	222.24%	222.24%	222.24				

Sequence No.: 17 Autosampler Location: 22
Sample ID: 151214A BLK 2 7470TCLP Date Collected: 12/15/15 9:26:29 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:13:57 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 151214A BLK 2 7470TCLP Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.005	-0.005	-0.0000	-0.0005	0.0001	9:27:19 AM	Yes
2	0.014	0.014	0.0001	0.0023	0.0002	9:27:47 AM	Yes
3	-0.011	-0.011	-0.0001	-0.0003	0.0001	9:28:17 AM	Yes
Mean:	-0.001	-0.001	-0.0000				
SD:	0.0128	0.0128	0.0001				
%RSD:	>999.9%	>999.9%	>999.9%				

Sequence No.: 18 Autosampler Location: 23
Sample ID: 151214A LCS 7470TCLP Date Collected: 12/15/15 9:28:36 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:13:58 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 151214A LCS 7470TCLP Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.106	4.106	0.0310	0.1221	0.0312	9:29:26 AM	Yes
2	4.076	4.076	0.0308	0.1196	0.0310	9:29:55 AM	Yes
3	4.088	4.088	0.0309	0.1203	0.0310	9:30:23 AM	Yes

Matrix Recovery Check: 151214A LCS 7470TCLP

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.994	4.090	0.015	ug/L	102.4
Mean:	4.090	4.090	0.0309				
SD:	0.0153	0.0153	0.0001				
%RSD:	0.37%	0.37%	0.37				

Sequence No.: 19 Autosampler Location: 24
Sample ID: 151214A LCS 2 7470TCLP Date Collected: 12/15/15 9:30:43 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:13:58 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 151214A LCS 2 7470TCLP Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.916	3.916	0.0296	0.1182	0.0297	9:31:33 AM	Yes
2	3.901	3.901	0.0295	0.1168	0.0296	9:32:02 AM	Yes
3	3.915	3.915	0.0296	0.1162	0.0297	9:32:31 AM	Yes

Matrix Recovery Check: 151214A LCS 2 7470TCLP

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.999	3.910	0.008	ug/L	97.8
Mean:	3.910	3.910	0.0296				
SD:	0.0085	0.0085	0.0001				
%RSD:	0.22%	0.22%	0.22				

Sequence No.: 20 Autosampler Location: 6

Sample ID: CCV 12/14/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Date Collected: 12/15/15 9:32:51 AM
Data Type: Reprocessed on 12/15/15 11:13:58 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.171	5.171	0.0391	0.1559	0.0392	9:33:42 AM	Yes
2	5.090	5.090	0.0385	0.1519	0.0386	9:34:10 AM	Yes
3	5.117	5.117	0.0387	0.1511	0.0388	9:34:39 AM	Yes
Mean:	5.126	5.126	0.0388				
SD:	0.0410	0.0410	0.0003				
%RSD:	0.80%	0.80%	0.80				

QC value within limits for Hg 253.7 Recovery = 102.52%
All analyte(s) passed QC.

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Sequence No.: 21
Sample ID: CCB 12/11/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/15/15 9:34:59 AM
Data Type: Reprocessed on 12/15/15 11:13:58 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/11/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.007	-0.007	-0.0001	-0.0010	0.0001	9:35:49 AM	Yes
2	-0.008	-0.008	-0.0001	-0.0006	0.0001	9:36:18 AM	Yes
3	0.009	0.009	0.0001	0.0012	0.0002	9:36:46 AM	Yes
Mean:	-0.002	-0.002	-0.0000				
SD:	0.0096	0.0096	0.0001				
%RSD:	504.07%	504.07%	504.07				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 22
Sample ID: AZ25684W01
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 25
Date Collected: 12/15/15 9:37:06 AM
Data Type: Reprocessed on 12/15/15 11:13:58 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25684W01 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.013	-0.013	-0.0001	-0.0004	0.0000	9:37:56 AM	Yes
2	-0.017	-0.017	-0.0001	-0.0009	0.0000	9:38:25 AM	Yes
3	0.004	0.004	0.0000	0.0008	0.0002	9:38:54 AM	Yes
Mean:	-0.009	-0.009	-0.0001				
SD:	0.0113	0.0113	0.0001				
%RSD:	132.03%	132.03%	132.03				

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Sequence No.: 23
Sample ID: AZ25685W01
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 26
Date Collected: 12/15/15 9:39:14 AM
Data Type: Reprocessed on 12/15/15 11:13:58 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25685W01 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.009	-0.009	-0.0001	0.0001	0.0001	9:40:04 AM	Yes

Replicate Data: AZ25422W06 DUP Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.009	-0.009	-0.0001	0.0001	0.0001	10:20:28 AM	Yes
2	0.007	0.007	0.0001	0.0016	0.0002	10:20:57 AM	Yes
3	-0.009	-0.009	-0.0001	-0.0004	0.0001	10:21:26 AM	Yes

Duplicate Check: AZ25422W06 DUP

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			-0.006	-0.004	0.009	ug/L	-45.7
Mean:	-0.004	-0.004	-0.0000				
SD:	0.0095	0.0095	0.0001				
%RSD:	263.16%	263.16%	263.16				

Sequence No.: 43
Sample ID: AZ25422W06 MS
Analyst: RE
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 44
Date Collected: 12/15/15 10:21:46 AM
Data Type: Reprocessed on 12/15/15 11:14:02 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: AZ25422W06 MS Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.003	4.003	0.0303	0.1199	0.0304	10:22:37 AM	Yes
2	4.035	4.035	0.0305	0.1175	0.0306	10:23:06 AM	Yes
3	3.984	3.984	0.0301	0.1157	0.0303	10:23:35 AM	Yes

Matrix Recovery Check: AZ25422W06 MS

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.994	4.007	0.026	ug/L	100.3
Mean:	4.007	4.007	0.0303				
SD:	0.0258	0.0258	0.0002				
%RSD:	0.64%	0.64%	0.64				

Sequence No.: 44
Sample ID: CCV 12/14/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 6
Date Collected: 12/15/15 10:23:55 AM
Data Type: Reprocessed on 12/15/15 11:14:02 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.218	5.218	0.0395	0.1545	0.0396	10:24:46 AM	Yes
2	5.239	5.239	0.0396	0.1530	0.0397	10:25:15 AM	Yes
3	5.264	5.264	0.0398	0.1548	0.0399	10:25:44 AM	Yes
Mean:	5.240	5.240	0.0396				
SD:	0.0229	0.0229	0.0002				
%RSD:	0.44%	0.44%	0.44				

QC value within limits for Hg 253.7 Recovery = 104.81%
All analyte(s) passed QC.

Sequence No.: 45
Sample ID: CCB 12/11/15 RE
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Autosampler Location: 1
Date Collected: 12/15/15 10:26:04 AM
Data Type: Reprocessed on 12/15/15 11:14:03 AM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB 12/11/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.015	-0.015	-0.0001	-0.0010	0.0000	10:26:54 AM	Yes
2	-0.001	-0.001	-0.0000	0.0009	0.0001	10:27:22 AM	Yes
3	-0.005	-0.005	-0.0000	0.0002	0.0001	10:27:51 AM	Yes
Mean:	-0.007	-0.007	-0.0001				
SD:	0.0069	0.0069	0.0001				
%RSD:	99.63%	99.63%	99.63				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 46 Autosampler Location: 45
Sample ID: AZ25423W06 Date Collected: 12/15/15 10:28:10 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:14:03 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25423W06 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.010	-0.010	-0.0001	-0.0002	0.0001	10:29:01 AM	Yes
2	-0.014	-0.014	-0.0001	-0.0007	0.0000	10:29:30 AM	Yes
3	-0.000	-0.000	-0.0000	0.0006	0.0001	10:29:59 AM	Yes
Mean:	-0.008	-0.008	-0.0001				
SD:	0.0070	0.0070	0.0001				
%RSD:	88.83%	88.83%	88.83				

Sequence No.: 47 Autosampler Location: 46
Sample ID: AZ25347S01 Date Collected: 12/15/15 10:30:20 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:14:03 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25347S01 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.002	-0.002	-0.0000	0.0005	0.0001	10:31:11 AM	Yes
2	-0.001	-0.001	-0.0000	0.0006	0.0001	10:31:39 AM	Yes
3	-0.000	-0.000	-0.0000	0.0005	0.0001	10:32:08 AM	Yes
Mean:	-0.001	-0.001	-0.0000				
SD:	0.0012	0.0012	0.0000				
%RSD:	94.27%	94.27%	94.27				

Sequence No.: 48 Autosampler Location: 47
Sample ID: AZ25348S01 Date Collected: 12/15/15 10:32:29 AM
Analyst: RE Data Type: Reprocessed on 12/15/15 11:14:03 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: AZ25348S01 Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0001	-0.0012	-0.0000	10:33:21 AM	Yes
2	-0.006	-0.006	-0.0000	-0.0000	0.0001	10:33:49 AM	Yes
3	-0.009	-0.009	-0.0001	0.0001	0.0001	10:34:18 AM	Yes
Mean:	-0.011	-0.011	-0.0001				
SD:	0.0065	0.0065	0.0000				
%RSD:	57.63%	57.63%	57.63				

Sequence No.: 49 Autosampler Location: 48
Sample ID: AZ25348S01 MS Date Collected: 12/15/15 10:34:39 AM

Analyst: RE
Data Type: Reprocessed on 12/15/15 11:14:03 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: AZ25348S01 MS
Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.175	4.175	0.0316	0.1221	0.0317	10:35:28 AM	Yes
2	4.172	4.172	0.0315	0.1222	0.0317	10:35:57 AM	Yes
3	4.141	4.141	0.0313	0.1189	0.0314	10:36:26 AM	Yes

Matrix Recovery Check: AZ25348S01 MS

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Recovery (%)
Hg 253.7			3.989	4.163	0.019	ug/L	104.3
Mean:	4.163	4.163	0.0315				
SD:	0.0188	0.0188	0.0001				
%RSD:	0.45%	0.45%	0.45				

==========

Sequence No.: 50
Autosampler Location: 49
Sample ID: AZ25348S01 MSD
Date Collected: 12/15/15 10:36:45 AM
Analyst: RE
Data Type: Reprocessed on 12/15/15 11:14:03 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: AZ25348S01 MSD
Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.066	4.066	0.0307	0.1199	0.0309	10:37:33 AM	Yes
2	4.052	4.052	0.0306	0.1174	0.0308	10:38:03 AM	Yes
3	4.045	4.045	0.0306	0.1166	0.0307	10:38:31 AM	Yes

Duplicate Check: AZ25348S01 MSD

Analyte			Expected Conc.	Measured Conc.	Std. Dev.	Units	Difference (%)
Hg 253.7			4.163	4.054	0.010	ug/L	2.6
Mean:	4.054	4.054	0.0307				
SD:	0.0104	0.0104	0.0001				
%RSD:	0.26%	0.26%	0.26				

==========

Sequence No.: 51
Autosampler Location: 6
Sample ID: CCV 12/14/15 RE
Date Collected: 12/15/15 11:00:49 AM
Analyst:
Data Type: Reprocessed on 12/15/15 11:14:04 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: CCV 12/14/15 RE
Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.429	5.429	0.0411	0.1575	0.0412	11:01:39 AM	Yes
2	5.282	5.282	0.0399	0.1565	0.0401	11:02:08 AM	Yes
3	5.256	5.256	0.0397	0.1536	0.0399	11:02:37 AM	Yes
Mean:	5.323	5.323	0.0402				
SD:	0.0933	0.0933	0.0007				
%RSD:	1.75%	1.75%	1.75				

QC value within limits for Hg 253.7 Recovery = 106.45%
All analyte(s) passed QC.

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Sequence No.: 52
Autosampler Location: 1
Sample ID: CCB 12/11/15 RE
Date Collected: 12/15/15 11:02:58 AM
Analyst:
Data Type: Reprocessed on 12/15/15 11:14:04 AM

Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCB 12/11/15 RE Analyte: Hg 253.7

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.006	0.006	0.0000	0.0014	0.0002	11:03:48 AM	Yes
2	-0.002	-0.002	-0.0000	0.0002	0.0001	11:04:16 AM	Yes
3	-0.010	-0.010	-0.0001	-0.0006	0.0001	11:04:45 AM	Yes
Mean:	-0.002	-0.002	-0.0000				
SD:	0.0080	0.0080	0.0001				
%RSD:	337.63%	337.63%	337.63				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4115022	12/08/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	EMD	55043	12/08/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4115022	12/09/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	EMD	55043	12/09/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4115022	12/18/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	EMD	55043	12/18/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

Mercury Standards

Methods 245.1/7470/7471

Hg STOCK STD 7470A/7471/245.1	Hg STOCK ICV 7470A/7471/245.1
1mL CPI Hg STD Lot # 15B160-35043 conc: 1000ug/mL exp 10/17/2016 and 1mL HNO3 EMD LOT# 55148 4997 to final volume of 100mL milipore water Final conc.: 10ug/mL Hg in 1%HNO3 Prep. Date 11/30/15 Exp. Date 12/28/15	1mL Ultra Sci Hg ICV STD Lot #P00139-32881 conc: 1000ug/mL exp 03/31/19 and 1mL HNO3 EMD LOT# 55148 4997 to final volume of 100mL milipore water Final conc.: 10ug/mL Hg in 1%HNO3 Prep.Date 11/30/15 Exp. Date 12/28/15

Hg WORKING STANDARDS 7470A/7471/245.1				
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD and 2mL HNO3 Merck Lot: 55148 4735 to final vol 200mL with milipore water	Prep:	**11/30/15**	Exp: **12/28/15** Final Conc: 50ug/L Expires Daily
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV and 2mL HNO3 Merck Lot: 55148 4735 to final vol 200mL with milipore water	Prep:	**11/30/15**	Exp: **12/28/15** Final Conc: 50ug/L Expires Daily

10% HCL	3% HCl
200 mL of HCL in 2000 mL of DI H2O Prep Date: 11/25/15 Exp Date: 11/25/16 Prepared by: RE Lot# HCL: BDH 4115050 5130	30 mL of HCL in 1000 mL of DI H2O Prep Date: 12/07/15 Exp Date: 12/07/16 Prepared by: RE Lot# HCL: BDH 4115080 429

1.1% STANNOUS CHLORIDE
11g SnCl2 BDH Lot #0774C508 30 mL HCl BDH Lot #4115080 429 Brought to 1000 mL with DI Water Prep. Date 12/07/15 Exp. Date 12/07/16 By RE

Mercury Standards

Methods 245.1/7470/7471

Hg STOCK STD 7470A/7471/245.1	Hg STOCK ICV 7470A/7471/245.1
1mL CPI Hg STD Lot # 15B160-35043 conc: 1000ug/mL exp 10/17/2016 and 1mL HNO3 EMD LOT# 55148 4997 to final volume of 100mL milipore water Final conc.: 10ug/mL Hg in 1%HNO3 Prep. Date 11/30/15 Exp. Date 12/28/15	1mL Ultra Sci Hg ICV STD Lot #P00139-32881 conc: 1000ug/mL exp 03/31/19 and 1mL HNO3 EMD LOT# 55148 4997 to final volume of 100mL milipore water Final conc.: 10ug/mL Hg in 1%HNO3 Prep.Date 11/30/15 Exp. Date 12/28/15

Hg WORKING STANDARDS 7470A/7471/245.1				
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD and 2mL HNO3 Merck Lot: 55195 4730 to final vol 200mL with milipore water	Prep:	**11/30/15**	Exp: **12/28/15** Final Conc: 50ug/L Expires Daily
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV and 2mL HNO3 Merck Lot: 55195 4730 to final vol 200mL with milipore water	Prep:	**11/30/15**	Exp: **12/28/15** Final Conc: 50ug/L Expires Daily

10% HCL	3% HCl
200 mL of HCL in 2000 mL of DI H2O Prep Date: 12/09/15 Exp Date: 12/09/16 Prepared by: RE Lot# HCL: BDH 4115080 429	30 mL of HCL in 1000 mL of DI H2O Prep Date: 12/14/15 Exp Date: 12/14/16 Prepared by: RE Lot# HCL: BDH 4115080 5313

1.1% STANNOUS CHLORIDE
11g SnCl2 BDH Lot #0774C508 30 mL HCl BDH Lot #4115080 5313 Brought to 1000 mL with DI Water Prep. Date 12/14/15 Exp. Date 12/14/16 By RE

Mercury Standards

Methods 245.1/7470/7471

Hg STOCK STD 7470A/7471/245.1	Hg STOCK ICV 7470A/7471/245.1
1mL CPI Hg STD Lot # 15B160-35043 conc: 1000ug/mL exp 10/17/2016 and 1mL HNO3 EMD LOT# 55148 4997 to final volume of 100mL milipore water Final conc.: 10ug/mL Hg in 1%HNO3 Prep. Date 11/30/15 Exp. Date 12/28/15	1mL Ultra Sci Hg ICV STD Lot #P00139-32881 conc: 1000ug/mL exp 03/31/19 and 1mL HNO3 EMD LOT# 55148 4997 to final volume of 100mL milipore water Final conc.: 10ug/mL Hg in 1%HNO3 Prep.Date 11/30/15 Exp. Date 12/28/15

Hg WORKING STANDARDS 7470A/7471/245.1				
Hg WORKING STD	1ml 10ug/ml Hg STOCK STD and 2mL HNO3 Merck Lot: 55195 4727 to final vol 200mL with milipore water	Prep:	**11/30/15**	Exp: **12/28/15** Final Conc: 50ug/L Expires Daily
Hg WORKING ICV	1ml 10ug/ml Hg STOCK ICV and 2mL HNO3 Merck Lot: 55195 4727 to final vol 200mL with milipore water	Prep:	**11/30/15**	Exp: **12/28/15** Final Conc: 50ug/L Expires Daily

10% HCL	3% HCl
200 mL of HCL in 2000 mL of DI H2O Prep Date: 12/09/15 Exp Date: 12/09/16 Prepared by: RE Lot# HCL: BDH 4115080 429	30 mL of HCL in 1000 mL of DI H2O Prep Date: 12/15/15 Exp Date: 12/15/16 Prepared by: RE Lot# HCL: BDH 4115080 5313

1.1% STANNOUS CHLORIDE
11g SnCl2 BDH Lot #0774C508 30 mL HCl BDH Lot #4115080 5313 Brought to 1000 mL with DI Water Prep. Date 12/15/15 Exp. Date 12/15/16 By RE

Metals Digestion Worksheet

Method Name 3010A Digestion (Field Filter) **Prep Method** M3010F **Set** 151208A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 1078377-35588		
Spiked ID 2	LCSW LOT# 1078431-35589		
Spiked ID 3	Li 10mg/L Prep 12-08-15		
Spiked ID 4			
Spiked By	NM	Date:	12/08/15 8:45:00 AM
Witnessed By	RJS	Date:	12/08/15 8:45:00 AM

Starting Temp:	92c Slot 30
Ending Temp:	95c Slot 30
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	12/08/15 12:30

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	151208A Blk				50mL	50mL	12/08/15 8:45	equip: Modblock4 FIELD FILTERED
2	151208A LCS		500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock4
3	AZ25281	AZ25281W08			50mL	50mL	12/08/15 8:45	equip: Modblock4
4	AZ25282	AZ25282W08			50mL	50mL	12/08/15 8:45	equip: Modblock4
5	AZ25283	AZ25283W07			50mL	50mL	12/08/15 8:45	equip: Modblock4
6	AZ25284	AZ25284W08			50mL	50mL	12/08/15 8:45	equip: Modblock4
7	AZ25285	AZ25285W20			50mL	50mL	12/08/15 8:45	equip: Modblock4
8	AZ25285 MS	AZ25285W20	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock4
9	AZ25285 MSD	AZ25285W20	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock4
10	AZ25331	AZ25331W09			50mL	50mL	12/08/15 8:45	equip: Modblock4
11	AZ25342	AZ25342W01			50mL	50mL	12/08/15 8:45	equip: Modblock4
12	AZ25343	AZ25343W02			50mL	50mL	12/08/15 8:45	equip: Modblock4
13	AZ25344	AZ25344W02			50mL	50mL	12/08/15 8:45	equip: Modblock4
14	AZ25345	AZ25345W01			50mL	50mL	12/08/15 8:45	equip: Modblock4
15	AZ25346	AZ25346W05			50mL	50mL	12/08/15 8:45	equip: Modblock4
16	AZ25346 MS	AZ25346W05	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock4
17	AZ25346 MSD	AZ25346W05	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock4

Solvent and Lot#
HNO3 MERCK 55148 4998
1:1 HCL 11-24-15

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RDS
Date	12/9/15
Time	920
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	12/08/15 8:25:05 AM

Reviewed By: RDS **Date:** 12/9/15

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 151208A **Units** mL

Spikes	
Spiked ID 1	LCSW LOT# 1080490-35747
Spiked ID 2	LCSW LOT# 1080321-35748
Spiked ID 3	Li 10mg/L Prep 12-08-15
Spiked ID 4	
Spiked By	NM Date: 12/08/15 8:45:00 AM
Witnessed By	RJS Date: 12/08/15 8:45:00 AM

Starting Temp:	92c Slot 11
Ending Temp:	93c Slot 11
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	12/08/15 14:23

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	151208A Blk				50mL	50mL	12/08/15 8:45	equip: Modblock2 TOTAL
2	151208A LCS		500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock2
3	AZ25281	AZ25281W07			50mL	50mL	12/08/15 8:45	equip: Modblock2
4	AZ25282	AZ25282W07			50mL	50mL	12/08/15 8:45	equip: Modblock2
5	AZ25283	AZ25283W08			50mL	50mL	12/08/15 8:45	equip: Modblock2
6	AZ25284	AZ25284W07			50mL	50mL	12/08/15 8:45	equip: Modblock2
7	AZ25285	AZ25285W21			50mL	50mL	12/08/15 8:45	equip: Modblock2
8	AZ25285 MS	AZ25285W21	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock2
9	AZ25285 MSD	AZ25285W21	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock2
10	AZ25342	AZ25342W02			50mL	50mL	12/08/15 8:45	equip: Modblock2
11	AZ25343	AZ25343W01			50mL	50mL	12/08/15 8:45	equip: Modblock2
12	AZ25344	AZ25344W01			50mL	50mL	12/08/15 8:45	equip: Modblock2
13	AZ25345	AZ25345W02			50mL	50mL	12/08/15 8:45	equip: Modblock2
14	AZ25346	AZ25346W04			50mL	50mL	12/08/15 8:45	equip: Modblock2
15	AZ25346 MS	AZ25346W04	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock2
16	AZ25346 MSD	AZ25346W04	500uL	1+2	50mL	50mL	12/08/15 8:45	equip: Modblock2

Solvent and Lot#
HNO3 MERCK 55148 4998
1:1 HCL 11-24-15

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RBS
Date	12/9/15
Time	920
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	12/08/15 8:20:27 AM

Reviewed By: RBS **Date:** 12/9/15

Metals Digestion Worksheet

Method Name 3010A Digestion (TCLP) **Prep Method** M3010TCLP T **Set** 151214A **Units** mL

Spikes	
Spiked ID 1	LCSW LOT# 1080490-35747
Spiked ID 2	LCSW LOT# 1080321-35748
Spiked ID 3	
Spiked ID 4	
Spiked By	NM Date: 12/14/15 10:39:00 AM
Witnessed By	RE Date: 12/14/15 10:39:00 AM

Starting Temp:	92c Slot 15
Ending Temp:	92c Slot 15
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	12/14/15 15:55

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	151214A Blk				50mL	50mL	12/14/15 10:39	equip: Modblock2 Tumble Start Time 12/2/15@15:40
2	151214A BLK 2				50mL	50mL	12/14/15 10:39	equip: Modblock2 %Solid<0.5
3	151214A LCS		500uL	1+2	50mL	50mL	12/14/15 10:39	equip: Modblock2 Tumble End Time 12/3/15@08:00
4	151214A LCS 2		500uL	1+2	50mL	50mL	12/14/15 10:39	equip: Modblock2 %Solid<0.5
5	AZ25347	AZ25347W05			50mL	50mL	12/14/15 10:39	equip: Modblock2 %Solid<0.5
6	AZ25348	AZ25348S01			50mL	50mL	12/14/15 10:39	equip: Modblock2 FLUID #1
7	AZ25348 MS	AZ25348S01	500uL	1+2	50mL	50mL	12/14/15 10:39	equip: Modblock2 FLUID #1
8	AZ25348 MSD	AZ25348S01	500uL	1+2	50mL	50mL	12/14/15 10:39	equip: Modblock2 FLUID #1

Solvent and Lot#
HNO3 MERCK 55195 4730
1:1 HCL 11-24-15

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RDS
Date	12/16/15
Time	845
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	12/14/15 8:55:54 AM

Reviewed By: RDS **Date:** 12/16/15

Mercury Digestion Worksheet

Method Name 7470A Mercury Digestion (Field Filter) **Prep Method** M7470F **Set** 151211A **Units** mL

Spikes			
Spiked ID 1	Hg WORKING STANDARD 12-11-15		
Spiked ID 2	Hg WORKING ICV 12-11-15		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	12/11/15 11:29:00 AM
Witnessed By	MM	Date:	12/11/15 11:29:00 AM

Starting Temp:	88c Slot 33
Ending Temp:	85c Slot 33
Temp Type:	Modblock1
End Date/Time	12/11/15 1:40:00 PM

Mercury Calibration			
Sample	Spike Amount	Spike ID	Final Volume
0 ppb		1	72.25 ml
0.2 ppb	0.2 ml	1	72.25 ml
0.5 ppb	0.5 ml	1	72.25 ml
1 ppb	1 ml	1	72.25 ml
2 ppb	2 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
10 ppb	10 ml	1	72.25 ml
ICV	4 ml	2	72.25 ml

Start Date/Time of Calibration 12/11/15 11:29

Sufficient Vol for Matrix QC:	Yes

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	151211A Blk				50mL	72.25mL	12/11/15 11:29	equip: Modblock1
2	151211A LCS		4mL	1	50mL	72.25mL	12/11/15 11:29	equip: Modblock1
3	AZ25342	AZ25342W01			50mL	72.25mL	12/11/15 11:29	equip: Modblock1
4	AZ25343	AZ25343W02			50mL	72.25mL	12/11/15 11:29	equip: Modblock1
5	AZ25344	AZ25344W02			50mL	72.25mL	12/11/15 11:29	equip: Modblock1
6	AZ25345	AZ25345W01			50mL	72.25mL	12/11/15 11:29	equip: Modblock1
7	AZ25346	AZ25346W05			50mL	72.25mL	12/11/15 11:29	equip: Modblock1
8	AZ25346 MS	AZ25346W05	4mL	1	50mL	72.25mL	12/11/15 11:29	equip: Modblock1
9	AZ25346 MSD	AZ25346W05	4mL	1	50mL	72.25mL	12/11/15 11:29	equip: Modblock1

Solvent and Lot#
HNO3 MERCK 55195 4730
H2SO4 J.T.B. 113785 4595
KMnO4 12-02-15
K2s2o8 12-10-15
Decolorizer 12-02-15

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RE
Date	12/14/15
Time	8:02
Moved to	metals

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	12/11/15 11:12:19 AM

Reviewed By: RE **Date:** 12/14/15

Mercury Digestion Worksheet

Method Name 7470A Mercury Digestion **Prep Method** M7470 **Set** 151205B **Units** mL

Spikes			
Spiked ID 1	Hg WORKING STANDARD prep 12-5-15		
Spiked ID 2	Hg WORKING ICV prep 12-5-15		
Spiked ID 3			
Spiked ID 4			
Spiked By	RE	Date:	12/05/15 9:40:00 AM
Witnessed By	CM	Date:	12/05/15 9:40:00 AM

Starting Temp:	86 C Slot 29
Ending Temp:	89 C Slot 29
Temp Type:	Modblock1
End Date/Time	12/05/15 12:30:00 PM

Mercury Calibration

Sample	Spike Amount	Spike ID	Final Volume
0 ppb		1	72.25 ml
0.2 ppb	0.2 ml	1	72.25 ml
0.5 ppb	0.5 ml	1	72.25 ml
1 ppb	1 ml	1	72.25 ml
2 ppb	2 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
10 ppb	10 ml	1	72.25 ml
ICV	4 ml	2	72.25 ml

Start Date/Time of Calibration 12/05/15 9:40

Sufficient Vol for Matrix QC:	Yes

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	151205B Blk				50mL	72.25mL	12/05/15 9:40	equip: Modblock1
2	151205B LCS		4mL	1	50mL	72.25mL	12/05/15 9:40	equip: Modblock1
3	AZ25342	AZ25342W02			50mL	72.25mL	12/05/15 9:40	equip: Modblock1
4	AZ25343	AZ25343W01			50mL	72.25mL	12/05/15 9:40	equip: Modblock1
5	AZ25344	AZ25344W01			50mL	72.25mL	12/05/15 9:40	equip: Modblock1
6	AZ25345	AZ25345W02			50mL	72.25mL	12/05/15 9:40	equip: Modblock1
7	AZ25346	AZ25346W02			50mL	72.25mL	12/05/15 9:40	equip: Modblock1
8	AZ25346 MS	AZ25346W02	4mL	1	50mL	72.25mL	12/05/15 9:40	equip: Modblock1
9	AZ25346 MSD	AZ25346W02	4mL	1	50mL	72.25mL	12/05/15 9:40	equip: Modblock1

Solvent and Lot#
HNO3 MERCK 55195 4998
H2SO4 J.T.B 113785 4595
KMnO4 12-2-15
K2s2o8 10-29-15
Decolorizer 12-2-15

Sample COC Transfer	
Sample prep employee Initials	RE
Analyst's initials	
Date	
Time	
Moved to	

Technician's Initials	
Scanned By	RE
Sample Preparation	RE
Digestion	RE
Bring up to volume	RE
Modified	12/05/15 9:05:55 AM

Reviewed By: MM **Date:** 12/7/15

Mercury Digestion Worksheet

Method Name 7470 Mercury Digestion (TCLP) **Prep Method** M7470TCLP **Set** 151214A **Units** mL

Spikes			
Spiked ID 1	Hg WORKING STANDARD prep 12-14-15		
Spiked ID 2	Hg WORKING ICV prep 12-14-15		
Spiked ID 3			
Spiked ID 4			
Spiked By	RE	Date:	12/14/15 10:50:00 AM
Witnessed By	RJS	Date:	12/14/15 10:50:00 AM

Starting Temp:	95c Slot 1
Ending Temp:	95c slot 1
Temp Type:	Modblock4 Tumble Start Time 12/2/15@15:40 Fluid#1
End Date/Time	12/14/15 1:00:00 PM

Mercury Calibration

Sample	Spike Amount	Spike ID	Final Volume
0 ppb		1	72.25 ml
0.2 ppb	0.2 ml	1	72.25 ml
0.5 ppb	0.5 ml	1	72.25 ml
1 ppb	1 ml	1	72.25 ml
2 ppb	2 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
5 ppb	5 ml	1	72.25 ml
10 ppb	10 ml	1	72.25 ml
ICV	4 ml	2	72.25 ml

Start Date/Time of Calibration 12/14/15 10:50

Sufficient Vol for Matrix QC:	Yes

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	151214A Blk				50mL	72.25mL	12/14/15 10:50	equip: Modblock4 Tumble Start Time 12/2/15@15:40 Fluid#1
2	151214A Blk 2				50mL	72.25mL	12/14/15 10:50	equip: Modblock4 %Solid<0.5
3	151214A LCS		4mL	1	50mL	72.25mL	12/14/15 10:50	equip: Modblock4 Tumble End Time 12/3/15@08:00 Fluid#1
4	151214A LCS 2		4mL	1	50mL	72.25mL	12/14/15 10:50	equip: Modblock4 %Solid<0.5
5	AZ25347	AZ25347S01			50mL	72.25mL	12/14/15 10:50	equip: Modblock4 %Solid<0.5
6	AZ25348	AZ25348S01			50mL	72.25mL	12/14/15 10:50	equip: Modblock4 Fluid#1
7	AZ25348 MS	AZ25348S01	4mL	1	50mL	72.25mL	12/14/15 10:50	equip: Modblock4 Fluid#1
8	AZ25348 MSD	AZ25348S01	4mL	1	50mL	72.25mL	12/14/15 10:50	equip: Modblock4 Fluid#1

Solvent and Lot#
HNO3 MERCK 55195 4730
H2SO4 J.T.B 113785 4595
KMnO4 12-02-15
K2S2O8 12-10-15
Decolorizer 12-02-15

Sample COC Transfer	
Sample prep employee Initials	RE
Analyst's initials	RE
Date	12/15/15
Time	11:20
Moved to	mckls

Technician's Initials	
Scanned By	RE
Sample Preparation	RE
Digestion	RE
Bring up to volume	RE
Modified	12/14/15 11:05:31 AM

Reviewed By: mm **Date:** 12/15/15

6010 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	08 Dec 2015	14:02	CalBlk 151208RJS I:PB O:R		151208A6010	1.
2	08 Dec 2015	14:07	STD 1 151208RJS I:PB O:RJ		151208A6010	1.
3	08 Dec 2015	14:11	STD 2 151208RJS I:PB O:RJ		151208A6010	1.
4	08 Dec 2015	14:15	STD 3 151208RJS I:PB O:RJ		151208A6010	1.
5	08 Dec 2015	14:18	ICV 151208RJS I:PB O:RJS		151208A6010	1.
6	08 Dec 2015	14:26	ICB 151208RJS I:PB O:RJS		151208A6010	1.
9	08 Dec 2015	14:46	ICSA 151208RJS I:PB O:RJS		151208A6010	1.
10	08 Dec 2015	14:51	ICSAB 151208RJS I:PB O:RJ		151208A6010	1.
11	08 Dec 2015	14:56	CCV1 151208RJS I:PB O:RJS		151208A6010	1.
12	08 Dec 2015	15:01	CCB 151208RJS I:PB O:RJS		151208A6010	1.
13	08 Dec 2015	15:05	151208A-3010F-BLK		151208A6010	1.
14	08 Dec 2015	15:10	151208A-3010F-LCS		151208A6010	1.
15	08 Dec 2015	15:16	151208A-3010-BLK		151208A6010	1.
16	08 Dec 2015	15:20	151208A-3010-LCS		151208A6010	1.
18	08 Dec 2015	15:29	AZ25342W01		151208A6010	1.
19	08 Dec 2015	15:34	AZ25343W02		151208A6010	1.
20	08 Dec 2015	15:39	AZ25344W02		151208A6010	1.
21	08 Dec 2015	15:44	AZ25345W01		151208A6010	1.
22	08 Dec 2015	15:49	AZ25346W05		151208A6010	1.
23	08 Dec 2015	15:54	AZ25346W05 MS		151208A6010	1.
24	08 Dec 2015	15:59	AZ25346W05 MSD		151208A6010	1.
25	08 Dec 2015	16:04	AZ25346W05-A		151208A6010	1.
26	08 Dec 2015	16:09	AZ25346W05-1/5		151208A6010	5.
27	08 Dec 2015	16:13	CCV2 151208RJS I:PB O:RJS		151208A6010	1.
28	08 Dec 2015	16:20	CCB 151208RJS I:PB O:RJS		151208A6010	1.
38	08 Dec 2015	17:04	CCV1 151208RJS I:PB O:RJS		151208A6010	1.
39	08 Dec 2015	17:09	CCB 151208RJS I:PB O:RJS		151208A6010	1.
40	08 Dec 2015	17:13	AZ25342W02		151208A6010	1.
41	08 Dec 2015	17:18	AZ25343W01		151208A6010	1.
42	08 Dec 2015	17:23	AZ25344W01		151208A6010	1.
43	08 Dec 2015	17:28	AZ25345W02		151208A6010	1.
44	08 Dec 2015	17:33	AZ25346W04		151208A6010	1.
45	08 Dec 2015	17:38	AZ25346W04 MS		151208A6010	1.
46	08 Dec 2015	17:43	AZ25346W04 MSD		151208A6010	1.
47	08 Dec 2015	17:48	AZ25346W04-A		151208A6010	1.
48	08 Dec 2015	17:53	AZ25346W04-1/5		151208A6010	5.
49	08 Dec 2015	17:57	CCV2 151208RJS I:PB O:RJS		151208A6010	1.
50	08 Dec 2015	18:04	CCB 151208RJS I:PB O:RJS		151208A6010	1.

6010 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	09 Dec 2015	12:56	CalBlk 151209RJS I:PB O:R		151209A6010	1.
2	09 Dec 2015	13:00	STD 1 151209RJS I:PB O:RJ		151209A6010	1.
3	09 Dec 2015	13:04	STD 2 151209RJS I:PB O:RJ		151209A6010	1.
4	09 Dec 2015	13:08	STD 3 151209RJS I:PB O:RJ		151209A6010	1.
5	09 Dec 2015	13:12	ICV 151209RJS I:PB O:RJS		151209A6010	1.
6	09 Dec 2015	13:21	ICB 151209RJS I:PB O:RJS		151209A6010	1.
9	09 Dec 2015	13:34	ICSA 151209RJS I:PB O:RJS		151209A6010	1.
10	09 Dec 2015	13:39	ICSAB 151209RJS I:PB O:RJ		151209A6010	1.
11	09 Dec 2015	13:44	CCV1 151209RJS I:PB O:RJS		151209A6010	1.
12	09 Dec 2015	13:49	CCB 151209RJS I:PB O:RJS		151209A6010	1.
13	09 Dec 2015	13:53	AZ25342W01-1/20		151209A6010	20.
14	09 Dec 2015	13:57	AZ25343W02-1/20		151209A6010	20.
15	09 Dec 2015	14:01	AZ25344W02-1/20		151209A6010	20.
16	09 Dec 2015	14:05	AZ25345W01-1/20		151209A6010	20.
17	09 Dec 2015	14:10	AZ25346W05-1/20		151209A6010	20.
18	09 Dec 2015	14:14	AZ25346W05 MS-1/20		151209A6010	20.
19	09 Dec 2015	14:18	AZ25346W05 MSD-1/20		151209A6010	20.
20	09 Dec 2015	14:22	AZ25346W05-A-1/20		151209A6010	20.
21	09 Dec 2015	14:27	AZ25346W05-1/100		151209A6010	100.
22	09 Dec 2015	14:31	CCV2 151209RJS I:PB O:RJS		151209A6010	1.
23	09 Dec 2015	14:35	CCB 151209RJS I:PB O:RJS		151209A6010	1.
24	09 Dec 2015	14:40	AZ25342W02-1/20		151209A6010	20.
25	09 Dec 2015	14:44	AZ25343W01-1/20		151209A6010	20.
26	09 Dec 2015	14:48	AZ25344W01-1/20		151209A6010	20.
27	09 Dec 2015	14:52	AZ25345W02-1/20		151209A6010	20.
28	09 Dec 2015	14:57	AZ25346W04-1/20		151209A6010	20.
29	09 Dec 2015	15:01	AZ25346W04 MS-1/20		151209A6010	20.
30	09 Dec 2015	15:05	AZ25346W04 MSD-1/20		151209A6010	20.
31	09 Dec 2015	15:09	AZ25346W04-A-1/20		151209A6010	20.
32	09 Dec 2015	15:14	AZ25346W04-1/100		151209A6010	100.
34	09 Dec 2015	15:23	CCV1 151209RJS I:PB O:RJS		151209A6010	1.
35	09 Dec 2015	15:28	CCB 151209RJS I:PB O:RJS		151209A6010	1.

200.7 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	18 Dec 2015	10:53	CalBlk 151218RJS I:PB O:R		151218A2007	1.
2	18 Dec 2015	10:57	STD 1 151218RJS I:PB O:RJ		151218A2007	1.
3	18 Dec 2015	11:01	STD 2 151218RJS I:PB O:RJ		151218A2007	1.
4	18 Dec 2015	11:04	STD 3 151218RJS I:PB O:RJ		151218A2007	1.
5	18 Dec 2015	11:14	ICV 151218RJS I:PB O:RJS		151218A2007	1.
6	18 Dec 2015	11:20	ICB 151218RJS I:PB O:RJS		151218A2007	1.
8	18 Dec 2015	11:37	ICSA 151218RJS I:PB O:RJS		151218A2007	1.
9	18 Dec 2015	11:42	ICSAB 151218RJS I:PB O:RJ		151218A2007	1.
10	18 Dec 2015	11:46	CCV1 151218RJS I:PB O:RJS		151218A2007	1.
11	18 Dec 2015	11:53	CCB 151218RJS I:PB O:RJS		151218A2007	1.
12	18 Dec 2015	11:57	151214A-3010T-BLK 2		151218A2007	1.
13	18 Dec 2015	12:01	151214A-3010T-LCS 2		151218A2007	1.
14	18 Dec 2015	12:05	AZ25347W05		151218A2007	1.
15	18 Dec 2015	12:11	151214A-3010T-BLK		151218A2007	1.
16	18 Dec 2015	12:16	151214A-3010T-LCS		151218A2007	1.
17	18 Dec 2015	12:21	AZ25348S01		151218A2007	1.
18	18 Dec 2015	12:27	AZ25348S01 MS		151218A2007	1.
19	18 Dec 2015	12:32	AZ25348S01 MSD		151218A2007	1.
20	18 Dec 2015	12:38	AZ25348S01-A		151218A2007	1.
21	18 Dec 2015	12:43	AZ25348S01-1/5		151218A2007	5.
22	18 Dec 2015	12:51	CCV2 151218RJS I:PB O:RJS		151218A2007	1.
23	18 Dec 2015	12:54	CCB 151218RJS I:PB O:RJS		151218A2007	1.

various Injection Log

Directory: K:\FIMS Freddie\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	07 Dec 2015	12:45	Calib. Blank		151207W	1.
2	07 Dec 2015	12:47	0.2		151207W	1.
3	07 Dec 2015	12:49	0.5		151207W	1.
4	07 Dec 2015	12:52	1		151207W	1.
5	07 Dec 2015	12:54	2		151207W	1.
6	07 Dec 2015	12:56	5		151207W	1.
7	07 Dec 2015	12:58	10		151207W	1.
8	07 Dec 2015	13:00	ICV 12/07/15 RE		151207W	1.
9	07 Dec 2015	13:02	ICB 12/07/15 RE		151207W	1.
10	07 Dec 2015	13:04	CCV 12/07/15 RE		151207W	1.
11	07 Dec 2015	13:06	CCB 12/07/15 RE		151207W	1.
16	07 Dec 2015	13:17	151205B BLK		151207W	1.
17	07 Dec 2015	13:19	151205B LCS		151207W	1.
18	07 Dec 2015	13:21	CCV 12/07/15 RE		151207W	1.
19	07 Dec 2015	13:23	CCB 12/07/15 RE		151207W	1.
58	07 Dec 2015	14:46	CCV 12/07/15 RE		151207W	1.
59	07 Dec 2015	14:48	CCB 12/07/15 RE		151207W	1.
65	07 Dec 2015	15:01	AZ25342W02		151207W	1.
66	07 Dec 2015	15:03	AZ25343W01		151207W	1.
67	07 Dec 2015	15:06	AZ25344W01		151207W	1.
68	07 Dec 2015	15:08	AZ25345W02		151207W	1.
69	07 Dec 2015	15:10	AZ25346W02		151207W	1.
70	07 Dec 2015	15:12	AZ25346W02 MS		151207W	1.
71	07 Dec 2015	15:14	AZ25346W02 MSD		151207W	1.
72	07 Dec 2015	15:16	CCV 12/07/15 RE		151207W	1.
73	07 Dec 2015	15:18	CCB 12/07/15 RE		151207W	1.

various Injection Log

Directory: K:\FIMS Freddie\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	14 Dec 2015	09:23	Calib. Blank		151214W	1.
2	14 Dec 2015	09:26	0.2		151214W	1.
3	14 Dec 2015	09:28	0.5		151214W	1.
4	14 Dec 2015	09:30	1		151214W	1.
5	14 Dec 2015	09:32	2		151214W	1.
6	14 Dec 2015	09:34	5		151214W	1.
7	14 Dec 2015	09:36	10		151214W	1.
8	14 Dec 2015	09:38	ICV 12/14/15 RE		151214W	1.
9	14 Dec 2015	09:40	ICB 12/14/15 RE		151214W	1.
10	14 Dec 2015	09:43	CCV 12/14/15 RE		151214W	1.
11	14 Dec 2015	09:45	CCB 12/14/15 RE		151214W	1.
14	14 Dec 2015	09:51	151211A BLK 7470F		151214W	1.
15	14 Dec 2015	09:53	151211A LCS 7470F		151214W	1.
18	14 Dec 2015	09:59	CCV 12/14/15 RE		151214W	1.
19	14 Dec 2015	10:02	CCB 12/14/15 RE		151214W	1.
32	14 Dec 2015	10:29	CCV 12/14/15 RE		151214W	1.
33	14 Dec 2015	10:31	CCB 12/14/15 RE		151214W	1.
34	14 Dec 2015	10:33	AZ25342W01		151214W	1.
35	14 Dec 2015	10:36	AZ25343W02		151214W	1.
36	14 Dec 2015	10:38	AZ25344W02		151214W	1.
37	14 Dec 2015	10:40	AZ25345W01		151214W	1.
38	14 Dec 2015	10:42	AZ25346W05		151214W	1.
39	14 Dec 2015	10:44	AZ25346W05 MS		151214W	1.
40	14 Dec 2015	10:46	AZ25346W05 MSD		151214W	1.
41	14 Dec 2015	10:48	CCV 12/14/15 RE		151214W	1.
42	14 Dec 2015	10:50	CCB 12/14/15 RE		151214W	1.

various Injection Log

Directory: K:\FIMS Freddie\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	15 Dec 2015	08:52	Calib. Blank		151215W	1.
2	15 Dec 2015	08:54	0.2		151215W	1.
3	15 Dec 2015	08:56	0.5		151215W	1.
4	15 Dec 2015	08:58	1		151215W	1.
5	15 Dec 2015	09:01	2		151215W	1.
6	15 Dec 2015	09:03	5		151215W	1.
7	15 Dec 2015	09:05	10		151215W	1.
8	15 Dec 2015	09:07	ICV 12/14/15 RE		151215W	1.
9	15 Dec 2015	09:09	ICB 12/14/15 RE		151215W	1.
10	15 Dec 2015	09:11	CCV 12/14/15 RE		151215W	1.
11	15 Dec 2015	09:13	CCB 12/11/15 RE		151215W	15.
16	15 Dec 2015	09:24	151214A BLK 7470TCLP		151215W	1.
17	15 Dec 2015	09:26	151214A BLK 2 7470TCLP		151215W	1.
18	15 Dec 2015	09:28	151214A LCS 7470TCLP		151215W	1.
19	15 Dec 2015	09:30	151214A LCS 2 7470TCLP		151215W	1.
20	15 Dec 2015	09:32	CCV 12/14/15 RE		151215W	1.
21	15 Dec 2015	09:34	CCB 12/11/15 RE		151215W	15.
44	15 Dec 2015	10:23	CCV 12/14/15 RE		151215W	1.
45	15 Dec 2015	10:26	CCB 12/11/15 RE		151215W	15.
47	15 Dec 2015	10:30	AZ25347S01		151215W	1.
48	15 Dec 2015	10:32	AZ25348S01		151215W	1.
49	15 Dec 2015	10:34	AZ25348S01 MS		151215W	1.
50	15 Dec 2015	10:36	AZ25348S01 MSD		151215W	1.
51	15 Dec 2015	11:00	CCV 12/14/15 RE		151215W	1.
52	15 Dec 2015	11:02	CCB 12/11/15 RE		151215W	15.

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-AQIDW-112015

Sample Collection Date: 11/20/15

APPL ID: AZ25347

ARF: 78007

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 9040C	PH	6.67@12.2C	NA			pH Units	1	11/23/15	11/23/15

Printed: 12/11/15 3:21:18 PM

APPL-F1-SC-NoMC-REG MDLs

INORGANIC ANALYSIS
Calibration Data

APPL, INC.

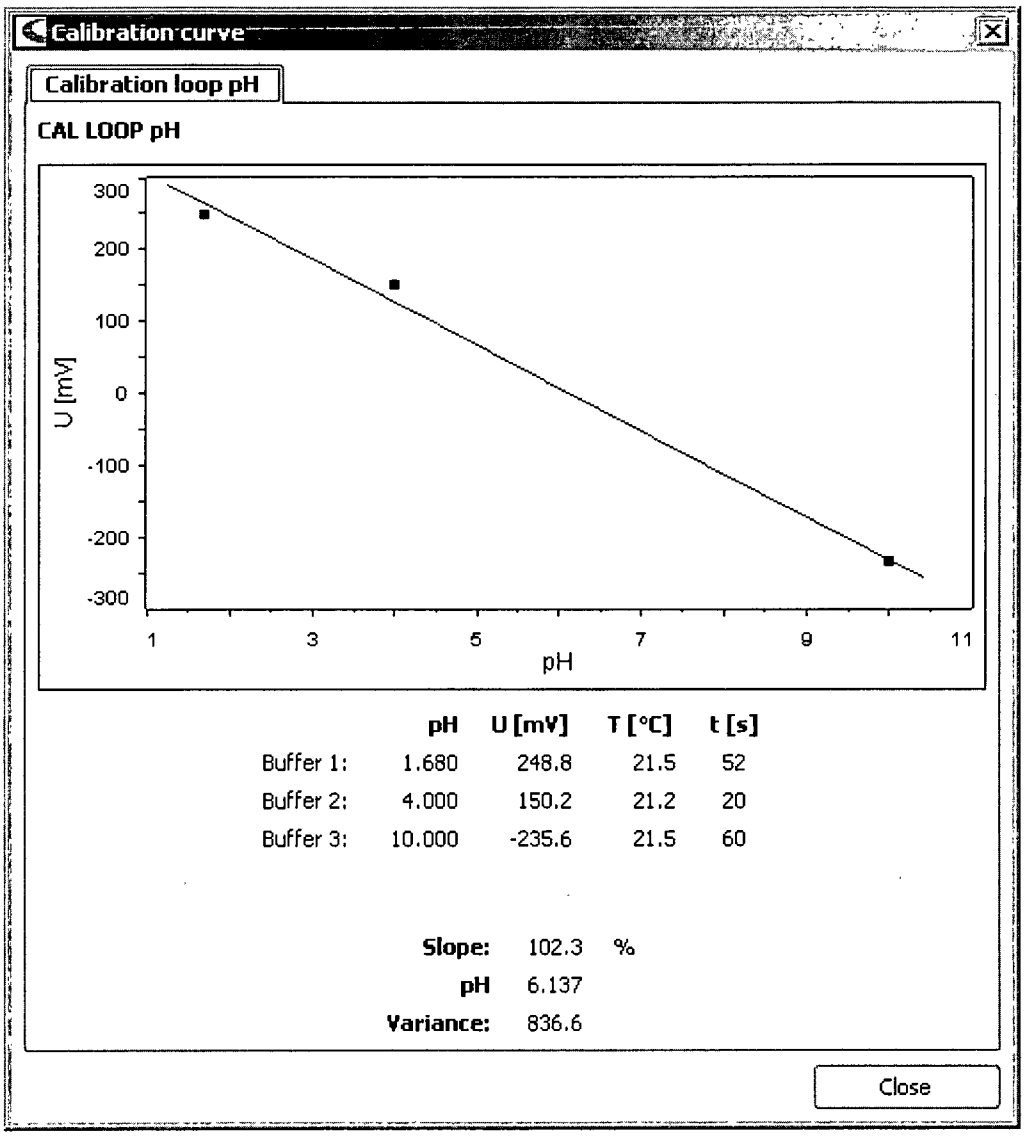
A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 78007 SDG: 78007
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/23/15

Analyte	Calibration Verification									M
	True CCV1	Found 9:58	%R(1)	True CCV1	Found 10:07	%R(1)	True	Found	%R(1)	
pH	7	7.04	101	7	7.02	100				

(1) Control Limits: 99-101

ILM02.0


Calibration curve
Calibration loop pH
CAL LOOP pH
300
200
100
0
-100
-200
-300
U [mV]
1
3
5
7
9
11
pH
pH U [mV] T [°C] t [s]
Buffer 1: 1.680 248.8 21.5 52
Buffer 2: 4.000 150.2 21.2 20
Buffer 3: 10.000 -235.6 21.5 60
Slope: 102.3 %
pH 6.137
Variance: 836.6
Close

INORGANIC ANALYSIS
Raw Data

APPL, INC.

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Result	Temp	Unit	Batch	Initials
CCV	2015-11-23 10:07:50 UTC-8	pH meas 2011	7.02 7.05	22.6	pH Units		
AZ25347W05 dup	2015-11-23 10:04:38 UTC-8	pH meas 2011	6.70 6.67	12.8	pH Units	151123a	bb
AZ25347W05	2015-11-23 10:01:43 UTC-8	pH meas 2011	6.67 6.65	12.2	pH Units	151123a	bb
CCV	2015-11-23 09:58:10 UTC-8	pH meas 2011	7.04 7.07	23.0	pH Units		

150.1/9040B Injection Log

Directory: I:\Tiamo\EXPORT\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	23 Nov 2015	09:58	CCV		151123a_PH	1.
2	23 Nov 2015	10:01	AZ25347W05		151123a_PH	1.
3	23 Nov 2015	10:04	AZ25347W05 dup		151123a_PH	1.
4	23 Nov 2015	10:07	CCV		151123a_PH	1.

12.11.15

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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www.alsglobal.com

December 17, 2015 **Analytical Report for Service Request No:** K1513513

Cynthia Clark
Agriculture and Priority Pollutants Lab, Inc.
908 North Temperance Ave.
Clovis, CA 93611

RE: 78007

Dear Cynthia,

Enclosed are the results of the sample(s) submitted to our laboratory November 24, 2015
For your reference, these analyses have been assigned our service request number **K1513513.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3275. You may also contact me via email at Chris.Leaf@ALSGlobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Chris Leaf for Chris Leaf
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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www.alsglobal.com

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS Environmental

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Agriculture & Priority Pollutant Labs, Inc.	**Service Request No.:**	K1513513
Project:	78007	**Date Received:**	11/24/15
Sample Matrix:	Water and Soil		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two samples were received for analysis at ALS Environmental on 11/24/15. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

Corrosivity Towards Steel by EPA Method 1110:
The fully submerged coupon was reported for samples S67-AQIDW-110215 and S67-SOIDW-112015. In sample S67-SOIDW-112015 the half submerged coupon had a result of 6.3 mm/year.

No other anomalies associated with the analysis of these samples were observed.

Approved by Kent Clawson

ALS Environmental

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

SUBCONTRACT ORDER

APPL, Inc.

K1 513513

ARF: 78007 **PO: 00-78007**

SENDING LABORATORY:

APPL Labs
908 North Temperance Ave.
Clovis, CA 93611
Phone: (559) 275-2175
Fax: (559) 275-4422
Project Manager: Cynthia Clark (cclark@applinc.com)

RECEIVING LABORATORY:

Columbia Analytical - Kelso
1317 South 13th Avenue
Kelso, WA 98626-2845
Phone: (360) 577-7222x
Fax: (360) 636-1068
DOD Expiration Date:

Comments: ~~2 week TAT~~, Level IV report, DoD QSM v4.2 reporting, Tetra Tech LEDD EDD to cclark@applinc.com
STD TAT

	APPL ID	Sample ID	LOC ID	Matrix	Collected	Analysis	Price
1.	AZ25347	S67-AQIDW-112015		Water	11/20/15 13:50	Corrosivity EPA 1110A	
				Water	11/20/15 13:50	Ignitablility EPA 1010A	
2.	AZ25348	S67-SOIDW-112015		~~Water~~ SOIL	11/20/15 13:40	Corrosivity EPA 1110A	
				~~Water~~	11/20/15 13:40	Ignitablility EPA 1010A	

pH-2375

Released By	Date	Time	Received By	Date	Time
	11/23/15	1300		11/24/15	0900
Released By	Date	Time	Received By	Date	Time

Upon receipt, please email signed COC to APPL Inc.
To ensure timely payment, please include the PO number on your invoice.

PC CV

Cooler Receipt and Preservation Form

Client / Project: APPL Service Request *K15* 13513

Received: 11/24/15 Opened: 11/24/15 By: SO Unloaded: 11/24/15 By: SO

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
5.9	6.0	5.9	6.0	+0.1	348		7750 4315 3739	

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

*Notes, Discrepancies, & Resolutions:*_____

*Page*____ *of*____

ALS Environmental

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project:	78007	**Date Collected:**	11/20/15
Sample Matrix:	Soil	**Date Received:**	11/24/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
S67-SOIDW-112015	K1513513-002	**78.6**	-	-	1	11/25/15 11:31	

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QA/QC Report

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project	78007	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary
Inorganic Parameters

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1513509-001DUP	-	74.3	75.8	75.1	2	20	11/25/15
Batch QC	K1513516-010DUP	-	80.4	80.7	80.6	<1	20	11/25/15
Batch QC	K1513516-017DUP	-	81.6	82.6	82.1	1	20	11/25/15
Batch QC	K1513516-018DUP	-	78.2	74.9	76.6	4	20	11/25/15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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General Chemistry

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Analytical Report

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project:	78007	**Date Collected:**	11/20/15
Sample Matrix:	Water	**Date Received:**	11/24/15
Analysis Method:	1020A	**Units:**	deg C
Prep Method:	None	**Basis:**	NA

Flash Point

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
S67-AQIDW-112015	K1513513-001	**>110**	-	-	-	1	12/05/15 14:40	
Method Blank	K1513513-MB1	**>110**	-	-	-	1	12/05/15 14:40	

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project	78007	**Date Collected:**	11/20/15
Sample Matrix:	Water	**Date Received:**	11/24/15
		Date Analyzed:	12/05/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	S67-AQIDW-112015	**Units:**	deg C
Lab Code:	K1513513-001	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K1513513-001DUP Result	Average	RPD	RPD Limit
Flash Point	1020A	-	-	-	>110	>110	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project:	78007	**Date Analyzed:**	12/05/15
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Flash Point

Analysis Method:	1020A	**Units:**	deg C
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	475059

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1513513-LCS3	27.0	27.0	100	85-115

Analytical Report

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project:	78007	**Date Collected:**	11/20/15
Sample Matrix:	Soil	**Date Received:**	11/24/15
Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received

Flash Point

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
S67-SOIDW-112015	K1513513-002	**>110**	-	-	-	1	12/05/15 14:40	
Method Blank	K1513513-MB2	**>110**	-	-	-	1	12/05/15 14:40	
Method Blank	K1513513-MB3	**>110**	-	-	-	1	12/05/15 14:40	

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project	78007	**Date Collected:**	11/20/15
Sample Matrix:	Soil	**Date Received:**	11/24/15
Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary
Flash Point

Sample Name:	Lab Code:	LOQ	LOD	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1513301-001DUP	-		-	>110	>110	NC	NC	20	12/05/15
S67-SOIDW-112015	K1513513-002DUP	-		-	>110	>110	NC	NC	20	12/05/15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project:	78007	**Date Analyzed:**	12/05/15
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
Flash Point

Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received
		Analysis Lot:	475059

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1513513-LCS1	27.0	27.0	100	85-115
Lab Control Sample	K1513513-LCS2	27.0	27.0	100	85-115

Analytical Report

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project:	78007	**Date Collected:**	11/20/15
Sample Matrix:	Water	**Date Received:**	11/24/15
Analysis Method:	1110	**Units:**	mm/yr
Prep Method:	None	**Basis:**	NA

Corrosivity Toward Steel

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
S67-AQIDW-112015	K1513513-001	**8.2**	6.2	-	-	1	12/09/15 16:20	
Method Blank	K1513513-MB1	ND U	6.2	-	-	1	12/09/15 16:20	

Analytical Report

Client:	Agriculture & Priority Pollutant Labs, Inc. (APPL)	**Service Request:**	K1513513
Project:	78007	**Date Collected:**	11/20/15
Sample Matrix:	Soil	**Date Received:**	11/24/15
Analysis Method:	1110 Modified	**Units:**	mm/yr
Prep Method:	None	**Basis:**	As Received

Corrosivity Towards Steel

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
S67-SOIDW-112015	K1513513-002	**9.5**	6.2	-	-	1	12/09/15 16:20	
Method Blank	K1513513-MB2	ND U	6.2	-	-	1	12/09/15 16:20	

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Raw Data

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Total Solids

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Benchsheet

Service Request #:	**K1513509, KQ1514053, K1513513, K1513516**	**Run #:**	**473906**
Test:	**TS**	**Balance ID:**	**K-Balance-16**
Method:	**160.3 Modified**		

Pan ID:	Lab Code:	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
	K1513509-001	1.29	11.05	9.50	8.21	74.3	
	K1513509-001DUP	1.30	12.18	10.53	9.23	75.8	2
	K1513513-002	1.29	20.48	17.39	16.1	78.6	
	K1513516-001	1.31	11.35	9.66	8.35	73.6	
	K1513516-002	1.30	11.13	8.95	7.65	68.7	
	K1513516-003	1.29	11.13	8.61	7.32	65.8	
	K1513516-004	1.28	10.14	10.20	8.92	88.0	
	K1513516-005	1.30	10.69	9.69	8.39	78.5	
	K1513516-007	1.30	10.18	9.42	8.12	79.8	
	K1513516-008	1.30	11.69	10.72	9.42	80.6	
	K1513516-009	1.29	12.28	11.21	9.92	80.8	
	K1513516-010	1.30	12.27	11.17	9.87	80.4	
	K1513516-010DUP	1.29	13.24	11.98	10.7	80.7	<1
	K1513516-011	1.29	10.99	10.34	9.05	82.3	
	K1513516-012	1.30	10.15	9.65	8.35	82.3	
	K1513516-013	1.29	10.14	9.71	8.42	83.0	
	K1513516-014	1.31	12.65	11.46	10.2	80.2	
	K1513516-015	1.29	10.80	10.17	8.88	82.2	
	K1513516-016	1.29	11.54	10.79	9.50	82.3	
	K1513516-017	1.29	12.67	11.63	10.3	81.6	
	K1513516-017DUP	1.30	10.66	10.11	8.81	82.6	1
	K1513516-018	1.30	10.14	9.23	7.93	78.2	
	K1513516-018DUP	1.31	10.54	9.20	7.89	74.9	4
	K1513516-019	1.31	12.42	10.81	9.50	76.5	

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	K-OVEN-07	105	105	11/25/2015	11:31	11/30/2015	07:05	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	K-Balance-16	1.00, 99.99	1.00, 99.99	11/25/2015	11:11	11/25/2015	11:31
Calibration2	K-Balance-16	1.00, 100.00	1.00, 100.01	11/30/2015	07:44	11/30/2015	07:48

Comments: DJM Reviewed 12-1-15 L.J.

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General Chemistry

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Work Request # Original (3301) 3513

Tier: II IV

Date Analyzed: 12.5.15

Analyst: MS

Analysis: Flash

Run # 475059

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Due 12/4/15

Final Approved by: _____ Date: 12/7/15

DQRFPORT

Analytical Results Summary

Instrument Name: K-FlashPoint-01 **Analyst:** MSPECHT **Analysis Lot:** 475059 **Method/Testcode:** 1020A Modified/IgnitClosedCup

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1513301-001	Flash Point	N/A		Misc. Solid	>110 deg C	g	>110 deg C	1					12/5/15 14:40:00	N	II
K1513513-001	Flash Point	N/A		Water	>110 deg C	2 mL	>110 deg C	1					12/5/15 14:40:00	N	IV
K1513513-002	Flash Point	N/A		Soil	>110 deg C	g	>110 deg C	1					12/5/15 14:40:00	N	IV
KQ1514400-02	Flash Point	MB		Misc. Solid	>110 deg C	g	>110 deg C	1					12/5/15 14:40:00	N	II
KQ1514400-03	Flash Point	MB		Water	>110 deg C	2 mL	>110 deg C	1					12/5/15 14:40:00	N	IV
KQ1514400-04	Flash Point	MB		Soil	>110 deg C	g	>110 deg C	1					12/5/15 14:40:00	N	IV
KQ1514400-05	Flash Point	LCS		Misc. Solid	27.00 deg C	g	27.0 deg C	1			100		12/5/15 14:40:00	N	II
KQ1514400-06	Flash Point	LCS		Water	27.00 deg C	2 mL	27.0 deg C	1			100		12/5/15 14:40:00	N	IV
KQ1514400-07	Flash Point	LCS		Soil	27.00 deg C	g	27.0 deg C	1			100		12/5/15 14:40:00	N	IV
KQ1514400-08	Flash Point	DUP	K1513301-001	Misc. Solid	>110 deg C	g	>110 deg C	1				NC	12/5/15 14:40:00	N	II
KQ1514400-09	Flash Point	DUP	K1513513-001	Water	>110 deg C	2 mL	>110 deg C	1				NC	12/5/15 14:40:00	N	IV
KQ1514400-10	Flash Point	DUP	K1513513-002	Soil	>110 deg C	g	>110 deg C	1				NC	12/5/15 14:40:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Environmental

Service Request: K1513513,3301

Analysis For: Flashpoint

Method: EPA 1020

p-xylene STD 1

°C	Yes	No
20		X
25		X
30	X	
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		
105		
110		
21		X
22		X
23		X
24		X
Verification		
25		X
26		X
27	X	
28		
29		
Obs. Flash =		27
Flashpoint =		27

1-butanol STD 2

°C	Yes	No
20		
25		
30		X
35		X
40	X	
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		
105		
110		
31		X
32		X
33		X
34		X
Verification		
35		X
36		X
37	X	
38		
39		
Obs. Flash =		37
Flashpoint =		37

DI Water Blank

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		X
85		
90		X
95		
100		X
105		
110		X
Verification		
110		X
Obs. Flash =		>110
Flashpoint =		>110

Sample #: K3513-1

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		X
55		
60		X
65		
70		X
75		
80		X
85		
90		X
95		
100		X
105		
110		X
Verification		
110		X
Obs. Flash =		>110
Flashpoint =		>110

Sample #: K3513-1D

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		X
75		
80		X
85		
90		X
95		
100		X
105		
110		X
Verification		
110		X
Obs. Flash =		>110
Flashpoint =		>110

Standard 1: **p-xylene T.V. = 27.0 °C ±0.5 °C** **Lot #:** **K12W031** **%REC=**

Standard 2: **1-butanol T.V. = 37.0 °C ±1.0 °C** **Lot #:** 71926 **%REC=**

Actual Flashpoint (°C) = Observed flashpoint + 0.03 (760 - Avg. barometric pressure (mm Hg))

Barometric Pressure

Beginning : 758.952

End : 758.952

Comments:

Instrument ID: K-Flashpoint-01

Analyst: MS		Date: 12/5/2015	Time: 14:40
Reviewed By:		Date: 12/7/15	

Revision 1-R:/WET/ANALYSES/FLASH/TEMPLATE/fpointF&C

ALS Environmental

Service Request: K1513513,3301

Analysis For: Flashpoint

Method: EPA 1020

Sample #: K3513-2

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		X
75		
80		X
85		
90		X
95		
100		X
105		
110		X
Verification		
110		X
Obs. Flash =		>110
Flashpoint =		>110

Sample #: K3513-2D

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		X
75		
80		X
85		
90		X
95		
100		X
105		
110		X
Verification		
110		X
Obs. Flash =		>110
Flashpoint =		>110

Sample #: K3301-1

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		
55		
60		X
65		
70		X
75		
80		X
85		
90		X
95		
100		X
105		
110		
Verification		
110		
Obs. Flash =		
Flashpoint =		

Sample #: K3301-1D

°C	Yes	No
20		
25		
30		
35		
40		
45		
50		
55		
60		X
65		
70		X
75		
80		X
85		
90		X
95		
100		X
105		
110		
Verification		
110		
Obs. Flash =		
Flashpoint =		

Sample #:

°C	Yes	No
~~20~~		
~~25~~		
~~30~~		
~~35~~		
~~40~~		
~~45~~		
~~50~~		
~~55~~		
~~60~~		
~~65~~		
~~70~~		
~~75~~		
~~80~~		
~~85~~		
~~90~~		
~~95~~		
~~100~~		
~~105~~		
~~110~~		
Verification		
Obs. Flash =		
Flashpoint =		

Comments:

Analyst: MS	Date:	12/5/2015	Time: 14:40
Reviewed By:	Date:	12/7/15	

Work Request # (Original) K1513513

Tier: IV

Date Analyzed: 12-4-15

Analyst: MS

Analysis: Corrosivity

Run# 475637

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/(NA)
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
9.	Are results for methods blanks all ND?	(yes)/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	(yes)/no/NA
11.	Are all exceptions explained?	(yes)/no/NA
12.	Have all applicable service requests been reviewed?	(yes)/no/NA
13.	Are all samples labeled correctly?	(yes)/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	(yes)/no/NA
15.	Are detection limits and units reported correctly?	(yes)/no/NA
16.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/(no)/NA

COMMENTS:

Due 12/4/15

Final Approved by: [signature] Date: 12/11/15

DQREPORT

Analytical Results Summary

Instrument Name: K-Balance-05 **Analyst:** MSPECHT **Analysis Lot:** 475637 **Method/Testcode:** 1110/Corr Steel

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1513513-001	Corrosivity Toward Steel	N/A		Water	8.20 mm/yr	1000 mL	8.2 mm/yr	1		6.2			12/9/15 16:20:00	N	IV
K1513513-002	Corrosivity Towards Steel	N/A		Soil	9.50 mm/yr	50 g	9.5 mm/yr	1		6.2			12/9/15 16:20:00	N	IV
KQ1514566-01	Corrosivity Toward Steel	MB		Water	1.10 mm/yr	1000 mL	6.2 mm/yr U	1		6.2			12/9/15 16:20:00	N	IV
KQ1514566-02	Corrosivity Towards Steel	MB		Soil	1.10 mm/yr	50 g	6.2 mm/yr U	1		6.2			12/9/15 16:20:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Environmental.

Service Request No.: K1513513 **Method:** SW-846/1110

Analysis for: **Corrosivity Toward Steel**

Sample No.	MB	Sample No	K3513-1 F	Sample No.	K3513-1 1/2	Sample No.	K3513-1 V
Coupon No.	90	Coupon No.	170	Coupon No.	159	Coupon No.	176
D	1.482	D	1.4935	D	1.4980	D	1.4920
d	0.4050	d	0.4065	d	0.4085	d	0.4075
t	0.1145	t	0.1100	t	0.1110	t	0.1090
Area (cm2)	3.8691	Area (cm2)	3.8988	Area (cm2)	3.9256	Area (cm2)	3.8843
Start Time	12/9/2015 16:20	Start Time	12/9/2015 16:20	Start Time	12/9/2015 16:20	Start Time	12/9/2015 16:20
Stop Time	12/10/2015 19:20	12/10/2015 19:20	12/10/2015 19:20	Stop Time	12/10/2015 19:20	Stop Time	12/10/2015 19:20
Elapsed Time (hr)	23.00	Elapsed Time (hr)	23.00	Elapsed Time (hr)	23.00	Elapsed Time (hr)	23.00
Initial wt (g)	23.1716	Initial wt (g)	22.9215	Initial wt (g)	23.4673	Initial wt (g)	22.7225
Final Wt (g)	23.1626	Final Wt (g)	22.8468	Final Wt (g)	23.4144	Final Wt (g)	22.6893
Initial Temp (Deg C)	55*	Initial Temp (Deg C)	55*	Initial Temp (Deg C)	55*	Initial Temp (Deg C)	55*
Final Temp (Deg C)	55*	Temp (Deg C)	55*	Temp (Deg C)	55*	Temp (Deg C)	55*
Weight Loss (mg)	9.0	Weight Loss (mg)	74.7	Weight Loss (mg)	52.9	Weight Loss (mg)	33.2
mm/year (mmpy)	1.1	mm/year (mmpy)	8.2	mm/year (mmpy)	5.4	mm/year (mmpy)	3.0

Sample No.	K3513-2 F	Sample No.	K3513-2 1/2	Sample No.	K3513-2 V	~~Sample No.~~	
Coupon No.	126	Coupon No.	161	Coupon No.	157	~~Coupon No.~~	
D	1.4930	D	1.4910	D	1.5010	~~D~~	
d	0.4055	d	0.4115	d	0.4045	~~d~~	
t	0.1075	t	0.1075	t	0.1150	~~t~~	
Area (cm2)	3.8823	Area (cm2)	3.8666	Area (cm2)	3.9684	~~Area (cm2)~~	
Start Time	12/9/2015 16:20	Start Time	12/9/2015 16:20	Start Time	12/9/2015 16:20	~~Start Time~~	~~12/9/2015 16:20~~
Stop Time	12/10/2015 19:20	Stop Time	12/10/2015 19:20	Stop Time	12/10/2015 19:20	~~Stop Time~~	~~12/10/2015 19:20~~
Elapsed Time (hr)	23.00	Elapsed Time (hr)	23	Elapsed Time (hr)	23	~~Elapsed Time (hr)~~	23
Initial wt (g)	23.3585	Initial wt (g)	22.5026	Initial wt (g)	24.1741	~~Initial wt (g)~~	
Final Wt (g)	23.2733	Final Wt (g)	22.4435	Final Wt (g)	24.1169	~~Final Wt (g)~~	
Initial Temp (Deg C)	55*	Initial Temp (Deg C)	55*	Initial Temp (Deg C)	55*	~~Initial Temp (Deg C)~~	55*
Final Temp (Deg C)	55*	Temp (Deg C)	55*	Temp (Deg C)	55*	~~Temp (Deg C)~~	55*
Weight Loss (mg)	85.2	Weight Loss (mg)	59.1	Weight Loss (mg)	57.2	~~Weight Loss (mg)~~	
mm/year (mmpy)	9.5	mm/year (mmpy)	6.3	mm/year (mmpy)	5.9	~~mm/year (mmpy)~~	

Comments: K3513-1=1000ML / K3513-2=50.1504G K1513513-001 AVG= 5.5

Thermometer: 105625,011777 K1513513-002 AVG= 7.2

Analyst:	MS	Date: 12/11/15	12/9/15
Reviewed By:		Date: 12/11/15	

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