General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston SC 29407

Chain of Custody/Analysis Request

ADEP

COC/Lab Request #: 2014-3353

Page 1 of 1

Client Contact:

Lab Agreement # : 126310011

Project Number :

Analysis Turnaround Time:

24 Hour - ☐ Other - ☐
7 Day - ☐
14 Day - ☐
21 Day - ☐
28 Day - ☒

Site Name: Los Alamos National Laboratory

Rad Screening Info: Yes, Below Background

Lab Reporting Limit Type: Sample Quantitation Limit

Special Instructions:

Field Sample ID	Sample Date	Sample Time	Sample Matrix	WSP-8260B-VOA	WSP-8270C-SVOA
CAMO-14-75543	May 6 2014	9:45	W	2	3
CAMO-14-75540	May 6 2014	9:45	W	2	

Special Instructions:

Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 4642 **EVENT NAME:** Mortandad/Sandia (MDA C and GS Investigation) MY2014 Q3 Watershed Sampling

SAMPLE ID: CAMO-14-75540 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED (MM/DD/YYYY):		05/06/2014	**FIELD MATRIX:**	WG	OK
TIME COLLECTED (HH:MM):		9:45	**MEDIA:**	UA	↓
PRS ID:		OK	**SAMPLE TECH CODE:**	UA	GSP
LOCATION ID:	R-14 S1	↓	**FIELD PREP:**	UF	OK
LOCATION TYPE:		↓	**FIELD QC TYPE:**	FTB	↓
PORT:	SINGLE COMPLETION	↓	**SAMPLE USAGE:**	QC	

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
N/A	WSP-8260B-VOA	40 ML SEPTUM AMBER GLASS	2	HCL JSH 5/6/14	Y	NONE

SAMPLE COMMENTS: none

LOCATION COMMENTS: none

~~FIELD PARAMETERS:~~

Dissolved Oxygen _____ mg/L Flow (in gpm) JSH 5/6/14 Oxidation-Reduction Potential _____ mV

pH _____ SU Specific Conductance _____ uS/cm Temperature _____ deg C

Turbidity _____ NTU

COLLECTED BY (PRINT) D. Fellenz

RELINQUISHED BY (Printed Name) Julie Matteson **(Signature)**	**Date/Time** 05/06/14 1230	**RECEIVED BY (Printed Name)** S. Sherwood **(Signature)**	**Date/Time** 05/06/14 1230
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date 05/01/2014

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 4642 **EVENT NAME:** Mortandad/Sandia (MDA C and GS Investigation) MY2014 Q3 Watershed Sampling

SAMPLE ID: CAMO-14-75543 **WORK ORDER:** NA

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED (MM/DD/YYYY):		05/06/2014	**FIELD MATRIX:** WG		Ok
TIME COLLECTED (HH:MM):		9:45	**MEDIA:** UA		↓
PRS ID:		Ok	**SAMPLE TECH CODE:** UA		GSP
LOCATION ID: R-14 S1		↓	**FIELD PREP:** UF		Ok
LOCATION TYPE: MON		↓	**FIELD QC TYPE:** REG		↓
PORT: SINGLE COMPLETION		↓	**SAMPLE USAGE:** INV		↓

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
N/A	WSP-8260B-VOA	40 ML SEPTUM AMBER GLASS	2	HCL	Y	NONE
↓	WSP-8270C-SVOA	1 LITER AMBER GLASS	3	ICE	↓	
↓	WSP-LL-H-3	1 LITER POLY	1	NONE	↓	

SAMPLE COMMENTS: Sampled within 50' of running diesel generator

LOCATION COMMENTS: none.

FIELD PARAMETERS:

Dissolved Oxygen 5.69 mg/L Flow (in gpm) 7.3 GPM Oxidation-Reduction Potential -14.3 mV

pH 8.19 SU Specific Conductance 134 uS/cm Temperature 23.00 deg C

Turbidity 0.8 NTU

COLLECTED BY (PRINT) D. Fellenz

RELINQUISHED BY (Printed Name) Julie Maze (Signature) Julie Maze	**Date/Time** 05/06/14 1230	**RECEIVED BY** (Printed Name) S Greenwood (Signature) S Greenwood	**Date/Time** 05/06/14 1230
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

Report Date 05/01/2014

DATA VALIDATION REPORT

Chain Of Custody No. 2014-3353

1. Distribution Of Samples In EDD.

SDG	Analytical Method	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks
348269	SW-846:8260B	1		1		
348269	SW-846:8270D	1				

SDG	Analytical Method	Analysis Lot ID	Prep Lot ID	Regular Samples	Field Duplicates	Trip Blanks	Field Blanks	Equipment Blanks	Method Blanks	Matrix Spikes	Matrix Spike Dups	Analytical Spikes	Post-Digestion Spikes	Lab Control Samples	Lab Control Sample Dups	Blank Spike	Blank Spike Dups	Lab Duplicates	Storage Blanks	Preparation Blanks	Reagent Blanks
348269	SW-846:8260B	1390101	1390101	1		1			2					4							
348269	SW-846:8270D	1387154	1387153	1					1	1	1			1							

2. Distribution Of Analytes In EDD.

Analytical Method	Analytical Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spiked Compounds	TICS
SW-846:8260B	VOC	CAMO-14-75540	348269002	FTB	80	3	0	0
SW-846:8260B	VOC	CAMO-14-75543	348269001	REG	80	3	0	0
SW-846:8260B	VOC	LCS	1203094005	LCS	0	3	70	0
SW-846:8260B	VOC	LCS	1203094006	LCS	0	3	10	0
SW-846:8260B	VOC	LCS	1203099706	LCS	0	3	70	0
SW-846:8260B	VOC	LCS	1203099707	LCS	0	3	10	0
SW-846:8260B	VOC	MB	1203094002	MB	80	3	0	0
SW-846:8260B	VOC	MB	1203099705	MB	80	3	0	0
SW-846:8270D	SVOC	CAMO-14-75543	1203086343	MS	0	6	76	0
SW-846:8270D	SVOC	CAMO-14-75543	1203086344	MSD	0	6	76	0
SW-846:8270D	SVOC	CAMO-14-75543	348269001	REG	80	6	0	0
SW-846:8270D	SVOC	LCS	1203086342	LCS	0	6	76	0
SW-846:8270D	SVOC	MB	1203086341	MB	80	6	0	0

3. Are any analytes missing?

No.

4. Were any holding times exceeded?

No.

5. Any contaminants in blanks?

No.

6. Any surrogate recoveries outside the control limits?

No.

7. Any MS/MSD recoveries or RPDs outside the control limits?

No.

8. Any LCS/LCSD or BS/BSD recoveries or RPDs outside the control limits?

LCS Lab Sample	LCSD Lab	Analytical Method	Parameter Name	Lab Lot ID	Analysis	Sample Matrix	LCS Spike Recovery	LCSD Spike Recovery	Upper Limit	Lower Limit	Upper Rejection Limit	Lower Rejection Limit	RPD	RPD Limit
1203094005		SW-846:8260B	Hexachlorobutadiene	1390101	05-23-2014	W	130		128	71		10		
1203099706		SW-846:8260B	Trichlorofluoromethane	1390101	05-24-2014	W	137		123	73		10		
1203099706		SW-846:8260B	Vinyl acetate	1390101	05-24-2014	W	131		130	78		10		
1203099707		SW-846:8260B	Acrolein	1390101	05-24-2014	W	131		126	65		10		

9. Any Field Duplicate RPDs outside the desired limits?

No.

10. Any Lab Duplicate RPDs outside the desired limits?

No.

11. Any required reporting limits exceeded?

No.

12. Additional Validator's Comments.

13. Display Flagged Data.

None.

Reason Code	Description
U_LAB	The analytical laboratory qualified the analyte as not detected.

14. Usable Result Count.

Field Sample ID	Location ID	Sample Purpose	Analytical Method	No. Unuseable Records	Total Records
CAMO-14-75540	R-14 S1	FTB	SW-846:8260B	0	80
CAMO-14-75543	R-14 S1	REG	SW-846:8260B	0	80
CAMO-14-75543	R-14 S1	REG	SW-846:8270D	0	80

GEL Laboratories LLC

a member of The GEL Group INC

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

P 843.556.8171 F 843.766.1178

www.gel.com

June 02, 2014

Mr. Keith Greene
Los Alamos National Laboratory
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL- WQH Water Samples
Work Order: 348269
SDG: 2014-3353

Dear Mr. Greene:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on May 08, 2014, and analyzed for GC/MS Semivolatile and GC/MS Volatile. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

Hope Taylor for
Valerie Davis
Project Manager

Chain of Custody: 2014-3353
Enclosures

ARS International, LLC (ARS-LANS-MTOA6-25093-GEL)
LANL- WQH Water Samples
Work Order #: 348269
SDG: 2014-3353

Table of Contents

Case Narrative

Case Narrative for
ARS International, LLC (ARS-LANS-MTOA6-25093-GEL)
LANL- WQH Water Samples
Workorder #: 348269
SDG # : 2014-3353

June 04, 2014

Laboratory Identification:

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

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on May 08, 2014 for analysis. The samples were delivered with proper chain of custody documentation and signatures. The samples were screened according to GEL Standard Operating Procedure. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C). Shipping container temperatures were checked, documented, and within specifications. There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
348269001	CAMO-14-75543
348269002	CAMO-14-75540

Case Narrative

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

Data Package

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

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

Hope Taylor for
Valerie Davis
Project Manager

List of current GEL Certifications as of 02 June 2014

State	Certification
Alaska	UST−110
Arkansas	88−0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH−0169
Delaware	SC000122013−10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−12−00283, P330−12−00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013−10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M−SC012
Michigan	9976
Mississippi	SC000122013−10
Nebraska	NE−OS−26−13
Nevada	SC000122014−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68−00485
Plant Material Permit	PDEP−12−00260
South Carolina Chemistry	10120001
South Carolina GVL	23611001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235−14−9
Utah NELAP	SC000122013−11
Vermont	VT87156
Virginia NELAP	460202
Washington	C780−12
Wisconsin	999887790

Chain of Custody and Supporting Documentation

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston SC 29407

Chain of Custody/Analysis Request

3482169 ADEP

COC/Lab Request #: 2014-3353

Page 1 of 1

Client Contact:

Lab Agreement # : 126310011

Project Number :

Site Name: Los Alamos National Laboratory

Analysis Turnaround Time:

24 Hour - ☐ Other - ☐
7 Day - ☐
14 Day - ☐
21 Day - ☐
28 Day - ☒

Field Sample ID	Sample Date	Sample Time	Sample Matrix	WSP-8260B-VOA	WSP-8270C-SVOA
CAMO-14-75543	May 6 2014	9:45	W	2	3
CAMO-14-75540	May 6 2014	9:45	W	2	

Rad Screening Info: Yes, Below Background

Lab Reporting Limit Type: Sample Quantitation Limit

Special Instructions:

Special Instructions:

Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
[signature]	Melissa Montoya	5/7/14 3:00	P. Want	Patricia Dent	5.8.14 0900
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL			SDG/AR/COC/Work Order: 2014-3353
Received By: P. Quest			Date Received: 5-8-14
Suspected Hazard Information	**Yes**	**No**	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):
Classified Radioactive II or III by RSO?		X	If yes, Were swipes taken of sample contatiners < action levels?
COC/Samples marked containing PCBs?		X	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		X	If yes, samples are to be segregeated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X			Preservation Method: Ice bags Blue ice Dry ice None Other (describe) 3.5c *all temperatures are recorded in Celsius
2a	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): 130462966
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?	X			Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	X			Sample ID's affected:
11	Number of containers received match number indicated on COC?			X	Sample ID's affected: CAMO-14-7554 lab rec'd (1) 82606 VOA vial container chain initials (2).
12	Are sample containers identifiable as GEL provided?	X		X	clients
13	COC form is properly signed in relinquished/received sections?	X			
14	Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other 5908 1777 0255-5c 5908 1777 0244-3c

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials HH Date 05/8/14 Page 1 of 1

ORIGIN ID:SAFA (505) 665-9966
KEITH GREENE
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07MAY14
ACTWGT: 36.0 LB MAN
CAD: 0014176/CAFE2704

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: WE6L11551000

5c

518C1/62D3/6F03

FedEx Express

J131113052301Z6

TRK# 0201 5908 1777 0255

THU - 08 MAY 10:30A
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US CHS

Part # 156148-434 RIT2 10/11

ORIGIN ID:SAFA (505) 665-9966
KEITH GREENE
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07MAY14
ACTWGT: 44.0 LB MAN
CAD: 0014176/CAFE2704

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: MR1A015AGWK0

3c

518C1/62D3/6F02

FedEx Express

J131113052301Z6

TRK# 0201 5908 1777 0244

THU - 08 MAY 10:30A
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US CHS

Part # 156148-434 RIT2 10/11

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

P Organics-The concentrations between the primary and confirmation columns/detectors is >40% difference. For HPLC, the difference is >70%.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Volatile Analysis

Case Narrative

ChemStation Case Narrative
ARS International, LLC (ARSL)
SDG 2014-3353

Method/Analysis Information

Procedure:	**Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method:	SW846 8260B DOE-AL
Analytical Batch Number:	1390101

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
348269001	CAMO-14-75543
348269002	CAMO-14-75540
1203094002	Method Blank (MB)
1203094003	348269001(CAMO-14-75543) Post Spike (PS)
1203094004	348269001(CAMO-14-75543) Post Spike Duplicate (PSD)
1203094005	Laboratory Control Sample (LCS)
1203094006	Laboratory Control Sample (LCS)
1203094007	348269001(CAMO-14-75543) Post Spike (PS)
1203094008	348269001(CAMO-14-75543) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 21.

Raw data reports are processed and reviewed by the analyst using the Chemstation software package. False positives have been removed from the quantitation reports per standard operating procedures (SOP) section 19.1.2. False positive analytes are designated on the quantitation report with a ’d’ qualifier.

Calibration Information

A complete list of the initial calibration data files with the correct dates and times of analysis are shown in the Calibration History report located in the Standard Data section of the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L or 20 ug/L for low level analyses. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Blank (MB) Statement
The blank analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS 1203094005 (LCS) recoveries were not all within the acceptance limits. The unacceptable recoveries were less than 5% of the requested analyte list. This satisfies the client criteria. The results are reported. See the Data Exception Report in the miscellaneous section of the data package.

QC Sample Designation
Sample 348269001 (CAMO-14-75543) was designated for spike analysis.

Matrix Spike (PS) Recovery Statement
The spike 1203094007 (CAMO-14-75543) recoveries were not all within the acceptance limits. See the Data Exception Report in the miscellaneous section of the data package.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate 1203094004 (CAMO-14-75543) recoveries were not all within the acceptance limits. See the Data Exception Report in the miscellaneous section of the data package.

Relative Percent Difference (RPD) Statement
The RPD between the matrix spike pair were not all within the acceptance limits. See the Data Exception Report in the miscellaneous section of the deliverable.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. Samples 1203094003 (CAMO-14-75543), 1203094004 (CAMO-14-75543), 1203094007 (CAMO-14-75543), 1203094008 (CAMO-14-75543), 348269001 (CAMO-14-75543) and 348269002 (CAMO-14-75540) were not analyzed within the recommended holding. However, the samples were analyzed within two times the holding period. This satisfies the client criteria.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions/Methanol Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation
The following DER was generated for this SDG: 1299231.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were requested for this sample delivery group/work order. Please note that non-requested target analytes that are reported on the quantitation reports will be present on the Form I. These detected analytes are included in the calibrated method and as a result will be reported on the Sample Data Summary (Form I) or Certificate of Analysis (C of A). TIC data are included on the Sample Data Summary (Form I).

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA6.I	Agilent 6890N/5975 GC/MS w/ OI 4560/Archon Autosampler	HP6890N/HP5975	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

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

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ARSL004 ARS International, LLC (ARS-LANS-MTOA6-25093-GEL)

Client SDG: 2014-3353 GEL Work Order: 348269

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

H Analytical holding time was exceeded

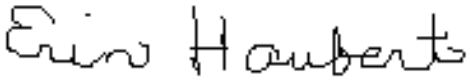
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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

Review/Validation

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

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

Signature:  **Name: Erin Haubert**

Date: 03 JUN 2014 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269001**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75543**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 17:46**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 17:46**				
Data File:	**052314V6\6J512.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	HU	1.00	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	HU	1.00	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	HU	1.00	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	HU	1.00	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	HU	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	HU	1.00	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	HU	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	HU	1.00	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	HU	1.00	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	HU	5.00	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	HU	1.00	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
591-78-6	2-Hexanone	HU	5.00	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	HU	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	HU	5.00	ug/L	1.50	5.00
67-64-1	Acetone	HU	10.0	ug/L	2.50	10.0
75-05-8	Acetonitrile	HU	25.0	ug/L	8.00	25.0
107-02-8	Acrolein	HU	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	HU	5.00	ug/L	1.50	5.00
107-05-1	Allyl chloride	HU	5.00	ug/L	1.50	5.00
71-43-2	Benzene	HU	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	HU	1.00	ug/L	0.300	1.00
74-97-5	Bromochloromethane	HU	1.00	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	HU	1.00	ug/L	0.300	1.00
75-25-2	Bromoform	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269001**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75543**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 17:46**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 17:46**				
Data File:	**052314V6\6J512.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	HU	1.00	ug/L	0.300	1.00
75-15-0	Carbon disulfide	HU	5.00	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	HU	1.00	ug/L	0.300	1.00
108-90-7	Chlorobenzene	HU	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	HU	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	HU	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	HU	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	HU	1.00	ug/L	0.300	1.00
74-95-3	Dibromomethane	HU	1.00	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	HU	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	HU	1.00	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	HU	5.00	ug/L	1.50	5.00
100-41-4	Ethylbenzene	HU	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	HU	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	HU	5.00	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	HU	50.0	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	HU	1.00	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	HU	5.00	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	HU	5.00	ug/L	1.50	5.00
75-09-2	Methylene chloride	HU	10.0	ug/L	1.70	10.0
91-20-3	Naphthalene	HU	1.00	ug/L	0.600	1.00
107-12-0	Propionitrile	HU	5.00	ug/L	1.50	5.00
100-42-5	Styrene	HU	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	HU	1.00	ug/L	0.300	1.00
108-88-3	Toluene	HU	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	HU	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	HU	1.00	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	HU	5.00	ug/L	1.50	5.00
108-05-4	Vinyl acetate	HU	5.00	ug/L	1.50	5.00
75-01-4	Vinyl chloride	HU	1.00	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	HU	2.00	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	HU	50.0	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	HU	1.00	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	HU	1.00	ug/L	0.300	1.00
95-47-6	o-Xylene	HU	1.00	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269001**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75543**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 17:46**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 17:46**				
Data File:	**052314V6\6J512.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	HU	1.00	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	HU	1.00	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.0	50.0	ug/L	100	(78%-124%)
Bromofluorobenzene	50.4	50.0	ug/L	101	(80%-120%)
Toluene-d8	49.5	50.0	ug/L	99.0	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown siloxane	13.848	5.59	ug/L	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269002**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75540**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 18:15**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 18:15**				
Data File:	**052314V6\6J513.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	HU	1.00	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	HU	1.00	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	HU	1.00	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	HU	1.00	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	HU	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	HU	1.00	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	HU	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	HU	1.00	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	HU	1.00	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	HU	5.00	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	HU	1.00	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
591-78-6	2-Hexanone	HU	5.00	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	HU	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	HU	5.00	ug/L	1.50	5.00
67-64-1	Acetone	HU	10.0	ug/L	2.50	10.0
75-05-8	Acetonitrile	HU	25.0	ug/L	8.00	25.0
107-02-8	Acrolein	HU	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	HU	5.00	ug/L	1.50	5.00
107-05-1	Allyl chloride	HU	5.00	ug/L	1.50	5.00
71-43-2	Benzene	HU	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	HU	1.00	ug/L	0.300	1.00
74-97-5	Bromochloromethane	HU	1.00	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	HU	1.00	ug/L	0.300	1.00
75-25-2	Bromoform	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269002**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75540**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 18:15**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 18:15**				
Data File:	**052314V6\6J513.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	HU	1.00	ug/L	0.300	1.00
75-15-0	Carbon disulfide	HU	5.00	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	HU	1.00	ug/L	0.300	1.00
108-90-7	Chlorobenzene	HU	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	HU	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	HU	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	HU	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	HU	1.00	ug/L	0.300	1.00
74-95-3	Dibromomethane	HU	1.00	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	HU	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	HU	1.00	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	HU	5.00	ug/L	1.50	5.00
100-41-4	Ethylbenzene	HU	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	HU	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	HU	5.00	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	HU	50.0	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	HU	1.00	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	HU	5.00	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	HU	5.00	ug/L	1.50	5.00
75-09-2	Methylene chloride	HU	10.0	ug/L	1.70	10.0
91-20-3	Naphthalene	HU	1.00	ug/L	0.600	1.00
107-12-0	Propionitrile	HU	5.00	ug/L	1.50	5.00
100-42-5	Styrene	HU	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	HU	1.00	ug/L	0.300	1.00
108-88-3	Toluene	HU	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	HU	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	HU	1.00	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	HU	5.00	ug/L	1.50	5.00
108-05-4	Vinyl acetate	HU	5.00	ug/L	1.50	5.00
75-01-4	Vinyl chloride	HU	1.00	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	HU	2.00	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	HU	50.0	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	HU	1.00	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	HU	1.00	ug/L	0.300	1.00
95-47-6	o-Xylene	HU	1.00	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269002**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75540**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 18:15**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 18:15**				
Data File:	**052314V6\6J513.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	HU	1.00	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	HU	1.00	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	52.7	50.0	ug/L	105	(78%-124%)
Bromofluorobenzene	50.7	50.0	ug/L	101	(80%-120%)
Toluene-d8	49.5	50.0	ug/L	99.0	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/L		

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 2014-3353

Matrix Type: LIQUID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1203094005	LCS for batch 1390101	102	102	95
1203094006	LCS for batch 1390101	96	96	93
1203094002	MB for batch 1390101	102	99	100
348269001	CAMO-14-75543	100	99	101
348269002	CAMO-14-75540	105	99	101
1203094003	CAMO-14-75543PS	107	110	95
1203094004	CAMO-14-75543PSD	100	100	93
1203094007	CAMO-14-75543PS	107	103	98
1203094008	CAMO-14-75543PSD	107	98	98

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(78%-124%)
TOL	= Toluene-d8	(80%-120%)
BFB	= Bromofluorobenzene	(80%-120%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353 **Sample Type:** Post Spike

Client ID: CAMO-14-75543PS **Matrix:** W

Lab Sample ID 1203094003

Instrument: VOA6.I **Analysis Date:** 05/23/2014 22:06 **Dilution:** 1

Analyst: GRB2

Purge Vol: 5 mL **Batch ID:** 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	PS	m,p-Xylenes	100	0.00	HU	96.3	96	72-120
75-05-8	PS	Acetonitrile	1250	0.00	HU	881	70	61-135
67-64-1	PS	Acetone	250	0.00	HU	88.3	35	29-144
74-88-4	PS	Iodomethane	250	0.00	HU	259	104	73-120
75-15-0	PS	Carbon disulfide	250	0.00	HU	231	93	79-138
108-05-4	PS	Vinyl acetate	250	0.00	HU	249	100	60-136
78-93-3	PS	2-Butanone	250	0.00	HU	124	50	38-136
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	HU	209	84	70-132
591-78-6	PS	2-Hexanone	250	0.00	HU	146	58	48-137
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	HU	54.7	109	51-133
74-87-3	PS	Chloromethane	50.0	0.00	HU	51.6	103	54-135
75-01-4	PS	Vinyl chloride	50.0	0.00	HU	55.5	111	52-129
74-83-9	PS	Bromomethane	50.0	0.00	HU	51.5	103	67-128
75-00-3	PS	Chloroethane	50.0	0.00	HU	47.2	94	69-120
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	HU	58.3	117	66-126
60-29-7	PS	Ethyl ether	50.0	0.00	HU	43.2	86	69-120
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	HU	43.2	86	74-130
75-09-2	PS	Methylene chloride	50.0	0.00	HU	46.2	92	73-120
1634-04-4	PS	tert-Butyl methyl ether	50.0	0.00	HU	48.7	97	71-124
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	HU	43.1	86	75-124
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	HU	44.5	89	76-122
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	HU	45.2	90	77-121

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353 **Sample Type:** Post Spike
Client ID: CAMO-14-75543PS **Matrix:** W
Lab Sample ID 1203094003
Instrument: VOA6.I **Analysis Date:** 05/23/2014 22:06 **Dilution:** 1
Analyst: GRB2
Purge Vol: 5 mL **Batch ID:** 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	HU	49.8	100	72-129
74-97-5	PS	Bromochloromethane	50.0	0.00	HU	50.9	102	78-122
67-66-3	PS	Chloroform	50.0	0.00	HU	49.3	99	75-123
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	HU	52.2	104	76-129
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	HU	44.1	88	76-125
56-23-5	PS	Carbon tetrachloride	50.0	0.00	HU	55.2	110	76-132
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	HU	48.9	98	68-128
71-43-2	PS	Benzene	50.0	0.00	HU	44.5	89	75-120
79-01-6	PS	Trichloroethylene	50.0	0.00	HU	47.6	95	75-125
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	HU	49.1	98	75-120
74-95-3	PS	Dibromomethane	50.0	0.00	HU	53.0	106	77-122
75-27-4	PS	Bromodichloromethane	50.0	0.00	HU	58.4	117	76-129
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	HU	52.8	106	75-127
108-88-3	PS	Toluene	50.0	0.00	HU	48.6	97	72-120
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	HU	47.5	95	73-123
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	HU	43.2	86	77-120
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	HU	43.2	86	73-120
127-18-4	PS	Tetrachloroethylene	50.0	0.00	HU	50.8	102	67-124
124-48-1	PS	Dibromochloromethane	50.0	0.00	HU	54.4	109	70-130
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	HU	47.2	94	79-122
108-90-7	PS	Chlorobenzene	50.0	0.00	HU	47.4	95	74-120
100-41-4	PS	Ethylbenzene	50.0	0.00	HU	46.6	93	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353 **Sample Type:** Post Spike
Client ID: CAMO-14-75543PS **Matrix:** W
Lab Sample ID 1203094003
Instrument: VOA6.I **Analysis Date:** 05/23/2014 22:06 **Dilution:** 1
Analyst: GRB2
Purge Vol: 5 mL **Batch ID:** 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
95-47-6	PS	o-Xylene	50.0	0.00	HU	47.8	96	72-120
100-42-5	PS	Styrene	50.0	0.00	HU	50.2	100	74-124
75-25-2	PS	Bromoform	50.0	0.00	HU	49.6	99	61-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	HU	45.7	91	71-124
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	HU	43.7	87	74-124
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	HU	43.7	87	71-125
108-86-1	PS	Bromobenzene	50.0	0.00	HU	47.3	95	72-120
103-65-1	PS	n-Propylbenzene	50.0	0.00	HU	45.2	90	69-121
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	HU	48.2	96	71-123
95-49-8	PS	2-Chlorotoluene	50.0	0.00	HU	46.6	93	71-120
106-43-4	PS	4-Chlorotoluene	50.0	0.00	HU	46.1	92	70-120
98-06-6	PS	tert-Butylbenzene	50.0	0.00	HU	48.9	98	72-124
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	HU	46.7	93	71-122
135-98-8	PS	sec-Butylbenzene	50.0	0.00	HU	46.3	93	71-124
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	HU	48.3	97	70-124
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	HU	49.0	98	70-120
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	HU	45.2	90	70-120
104-51-8	PS	n-Butylbenzene	50.0	0.00	HU	47.2	94	69-125
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	HU	45.3	91	60-130
87-68-3	PS	Hexachlorobutadiene	50.0	0.00	HU	52.8	106	60-129
91-20-3	PS	Naphthalene	50.0	0.00	HU	41.4	83	58-134
87-61-6	PS	1,2,3-Trichlorobenzene	50.0	0.00	HU	48.9	98	52-132

Quality Control Summary
Spike Recovery Report

SDG Number: **2014-3353**
Sample Type: **Post Spike**
Client ID: **CAMO-14-75543PS**
Matrix: **W**
Lab Sample ID **1203094003**
Instrument: **VOA6.I**
Analysis Date: **05/23/2014 22:06**
Dilution: **1**
Analyst: **GRB2**
Purge Vol: **5 mL**
Batch ID: **1390101**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
120-82-1	PS	1,2,4-Trichlorobenzene	50.0	0.00	HU	48.6	97	59-126
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	HU	54.3	109	78-128
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	HU	47.7	95	72-120
71-36-3	PS	n-Butyl alcohol	5000	0.00	HU	3750	75	64-138

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353 **Sample Type:** Post Spike Duplicate
Client ID: CAMO-14-75543PSD **Matrix:** W
Lab Sample ID 1203094004
Instrument: VOA6.I **Analysis Date:** 05/23/2014 22:35 **Dilution:** 1
Analyst: GRB2
Purge Vol: 5 mL **Batch ID:** 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
179601-23-1	PSD	m,p-Xylenes	100	0.00	HU	96.7	97	72-120	0	0-20
75-05-8	PSD	Acetonitrile	1250	0.00	HU	847	68	61-135	4	0-20
67-64-1	PSD	Acetone	250	0.00	HU	81.5	33	29-144	8	0-20
74-88-4	PSD	Iodomethane	250	0.00	HU	252	101	73-120	3	0-20
75-15-0	PSD	Carbon disulfide	250	0.00	HU	237	95	79-138	2	0-20
108-05-4	PSD	Vinyl acetate	250	0.00	HU	240	96	60-136	3	0-20
78-93-3	PSD	2-Butanone	250	0.00	HU	113	45	38-136	10	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	HU	168	67 *	70-132	22 *	0-20
591-78-6	PSD	2-Hexanone	250	0.00	HU	132	53	48-137	10	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	HU	46.4	93	51-133	16	0-20
74-87-3	PSD	Chloromethane	50.0	0.00	HU	44.9	90	54-135	14	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.00	HU	48.8	98	52-129	13	0-20
74-83-9	PSD	Bromomethane	50.0	0.00	HU	54.0	108	67-128	5	0-20
75-00-3	PSD	Chloroethane	50.0	0.00	HU	50.9	102	69-120	8	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	HU	57.3	115	66-126	2	0-20
60-29-7	PSD	Ethyl ether	50.0	0.00	HU	44.9	90	69-120	4	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	HU	43.5	87	74-130	1	0-20
75-09-2	PSD	Methylene chloride	50.0	0.00	HU	48.9	98	73-120	6	0-20
1634-04-4	PSD	tert-Butyl methyl ether	50.0	0.00	HU	44.5	89	71-124	9	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	HU	43.5	87	75-124	1	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	HU	45.2	90	76-122	1	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	HU	44.7	89	77-121	1	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353 **Sample Type:** Post Spike Duplicate
Client ID: CAMO-14-75543PSD **Matrix:** W
Lab Sample ID 1203094004
Instrument: VOA6.I **Analysis Date:** 05/23/2014 22:35 **Dilution:** 1
Analyst: GRB2
Purge Vol: 5 mL **Batch ID:** 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	HU	48.4	97	72-129	3	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.00	HU	48.7	97	78-122	4	0-20
67-66-3	PSD	Chloroform	50.0	0.00	HU	48.4	97	75-123	2	0-20
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	HU	50.0	100	76-129	4	0-20
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	HU	44.1	88	76-125	0	0-20
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	HU	52.3	105	76-132	5	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	HU	45.0	90	68-128	8	0-20
71-43-2	PSD	Benzene	50.0	0.00	HU	44.2	88	75-120	1	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.00	HU	46.0	92	75-125	3	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	HU	36.9	74 *	75-120	28 *	0-20
74-95-3	PSD	Dibromomethane	50.0	0.00	HU	38.9	78	77-122	31 *	0-20
75-27-4	PSD	Bromodichloromethane	50.0	0.00	HU	43.7	87	76-129	29 *	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	HU	40.0	80	75-127	28 *	0-20
108-88-3	PSD	Toluene	50.0	0.00	HU	44.6	89	72-120	9	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	HU	46.3	93	73-123	3	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	HU	41.4	83	77-120	4	0-20
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	HU	41.9	84	73-120	3	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	HU	51.0	102	67-124	0	0-20
124-48-1	PSD	Dibromochloromethane	50.0	0.00	HU	52.0	104	70-130	4	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	HU	45.2	90	79-122	4	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.00	HU	47.8	96	74-120	1	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.00	HU	46.0	92	72-120	1	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353 **Sample Type:** Post Spike Duplicate
Client ID: CAMO-14-75543PSD **Matrix:** W
Lab Sample ID 1203094004
Instrument: VOA6.I **Analysis Date:** 05/23/2014 22:35 **Dilution:** 1
Analyst: GRB2
Purge Vol: 5 mL **Batch ID:** 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
95-47-6	PSD	o-Xylene	50.0	0.00	HU	48.8	98	72-120	2	0-20
100-42-5	PSD	Styrene	50.0	0.00	HU	51.3	103	74-124	2	0-20
75-25-2	PSD	Bromoform	50.0	0.00	HU	51.4	103	61-135	4	0-20
98-82-8	PSD	Isopropylbenzene	50.0	0.00	HU	46.3	93	71-124	1	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	HU	39.4	79	74-124	10	0-20
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	HU	41.7	83	71-125	5	0-20
108-86-1	PSD	Bromobenzene	50.0	0.00	HU	48.9	98	72-120	3	0-20
103-65-1	PSD	n-Propylbenzene	50.0	0.00	HU	45.5	91	69-121	1	0-20
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	HU	49.7	99	71-123	3	0-20
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	HU	46.9	94	71-120	1	0-20
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	HU	44.1	88	70-120	4	0-20
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	HU	49.7	99	72-124	2	0-20
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	HU	50.3	101	71-122	7	0-20
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	HU	46.4	93	71-124	0	0-20
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	HU	49.0	98	70-124	1	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	HU	46.7	93	70-120	5	0-20
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	HU	45.0	90	70-120	0	0-20
104-51-8	PSD	n-Butylbenzene	50.0	0.00	HU	46.4	93	69-125	2	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	HU	44.8	90	60-130	1	0-20
87-68-3	PSD	Hexachlorobutadiene	50.0	0.00	HU	58.5	117	60-129	10	0-20
91-20-3	PSD	Naphthalene	50.0	0.00	HU	46.1	92	58-134	11	0-20
87-61-6	PSD	1,2,3-Trichlorobenzene	50.0	0.00	HU	53.1	106	52-132	8	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353 **Sample Type:** Post Spike Duplicate

Client ID: CAMO-14-75543PSD **Matrix:** W

Lab Sample ID 1203094004

Instrument: VOA6.I **Analysis Date:** 05/23/2014 22:35 **Dilution:** 1

Analyst: GRB2

Purge Vol: 5 mL **Batch ID:** 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
120-82-1	PSD	1,2,4-Trichlorobenzene	50.0	0.00	HU	53.5	107	59-126	10	0-20
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	HU	53.5	107	78-128	2	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	HU	47.5	95	72-120	1	0-20
71-36-3	PSD	n-Butyl alcohol	5000	0.00	HU	3350	67	64-138	11	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1390101
Matrix: WATER
Lab Sample ID 1203094005
Instrument: VOA6.I
Analysis Date: 05/23/2014 14:52
Dilution: 1
Analyst: GRB2
Purge Vol: 5 mL
Batch ID: 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	97.5	98	80-120
75-05-8	LCS	Acetonitrile	1250	0.0	1070	86	63-131
67-64-1	LCS	Acetone	250	0.0	278	111	50-149
74-88-4	LCS	Iodomethane	250	0.0	258	103	75-120
75-15-0	LCS	Carbon disulfide	250	0.0	253	101	80-136
108-05-4	LCS	Vinyl acetate	250	0.0	304	122	78-130
78-93-3	LCS	2-Butanone	250	0.0	271	108	57-148
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	229	91	75-130
591-78-6	LCS	2-Hexanone	250	0.0	266	106	64-149
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	49.2	98	58-129
74-87-3	LCS	Chloromethane	50.0	0.0	47.6	95	59-131
75-01-4	LCS	Vinyl chloride	50.0	0.0	52.2	104	59-127
74-83-9	LCS	Bromomethane	50.0	0.0	53.1	106	70-125
75-00-3	LCS	Chloroethane	50.0	0.0	54.1	108	73-120
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	60.3	121	73-123
60-29-7	LCS	Ethyl ether	50.0	0.0	47.3	95	73-120
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	46.6	93	80-128
75-09-2	LCS	Methylene chloride	50.0	0.0	47.5	95	75-120
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	48.3	97	74-122
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	45.7	91	80-121
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	46.5	93	79-120
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	46.5	93	79-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1390101
Matrix: WATER
Lab Sample ID 1203094005
Instrument: VOA6.I
Analysis Date: 05/23/2014 14:52
Dilution: 1
Analyst: GRB2
Purge Vol: 5 mL
Batch ID: 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	52.0	104	79-130
74-97-5	LCS	Bromochloromethane	50.0	0.0	50.1	100	80-121
67-66-3	LCS	Chloroform	50.0	0.0	48.2	96	79-120
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	51.3	103	80-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	46.7	93	80-123
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.2	106	80-131
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.5	91	73-120
71-43-2	LCS	Benzene	50.0	0.0	45.5	91	78-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	46.4	93	80-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	42.3	85	79-120
74-95-3	LCS	Dibromomethane	50.0	0.0	44.1	88	80-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	42.6	85	80-126
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	40.8	82	80-125
108-88-3	LCS	Toluene	50.0	0.0	45.3	91	78-120
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	48.1	96	79-121
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	44.0	88	78-120
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	43.1	86	75-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	52.4	105	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	52.7	105	73-129
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	48.3	97	80-120
108-90-7	LCS	Chlorobenzene	50.0	0.0	47.8	96	79-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	47.0	94	79-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1390101
Matrix: WATER
Lab Sample ID 1203094005
Instrument: VOA6.I
Analysis Date: 05/23/2014 14:52
Dilution: 1
Analyst: GRB2
Purge Vol: 5 mL
Batch ID: 1390101

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
95-47-6	LCS	o-Xylene	50.0	0.0	47.7	95	80-123
100-42-5	LCS	Styrene	50.0	0.0	50.7	101	80-121
75-25-2	LCS	Bromoform	50.0	0.0	54.7	109	65-135
98-82-8	LCS	Isopropylbenzene	50.0	0.0	47.6	95	79-121
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	44.5	89	76-123
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	45.0	90	76-120
108-86-1	LCS	Bromobenzene	50.0	0.0	47.5	95	79-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	46.6	93	80-123
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	49.4	99	80-120
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	47.0	94	79-120
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	45.4	91	79-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	51.5	103	79-122
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	48.1	96	80-120
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	49.1	98	80-121
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	51.7	103	80-121
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	47.5	95	76-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	46.3	93	78-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	50.5	101	80-123
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	54.9	110	66-125
87-68-3	LCS	Hexachlorobutadiene	50.0	0.0	65.0	130 *	71-128
91-20-3	LCS	Naphthalene	50.0	0.0	53.6	107	64-132
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	60.7	121	61-132

Quality Control Summary
Spike Recovery Report

SDG Number: **2014-3353**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 1390101**
Matrix: **WATER**
Lab Sample ID **1203094005**
Instrument: **VOA6.I**
Analvsis Date: **05/23/2014 14:52**
Dilution: **1**
Analvst: **GRB2**
Purge Vol: **5 mL**
Batch ID: **1390101**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	60.3	121	66-130
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	52.5	105	80-125
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	48.1	96	78-120
71-36-3	LCS	n-Butyl alcohol	5000	0.0	4760	95	67-137

Quality Control Summary
Spike Recovery Report

SDG Number: **2014-3353**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 1390101**
Matrix: **WATER**
Lab Sample ID **1203094006**
Instrument: **VOA6.I**
Analysis Date: **05/23/2014 16:19**
Dilution: **1**
Analyst: **GRB2**
Purge Vol: **5 mL**
Batch ID: **1390101**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
107-02-8	LCS	Acrolein	250	0.0	300	120	65-126
76-13-1	LCS	Trichlorotrifluoroethane	250	0.0	270	108	73-132
107-05-1	LCS	Allyl chloride	250	0.0	231	92	67-127
107-13-1	LCS	Acrylonitrile	250	0.0	216	86	74-122
107-12-0	LCS	Propionitrile	250	0.0	216	87	73-124
126-98-7	LCS	Methacrylonitrile	250	0.0	223	89	68-123
80-62-6	LCS	Methyl methacrylate	250	0.0	235	94	79-120
97-63-2	LCS	Ethyl methacrylate	250	0.0	241	96	77-120
78-83-1	LCS	Isobutyl alcohol	2500	0.0	2000	80	72-133
126-99-8	LCS	2-Chloro-1,3-butadiene	50.0	0.0	51.6	103	57-142

Quality Control Summary
Spike Recovery Report

SDG Number: **2014-3353**
Sample Type: **Post Spike**
Client ID: **CAMO-14-75543PS**
Matrix: **W**
Lab Sample ID **1203094007**
Instrument: **VOA6.I**
Analysis Date: **05/23/2014 23:03**
Dilution: **1**
Analyst: **GRB2**
Purge Vol: **5 mL**
Batch ID: **1390101**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
107-02-8	PS	Acrolein	250	0.00	HU	350	140 *	57-131
76-13-1	PS	Trichlorotrifluoroethane	250	0.00	HU	295	118	76-133
107-05-1	PS	Allyl chloride	250	0.00	HU	266	107	65-130
107-13-1	PS	Acrylonitrile	250	0.00	HU	256	102	70-128
107-12-0	PS	Propionitrile	250	0.00	HU	207	83	68-131
126-98-7	PS	Methacrylonitrile	250	0.00	HU	220	88	64-129
80-62-6	PS	Methyl methacrylate	250	0.00	HU	229	91	76-120
97-63-2	PS	Ethyl methacrylate	250	0.00	HU	246	99	72-122
78-83-1	PS	Isobutyl alcohol	2500	0.00	HU	1870	75	72-134
126-99-8	PS	2-Chloro-1,3-butadiene	50.0	0.00	HU	56.0	112	46-140

Quality Control Summary
Spike Recovery Report

SDG Number: **2014-3353**
Sample Type: **Post Spike Duplicate**
Client ID: **CAMO-14-75543PSD**
Matrix: **W**
Lab Sample ID **1203094008**
Instrument: **VOA6.I**
Analysis Date: **05/23/2014 23:32**
Dilution: **1**
Analyst: **GRB2**
Purge Vol: **5 mL**
Batch ID: **1390101**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
107-02-8	PSD	Acrolein	250	0.00	HU	273	109	57-131	25 *	0-20
76-13-1	PSD	Trichlorotrifluoroethane	250	0.00	HU	253	101	76-133	16	0-20
107-05-1	PSD	Allyl chloride	250	0.00	HU	221	89	65-130	19	0-20
107-13-1	PSD	Acrylonitrile	250	0.00	HU	204	81	70-128	23 *	0-20
107-12-0	PSD	Propionitrile	250	0.00	HU	203	81	68-131	2	0-20
126-98-7	PSD	Methacrylonitrile	250	0.00	HU	230	92	64-129	4	0-20
80-62-6	PSD	Methyl methacrylate	250	0.00	HU	239	96	76-120	5	0-20
97-63-2	PSD	Ethyl methacrylate	250	0.00	HU	222	89	72-122	11	0-20
78-83-1	PSD	Isobutyl alcohol	2500	0.00	HU	1930	77	72-134	3	0-20
126-99-8	PSD	2-Chloro-1,3-butadiene	50.0	0.00	HU	49.6	99	46-140	12	0-20

Method Blank Summary

SDG Number:	**2014-3353**	**Client:**	**ARSL004**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1390101**	**Instrument ID:**	**VOA6.I**	**Data File:**	**052314V6\6J511BAR.D**
Lab Sample ID:	**1203094002**	**Prep Date:**	**05/23/2014 17:17**	**Analyzed:**	**05/23/14 17:17**
Column:	**DB-624**				

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

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1390101	1203094005	052314V6\6J506LAR.D	05/23/14	1452
02	LCS for batch 1390101	1203094006	052314V6\6J509SHAR.D	05/23/14	1619
03	CAMO-14-75543	348269001	052314V6\6J512.D	05/23/14	1746
04	CAMO-14-75540	348269002	052314V6\6J513.D	05/23/14	1815
05	CAMO-14-75543PS	1203094003	052314V6\6J521.D	05/23/14	2206
06	CAMO-14-75543PSD	1203094004	052314V6\6J522.D	05/23/14	2235
07	CAMO-14-75543PS	1203094007	052314V6\6J523.D	05/23/14	2303
08	CAMO-14-75543PSD	1203094008	052314V6\6J524.D	05/23/14	2332

Quality Control Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094002**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**MB for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 17:17**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 17:17**				
Data File:	**052314V6\6J511BAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.50	5.00
67-64-1	Acetone	U	10.0	ug/L	2.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	8.00	25.0
107-02-8	Acrolein	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.50	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094002**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**MB for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 17:17**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 17:17**				
Data File:	**052314V6\6J511BAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-15-0	Carbon disulfide	U	5.00	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.50	5.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.50	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	1.70	10.0
91-20-3	Naphthalene	U	1.00	ug/L	0.600	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
100-42-5	Styrene	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
108-88-3	Toluene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.50	5.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.300	1.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094002**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**MB for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 17:17**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 17:17**				
Data File:	**052314V6\6J511BAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.8	50.0	ug/L	102	(78%-124%)
Bromofluorobenzene	49.9	50.0	ug/L	99.8	(80%-120%)
Toluene-d8	49.6	50.0	ug/L	99.3	(80%-120%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/L		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094003**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 22:06**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 22:06**				
Data File:	**052314V6\6J521.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	H	54.3	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	H	52.2	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	H	43.7	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	H	43.2	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	H	44.5	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	H	43.2	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	H	44.1	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	H	48.9	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	H	43.7	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	H	48.6	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	H	46.7	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	H	45.3	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	H	47.2	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	H	47.7	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	H	48.9	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	H	49.1	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	H	48.2	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	H	49.0	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	H	43.2	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	H	45.2	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	H	49.8	ug/L	0.300	1.00
78-93-3	2-Butanone	H	124	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	HU	1.00	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	H	46.6	ug/L	0.300	1.00
591-78-6	2-Hexanone	H	146	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	H	46.1	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	H	48.3	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	H	209	ug/L	1.50	5.00
67-64-1	Acetone	H	88.3	ug/L	2.50	10.0
75-05-8	Acetonitrile	H	881	ug/L	8.00	25.0
107-02-8	Acrolein	HU	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	HU	5.00	ug/L	1.50	5.00
107-05-1	Allyl chloride	HU	5.00	ug/L	1.50	5.00
71-43-2	Benzene	H	44.5	ug/L	0.300	1.00
108-86-1	Bromobenzene	H	47.3	ug/L	0.300	1.00
74-97-5	Bromochloromethane	H	50.9	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	H	58.4	ug/L	0.300	1.00
75-25-2	Bromoform	H	49.6	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094003**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 22:06**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 22:06**				
Data File:	**052314V6\6J521.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	H	51.5	ug/L	0.300	1.00
75-15-0	Carbon disulfide	H	231	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	H	55.2	ug/L	0.300	1.00
108-90-7	Chlorobenzene	H	47.4	ug/L	0.300	1.00
75-00-3	Chloroethane	H	47.2	ug/L	0.300	1.00
67-66-3	Chloroform	H	49.3	ug/L	0.300	1.00
74-87-3	Chloromethane	H	51.6	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	H	54.4	ug/L	0.300	1.00
74-95-3	Dibromomethane	H	53.0	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	H	54.7	ug/L	0.300	1.00
60-29-7	Ethyl ether	H	43.2	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	HU	5.00	ug/L	1.50	5.00
100-41-4	Ethylbenzene	H	46.6	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	H	52.8	ug/L	0.300	1.00
74-88-4	Iodomethane	H	259	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	HU	50.0	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	H	45.7	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	HU	5.00	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	HU	5.00	ug/L	1.50	5.00
75-09-2	Methylene chloride	H	46.2	ug/L	1.70	10.0
91-20-3	Naphthalene	H	41.4	ug/L	0.600	1.00
107-12-0	Propionitrile	HU	5.00	ug/L	1.50	5.00
100-42-5	Styrene	H	50.2	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	H	50.8	ug/L	0.300	1.00
108-88-3	Toluene	H	48.6	ug/L	0.300	1.00
79-01-6	Trichloroethylene	H	47.6	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	H	58.3	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	HU	5.00	ug/L	1.50	5.00
108-05-4	Vinyl acetate	H	249	ug/L	1.50	5.00
75-01-4	Vinyl chloride	H	55.5	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	H	45.2	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	H	52.8	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	H	96.3	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	H	3750	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	H	47.2	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	H	45.2	ug/L	0.300	1.00
95-47-6	o-Xylene	H	47.8	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	H	46.3	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094003**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 22:06**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 22:06**				
Data File:	**052314V6\6J521.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	H	48.7	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	H	48.9	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	H	43.1	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	H	47.5	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	53.4	50.0	ug/L	107	(78%-124%)
Bromofluorobenzene	47.5	50.0	ug/L	94.9	(80%-120%)
Toluene-d8	55.0	50.0	ug/L	110	(80%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094004**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 22:35**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 22:35**				
Data File:	**052314V6\6J522.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	H	53.5	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	H	50.0	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	H	39.4	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	H	41.4	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	H	45.2	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	H	43.5	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	H	44.1	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	H	53.1	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	H	41.7	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	H	53.5	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	H	50.3	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	H	44.8	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	H	45.2	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	H	47.5	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	H	45.0	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	H	36.9	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	H	49.7	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	H	46.7	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	H	41.9	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	H	45.0	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	H	48.4	ug/L	0.300	1.00
78-93-3	2-Butanone	H	113	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	HU	1.00	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	H	46.9	ug/L	0.300	1.00
591-78-6	2-Hexanone	H	132	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	H	44.1	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	H	49.0	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	H	168	ug/L	1.50	5.00
67-64-1	Acetone	H	81.5	ug/L	2.50	10.0
75-05-8	Acetonitrile	H	847	ug/L	8.00	25.0
107-02-8	Acrolein	HU	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	HU	5.00	ug/L	1.50	5.00
107-05-1	Allyl chloride	HU	5.00	ug/L	1.50	5.00
71-43-2	Benzene	H	44.2	ug/L	0.300	1.00
108-86-1	Bromobenzene	H	48.9	ug/L	0.300	1.00
74-97-5	Bromochloromethane	H	48.7	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	H	43.7	ug/L	0.300	1.00
75-25-2	Bromoform	H	51.4	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094004**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 22:35**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 22:35**				
Data File:	**052314V6\6J522.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	H	54.0	ug/L	0.300	1.00
75-15-0	Carbon disulfide	H	237	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	H	52.3	ug/L	0.300	1.00
108-90-7	Chlorobenzene	H	47.8	ug/L	0.300	1.00
75-00-3	Chloroethane	H	50.9	ug/L	0.300	1.00
67-66-3	Chloroform	H	48.4	ug/L	0.300	1.00
74-87-3	Chloromethane	H	44.9	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	H	52.0	ug/L	0.300	1.00
74-95-3	Dibromomethane	H	38.9	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	H	46.4	ug/L	0.300	1.00
60-29-7	Ethyl ether	H	44.9	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	HU	5.00	ug/L	1.50	5.00
100-41-4	Ethylbenzene	H	46.0	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	H	58.5	ug/L	0.300	1.00
74-88-4	Iodomethane	H	252	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	HU	50.0	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	H	46.3	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	HU	5.00	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	HU	5.00	ug/L	1.50	5.00
75-09-2	Methylene chloride	H	48.9	ug/L	1.70	10.0
91-20-3	Naphthalene	H	46.1	ug/L	0.600	1.00
107-12-0	Propionitrile	HU	5.00	ug/L	1.50	5.00
100-42-5	Styrene	H	51.3	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	H	51.0	ug/L	0.300	1.00
108-88-3	Toluene	H	44.6	ug/L	0.300	1.00
79-01-6	Trichloroethylene	H	46.0	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	H	57.3	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	HU	5.00	ug/L	1.50	5.00
108-05-4	Vinyl acetate	H	240	ug/L	1.50	5.00
75-01-4	Vinyl chloride	H	48.8	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	H	44.7	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	H	40.0	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	H	96.7	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	H	3350	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	H	46.4	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	H	45.5	ug/L	0.300	1.00
95-47-6	o-Xylene	H	48.8	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	H	46.4	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094004**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 22:35**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 22:35**				
Data File:	**052314V6\6J522.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	H	44.5	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	H	49.7	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	H	43.5	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	H	46.3	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.1	50.0	ug/L	100	(78%-124%)
Bromofluorobenzene	46.5	50.0	ug/L	93.1	(80%-120%)
Toluene-d8	50.1	50.0	ug/L	100	(80%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094005**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 14:52**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 14:52**				
Data File:	**052314V6\6J506LAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane		52.5	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane		51.3	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		44.5	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane		44.0	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane		46.5	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene		46.6	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene		46.7	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene		60.7	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane		45.0	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene		60.3	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		48.1	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		54.9	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane		48.3	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene		48.1	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane		45.5	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane		42.3	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		49.4	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene		47.5	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane		43.1	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene		46.3	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane		52.0	ug/L	0.300	1.00
78-93-3	2-Butanone		271	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	U	1.00	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene		47.0	ug/L	0.300	1.00
591-78-6	2-Hexanone		266	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene		45.4	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene		51.7	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone		229	ug/L	1.50	5.00
67-64-1	Acetone		278	ug/L	2.50	10.0
75-05-8	Acetonitrile		1070	ug/L	8.00	25.0
107-02-8	Acrolein	U	5.00	ug/L	1.50	5.00
107-13-1	Acrylonitrile	U	5.00	ug/L	1.50	5.00
107-05-1	Allyl chloride	U	5.00	ug/L	1.50	5.00
71-43-2	Benzene		45.5	ug/L	0.300	1.00
108-86-1	Bromobenzene		47.5	ug/L	0.300	1.00
74-97-5	Bromochloromethane		50.1	ug/L	0.300	1.00
75-27-4	Bromodichloromethane		42.6	ug/L	0.300	1.00
75-25-2	Bromoform		54.7	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094005**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 14:52**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 14:52**				
Data File:	**052314V6\6J506LAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane		53.1	ug/L	0.300	1.00
75-15-0	Carbon disulfide		253	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride		53.2	ug/L	0.300	1.00
108-90-7	Chlorobenzene		47.8	ug/L	0.300	1.00
75-00-3	Chloroethane		54.1	ug/L	0.300	1.00
67-66-3	Chloroform		48.2	ug/L	0.300	1.00
74-87-3	Chloromethane		47.6	ug/L	0.300	1.00
124-48-1	Dibromochloromethane		52.7	ug/L	0.300	1.00
74-95-3	Dibromomethane		44.1	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane		49.2	ug/L	0.300	1.00
60-29-7	Ethyl ether		47.3	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	U	5.00	ug/L	1.50	5.00
100-41-4	Ethylbenzene		47.0	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene		65.0	ug/L	0.300	1.00
74-88-4	Iodomethane		258	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	U	50.0	ug/L	15.0	50.0
98-82-8	Isopropylbenzene		47.6	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	U	5.00	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	U	5.00	ug/L	1.50	5.00
75-09-2	Methylene chloride		47.5	ug/L	1.70	10.0
91-20-3	Naphthalene		53.6	ug/L	0.600	1.00
107-12-0	Propionitrile	U	5.00	ug/L	1.50	5.00
100-42-5	Styrene		50.7	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene		52.4	ug/L	0.300	1.00
108-88-3	Toluene		45.3	ug/L	0.300	1.00
79-01-6	Trichloroethylene		46.4	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane		60.3	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.50	5.00
108-05-4	Vinyl acetate		304	ug/L	1.50	5.00
75-01-4	Vinyl chloride		52.2	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene		46.5	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene		40.8	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes		97.5	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol		4760	ug/L	15.0	50.0
104-51-8	n-Butylbenzene		50.5	ug/L	0.300	1.00
103-65-1	n-Propylbenzene		46.6	ug/L	0.300	1.00
95-47-6	o-Xylene		47.7	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene		49.1	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094005**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 14:52**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 14:52**				
Data File:	**052314V6\6J506LAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether		48.3	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene		51.5	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene		45.7	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		48.1	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	50.8	50.0	ug/L	102	(78%-124%)
Bromofluorobenzene	47.6	50.0	ug/L	95.2	(80%-120%)
Toluene-d8	51.0	50.0	ug/L	102	(80%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094006**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 16:19**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 16:19**				
Data File:	**052314V6\6J509SHAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene		51.6	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/L	1.50	5.00
67-64-1	Acetone	U	10.0	ug/L	2.50	10.0
75-05-8	Acetonitrile	U	25.0	ug/L	8.00	25.0
107-02-8	Acrolein		300	ug/L	1.50	5.00
107-13-1	Acrylonitrile		216	ug/L	1.50	5.00
107-05-1	Allyl chloride		231	ug/L	1.50	5.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/L	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094006**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 16:19**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 16:19**				
Data File:	**052314V6\6J509SHAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	U	1.00	ug/L	0.300	1.00
75-15-0	Carbon disulfide	U	5.00	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	U	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	U	1.00	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate		241	ug/L	1.50	5.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol		2000	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.300	1.00
126-98-7	Methacrylonitrile		223	ug/L	1.50	5.00
80-62-6	Methyl methacrylate		235	ug/L	1.50	5.00
75-09-2	Methylene chloride	U	10.0	ug/L	1.70	10.0
91-20-3	Naphthalene	U	1.00	ug/L	0.600	1.00
107-12-0	Propionitrile		216	ug/L	1.50	5.00
100-42-5	Styrene	U	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/L	0.300	1.00
108-88-3	Toluene	U	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane		270	ug/L	1.50	5.00
108-05-4	Vinyl acetate	U	5.00	ug/L	1.50	5.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	U	50.0	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.300	1.00
95-47-6	o-Xylene	U	1.00	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203094006**				
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1390101**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 16:19**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 16:19**				
Data File:	**052314V6\6J509SHAR.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	U	1.00	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	47.9	50.0	ug/L	95.9	(78%-124%)
Bromofluorobenzene	46.4	50.0	ug/L	92.8	(80%-120%)
Toluene-d8	48.1	50.0	ug/L	96.1	(80%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094007**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 23:03**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 23:03**				
Data File:	**052314V6\6J523.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	HU	1.00	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	HU	1.00	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	HU	1.00	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	HU	1.00	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	HU	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	HU	1.00	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	HU	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	HU	1.00	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	HU	1.00	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	HU	5.00	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	H	56.0	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
591-78-6	2-Hexanone	HU	5.00	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	HU	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	HU	5.00	ug/L	1.50	5.00
67-64-1	Acetone	HU	10.0	ug/L	2.50	10.0
75-05-8	Acetonitrile	HU	25.0	ug/L	8.00	25.0
107-02-8	Acrolein	H	350	ug/L	1.50	5.00
107-13-1	Acrylonitrile	H	256	ug/L	1.50	5.00
107-05-1	Allyl chloride	H	266	ug/L	1.50	5.00
71-43-2	Benzene	HU	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	HU	1.00	ug/L	0.300	1.00
74-97-5	Bromochloromethane	HU	1.00	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	HU	1.00	ug/L	0.300	1.00
75-25-2	Bromoform	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094007**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 23:03**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 23:03**				
Data File:	**052314V6\6J523.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	HU	1.00	ug/L	0.300	1.00
75-15-0	Carbon disulfide	HU	5.00	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	HU	1.00	ug/L	0.300	1.00
108-90-7	Chlorobenzene	HU	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	HU	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	HU	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	HU	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	HU	1.00	ug/L	0.300	1.00
74-95-3	Dibromomethane	HU	1.00	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	HU	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	HU	1.00	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	H	246	ug/L	1.50	5.00
100-41-4	Ethylbenzene	HU	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	HU	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	HU	5.00	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	H	1870	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	HU	1.00	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	H	220	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	H	229	ug/L	1.50	5.00
75-09-2	Methylene chloride	HU	10.0	ug/L	1.70	10.0
91-20-3	Naphthalene	HU	1.00	ug/L	0.600	1.00
107-12-0	Propionitrile	H	207	ug/L	1.50	5.00
100-42-5	Styrene	HU	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	HU	1.00	ug/L	0.300	1.00
108-88-3	Toluene	HU	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	HU	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	HU	1.00	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	H	295	ug/L	1.50	5.00
108-05-4	Vinyl acetate	HU	5.00	ug/L	1.50	5.00
75-01-4	Vinyl chloride	HU	1.00	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	HU	2.00	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	HU	50.0	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	HU	1.00	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	HU	1.00	ug/L	0.300	1.00
95-47-6	o-Xylene	HU	1.00	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094007**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PS**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 23:03**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 23:03**				
Data File:	**052314V6\6J523.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	HU	1.00	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	HU	1.00	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	53.3	50.0	ug/L	107	(78%-124%)
Bromofluorobenzene	48.9	50.0	ug/L	97.7	(80%-120%)
Toluene-d8	51.3	50.0	ug/L	103	(80%-120%)

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094008**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 23:32**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 23:32**				
Data File:	**052314V6\6J524.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
630-20-6	1,1,1,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
71-55-6	1,1,1-Trichloroethane	HU	1.00	ug/L	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	HU	1.00	ug/L	0.300	1.00
79-00-5	1,1,2-Trichloroethane	HU	1.00	ug/L	0.300	1.00
75-34-3	1,1-Dichloroethane	HU	1.00	ug/L	0.300	1.00
75-35-4	1,1-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
563-58-6	1,1-Dichloropropene	HU	1.00	ug/L	0.300	1.00
87-61-6	1,2,3-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
96-18-4	1,2,3-Trichloropropane	HU	1.00	ug/L	0.300	1.00
120-82-1	1,2,4-Trichlorobenzene	HU	1.00	ug/L	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	HU	1.00	ug/L	0.500	1.00
106-93-4	1,2-Dibromoethane	HU	1.00	ug/L	0.300	1.00
95-50-1	1,2-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
107-06-2	1,2-Dichloroethane	HU	1.00	ug/L	0.300	1.00
78-87-5	1,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	HU	1.00	ug/L	0.300	1.00
541-73-1	1,3-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
142-28-9	1,3-Dichloropropane	HU	1.00	ug/L	0.300	1.00
106-46-7	1,4-Dichlorobenzene	HU	1.00	ug/L	0.300	1.00
594-20-7	2,2-Dichloropropane	HU	1.00	ug/L	0.300	1.00
78-93-3	2-Butanone	HU	5.00	ug/L	2.00	5.00
126-99-8	2-Chloro-1,3-butadiene	H	49.6	ug/L	0.300	1.00
95-49-8	2-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
591-78-6	2-Hexanone	HU	5.00	ug/L	2.20	5.00
106-43-4	4-Chlorotoluene	HU	1.00	ug/L	0.300	1.00
99-87-6	4-Isopropyltoluene	HU	1.00	ug/L	0.300	1.00
108-10-1	4-Methyl-2-pentanone	HU	5.00	ug/L	1.50	5.00
67-64-1	Acetone	HU	10.0	ug/L	2.50	10.0
75-05-8	Acetonitrile	HU	25.0	ug/L	8.00	25.0
107-02-8	Acrolein	H	273	ug/L	1.50	5.00
107-13-1	Acrylonitrile	H	204	ug/L	1.50	5.00
107-05-1	Allyl chloride	H	221	ug/L	1.50	5.00
71-43-2	Benzene	HU	1.00	ug/L	0.300	1.00
108-86-1	Bromobenzene	HU	1.00	ug/L	0.300	1.00
74-97-5	Bromochloromethane	HU	1.00	ug/L	0.300	1.00
75-27-4	Bromodichloromethane	HU	1.00	ug/L	0.300	1.00
75-25-2	Bromoform	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094008**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 23:32**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 23:32**				
Data File:	**052314V6\6J524.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
74-83-9	Bromomethane	HU	1.00	ug/L	0.300	1.00
75-15-0	Carbon disulfide	HU	5.00	ug/L	1.50	5.00
56-23-5	Carbon tetrachloride	HU	1.00	ug/L	0.300	1.00
108-90-7	Chlorobenzene	HU	1.00	ug/L	0.300	1.00
75-00-3	Chloroethane	HU	1.00	ug/L	0.300	1.00
67-66-3	Chloroform	HU	1.00	ug/L	0.300	1.00
74-87-3	Chloromethane	HU	1.00	ug/L	0.300	1.00
124-48-1	Dibromochloromethane	HU	1.00	ug/L	0.300	1.00
74-95-3	Dibromomethane	HU	1.00	ug/L	0.300	1.00
75-71-8	Dichlorodifluoromethane	HU	1.00	ug/L	0.300	1.00
60-29-7	Ethyl ether	HU	1.00	ug/L	0.300	1.00
97-63-2	Ethyl methacrylate	H	222	ug/L	1.50	5.00
100-41-4	Ethylbenzene	HU	1.00	ug/L	0.300	1.00
87-68-3	Hexachlorobutadiene	HU	1.00	ug/L	0.300	1.00
74-88-4	Iodomethane	HU	5.00	ug/L	1.50	5.00
78-83-1	Isobutyl alcohol	H	1930	ug/L	15.0	50.0
98-82-8	Isopropylbenzene	HU	1.00	ug/L	0.300	1.00
126-98-7	Methacrylonitrile	H	230	ug/L	1.50	5.00
80-62-6	Methyl methacrylate	H	239	ug/L	1.50	5.00
75-09-2	Methylene chloride	HU	10.0	ug/L	1.70	10.0
91-20-3	Naphthalene	HU	1.00	ug/L	0.600	1.00
107-12-0	Propionitrile	H	203	ug/L	1.50	5.00
100-42-5	Styrene	HU	1.00	ug/L	0.300	1.00
127-18-4	Tetrachloroethylene	HU	1.00	ug/L	0.300	1.00
108-88-3	Toluene	HU	1.00	ug/L	0.300	1.00
79-01-6	Trichloroethylene	HU	1.00	ug/L	0.300	1.00
75-69-4	Trichlorofluoromethane	HU	1.00	ug/L	0.300	1.00
76-13-1	Trichlorotrifluoroethane	H	253	ug/L	1.50	5.00
108-05-4	Vinyl acetate	HU	5.00	ug/L	1.50	5.00
75-01-4	Vinyl chloride	HU	1.00	ug/L	0.300	1.00
156-59-2	cis-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-01-5	cis-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00
179601-23-1	m,p-Xylenes	HU	2.00	ug/L	0.300	2.00
71-36-3	n-Butyl alcohol	HU	50.0	ug/L	15.0	50.0
104-51-8	n-Butylbenzene	HU	1.00	ug/L	0.300	1.00
103-65-1	n-Propylbenzene	HU	1.00	ug/L	0.300	1.00
95-47-6	o-Xylene	HU	1.00	ug/L	0.300	1.00
135-98-8	sec-Butylbenzene	HU	1.00	ug/L	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203094008**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1390101**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543PSD**	**Method:**	**SW846 8260B DOE-AL**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1390101**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**05/23/2014 23:32**	**Analyst:**	**GRB2**	**Purge Vol:**	**5 mL**
Prep Date:	**05/23/2014 23:32**				
Data File:	**052314V6\6J524.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
1634-04-4	tert-Butyl methyl ether	HU	1.00	ug/L	0.300	1.00
98-06-6	tert-Butylbenzene	HU	1.00	ug/L	0.300	1.00
156-60-5	trans-1,2-Dichloroethylene	HU	1.00	ug/L	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	HU	1.00	ug/L	0.300	1.00

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	53.4	50.0	ug/L	107	(78%-124%)
Bromofluorobenzene	48.9	50.0	ug/L	97.7	(80%-120%)
Toluene-d8	49.0	50.0	ug/L	98.1	(80%-120%)

Miscellaneous

DATA EXCEPTION REPORT

Mo.Day Yr.	**Division:**	**Quality Criteria:**	**Type:**
02-JUN-14	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
VOA GC/MS	SW846 8260B DOE-AL	Liquid	ESHL
Batch ID:	**Sample Numbers:**		
1390101	See Below		

Potentially affected work order(s)(SDG): 348269(2014-3353),348526(2014-3373),348530(2014-3375),348630(2014-3383),348686(2014-3382)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Sample Analyzed out of Holding

Failed Recovery for LCS/LCSD

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	**DER Disposition:**
1. QC sample 1203094007MS recovered outside the limits for Acrolein. 2. The MS/MSD pairs did not all have acceptable RPD values. 3. Sample Analyzed out of Holding: 348269 001,002 348526 004 348530 003 QC 1203094003MS, 1203094004MSD, 1203094007MS and 1203094008MSD 4. The LCS recoveries were not all within the acceptance limits. 5. QC sample 1203094004MSD recovered outside the limits for 1,2-Dichloropropane and 4-Methyl-2-pentanone.	1,2 and 5. The MS/MSD pairs were re-analyzed and recovered in similar manners. 3. The samples were analyzed within two times the hold time criteria, which satisfies the client criteria. 4. The unacceptable recoveries were less than 5% of the requested analyte list. This satisfies the client criteria.

Originator's Name:

Gelester Baskett 02-JUN-14

Data Validator/Group Leader:

Erin Haubert 02-JUN-14

Semi-Volatile Analysis

Case Narrative

Semi-Volatile Case Narrative
ARS International, LLC (ARSL)
SDG 2014-3353

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 3510C/8270D
Prep Method:	SW846 3510C
Analytical Batch Number:	1387154
Prep Batch Number:	1387153

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 3510C/8270D:

Sample ID	Client ID
348269001	CAMO-14-75543
1203086341	Method Blank (MB)
1203086342	Laboratory Control Sample (LCS)
1203086343	348269001(CAMO-14-75543) Matrix Spike (MS)
1203086344	348269001(CAMO-14-75543) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 32.

Raw data reports are processed and reviewed by the analyst using the data analysis software package. False positives have been removed from the quantitation reports per standard operating procedures (SOP).

Calibration Information

A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Methodologies referenced N-Nitroso-diphenylamine. However, as stated in EPA Methodology, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at

GEL, both independent of each other and together, showed that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG) in this batch. A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All Calibration Verification Standards (CCV) did not meet the acceptance criteria as outlined in Method 8270D for sample 348269001 (CAMO-14-75543). However, the method allows for a designated number of outliers dependent on the requested analyte list. This SDG satisfied the 8270D outlier acceptance criteria. Detected concentrations of these analytes should be considered as estimated.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG in this batch met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG in this batch.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 348269001 (CAMO-14-75543) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD values between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses used to quantitate the requested target analytes were within the required acceptance criteria for the SDG associated samples in this batch.

Technical Information:

Holding Time Specifications
All samples in this SDG in this batch met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All reported compound mass spectra met the detection specifications in the method.

Sample Dilutions
The samples in this SDG in this batch did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG in this analytical batch unless confirmations or dilutions were required.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports (DERs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A DER was not required for sample 348269001 (CAMO-14-75543) in this batch for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Manual integrations were required in this SDG and are included with the raw data.

TIC Comment
Tentatively identified compounds (TIC) may be requested for samples 1203086341(MB) and 348269001 (CAMO-14-75543) in this delivery group/work order. Please note that non-requested calibrated analytes detected in a client sample may be reported on the Form 1/Certificate of Analysis as TICs. TIC data, if requested, are included on the Sample Data Summary (Form 1) and are also included with the sample raw data.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

Due to rounding differences in the calculation, the data reported in the Surrogate Recovery Report may differ slightly from the raw data. Due to software issue, the raw data may not correctly display the updated SPC limits. Please see Sample Data Summary Report and Surrogate Recovery Report for the correct surrogate acceptance limits.

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the reviewer name associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration

The Semi-Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description

MSD4.I	Agilent 7890A/5975C GC/MS w/ 7683 Autosampler	HP6890/HP5973	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

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

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ARSL004 ARS International, LLC (ARS-LANS-MTOA6-25093-GEL)

Client SDG: 2014-3353 GEL Work Order: 348269

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

J Value is estimated

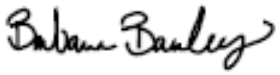
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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

Review/Validation

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

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

Signature:  **Name: Barbara Bailey**

Date: 03 JUN 2014 **Title: Data Validator**

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269001**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75543**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 15:15**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1413.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
95-94-3	1,2,4,5-Tetrachlorobenzene	U	10.0	ug/L	3.00	10.0
120-82-1	1,2,4-Trichlorobenzene	U	10.0	ug/L	3.00	10.0
95-50-1	1,2-Dichlorobenzene	U	10.0	ug/L	3.00	10.0
122-66-7	Azobenzene	U	10.0	ug/L	3.00	10.0
	1,2-Diphenylhydrazine					
541-73-1	1,3-Dichlorobenzene	U	10.0	ug/L	3.00	10.0
106-46-7	1,4-Dichlorobenzene	U	10.0	ug/L	3.00	10.0
123-91-1	1,4-Dioxane	U	10.0	ug/L	3.00	10.0
90-12-0	1-Methylnaphthalene	U	1.00	ug/L	0.300	1.00
58-90-2	2,3,4,6-Tetrachlorophenol	U	10.0	ug/L	3.00	10.0
95-95-4	2,4,5-Trichlorophenol	U	10.0	ug/L	3.00	10.0
88-06-2	2,4,6-Trichlorophenol	U	10.0	ug/L	3.00	10.0
120-83-2	2,4-Dichlorophenol	U	10.0	ug/L	3.00	10.0
105-67-9	2,4-Dimethylphenol	U	10.0	ug/L	3.00	10.0
51-28-5	2,4-Dinitrophenol	U	20.0	ug/L	5.00	20.0
121-14-2	2,4-Dinitrotoluene	U	10.0	ug/L	3.00	10.0
606-20-2	2,6-Dinitrotoluene	U	10.0	ug/L	3.00	10.0
91-58-7	2-Chloronaphthalene	U	1.00	ug/L	0.410	1.00
95-57-8	2-Chlorophenol	U	10.0	ug/L	3.00	10.0
534-52-1	2-Methyl-4,6-dinitrophenol	U	10.0	ug/L	3.00	10.0
91-57-6	2-Methylnaphthalene	U	1.00	ug/L	0.300	1.00
88-75-5	2-Nitrophenol	U	10.0	ug/L	3.00	10.0
91-94-1	3,3'-Dichlorobenzidine	U	10.0	ug/L	3.00	10.0
101-55-3	4-Bromophenylphenylether	U	10.0	ug/L	3.00	10.0
59-50-7	Parachlorometa cresol	U	10.0	ug/L	3.00	10.0
	4-Chloro-3-methylphenol					
106-47-8	4-Chloroaniline	U	10.0	ug/L	3.30	10.0
7005-72-3	4-Chlorophenylphenylether	U	10.0	ug/L	3.00	10.0
100-02-7	4-Nitrophenol	U	10.0	ug/L	3.00	10.0
83-32-9	Acenaphthene	U	1.00	ug/L	0.300	1.00
208-96-8	Acenaphthylene	U	1.00	ug/L	0.300	1.00
62-53-3	Aniline	U	10.0	ug/L	4.20	10.0
120-12-7	Anthracene	U	1.00	ug/L	0.300	1.00
1912-24-9	Atrazine	U	10.0	ug/L	3.00	10.0
92-87-5	Benzidine	U	10.0	ug/L	3.90	10.0
56-55-3	Benzo(a)anthracene	U	1.00	ug/L	0.300	1.00
50-32-8	Benzo(a)pyrene	U	1.00	ug/L	0.300	1.00
205-99-2	Benzo(b)fluoranthene	U	1.00	ug/L	0.300	1.00
191-24-2	Benzo(ghi)perylene	U	1.00	ug/L	0.300	1.00

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269001**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75543**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 15:15**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1413.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
207-08-9	Benzo(k)fluoranthene	U	1.00	ug/L	0.300	1.00
65-85-0	Benzoic acid	U	20.0	ug/L	6.00	20.0
100-51-6	Benzyl alcohol	U	10.0	ug/L	3.00	10.0
85-68-7	Butylbenzylphthalate	U	10.0	ug/L	3.00	10.0
218-01-9	Chrysene	U	1.00	ug/L	0.300	1.00
84-74-2	Di-n-butylphthalate	U	10.0	ug/L	3.00	10.0
117-84-0	Di-n-octylphthalate	U	10.0	ug/L	3.00	10.0
53-70-3	Dibenzo(a,h)anthracene	U	1.00	ug/L	0.300	1.00
132-64-9	Dibenzofuran	U	10.0	ug/L	3.00	10.0
84-66-2	Diethylphthalate	U	10.0	ug/L	3.00	10.0
131-11-3	Dimethylphthalate	U	10.0	ug/L	3.00	10.0
88-85-7	Dinoseb	U	10.0	ug/L	3.00	10.0
122-39-4	Diphenylamine	U	10.0	ug/L	3.00	10.0
206-44-0	Fluoranthene	U	1.00	ug/L	0.300	1.00
86-73-7	Fluorene	U	1.00	ug/L	0.300	1.00
118-74-1	Hexachlorobenzene	U	10.0	ug/L	3.00	10.0
87-68-3	Hexachlorobutadiene	U	10.0	ug/L	3.00	10.0
77-47-4	Hexachlorocyclopentadiene	U	10.0	ug/L	3.00	10.0
67-72-1	Hexachloroethane	U	10.0	ug/L	3.00	10.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	1.00	ug/L	0.300	1.00
78-59-1	Isophorone	U	10.0	ug/L	3.50	10.0
62-75-9	N-Methyl-N-nitrosomethylamine	U	10.0	ug/L	3.00	10.0
924-16-3	N-Nitrosodi-n-butylamine	U	10.0	ug/L	3.00	10.0
55-18-5	N-Nitrosodiethylamine	U	10.0	ug/L	3.00	10.0
621-64-7	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*	U	10.0	ug/L	3.00	10.0
930-55-2	N-Nitrosopyrrolidine	U	10.0	ug/L	3.00	10.0
91-20-3	Naphthalene	U	1.00	ug/L	0.300	1.00
98-95-3	Nitrobenzene	U	10.0	ug/L	3.00	10.0
608-93-5	Pentachlorobenzene	U	10.0	ug/L	3.00	10.0
87-86-5	Pentachlorophenol	U	10.0	ug/L	3.00	10.0
85-01-8	Phenanthrene	U	1.00	ug/L	0.300	1.00
108-95-2	Phenol	U	10.0	ug/L	3.00	10.0
129-00-0	Pyrene	U	1.00	ug/L	0.300	1.00
110-86-1	Pyridine	U	10.0	ug/L	3.00	10.0
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	10.0	ug/L	3.00	10.0
111-91-1	bis(2-Chloroethoxy)methane	U	10.0	ug/L	3.00	10.0
111-44-4	bis(2-Chloroethyl) ether	U	10.0	ug/L	3.00	10.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	10.0	ug/L	3.00	10.0

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**348269001**	**Date Received:**	**05/08/2014 09:00**		
		Client:	**ARSL004**	**Project:**	**ESHL00114**
Client ID:	**CAMO-14-75543**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 15:15**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1413.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
65794-96-9	m,p-Cresols	U	10.0	ug/L	3.70	10.0
99-09-2	3-Nitroaniline *m-Nitroaniline*	U	10.0	ug/L	3.00	10.0
95-48-7	o-Cresol	U	10.0	ug/L	3.00	10.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	10.0	ug/L	3.00	10.0
100-01-6	4-Nitroaniline *p-Nitroaniline*	U	10.0	ug/L	3.00	10.0

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
2,4,6-Tribromophenol	69.8	100	ug/L	69.8	(26%-129%)
2-Fluorobiphenyl	32.6	50.0	ug/L	65.2	(32%-102%)
2-Fluorophenol	43.2	100	ug/L	43.2	(10%-78%)
Nitrobenzene-d5	34.3	50.0	ug/L	68.6	(36%-125%)
Phenol-d5	25.8	100	ug/L	25.8	(10%-104%)
p-Terphenyl-d14	48.2	50.0	ug/L	96.4	(34%-135%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	Estimated RT	Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/L		

Quality Control Summary

Surrogate Recovery Report

SDG Number: 2014-3353

Matrix Type: LIQUID

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1203086341	MB for batch 1387153	44	25	67	58	65	95
1203086342	LCS for batch 1387153	49	32	85	77	89	107
348269001	CAMO-14-75543	43	26	69	65	70	96
1203086343	CAMO-14-75543MS	67	51	80	78	84	108
1203086344	CAMO-14-75543MSD	65	51	83	79	92	104

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(10%-78%)
PHL	= Phenol-d5	(10%-104%)
NBZ	= Nitrobenzene-d5	(36%-125%)
FBP	= 2-Fluorobiphenyl	(32%-102%)
TBP	= 2,4,6-Tribromophenol	(26%-129%)
TPH	= p-Terphenyl-d14	(34%-135%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1387153
Matrix: WATER
Lab Sample ID 1203086342
Instrument: MSD4.I
Analysis Date: 05/14/2014 14:45
Dilution: 1
Analyst: JMB3
Prep Batch ID: 1387153
Inj. Vol: 1 uL
Batch ID: 1387154

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	50.0	0.0	26.6	53	18-75
110-86-1	LCS	Pyridine	50.0	0.0	33.0	66	11-88
62-53-3	LCS	Aniline	50.0	0.0	44.2	88	35-107
108-95-2	LCS	Phenol	50.0	0.0	16.2	32	13-77
111-44-4	LCS	bis(2-Chloroethyl) ether	50.0	0.0	43.6	87	35-111
95-57-8	LCS	2-Chlorophenol	50.0	0.0	39.3	79	39-99
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	29.0	58	25-100
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	29.2	58	24-88
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	30.7	61	27-87
108-60-1	LCS	bis(2-Chloro-1-methylethyl)et	50.0	0.0	42.4	85	23-120
100-51-6	LCS	Benzyl alcohol	50.0	0.0	38.8	78	33-90
95-48-7	LCS	o-Cresol	50.0	0.0	35.7	71	32-90
65794-96-9	LCS	m,p-Cresols	50.0	0.0	36.1	72	28-100
621-64-7	LCS	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*	50.0	0.0	42.8	86	39-113
67-72-1	LCS	Hexachloroethane	50.0	0.0	29.0	58	20-85
98-95-3	LCS	Nitrobenzene	50.0	0.0	46.3	93	41-119
78-59-1	LCS	Isophorone	50.0	0.0	47.1	94	49-133
88-75-5	LCS	2-Nitrophenol	50.0	0.0	40.7	81	42-111
105-67-9	LCS	2,4-Dimethylphenol	50.0	0.0	41.1	82	43-99
111-91-1	LCS	bis(2-Chloroethoxy)methane	50.0	0.0	47.2	94	44-109
120-83-2	LCS	2,4-Dichlorophenol	50.0	0.0	40.7	81	45-106
65-85-0	LCS	Benzoic acid	100	0.0	16.9	17	10-81

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1387153
Matrix: WATER
Lab Sample ID 1203086342
Instrument: MSD4.I
Analysis Date: 05/14/2014 14:45
Dilution: 1
Analyst: JMB3
Prep Batch ID: 1387153
Inj. Vol: 1 uL
Batch ID: 1387154

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
106-47-8	LCS	4-Chloroaniline	50.0	0.0	43.9	88	50-122
87-68-3	LCS	Hexachlorobutadiene	50.0	0.0	29.7	59	19-92
59-50-7	LCS	Parachlorometa cresol *4-Chloro-3-methylphenol*	50.0	0.0	41.5	83	46-111
91-57-6	LCS	2-Methylnaphthalene	50.0	0.0	32.0	64	33-102
91-20-3	LCS	Naphthalene	50.0	0.0	33.9	68	31-98
90-12-0	LCS	1-Methylnaphthalene	50.0	0.0	34.5	69	35-106
77-47-4	LCS	Hexachlorocyclopentadiene	50.0	0.0	24.5	49	15-72
88-06-2	LCS	2,4,6-Trichlorophenol	50.0	0.0	45.5	91	41-109
95-95-4	LCS	2,4,5-Trichlorophenol	50.0	0.0	44.0	88	41-111
91-58-7	LCS	2-Chloronaphthalene	50.0	0.0	36.2	72	36-98
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	50.0	0.0	46.1	92	44-117
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	50.0	0.0	42.8	86	45-124
131-11-3	LCS	Dimethylphthalate	50.0	0.0	49.5	99	53-112
606-20-2	LCS	2,6-Dinitrotoluene	50.0	0.0	50.3	101	52-117
121-14-2	LCS	2,4-Dinitrotoluene	50.0	0.0	50.6	101	45-124
208-96-8	LCS	Acenaphthylene	50.0	0.0	40.3	81	37-107
83-32-9	LCS	Acenaphthene	50.0	0.0	38.8	78	40-104
51-28-5	LCS	2,4-Dinitrophenol	50.0	0.0	33.4	67	19-110
132-64-9	LCS	Dibenzofuran	50.0	0.0	44.3	89	45-107
58-90-2	LCS	2,3,4,6-Tetrachlorophenol	50.0	0.0	44.7	89	45-120
84-66-2	LCS	Diethylphthalate	50.0	0.0	49.6	99	51-116
100-02-7	LCS	4-Nitrophenol	50.0	0.0	10.3	21	16-77

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 1387153
Matrix: WATER
Lab Sample ID 1203086342
Instrument: MSD4.I
Analysis Date: 05/14/2014 14:45
Dilution: 1
Analyst: JMB3
Prep Batch ID: 1387153
Inj. Vol: 1 uL
Batch ID: 1387154

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	50.0	0.0	41.6	83	43-110
7005-72-3	LCS	4-Chlorophenylphenylether	50.0	0.0	45.7	91	40-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	50.0	0.0	44.3	89	38-133
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	50.0	0.0	40.8	82	34-114
122-39-4	LCS	Diphenylamine	50.0	0.0	47.4	95	47-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	50.0	0.0	45.4	91	40-112
101-55-3	LCS	4-Bromophenylphenylether	50.0	0.0	46.4	93	41-113
118-74-1	LCS	Hexachlorobenzene	50.0	0.0	43.7	87	43-116
87-86-5	LCS	Pentachlorophenol	50.0	0.0	34.5	69	27-102
85-01-8	LCS	Phenanthrene	50.0	0.0	43.1	86	47-111
120-12-7	LCS	Anthracene	50.0	0.0	44.1	88	46-110
84-74-2	LCS	Di-n-butylphthalate	50.0	0.0	50.6	101	49-116
206-44-0	LCS	Fluoranthene	50.0	0.0	43.4	87	45-118
129-00-0	LCS	Pyrene	50.0	0.0	56.0	112	38-127
85-68-7	LCS	Butylbenzylphthalate	50.0	0.0	57.1	114	40-122
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	50.0	0.0	53.9	108	37-124
56-55-3	LCS	Benzo(a)anthracene	50.0	0.0	43.3	87	49-111
218-01-9	LCS	Chrysene	50.0	0.0	44.4	89	44-117
117-84-0	LCS	Di-n-octylphthalate	50.0	0.0	45.9	92	33-122
205-99-2	LCS	Benzo(b)fluoranthene	50.0	0.0	43.2	86	47-117
207-08-9	LCS	Benzo(k)fluoranthene	50.0	0.0	45.7	91	46-119
50-32-8	LCS	Benzo(a)pyrene	50.0	0.0	43.3	87	47-110

Quality Control Summary
Spike Recovery Report

SDG Number: **2014-3353**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 1387153**
Matrix: **WATER**
Lab Sample ID **1203086342**
Instrument: **MSD4.I**
Analysis Date: **05/14/2014 14:45**
Dilution: **1**
Analyst: **JMB3**
Prep Batch ID: **1387153**
Inj. Vol: **1 uL**
Batch ID: **1387154**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	50.0	0.0	45.7	91	37-125
53-70-3	LCS	Dibenzo(a,h)anthracene	50.0	0.0	46.8	94	36-125
191-24-2	LCS	Benzo(ghi)perylene	50.0	0.0	49.9	100	33-126
123-91-1	LCS	1,4-Dioxane	50.0	0.0	28.5	57	26-73
930-55-2	LCS	N-Nitrosopyrrolidine	50.0	0.0	40.9	82	42-106
95-94-3	LCS	1,2,4,5-Tetrachlorobenzene	50.0	0.0	32.2	64	36-95
1912-24-9	LCS	Atrazine	50.0	0.0	46.1	92	47-115
92-87-5	LCS	Benzidine	100	0.0	56.0	56	10-124
91-94-1	LCS	3,3'-Dichlorobenzidine	50.0	0.0	35.1	70	31-113
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	30.7	61	26-92

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Client ID: CAMO-14-75543MS
Lab Sample ID 1203086343
Instrument: MSD4.I
Analvst: JMB3
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: W
Analvsis Date: 05/14/2014 15:44
Dilution: 1
Prep Batch ID: 1387153
Batch ID: 1387154

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	100	0.00	U	71.3	71	21-88
110-86-1	MS	Pyridine	100	0.00	U	82.8	83	14-94
62-53-3	MS	Aniline	100	0.00	U	91.4	91	24-109
108-95-2	MS	Phenol	100	0.00	U	52.2	52	10-88
111-44-4	MS	bis(2-Chloroethyl) ether	100	0.00	U	83.6	84	25-114
95-57-8	MS	2-Chlorophenol	100	0.00	U	80.5	81	31-103
541-73-1	MS	1,3-Dichlorobenzene	100	0.00	U	58.4	58	18-83
106-46-7	MS	1,4-Dichlorobenzene	100	0.00	U	60.0	60	20-86
95-50-1	MS	1,2-Dichlorobenzene	100	0.00	U	61.0	61	21-85
108-60-1	MS	bis(2-Chloro-1-methylethyl)et	100	0.00	U	82.6	83	16-121
100-51-6	MS	Benzyl alcohol	100	0.00	U	86.6	87	31-100
95-48-7	MS	o-Cresol	100	0.00	U	79.2	79	26-97
65794-96-9	MS	m,p-Cresols	100	0.00	U	85.8	86	24-110
621-64-7	MS	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*	100	0.00	U	81.6	82	29-116
67-72-1	MS	Hexachloroethane	100	0.00	U	57.1	57	17-82
98-95-3	MS	Nitrobenzene	100	0.00	U	87.1	87	32-126
78-59-1	MS	Isophorone	100	0.00	U	88.9	89	36-139
88-75-5	MS	2-Nitrophenol	100	0.00	U	77.2	77	29-117
105-67-9	MS	2,4-Dimethylphenol	100	0.00	U	79.2	79	28-107
111-91-1	MS	bis(2-Chloroethoxy)methane	100	0.00	U	88.3	88	34-112
120-83-2	MS	2,4-Dichlorophenol	100	0.00	U	79.5	80	34-111
65-85-0	MS	Benzoic acid	200	0.00	U	71.5	36	10-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Client ID: CAMO-14-75543MS
Lab Sample ID 1203086343
Instrument: MSD4.I
Analyst: JMB3
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: W
Analysis Date: 05/14/2014 15:44
Prep Batch ID: 1387153
Batch ID: 1387154
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
106-47-8	MS	4-Chloroaniline	100	0.00	U	83.7	84	28-123
87-68-3	MS	Hexachlorobutadiene	100	0.00	U	55.4	55	11-97
59-50-7	MS	Parachlorometa cresol *4-Chloro-3-methylphenol*	100	0.00	U	79.8	80	31-119
91-57-6	MS	2-Methylnaphthalene	100	0.00	U	60.8	61	26-103
91-20-3	MS	Naphthalene	100	0.00	U	65.3	65	25-100
90-12-0	MS	1-Methylnaphthalene	100	0.00	U	66.1	66	27-107
77-47-4	MS	Hexachlorocyclopentadiene	100	0.00	U	45.8	46	14-73
88-06-2	MS	2,4,6-Trichlorophenol	100	0.00	U	86.5	87	31-113
95-95-4	MS	2,4,5-Trichlorophenol	100	0.00	U	83.4	83	30-117
91-58-7	MS	2-Chloronaphthalene	100	0.00	U	69.2	69	30-97
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	100	0.00	U	86.4	86	28-122
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	100	0.00	U	83.6	84	29-125
131-11-3	MS	Dimethylphthalate	100	0.00	U	93.4	93	41-116
606-20-2	MS	2,6-Dinitrotoluene	100	0.00	U	92.7	93	40-123
121-14-2	MS	2,4-Dinitrotoluene	100	0.00	U	94.4	94	34-126
208-96-8	MS	Acenaphthylene	100	0.00	U	75.8	76	33-104
83-32-9	MS	Acenaphthene	100	0.00	U	72.6	73	31-103
51-28-5	MS	2,4-Dinitrophenol	100	0.00	U	67.0	67	17-110
132-64-9	MS	Dibenzofuran	100	0.00	U	82.3	82	36-107
58-90-2	MS	2,3,4,6-Tetrachlorophenol	100	0.00	U	84.3	84	29-126
84-66-2	MS	Diethylphthalate	100	0.00	U	92.7	93	41-117
100-02-7	MS	4-Nitrophenol	100	0.00	U	37.0	37	16-71

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Client ID: CAMO-14-75543MS
Lab Sample ID 1203086343
Instrument: MSD4.I
Analyst: JMB3
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: W
Analysis Date: 05/14/2014 15:44
Prep Batch ID: 1387153
Batch ID: 1387154
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	100	0.00	U	77.0	77	32-111
7005-72-3	MS	4-Chlorophenylphenylether	100	0.00	U	82.8	83	30-112
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	100	0.00	U	85.4	85	25-133
534-52-1	MS	2-Methyl-4,6-dinitrophenol	100	0.00	U	80.3	80	22-118
122-39-4	MS	Diphenylamine	100	0.00	U	91.2	91	34-111
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	100	0.00	U	87.4	87	30-112
101-55-3	MS	4-Bromophenylphenylether	100	0.00	U	87.4	87	32-111
118-74-1	MS	Hexachlorobenzene	100	0.00	U	85.7	86	33-115
87-86-5	MS	Pentachlorophenol	100	0.00	U	68.8	69	19-112
85-01-8	MS	Phenanthrene	100	0.00	U	85.1	85	34-112
120-12-7	MS	Anthracene	100	0.00	U	87.0	87	33-108
84-74-2	MS	Di-n-butylphthalate	100	0.00	U	98.1	98	35-118
206-44-0	MS	Fluoranthene	100	0.00	U	84.6	85	31-118
129-00-0	MS	Pyrene	100	0.00	U	114	114	27-126
85-68-7	MS	Butylbenzylphthalate	100	0.00	U	111	111	29-121
117-81-7	MS	bis(2-Ethylhexyl)phthalate	100	0.00	U	101	101	29-120
56-55-3	MS	Benzo(a)anthracene	100	0.00	U	85.6	86	35-112
218-01-9	MS	Chrysene	100	0.00	U	88.1	88	32-116
117-84-0	MS	Di-n-octylphthalate	100	0.00	U	83.4	83	25-118
205-99-2	MS	Benzo(b)fluoranthene	100	0.00	U	86.8	87	34-116
207-08-9	MS	Benzo(k)fluoranthene	100	0.00	U	90.3	90	34-119
50-32-8	MS	Benzo(a)pyrene	100	0.00	U	86.0	86	34-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Client ID: CAMO-14-75543MS
Lab Sample ID 1203086343
Instrument: MSD4.I
Analyst: JMB3
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: W
Analysis Date: 05/14/2014 15:44
Prep Batch ID: 1387153
Batch ID: 1387154
Dilution: 1

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
193-39-5	MS	Indeno(1,2,3-cd)pyrene	100	0.00	U	89.1	89	25-122
53-70-3	MS	Dibenzo(a,h)anthracene	100	0.00	U	93.9	94	24-123
191-24-2	MS	Benzo(ghi)perylene	100	0.00	U	97.4	97	22-122
123-91-1	MS	1,4-Dioxane	100	0.00	U	73.3	73	26-88
930-55-2	MS	N-Nitrosopyrrolidine	100	0.00	U	82.8	83	42-110
95-94-3	MS	1,2,4,5-Tetrachlorobenzene	100	0.00	U	61.6	62	29-96
1912-24-9	MS	Atrazine	100	0.00	U	88.2	88	33-121
92-87-5	MS	Benzidine	200	0.00	U	118	59	10-117
91-94-1	MS	3,3'-Dichlorobenzidine	100	0.00	U	69.3	69	22-111
120-82-1	MS	1,2,4-Trichlorobenzene	100	0.00	U	58.2	58	20-90

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Matrix Spike Duplicate
Client ID: CAMO-14-75543MSD
Matrix: W
Lab Sample ID 1203086344
Instrument: MSD4.I
Analysis Date: 05/14/2014 16:14
Dilution: 1
Analyst: JMB3
Prep Batch ID: 1387153
Inj. Vol: 1 uL
Batch ID: 1387154

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD	N-Methyl-N-nitrosomethylam	100	0.00	U	68.2	68	21-88	5	0-30
110-86-1	MSD	Pyridine	100	0.00	U	79.5	80	14-94	4	0-30
62-53-3	MSD	Aniline	100	0.00	U	89.7	90	24-109	2	0-30
108-95-2	MSD	Phenol	100	0.00	U	51.7	52	10-88	1	0-30
111-44-4	MSD	bis(2-Chloroethyl) ether	100	0.00	U	82.6	83	25-114	1	0-30
95-57-8	MSD	2-Chlorophenol	100	0.00	U	80.0	80	31-103	1	0-30
541-73-1	MSD	1,3-Dichlorobenzene	100	0.00	U	58.9	59	18-83	1	0-30
106-46-7	MSD	1,4-Dichlorobenzene	100	0.00	U	59.9	60	20-86	0	0-30
95-50-1	MSD	1,2-Dichlorobenzene	100	0.00	U	61.6	62	21-85	1	0-30
108-60-1	MSD	bis(2-Chloro-1-methylethyl)et	100	0.00	U	81.8	82	16-121	1	0-30
100-51-6	MSD	Benzyl alcohol	100	0.00	U	87.5	88	31-100	1	0-30
95-48-7	MSD	o-Cresol	100	0.00	U	79.6	80	26-97	1	0-30
65794-96-9	MSD	m,p-Cresols	100	0.00	U	84.4	84	24-110	2	0-30
621-64-7	MSD	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*	100	0.00	U	84.2	84	29-116	3	0-30
67-72-1	MSD	Hexachloroethane	100	0.00	U	57.2	57	17-82	0	0-30
98-95-3	MSD	Nitrobenzene	100	0.00	U	90.5	90	32-126	4	0-30
78-59-1	MSD	Isophorone	100	0.00	U	95.2	95	36-139	7	0-30
88-75-5	MSD	2-Nitrophenol	100	0.00	U	80.9	81	29-117	5	0-30
105-67-9	MSD	2,4-Dimethylphenol	100	0.00	U	84.1	84	28-107	6	0-30
111-91-1	MSD	bis(2-Chloroethoxy)methane	100	0.00	U	91.9	92	34-112	4	0-30
120-83-2	MSD	2,4-Dichlorophenol	100	0.00	U	81.8	82	34-111	3	0-30
65-85-0	MSD	Benzoic acid	200	0.00	U	76.8	38	10-105	7	0-30

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Matrix Spike Duplicate
Client ID: CAMO-14-75543MSD
Matrix: W
Lab Sample ID 1203086344
Instrument: MSD4.I
Analysis Date: 05/14/2014 16:14
Dilution: 1
Analyst: JMB3
Prep Batch ID: 1387153
Inj. Vol: 1 uL
Batch ID: 1387154

CAS No	Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
106-47-8	MSD 4-Chloroaniline	100	0.00	U	84.8	85	28-123	1	0-30
87-68-3	MSD Hexachlorobutadiene	100	0.00	U	56.7	57	11-97	2	0-30
59-50-7	MSD Parachlorometa cresol *4-Chloro-3-methylphenol*	100	0.00	U	85.5	86	31-119	7	0-30
91-57-6	MSD 2-Methylnaphthalene	100	0.00	U	64.1	64	26-103	5	0-30
91-20-3	MSD Naphthalene	100	0.00	U	66.3	66	25-100	2	0-30
90-12-0	MSD 1-Methylnaphthalene	100	0.00	U	69.2	69	27-107	5	0-30
77-47-4	MSD Hexachlorocyclopentadiene	100	0.00	U	50.4	50	14-73	10	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	100	0.00	U	91.4	91	31-113	5	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	100	0.00	U	89.9	90	30-117	7	0-30
91-58-7	MSD 2-Chloronaphthalene	100	0.00	U	70.7	71	30-97	2	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	100	0.00	U	92.0	92	28-122	6	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	100	0.00	U	88.9	89	29-125	6	0-30
131-11-3	MSD Dimethylphthalate	100	0.00	U	100	100	41-116	7	0-30
606-20-2	MSD 2,6-Dinitrotoluene	100	0.00	U	100	100	40-123	8	0-30
121-14-2	MSD 2,4-Dinitrotoluene	100	0.00	U	102	102	34-126	8	0-30
208-96-8	MSD Acenaphthylene	100	0.00	U	78.6	79	33-104	4	0-30
83-32-9	MSD Acenaphthene	100	0.00	U	75.7	76	31-103	4	0-30
51-28-5	MSD 2,4-Dinitrophenol	100	0.00	U	74.4	74	17-110	10	0-30
132-64-9	MSD Dibenzofuran	100	0.00	U	85.6	86	36-107	4	0-30
58-90-2	MSD 2,3,4,6-Tetrachlorophenol	100	0.00	U	92.0	92	29-126	9	0-30
84-66-2	MSD Diethylphthalate	100	0.00	U	101	101	41-117	8	0-30
100-02-7	MSD 4-Nitrophenol	100	0.00	U	39.2	39	16-71	6	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Sample Type: Matrix Spike Duplicate
Client ID: CAMO-14-75543MSD
Matrix: W
Lab Sample ID 1203086344
Instrument: MSD4.I
Analysis Date: 05/14/2014 16:14
Dilution: 1
Analyst: JMB3
Prep Batch ID: 1387153
Inj. Vol: 1 uL
Batch ID: 1387154

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	100	0.00	U	81.4	81	32-111	6	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	100	0.00	U	86.9	87	30-112	5	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	100	0.00	U	95.2	95	25-133	11	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	100	0.00	U	85.4	85	22-118	6	0-30
122-39-4	MSD	Diphenylamine	100	0.00	U	90.6	91	34-111	1	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	100	0.00	U	86.9	87	30-112	1	0-30
101-55-3	MSD	4-Bromophenylphenylether	100	0.00	U	87.6	88	32-111	0	0-30
118-74-1	MSD	Hexachlorobenzene	100	0.00	U	85.4	85	33-115	0	0-30
87-86-5	MSD	Pentachlorophenol	100	0.00	U	73.7	74	19-112	7	0-30
85-01-8	MSD	Phenanthrene	100	0.00	U	84.7	85	34-112	1	0-30
120-12-7	MSD	Anthracene	100	0.00	U	88.0	88	33-108	1	0-30
84-74-2	MSD	Di-n-butylphthalate	100	0.00	U	100	100	35-118	2	0-30
206-44-0	MSD	Fluoranthene	100	0.00	U	87.2	87	31-118	3	0-30
129-00-0	MSD	Pyrene	100	0.00	U	103	103	27-126	10	0-30
85-68-7	MSD	Butylbenzylphthalate	100	0.00	U	114	114	29-121	3	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	100	0.00	U	110	110	29-120	8	0-30
56-55-3	MSD	Benzo(a)anthracene	100	0.00	U	88.1	88	35-112	3	0-30
218-01-9	MSD	Chrysene	100	0.00	U	88.9	89	32-116	1	0-30
117-84-0	MSD	Di-n-octylphthalate	100	0.00	U	98.5	99	25-118	17	0-30
205-99-2	MSD	Benzo(b)fluoranthene	100	0.00	U	88.8	89	34-116	2	0-30
207-08-9	MSD	Benzo(k)fluoranthene	100	0.00	U	91.4	91	34-119	1	0-30
50-32-8	MSD	Benzo(a)pyrene	100	0.00	U	87.5	87	34-110	2	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 2014-3353
Client ID: CAMO-14-75543MSD
Lab Sample ID 1203086344
Instrument: MSD4.I
Analyst: JMB3
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: W
Analysis Date: 05/14/2014 16:14
Prep Batch ID: 1387153
Batch ID: 1387154
Dilution: 1

CAS No	Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
193-39-5	MSD Indeno(1,2,3-cd)pyrene	100	0.00	U	83.7	84	25-122	6	0-30
53-70-3	MSD Dibenzo(a,h)anthracene	100	0.00	U	88.8	89	24-123	6	0-30
191-24-2	MSD Benzo(ghi)perylene	100	0.00	U	89.0	89	22-122	9	0-30
123-91-1	MSD 1,4-Dioxane	100	0.00	U	68.8	69	26-88	6	0-30
930-55-2	MSD N-Nitrosopyrrolidine	100	0.00	U	84.3	84	42-110	2	0-30
95-94-3	MSD 1,2,4,5-Tetrachlorobenzene	100	0.00	U	62.1	62	29-96	1	0-30
1912-24-9	MSD Atrazine	100	0.00	U	91.8	92	33-121	4	0-30
92-87-5	MSD Benzidine	200	0.00	U	139	69	10-117	16	0-30
91-94-1	MSD 3,3'-Dichlorobenzidine	100	0.00	U	73.5	74	22-111	6	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	100	0.00	U	60.5	61	20-90	4	0-30

Method Blank Summary

SDG Number:	**2014-3353**	**Client:**	**ARSL004**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1387153**	**Instrument ID:**	**MSD4.I**	**Data File:**	**s051414.B\s4e1411.D**
Lab Sample ID:	**1203086341**	**Prep Date:**	**05/13/2014 11:44**	**Analyzed:**	**05/14/14 14:16**
Column:	**DB-5ms**				

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

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1387153	1203086342	s051414.B\s4e1412.D	05/14/14	1445
02	CAMO-14-75543	348269001	s051414.B\s4e1413.D	05/14/14	1515
03	CAMO-14-75543MS	1203086343	s051414.B\s4e1414.D	05/14/14	1544
04	CAMO-14-75543MSD	1203086344	s051414.B\s4e1415.D	05/14/14	1614

Quality Control Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203086341**				
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**MB for batch 1387153**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 14:16**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1411.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
95-94-3	1,2,4,5-Tetrachlorobenzene	U	10.0	ug/L	3.00	10.0
120-82-1	1,2,4-Trichlorobenzene	U	10.0	ug/L	3.00	10.0
95-50-1	1,2-Dichlorobenzene	U	10.0	ug/L	3.00	10.0
122-66-7	Azobenzene	U	10.0	ug/L	3.00	10.0
	1,2-Diphenylhydrazine					
541-73-1	1,3-Dichlorobenzene	U	10.0	ug/L	3.00	10.0
106-46-7	1,4-Dichlorobenzene	U	10.0	ug/L	3.00	10.0
123-91-1	1,4-Dioxane	U	10.0	ug/L	3.00	10.0
90-12-0	1-Methylnaphthalene	U	1.00	ug/L	0.300	1.00
58-90-2	2,3,4,6-Tetrachlorophenol	U	10.0	ug/L	3.00	10.0
95-95-4	2,4,5-Trichlorophenol	U	10.0	ug/L	3.00	10.0
88-06-2	2,4,6-Trichlorophenol	U	10.0	ug/L	3.00	10.0
120-83-2	2,4-Dichlorophenol	U	10.0	ug/L	3.00	10.0
105-67-9	2,4-Dimethylphenol	U	10.0	ug/L	3.00	10.0
51-28-5	2,4-Dinitrophenol	U	20.0	ug/L	5.00	20.0
121-14-2	2,4-Dinitrotoluene	U	10.0	ug/L	3.00	10.0
606-20-2	2,6-Dinitrotoluene	U	10.0	ug/L	3.00	10.0
91-58-7	2-Chloronaphthalene	U	1.00	ug/L	0.410	1.00
95-57-8	2-Chlorophenol	U	10.0	ug/L	3.00	10.0
534-52-1	2-Methyl-4,6-dinitrophenol	U	10.0	ug/L	3.00	10.0
91-57-6	2-Methylnaphthalene	U	1.00	ug/L	0.300	1.00
88-75-5	2-Nitrophenol	U	10.0	ug/L	3.00	10.0
91-94-1	3,3'-Dichlorobenzidine	U	10.0	ug/L	3.00	10.0
101-55-3	4-Bromophenylphenylether	U	10.0	ug/L	3.00	10.0
59-50-7	Parachlorometa cresol	U	10.0	ug/L	3.00	10.0
	4-Chloro-3-methylphenol					
106-47-8	4-Chloroaniline	U	10.0	ug/L	3.30	10.0
7005-72-3	4-Chlorophenylphenylether	U	10.0	ug/L	3.00	10.0
100-02-7	4-Nitrophenol	U	10.0	ug/L	3.00	10.0
83-32-9	Acenaphthene	U	1.00	ug/L	0.300	1.00
208-96-8	Acenaphthylene	U	1.00	ug/L	0.300	1.00
62-53-3	Aniline	U	10.0	ug/L	4.20	10.0
120-12-7	Anthracene	U	1.00	ug/L	0.300	1.00
1912-24-9	Atrazine	U	10.0	ug/L	3.00	10.0
92-87-5	Benzidine	U	10.0	ug/L	3.90	10.0
56-55-3	Benzo(a)anthracene	U	1.00	ug/L	0.300	1.00
50-32-8	Benzo(a)pyrene	U	1.00	ug/L	0.300	1.00
205-99-2	Benzo(b)fluoranthene	U	1.00	ug/L	0.300	1.00
191-24-2	Benzo(ghi)perylene	U	1.00	ug/L	0.300	1.00

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203086341**				
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**MB for batch 1387153**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 14:16**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1411.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
207-08-9	Benzo(k)fluoranthene	U	1.00	ug/L	0.300	1.00
65-85-0	Benzoic acid	U	20.0	ug/L	6.00	20.0
100-51-6	Benzyl alcohol	U	10.0	ug/L	3.00	10.0
85-68-7	Butylbenzylphthalate	U	10.0	ug/L	3.00	10.0
218-01-9	Chrysene	U	1.00	ug/L	0.300	1.00
84-74-2	Di-n-butylphthalate	U	10.0	ug/L	3.00	10.0
117-84-0	Di-n-octylphthalate	U	10.0	ug/L	3.00	10.0
53-70-3	Dibenzo(a,h)anthracene	U	1.00	ug/L	0.300	1.00
132-64-9	Dibenzofuran	U	10.0	ug/L	3.00	10.0
84-66-2	Diethylphthalate	U	10.0	ug/L	3.00	10.0
131-11-3	Dimethylphthalate	U	10.0	ug/L	3.00	10.0
88-85-7	Dinoseb	U	10.0	ug/L	3.00	10.0
122-39-4	Diphenylamine	U	10.0	ug/L	3.00	10.0
206-44-0	Fluoranthene	U	1.00	ug/L	0.300	1.00
86-73-7	Fluorene	U	1.00	ug/L	0.300	1.00
118-74-1	Hexachlorobenzene	U	10.0	ug/L	3.00	10.0
87-68-3	Hexachlorobutadiene	U	10.0	ug/L	3.00	10.0
77-47-4	Hexachlorocyclopentadiene	U	10.0	ug/L	3.00	10.0
67-72-1	Hexachloroethane	U	10.0	ug/L	3.00	10.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	1.00	ug/L	0.300	1.00
78-59-1	Isophorone	U	10.0	ug/L	3.50	10.0
62-75-9	N-Methyl-N-nitrosomethylamine	U	10.0	ug/L	3.00	10.0
924-16-3	N-Nitrosodi-n-butylamine	U	10.0	ug/L	3.00	10.0
55-18-5	N-Nitrosodiethylamine	U	10.0	ug/L	3.00	10.0
621-64-7	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*	U	10.0	ug/L	3.00	10.0
930-55-2	N-Nitrosopyrrolidine	U	10.0	ug/L	3.00	10.0
91-20-3	Naphthalene	U	1.00	ug/L	0.300	1.00
98-95-3	Nitrobenzene	U	10.0	ug/L	3.00	10.0
608-93-5	Pentachlorobenzene	U	10.0	ug/L	3.00	10.0
87-86-5	Pentachlorophenol	U	10.0	ug/L	3.00	10.0
85-01-8	Phenanthrene	U	1.00	ug/L	0.300	1.00
108-95-2	Phenol	U	10.0	ug/L	3.00	10.0
129-00-0	Pyrene	U	1.00	ug/L	0.300	1.00
110-86-1	Pyridine	U	10.0	ug/L	3.00	10.0
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	10.0	ug/L	3.00	10.0
111-91-1	bis(2-Chloroethoxy)methane	U	10.0	ug/L	3.00	10.0
111-44-4	bis(2-Chloroethyl) ether	U	10.0	ug/L	3.00	10.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	10.0	ug/L	3.00	10.0

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203086341**				
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**MB for batch 1387153**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 14:16**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1411.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
65794-96-9	m,p-Cresols	U	10.0	ug/L	3.70	10.0
99-09-2	3-Nitroaniline *m-Nitroaniline*	U	10.0	ug/L	3.00	10.0
95-48-7	o-Cresol	U	10.0	ug/L	3.00	10.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	10.0	ug/L	3.00	10.0
100-01-6	4-Nitroaniline *p-Nitroaniline*	U	10.0	ug/L	3.00	10.0

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
2,4,6-Tribromophenol	64.8	100	ug/L	64.8	(26%-129%)
2-Fluorobiphenyl	28.8	50.0	ug/L	57.6	(32%-102%)
2-Fluorophenol	44.0	100	ug/L	44.0	(10%-78%)
Nitrobenzene-d5	33.6	50.0	ug/L	67.1	(36%-125%)
Phenol-d5	25.4	100	ug/L	25.4	(10%-104%)
p-Terphenyl-d14	47.7	50.0	ug/L	95.5	(34%-135%)

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	Estimated RT	Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/L		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203086342**				
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1387153**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 14:45**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1412.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
95-94-3	1,2,4,5-Tetrachlorobenzene		32.2	ug/L	3.00	10.0
120-82-1	1,2,4-Trichlorobenzene		30.7	ug/L	3.00	10.0
95-50-1	1,2-Dichlorobenzene		30.7	ug/L	3.00	10.0
122-66-7	Azobenzene		45.4	ug/L	3.00	10.0
	1,2-Diphenylhydrazine					
541-73-1	1,3-Dichlorobenzene		29.0	ug/L	3.00	10.0
106-46-7	1,4-Dichlorobenzene		29.2	ug/L	3.00	10.0
123-91-1	1,4-Dioxane		28.5	ug/L	3.00	10.0
90-12-0	1-Methylnaphthalene		34.5	ug/L	0.300	1.00
58-90-2	2,3,4,6-Tetrachlorophenol		44.7	ug/L	3.00	10.0
95-95-4	2,4,5-Trichlorophenol		44.0	ug/L	3.00	10.0
88-06-2	2,4,6-Trichlorophenol		45.5	ug/L	3.00	10.0
120-83-2	2,4-Dichlorophenol		40.7	ug/L	3.00	10.0
105-67-9	2,4-Dimethylphenol		41.1	ug/L	3.00	10.0
51-28-5	2,4-Dinitrophenol		33.4	ug/L	5.00	20.0
121-14-2	2,4-Dinitrotoluene		50.6	ug/L	3.00	10.0
606-20-2	2,6-Dinitrotoluene		50.3	ug/L	3.00	10.0
91-58-7	2-Chloronaphthalene		36.2	ug/L	0.410	1.00
95-57-8	2-Chlorophenol		39.3	ug/L	3.00	10.0
534-52-1	2-Methyl-4,6-dinitrophenol		40.8	ug/L	3.00	10.0
91-57-6	2-Methylnaphthalene		32.0	ug/L	0.300	1.00
88-75-5	2-Nitrophenol		40.7	ug/L	3.00	10.0
91-94-1	3,3'-Dichlorobenzidine		35.1	ug/L	3.00	10.0
101-55-3	4-Bromophenylphenylether		46.4	ug/L	3.00	10.0
59-50-7	Parachlorometa cresol		41.5	ug/L	3.00	10.0
	4-Chloro-3-methylphenol					
106-47-8	4-Chloroaniline		43.9	ug/L	3.30	10.0
7005-72-3	4-Chlorophenylphenylether		45.7	ug/L	3.00	10.0
100-02-7	4-Nitrophenol		10.3	ug/L	3.00	10.0
83-32-9	Acenaphthene		38.8	ug/L	0.300	1.00
208-96-8	Acenaphthylene		40.3	ug/L	0.300	1.00
62-53-3	Aniline		44.2	ug/L	4.20	10.0
120-12-7	Anthracene		44.1	ug/L	0.300	1.00
1912-24-9	Atrazine		46.1	ug/L	3.00	10.0
92-87-5	Benzidine		56.0	ug/L	3.90	10.0
56-55-3	Benzo(a)anthracene		43.3	ug/L	0.300	1.00
50-32-8	Benzo(a)pyrene		43.3	ug/L	0.300	1.00
205-99-2	Benzo(b)fluoranthene		43.2	ug/L	0.300	1.00
191-24-2	Benzo(ghi)perylene		49.9	ug/L	0.300	1.00

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203086342**				
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1387153**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 14:45**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1412.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
207-08-9	Benzo(k)fluoranthene		45.7	ug/L	0.300	1.00
65-85-0	Benzoic acid	J	16.9	ug/L	6.00	20.0
100-51-6	Benzyl alcohol		38.8	ug/L	3.00	10.0
85-68-7	Butylbenzylphthalate		57.1	ug/L	3.00	10.0
218-01-9	Chrysene		44.4	ug/L	0.300	1.00
84-74-2	Di-n-butylphthalate		50.6	ug/L	3.00	10.0
117-84-0	Di-n-octylphthalate		45.9	ug/L	3.00	10.0
53-70-3	Dibenzo(a,h)anthracene		46.8	ug/L	0.300	1.00
132-64-9	Dibenzofuran		44.3	ug/L	3.00	10.0
84-66-2	Diethylphthalate		49.6	ug/L	3.00	10.0
131-11-3	Dimethylphthalate		49.5	ug/L	3.00	10.0
88-85-7	Dinoseb	U	10.0	ug/L	3.00	10.0
122-39-4	Diphenylamine		47.4	ug/L	3.00	10.0
206-44-0	Fluoranthene		43.4	ug/L	0.300	1.00
86-73-7	Fluorene		41.6	ug/L	0.300	1.00
118-74-1	Hexachlorobenzene		43.7	ug/L	3.00	10.0
87-68-3	Hexachlorobutadiene		29.7	ug/L	3.00	10.0
77-47-4	Hexachlorocyclopentadiene		24.5	ug/L	3.00	10.0
67-72-1	Hexachloroethane		29.0	ug/L	3.00	10.0
193-39-5	Indeno(1,2,3-cd)pyrene		45.7	ug/L	0.300	1.00
78-59-1	Isophorone		47.1	ug/L	3.50	10.0
62-75-9	N-Methyl-N-nitrosomethylamine		26.6	ug/L	3.00	10.0
924-16-3	N-Nitrosodi-n-butylamine	U	10.0	ug/L	3.00	10.0
55-18-5	N-Nitrosodiethylamine	U	10.0	ug/L	3.00	10.0
621-64-7	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*		42.8	ug/L	3.00	10.0
930-55-2	N-Nitrosopyrrolidine		40.9	ug/L	3.00	10.0
91-20-3	Naphthalene		33.9	ug/L	0.300	1.00
98-95-3	Nitrobenzene		46.3	ug/L	3.00	10.0
608-93-5	Pentachlorobenzene	U	10.0	ug/L	3.00	10.0
87-86-5	Pentachlorophenol		34.5	ug/L	3.00	10.0
85-01-8	Phenanthrene		43.1	ug/L	0.300	1.00
108-95-2	Phenol		16.2	ug/L	3.00	10.0
129-00-0	Pyrene		56.0	ug/L	0.300	1.00
110-86-1	Pyridine		33.0	ug/L	3.00	10.0
108-60-1	bis(2-Chloro-1-methylethyl)ether		42.4	ug/L	3.00	10.0
111-91-1	bis(2-Chloroethoxy)methane		47.2	ug/L	3.00	10.0
111-44-4	bis(2-Chloroethyl) ether		43.6	ug/L	3.00	10.0
117-81-7	bis(2-Ethylhexyl)phthalate		53.9	ug/L	3.00	10.0

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**			**Matrix:**	**WATER**
Lab Sample ID:	**1203086342**				
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**LCS for batch 1387153**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 14:45**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**1000 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1412.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
65794-96-9	m,p-Cresols		36.1	ug/L	3.70	10.0
99-09-2	3-Nitroaniline *m-Nitroaniline*		42.8	ug/L	3.00	10.0
95-48-7	o-Cresol		35.7	ug/L	3.00	10.0
88-74-4	2-Nitroaniline *o-Nitroaniline*		46.1	ug/L	3.00	10.0
100-01-6	4-Nitroaniline *p-Nitroaniline*		44.3	ug/L	3.00	10.0

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
2,4,6-Tribromophenol	88.9	100	ug/L	88.9	(26%-129%)
2-Fluorobiphenyl	38.6	50.0	ug/L	77.3	(32%-102%)
2-Fluorophenol	49.1	100	ug/L	49.1	(10%-78%)
Nitrobenzene-d5	42.4	50.0	ug/L	84.8	(36%-125%)
Phenol-d5	31.5	100	ug/L	31.5	(10%-104%)
p-Terphenyl-d14	53.6	50.0	ug/L	107	(34%-135%)

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203086343**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543MS**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 15:44**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**500 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1414.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
95-94-3	1,2,4,5-Tetrachlorobenzene		61.6	ug/L	6.00	20.0
120-82-1	1,2,4-Trichlorobenzene		58.2	ug/L	6.00	20.0
95-50-1	1,2-Dichlorobenzene		61.0	ug/L	6.00	20.0
122-66-7	Azobenzene		87.4	ug/L	6.00	20.0
	1,2-Diphenylhydrazine					
541-73-1	1,3-Dichlorobenzene		58.4	ug/L	6.00	20.0
106-46-7	1,4-Dichlorobenzene		60.0	ug/L	6.00	20.0
123-91-1	1,4-Dioxane		73.3	ug/L	6.00	20.0
90-12-0	1-Methylnaphthalene		66.1	ug/L	0.600	2.00
58-90-2	2,3,4,6-Tetrachlorophenol		84.3	ug/L	6.00	20.0
95-95-4	2,4,5-Trichlorophenol		83.4	ug/L	6.00	20.0
88-06-2	2,4,6-Trichlorophenol		86.5	ug/L	6.00	20.0
120-83-2	2,4-Dichlorophenol		79.5	ug/L	6.00	20.0
105-67-9	2,4-Dimethylphenol		79.2	ug/L	6.00	20.0
51-28-5	2,4-Dinitrophenol		67.0	ug/L	10.0	40.0
121-14-2	2,4-Dinitrotoluene		94.4	ug/L	6.00	20.0
606-20-2	2,6-Dinitrotoluene		92.7	ug/L	6.00	20.0
91-58-7	2-Chloronaphthalene		69.2	ug/L	0.820	2.00
95-57-8	2-Chlorophenol		80.5	ug/L	6.00	20.0
534-52-1	2-Methyl-4,6-dinitrophenol		80.3	ug/L	6.00	20.0
91-57-6	2-Methylnaphthalene		60.8	ug/L	0.600	2.00
88-75-5	2-Nitrophenol		77.2	ug/L	6.00	20.0
91-94-1	3,3'-Dichlorobenzidine		69.3	ug/L	6.00	20.0
101-55-3	4-Bromophenylphenylether		87.4	ug/L	6.00	20.0
59-50-7	Parachlorometa cresol		79.8	ug/L	6.00	20.0
	4-Chloro-3-methylphenol					
106-47-8	4-Chloroaniline		83.7	ug/L	6.60	20.0
7005-72-3	4-Chlorophenylphenylether		82.8	ug/L	6.00	20.0
100-02-7	4-Nitrophenol		37.0	ug/L	6.00	20.0
83-32-9	Acenaphthene		72.6	ug/L	0.600	2.00
208-96-8	Acenaphthylene		75.8	ug/L	0.600	2.00
62-53-3	Aniline		91.4	ug/L	8.40	20.0
120-12-7	Anthracene		87.0	ug/L	0.600	2.00
1912-24-9	Atrazine		88.2	ug/L	6.00	20.0
92-87-5	Benzidine		118	ug/L	7.80	20.0
56-55-3	Benzo(a)anthracene		85.6	ug/L	0.600	2.00
50-32-8	Benzo(a)pyrene		86.0	ug/L	0.600	2.00
205-99-2	Benzo(b)fluoranthene		86.8	ug/L	0.600	2.00
191-24-2	Benzo(ghi)perylene		97.4	ug/L	0.600	2.00

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203086343**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543MS**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 15:44**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**500 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1414.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
207-08-9	Benzo(k)fluoranthene		90.3	ug/L	0.600	2.00
65-85-0	Benzoic acid		71.5	ug/L	12.0	40.0
100-51-6	Benzyl alcohol		86.6	ug/L	6.00	20.0
85-68-7	Butylbenzylphthalate		111	ug/L	6.00	20.0
218-01-9	Chrysene		88.1	ug/L	0.600	2.00
84-74-2	Di-n-butylphthalate		98.1	ug/L	6.00	20.0
117-84-0	Di-n-octylphthalate		83.4	ug/L	6.00	20.0
53-70-3	Dibenzo(a,h)anthracene		93.9	ug/L	0.600	2.00
132-64-9	Dibenzofuran		82.3	ug/L	6.00	20.0
84-66-2	Diethylphthalate		92.7	ug/L	6.00	20.0
131-11-3	Dimethylphthalate		93.4	ug/L	6.00	20.0
88-85-7	Dinoseb	U	20.0	ug/L	6.00	20.0
122-39-4	Diphenylamine		91.2	ug/L	6.00	20.0
206-44-0	Fluoranthene		84.6	ug/L	0.600	2.00
86-73-7	Fluorene		77.0	ug/L	0.600	2.00
118-74-1	Hexachlorobenzene		85.7	ug/L	6.00	20.0
87-68-3	Hexachlorobutadiene		55.4	ug/L	6.00	20.0
77-47-4	Hexachlorocyclopentadiene		45.8	ug/L	6.00	20.0
67-72-1	Hexachloroethane		57.1	ug/L	6.00	20.0
193-39-5	Indeno(1,2,3-cd)pyrene		89.1	ug/L	0.600	2.00
78-59-1	Isophorone		88.9	ug/L	7.00	20.0
62-75-9	N-Methyl-N-nitrosomethylamine		71.3	ug/L	6.00	20.0
924-16-3	N-Nitrosodi-n-butylamine	U	20.0	ug/L	6.00	20.0
55-18-5	N-Nitrosodiethylamine	U	20.0	ug/L	6.00	20.0
621-64-7	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*		81.6	ug/L	6.00	20.0
930-55-2	N-Nitrosopyrrolidine		82.8	ug/L	6.00	20.0
91-20-3	Naphthalene		65.3	ug/L	0.600	2.00
98-95-3	Nitrobenzene		87.1	ug/L	6.00	20.0
608-93-5	Pentachlorobenzene	U	20.0	ug/L	6.00	20.0
87-86-5	Pentachlorophenol		68.8	ug/L	6.00	20.0
85-01-8	Phenanthrene		85.1	ug/L	0.600	2.00
108-95-2	Phenol		52.2	ug/L	6.00	20.0
129-00-0	Pyrene		114	ug/L	0.600	2.00
110-86-1	Pyridine		82.8	ug/L	6.00	20.0
108-60-1	bis(2-Chloro-1-methylethyl)ether		82.6	ug/L	6.00	20.0
111-91-1	bis(2-Chloroethoxy)methane		88.3	ug/L	6.00	20.0
111-44-4	bis(2-Chloroethyl) ether		83.6	ug/L	6.00	20.0
117-81-7	bis(2-Ethylhexyl)phthalate		101	ug/L	6.00	20.0

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203086343**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543MS**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 15:44**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**500 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1414.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
65794-96-9	m,p-Cresols		85.8	ug/L	7.40	20.0
99-09-2	3-Nitroaniline *m-Nitroaniline*		83.6	ug/L	6.00	20.0
95-48-7	o-Cresol		79.2	ug/L	6.00	20.0
88-74-4	2-Nitroaniline *o-Nitroaniline*		86.4	ug/L	6.00	20.0
100-01-6	4-Nitroaniline *p-Nitroaniline*		85.4	ug/L	6.00	20.0

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
2,4,6-Tribromophenol	168	200	ug/L	84.1	(26%-129%)
2-Fluorobiphenyl	78.2	100	ug/L	78.2	(32%-102%)
2-Fluorophenol	135	200	ug/L	67.4	(10%-78%)
Nitrobenzene-d5	79.9	100	ug/L	79.9	(36%-125%)
Phenol-d5	102	200	ug/L	51.2	(10%-104%)
p-Terphenyl-d14	108	100	ug/L	108	(34%-135%)

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203086344**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543MSD**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 16:14**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**500 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1415.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
95-94-3	1,2,4,5-Tetrachlorobenzene		62.1	ug/L	6.00	20.0
120-82-1	1,2,4-Trichlorobenzene		60.5	ug/L	6.00	20.0
95-50-1	1,2-Dichlorobenzene		61.6	ug/L	6.00	20.0
122-66-7	Azobenzene		86.9	ug/L	6.00	20.0
	1,2-Diphenylhydrazine					
541-73-1	1,3-Dichlorobenzene		58.9	ug/L	6.00	20.0
106-46-7	1,4-Dichlorobenzene		59.9	ug/L	6.00	20.0
123-91-1	1,4-Dioxane		68.8	ug/L	6.00	20.0
90-12-0	1-Methylnaphthalene		69.2	ug/L	0.600	2.00
58-90-2	2,3,4,6-Tetrachlorophenol		92.0	ug/L	6.00	20.0
95-95-4	2,4,5-Trichlorophenol		89.9	ug/L	6.00	20.0
88-06-2	2,4,6-Trichlorophenol		91.4	ug/L	6.00	20.0
120-83-2	2,4-Dichlorophenol		81.8	ug/L	6.00	20.0
105-67-9	2,4-Dimethylphenol		84.1	ug/L	6.00	20.0
51-28-5	2,4-Dinitrophenol		74.4	ug/L	10.0	40.0
121-14-2	2,4-Dinitrotoluene		102	ug/L	6.00	20.0
606-20-2	2,6-Dinitrotoluene		100	ug/L	6.00	20.0
91-58-7	2-Chloronaphthalene		70.7	ug/L	0.820	2.00
95-57-8	2-Chlorophenol		80.0	ug/L	6.00	20.0
534-52-1	2-Methyl-4,6-dinitrophenol		85.4	ug/L	6.00	20.0
91-57-6	2-Methylnaphthalene		64.1	ug/L	0.600	2.00
88-75-5	2-Nitrophenol		80.9	ug/L	6.00	20.0
91-94-1	3,3'-Dichlorobenzidine		73.5	ug/L	6.00	20.0
101-55-3	4-Bromophenylphenylether		87.6	ug/L	6.00	20.0
59-50-7	Parachlorometa cresol		85.5	ug/L	6.00	20.0
	4-Chloro-3-methylphenol					
106-47-8	4-Chloroaniline		84.8	ug/L	6.60	20.0
7005-72-3	4-Chlorophenylphenylether		86.9	ug/L	6.00	20.0
100-02-7	4-Nitrophenol		39.2	ug/L	6.00	20.0
83-32-9	Acenaphthene		75.7	ug/L	0.600	2.00
208-96-8	Acenaphthylene		78.6	ug/L	0.600	2.00
62-53-3	Aniline		89.7	ug/L	8.40	20.0
120-12-7	Anthracene		88.0	ug/L	0.600	2.00
1912-24-9	Atrazine		91.8	ug/L	6.00	20.0
92-87-5	Benzidine		139	ug/L	7.80	20.0
56-55-3	Benzo(a)anthracene		88.1	ug/L	0.600	2.00
50-32-8	Benzo(a)pyrene		87.5	ug/L	0.600	2.00
205-99-2	Benzo(b)fluoranthene		88.8	ug/L	0.600	2.00
191-24-2	Benzo(ghi)perylene		89.0	ug/L	0.600	2.00

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203086344**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543MSD**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 16:14**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**500 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1415.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
207-08-9	Benzo(k)fluoranthene		91.4	ug/L	0.600	2.00
65-85-0	Benzoic acid		76.8	ug/L	12.0	40.0
100-51-6	Benzyl alcohol		87.5	ug/L	6.00	20.0
85-68-7	Butylbenzylphthalate		114	ug/L	6.00	20.0
218-01-9	Chrysene		88.9	ug/L	0.600	2.00
84-74-2	Di-n-butylphthalate		100	ug/L	6.00	20.0
117-84-0	Di-n-octylphthalate		98.5	ug/L	6.00	20.0
53-70-3	Dibenzo(a,h)anthracene		88.8	ug/L	0.600	2.00
132-64-9	Dibenzofuran		85.6	ug/L	6.00	20.0
84-66-2	Diethylphthalate		101	ug/L	6.00	20.0
131-11-3	Dimethylphthalate		100	ug/L	6.00	20.0
88-85-7	Dinoseb	U	20.0	ug/L	6.00	20.0
122-39-4	Diphenylamine		90.6	ug/L	6.00	20.0
206-44-0	Fluoranthene		87.2	ug/L	0.600	2.00
86-73-7	Fluorene		81.4	ug/L	0.600	2.00
118-74-1	Hexachlorobenzene		85.4	ug/L	6.00	20.0
87-68-3	Hexachlorobutadiene		56.7	ug/L	6.00	20.0
77-47-4	Hexachlorocyclopentadiene		50.4	ug/L	6.00	20.0
67-72-1	Hexachloroethane		57.2	ug/L	6.00	20.0
193-39-5	Indeno(1,2,3-cd)pyrene		83.7	ug/L	0.600	2.00
78-59-1	Isophorone		95.2	ug/L	7.00	20.0
62-75-9	N-Methyl-N-nitrosomethylamine		68.2	ug/L	6.00	20.0
924-16-3	N-Nitrosodi-n-butylamine	U	20.0	ug/L	6.00	20.0
55-18-5	N-Nitrosodiethylamine	U	20.0	ug/L	6.00	20.0
621-64-7	N-Nitrosodi--n-propylamine *N-Nitrosodipropylamine*		84.2	ug/L	6.00	20.0
930-55-2	N-Nitrosopyrrolidine		84.3	ug/L	6.00	20.0
91-20-3	Naphthalene		66.3	ug/L	0.600	2.00
98-95-3	Nitrobenzene		90.5	ug/L	6.00	20.0
608-93-5	Pentachlorobenzene	U	20.0	ug/L	6.00	20.0
87-86-5	Pentachlorophenol		73.7	ug/L	6.00	20.0
85-01-8	Phenanthrene		84.7	ug/L	0.600	2.00
108-95-2	Phenol		51.7	ug/L	6.00	20.0
129-00-0	Pyrene		103	ug/L	0.600	2.00
110-86-1	Pyridine		79.5	ug/L	6.00	20.0
108-60-1	bis(2-Chloro-1-methylethyl)ether		81.8	ug/L	6.00	20.0
111-91-1	bis(2-Chloroethoxy)methane		91.9	ug/L	6.00	20.0
111-44-4	bis(2-Chloroethyl) ether		82.6	ug/L	6.00	20.0
117-81-7	bis(2-Ethylhexyl)phthalate		110	ug/L	6.00	20.0

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**2014-3353**	**Date Collected:**	**05/06/2014 09:45**	**Matrix:**	**W**
Lab Sample ID:	**1203086344**	**Date Received:**	**05/08/2014 09:00**		
Client Sample:	**QC for batch 1387153**	**Client:**	**ARSL004**	**Project:**	**QC**
Client ID:	**CAMO-14-75543MSD**	**Method:**	**SW846 3510C/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1387154**	**Inst:**	**MSD4.I**	**Dilution:**	**1**
Run Date:	**05/14/2014 16:14**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/13/2014 11:44**	**Aliquot:**	**500 mL**	**Final Volume:**	**1 mL**
Data File:	**s051414.B\s4e1415.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
65794-96-9	m,p-Cresols		84.4	ug/L	7.40	20.0
99-09-2	3-Nitroaniline *m-Nitroaniline*		88.9	ug/L	6.00	20.0
95-48-7	o-Cresol		79.6	ug/L	6.00	20.0
88-74-4	2-Nitroaniline *o-Nitroaniline*		92.0	ug/L	6.00	20.0
100-01-6	4-Nitroaniline *p-Nitroaniline*		95.2	ug/L	6.00	20.0

Surrogate/Tracer recovery	Result	Nominal		Recovery%	Acceptable Limits
2,4,6-Tribromophenol	184	200	ug/L	92.0	(26%-129%)
2-Fluorobiphenyl	79.3	100	ug/L	79.3	(32%-102%)
2-Fluorophenol	130	200	ug/L	65.0	(10%-78%)
Nitrobenzene-d5	82.8	100	ug/L	82.8	(36%-125%)
Phenol-d5	102	200	ug/L	50.9	(10%-104%)
p-Terphenyl-d14	104	100	ug/L	104	(34%-135%)