

May 21, 2014

Rev. 1

WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352



May 21, 2014

Scot Fitzgerald
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Dear Scot Fitzgerald,

REVISED140657 - 866046 [Report ID: 140657]

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) MSC-SD-CD-QAPP-017, current version, Waste Sampling & Characterization Facility Quality Assurance Program Plan

This letter contains the following information for sample delivery group WSCF140657

- * Cover Sheet (Attachment 1)
- * Narrative (Attachment 2)
- * Analytical Results (Attachment 3)
- * Sample Receipt Information (Attachment 4)

Very truly yours,

A handwritten signature in black ink, appearing to read "Joseph Hale", is positioned above the typed name.

Electronically signed by Joseph Hale

For Lab Manager, Dan T. Smith

WSCF Analytical Lab

(509) 373-4804

Attachments 4

CC: w/Attachments

File/LB

REVISED140657 -

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF140657

Data Deliverable Date 04/28/14

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F14-002	B2V623	140657001	WATER	04/10/14	04/10/14
F14-002	B2V624	140657002	WATER	04/10/14	04/10/14
F14-002	B2V625	140657003	WATER	04/10/14	04/10/14
F14-002	B2V626	140657004	WATER	04/10/14	04/10/14
F14-002	B2V627	140657005	WATER	04/10/14	04/10/14

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Attachment 2
NarrativeRev1
WSCF140657

Revision 1: This case narrative replaces the prior in its entirety. It has been modified to address the P&D regarding 8260 missing compound.

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW)*, to Contract 39818, Revision 4, "WSCF ANALYTICAL SERVICES FOR GROUNDWATER."

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, C, D, J and U) may be applicable to this report, as appropriate.

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **C** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were C flagged (applies to inorganic and wet chemical analyses).
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **B (organic analyses)** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were B flagged.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.
- **o** – LCS recovery outside established laboratory acceptance limits.

Analytical Methodology for Requested Analyses

Attachment 2
NarrativeRev1
WSCF140657

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group.
Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

VOA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group.
Analytical Note(s):

- All applicable QC controls are within the established limits.

We certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
NarrativeRev1
WSCF140657

Problem and Discrepancy Report

WSCF

SDG WSCF140657

05/19/14

1. **The data package has the following issues:**
 - a. 8260_VOA_GCMS: COMMON (Add-on), Bromochloromethane, 74-97-5 is missing from samples B2V623, B2V624, B2V625, B2V626, B2V627.

Resolution: *Provide appropriate correction*

Lab Response: WSCF wasn't calibrated for Bromochloromethane. CHPRC has discussed this and will fix the system. It was accidentally missed in the service list and should have been retired.

Please correct the issues and resubmit the hard copy data package.

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 29 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract # MOA-FH-CHPRC-2008
Group # WSCF140657
Report Date May 21, 2014

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Heather Medley

Solid samples results that have a 'Percent Solid' test are reported on a "dry weight basis", except results of TCLP, Percent Solid, and Total Activity. If no 'Percent Solid' test is reported then the results are reported on an "as received" basis.

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7005. Information designation of this report is the responsibility of the customer.

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Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF140657

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
231745	231745	2	BLANK	108785	BLANK		Anions by Ion Chromatography (Water)
231745	231745	3	LCS	108786	LCS		Anions by Ion Chromatography (Water)
231745	231745	4	MS	108787	B2W8X8(140658002MS)	140658002	Anions by Ion Chromatography (Water)
231745	231745	5	MSD	108788	B2W8X8(140658002MSD)	140658002	Anions by Ion Chromatography (Water)
231745	231745	10	SAMPLE	140657001	B2V623		Anions by Ion Chromatography (Water)
231745	231745	12	SAMPLE	140657002	B2V624		Anions by Ion Chromatography (Water)
231745	231745	14	SAMPLE	140657003	B2V625		Anions by Ion Chromatography (Water)
231745	231745	16	SAMPLE	140657004	B2V626		Anions by Ion Chromatography (Water)
231745	231745	18	SAMPLE	140657005	B2V627		Anions by Ion Chromatography (Water)

Batch QC List

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
231852	231853	1	BLANK	108882	BLANK		SW-846 8260B Volatiles
231852	231853	2	LCS	108883	LCS		SW-846 8260B Volatiles
231852	231853	3	MS	108884	B2V623(140657001MS)	140657001	SW-846 8260B Volatiles
231852	231853	4	MSD	108885	B2V623(140657001MSD)	140657001	SW-846 8260B Volatiles
231852	231853	9	SAMPLE	140657001	B2V623		SW-846 8260B Volatiles
231852	231853	10	SAMPLE	140657001	B2V623		SW-846 8260B Volatiles
231852	231853	11	SAMPLE	140657002	B2V624		SW-846 8260B Volatiles
231852	231853	12	SAMPLE	140657002	B2V624		SW-846 8260B Volatiles
231852	231853	13	SAMPLE	140657003	B2V625		SW-846 8260B Volatiles
231852	231853	14	SAMPLE	140657003	B2V625		SW-846 8260B Volatiles
231852	231853	15	SAMPLE	140657004	B2V626		SW-846 8260B Volatiles
231852	231853	16	SAMPLE	140657004	B2V626		SW-846 8260B Volatiles
231852	231853	17	SAMPLE	140657005	B2V627		SW-846 8260B Volatiles
231852	231853	18	SAMPLE	140657005	B2V627		SW-846 8260B Volatiles

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF140657

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory, industry methods or HEIS methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-533-410	Anion Analysis by Ion Chromatography		Determination of Inorganic Anions by Ion Chromatography
	EPA-600/R-94-111	300.0	
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at <http://www7.rl.gov/rapidweb/AS-DOL/index.cfm>

Method Reference

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF140657

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory, industry methods or HEIS methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

Method Reference	Regulatory/Industry Method	WSCF Procedure	Method Description
LA-523-455	Volatile Sample Analysis by SW-846 Method 8260B		
	EPA SW-846	8000B	Determinative Chromographic Separations
	EPA SW-846	8260B	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
	HEIS	8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at <http://www7.rl.gov/rapidweb/AS-DOL/index.cfm>

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF140657

Sample # 140657001
 SAF# F14-002
 Sample ID B2V623

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										04/10/14
Anions by Ion Chromatography (Water)										
Nitrate-N	NO3-N	LA-533-410	D	65.2		ug/mL	10	0.20	1.0	04/10/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
 + - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF140657

Sample # 140657002
 SAF# F14-002
 Sample ID B2V624

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										04/10/14
Anions by Ion Chromatography (Water)										
Nitrate-N	NO3-N	LA-533-410	D	89.2		ug/mL	10	0.20	1.0	04/10/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
 + - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

REVISED140657 -

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF140657

Sample # 140657003
 SAF# F14-002
 Sample ID B2V625

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										04/10/14
Anions by Ion Chromatography (Water)										
Nitrate-N	NO3-N	LA-533-410	D	65.2		ug/mL	10	0.20	1.0	04/10/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
 + - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF140657

Sample # 140657004
 SAF# F14-002
 Sample ID B2V626

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										04/10/14
Anions by Ion Chromatography (Water)										
Nitrate-N	NO3-N	LA-533-410	D	48.8		ug/mL	10	0.20	1.0	04/10/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
 + - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF140657

Sample # 140657005
 SAF# F14-002
 Sample ID B2V627

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										04/10/14
Anions by Ion Chromatography (Water)										
Nitrate-N	NO3-N	LA-533-410	D	38.1		ug/mL	10	0.20	1.0	04/10/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
 + - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657001
 SAF# F14-002
 Sample ID B2V623

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										04/15/14
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Trichloroethene	79-01-6	LA-523-455		4.0		ug/L	1	0.5	1	04/15/14
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	4	04/15/14
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
 + - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
 D - Analyte was reported at a secondary dilution factor.
 E - Exceeds the calibration range (GC/MS).
 J - Analyte < PQL (or EQL) >= MDL.
 N - Presumed evidence based on MS library search(GC/MS only)

T - GC/MS or N - Non GC/MS - MS/MSD recovery outside control limits
 U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657001
 SAF# F14-002
 Sample ID B2V623

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455		750		ug/L	1	10	30	04/17/14
2-Hexanone	591-78-6	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Acetone	67-64-1	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Chloroform	67-66-3	LA-523-455		6.2		ug/L	1	1	5	04/15/14
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Chloroethane	75-00-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

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 TP Err = Total Propagated Error
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 D - Analyte was reported at a secondary dilution factor.
 E - Exceeds the calibration range (GC/MS).
 J - Analyte < PQL (or EQL) >= MDL.
 N - Presumed evidence based on MS library search(GC/MS only)

T - GC/MS or N - Non GC/MS - MS/MSD recovery outside control limits
 U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657002
 SAF# F14-002
 Sample ID B2V624

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										04/15/14
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Trichloroethene	79-01-6	LA-523-455		5.9		ug/L	1	0.5	1	04/15/14
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	4	04/15/14
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
 + - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
 D - Analyte was reported at a secondary dilution factor.
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T - GC/MS or N - Non GC/MS - MS/MSD recovery outside control limits
 U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)
 o - LCS recovery outside established laboratory acceptance limits.

REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657002
 SAF# F14-002
 Sample ID B2V624

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455		1200		ug/L	1	10	30	04/17/14
2-Hexanone	591-78-6	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Acetone	67-64-1	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Chloroform	67-66-3	LA-523-455		6.6		ug/L	1	1	5	04/15/14
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Chloroethane	75-00-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
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 D - Analyte was reported at a secondary dilution factor.
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 J - Analyte < PQL (or EQL) >= MDL.
 N - Presumed evidence based on MS library search(GC/MS only)

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REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657003
 SAF# F14-002
 Sample ID B2V625

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										04/15/14
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Trichloroethene	79-01-6	LA-523-455		3.1		ug/L	1	0.5	1	04/15/14
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	4	04/15/14
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

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REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657003
 SAF# F14-002
 Sample ID B2V625

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455		580		ug/L	1	10	30	04/17/14
2-Hexanone	591-78-6	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Acetone	67-64-1	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Chloroform	67-66-3	LA-523-455	J	4.6		ug/L	1	1	5	04/15/14
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Chloroethane	75-00-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

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REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657004
 SAF# F14-002
 Sample ID B2V626

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										04/15/14
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Trichloroethene	79-01-6	LA-523-455		2.1		ug/L	1	0.5	1	04/15/14
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	4	04/15/14
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

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REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657004
 SAF# F14-002
 Sample ID B2V626

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455		420		ug/L	1	10	30	04/17/14
2-Hexanone	591-78-6	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Acetone	67-64-1	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Chloroform	67-66-3	LA-523-455	J	3.5		ug/L	1	1	5	04/15/14
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Chloroethane	75-00-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

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REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657005
 SAF# F14-002
 Sample ID B2V627

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										04/15/14
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Trichloroethene	79-01-6	LA-523-455		1.1		ug/L	1	0.5	1	04/15/14
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	4	04/15/14
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

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REVISED140657 -

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Sample # 140657005
 SAF# F14-002
 Sample ID B2V627

Matrix WATER
 Sampled 04/10/14
 Received 04/10/14

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455		210		ug/L	1	2	6	04/17/14
2-Hexanone	591-78-6	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Acetone	67-64-1	LA-523-455	U	<5		ug/L	1	5	20	04/15/14
Chloroform	67-66-3	LA-523-455	J	2.0		ug/L	1	1	5	04/15/14
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Chloroethane	75-00-3	LA-523-455	U	<2		ug/L	1	2	10	04/15/14
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	04/15/14

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REVISED140657 -

Quality Control Report

May 21, 2014

Rev. 1

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF140657

Analytical Batch 231745 (QC Batch: 231745) Test Anions by Ion Chromatography (Water)
 Associated Samples 140657001, 140657002, 140657003, 140657004, 140657005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #108785								
Nitrate-N	NO3-N		<0.020	ug/mL					U	04/10/14
LCS		QC Sample #108786								
Nitrate-N	NO3-N		0.892	ug/mL	100.7	90 - 110				04/10/14
MS		QC Sample #108787								
		Original 140658002								
Nitrate-N	NO3-N		0.937	ug/mL	104.8	80 - 120			D	04/10/14
MSD		QC Sample #108788								
		Original 140658002								
Nitrate-N	NO3-N		0.911	ug/mL	101.9	80 - 120	0.50	20	Paired D	108787 04/10/14

* - QC result out of range

n/a - Not Applicable

REVISED140657 -

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Analytical Batch 231853 (QC Batch: 231852) Test SW-846 8260B Volatiles
 Associated Samples 140657001, 140657002, 140657003, 140657004, 140657005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #108882								
1,1-Dichloroethene	75-35-4	<1		ug/L					U	04/15/14
Trichloroethene	79-01-6	<0.5		ug/L					U	04/15/14
Benzene	71-43-2	<1		ug/L					U	04/15/14
Toluene	108-88-3	<1		ug/L					U	04/15/14
Chlorobenzene	108-90-7	<1		ug/L					U	04/15/14
1,1-Dichloroethane	75-34-3	<1		ug/L					U	04/15/14
Ethylbenzene	100-41-4	<1		ug/L					U	04/15/14
Styrene	100-42-5	<1		ug/L					U	04/15/14
cis-1,3-Dichloropropene	10061-01-5	<1		ug/L					U	04/15/14
trans-1,3-Dichloropropene	10061-02-6	<1		ug/L					U	04/15/14
1,2-Dichloroethane	107-06-2	<1		ug/L					U	04/15/14
Methyl isobutyl ketone	108-10-1	<1		ug/L					U	04/15/14
Dibromochloromethane	124-48-1	<1		ug/L					U	04/15/14
Tetrachloroethene	127-18-4	<1		ug/L					U	04/15/14
Total Xylenes	1330-20-7	<1		ug/L					U	04/15/14

* - QC result out of range

n/a - Not Applicable

REVISED140657 -

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Total 1,2-Dichloroethene	540-59-0		<1	ug/L					U	04/15/14
Carbon tetrachloride	56-23-5		<1	ug/L					U	04/15/14
2-Hexanone	591-78-6		<5	ug/L					U	04/15/14
Acetone	67-64-1		<5	ug/L					U	04/15/14
Chloroform	67-66-3		<1	ug/L					U	04/15/14
1,1,1-Trichloroethane	71-55-6		<1	ug/L					U	04/15/14
Bromomethane	74-83-9		<1	ug/L					U	04/15/14
Chloromethane	74-87-3		<2	ug/L					U	04/15/14
Chloroethane	75-00-3		<2	ug/L					U	04/15/14
Vinyl chloride	75-01-4		<1	ug/L					U	04/15/14
Methylene chloride	75-09-2		<1	ug/L					U	04/15/14
Carbon disulfide	75-15-0		<1	ug/L					U	04/15/14
Bromoform	75-25-2		<1	ug/L					U	04/15/14
1,2-Dichloropropane	78-87-5		<1	ug/L					U	04/15/14
Methyl ethyl ketone	78-93-3		<1	ug/L					U	04/15/14
1,1,2-Trichloroethane	79-00-5		<1	ug/L					U	04/15/14
1,1,2,2-Tetrachloroethane	79-34-5		<1	ug/L					U	04/15/14
LCS										
QC Sample #108883										
1,1-Dichloroethene	75-35-4		20	ug/L	81.7	75 - 125				04/15/14
Trichloroethene	79-01-6		23	ug/L	93.4	75 - 125				04/15/14
Benzene	71-43-2		24	ug/L	96.5	75 - 125				04/15/14

* - QC result out of range

n/a - Not Applicable

REVISED140657 -

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene	108-88-3		24	ug/L	95.6	75 - 125				04/15/14
Chlorobenzene	108-90-7		24	ug/L	95	75 - 125				04/15/14
1,1-Dichloroethane	75-34-3		22	ug/L	86.7	75 - 125				04/15/14
Ethylbenzene	100-41-4		25	ug/L	98.3	75 - 125				04/15/14
Styrene	100-42-5		24	ug/L	97.3	75 - 125				04/15/14
trans-1,3-Dichloropropene	10061-02-6		25	ug/L	98.2	75 - 125				04/15/14
1,2-Dichloroethane	107-06-2		24	ug/L	96.2	75 - 125				04/15/14
1,1,1-Trichloroethane	71-55-6		22	ug/L	87.5	75 - 125				04/15/14
Dibromochloromethane	124-48-1		24	ug/L	97.9	75 - 125				04/15/14
Carbon disulfide	75-15-0		24	ug/L	97.2	75 - 125				04/15/14
Bromoform	75-25-2		23	ug/L	92.3	75 - 125				04/15/14
1,2-Dichloropropane	78-87-5		25	ug/L	99.8	75 - 125				04/15/14
1,1,2-Trichloroethane	79-00-5		26	ug/L	103	75 - 125				04/15/14
1,1,2,2-Tetrachloroethane	79-34-5		27	ug/L	109.4	75 - 125				04/15/14
MS			QC Sample #108884							
			Original 140657001							
1,1-Dichloroethene	75-35-4	<1	21	ug/L	83.4	75 - 125				04/15/14
Trichloroethene	79-01-6	4.0	24	ug/L	94.9	75 - 125				04/15/14
Benzene	71-43-2	<1	24	ug/L	97.2	75 - 125				04/15/14
Toluene	108-88-3	<1	23	ug/L	93.1	75 - 125				04/15/14
Chlorobenzene	108-90-7	<1	24	ug/L	94.1	75 - 125				04/15/14
1,1-Dichloroethane	75-34-3	<1	21	ug/L	85.6	75 - 125				04/15/14

* - QC result out of range

n/a - Not Applicable

REVISED140657 -

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed	
Ethylbenzene	100-41-4	<1	25	ug/L	98.9	75 - 125				04/15/14	
Styrene	100-42-5	<1	24	ug/L	96.5	75 - 125				04/15/14	
trans-1,3-Dichloropropene	10061-02-6	<1	24	ug/L	94.4	75 - 125				04/15/14	
1,2-Dichloroethane	107-06-2	<1	23	ug/L	93	75 - 125				04/15/14	
1,1,1-Trichloroethane	71-55-6	<1	22	ug/L	87.1	75 - 125				04/15/14	
Dibromochloromethane	124-48-1	<1	23	ug/L	93.1	75 - 125				04/15/14	
Carbon disulfide	75-15-0	<1	21	ug/L	85.4	75 - 125				04/15/14	
Bromoform	75-25-2	<1	20	ug/L	82	75 - 125				04/15/14	
1,2-Dichloropropane	78-87-5	<1	24	ug/L	97.4	75 - 125				04/15/14	
1,1,2-Trichloroethane	79-00-5	<1	24	ug/L	96.8	75 - 125				04/15/14	
1,1,1,2-Tetrachloroethane	79-34-5	<1	26	ug/L	103.4	75 - 125				04/15/14	
MSD			QC Sample #108885								
			Original	140657001				Paired	108884		
1,1-Dichloroethene	75-35-4	<1	21	ug/L	84.4	75 - 125	1.20	20		04/15/14	
Trichloroethene	79-01-6	4.0	24	ug/L	96.6	75 - 125	1.50	20		04/15/14	
Benzene	71-43-2	<1	25	ug/L	98.5	75 - 125	1.30	20		04/15/14	
Toluene	108-88-3	<1	24	ug/L	96.3	75 - 125	3.40	20		04/15/14	
Chlorobenzene	108-90-7	<1	24	ug/L	95.4	75 - 125	1.40	20		04/15/14	
1,1-Dichloroethane	75-34-3	<1	21	ug/L	83.4	75 - 125	2.60	20		04/15/14	
Ethylbenzene	100-41-4	<1	25	ug/L	98.2	75 - 125	0.70	20		04/15/14	
Styrene	100-42-5	<1	24	ug/L	95.1	75 - 125	1.40	20		04/15/14	

* - QC result out of range

n/a - Not Applicable

REVISED140657 -

Quality Control Report

May 21, 2014

Rev. 1

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,3-Dichloropropene	10061-02-6	<1	25	ug/L	100.3	75 - 125	6.10	20		04/15/14
1,2-Dichloroethane	107-06-2	<1	24	ug/L	96.7	75 - 125	3.90	20		04/15/14
1,1,1-Trichloroethane	71-55-6	<1	25	ug/L	98.7	75 - 125	12.50	20		04/15/14
Dibromochloromethane	124-48-1	<1	25	ug/L	98.3	75 - 125	5.40	20		04/15/14
Carbon disulfide	75-15-0	<1	24	ug/L	96.9	75 - 125	12.50	20		04/15/14
Bromoform	75-25-2	<1	23	ug/L	90.1	75 - 125	9.40	20		04/15/14
1,2-Dichloropropane	78-87-5	<1	25	ug/L	100.5	75 - 125	3.20	20		04/15/14
1,1,2-Trichloroethane	79-00-5	<1	26	ug/L	103.6	75 - 125	6.80	20		04/15/14
1,1,2,2-Tetrachloroethane	79-34-5	<1	28	ug/L	113.4	75 - 125	9.20	20		04/15/14
BLANK			QC Sample #108882							
1,2-Dichloroethane-d4	17060-07-0				96.9	75 - 125				04/15/14
Toluene-d8	2037-26-5				105.9	75 - 125				04/15/14
4-Bromofluorobenzene	460-00-4				101.4	75 - 125				04/15/14
LCS			QC Sample #108883							
1,2-Dichloroethane-d4	17060-07-0				101.7	75 - 125				04/15/14
Toluene-d8	2037-26-5				104.8	75 - 125				04/15/14
4-Bromofluorobenzene	460-00-4				107.3	75 - 125				04/15/14
MS			QC Sample #108884							
			Original 140657001							

* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,2-Dichloroethane-d4	17060-07-0				100.8	75 - 125				04/15/14
Toluene-d8	2037-26-5				104	75 - 125				04/15/14
4-Bromofluorobenzene	460-00-4				106.4	75 - 125				04/15/14
MSD		QC Sample #108885								
		Original 140657001				Paired 108884				
1,2-Dichloroethane-d4	17060-07-0				102.6	75 - 125	n/a			04/15/14
Toluene-d8	2037-26-5				105.5	75 - 125	n/a			04/15/14
4-Bromofluorobenzene	460-00-4				104.8	75 - 125	n/a			04/15/14
SAMPLE		Sample #140657001								
1,2-Dichloroethane-d4	17060-07-0				100.2	75 - 125				04/15/14
Toluene-d8	2037-26-5				105.6	75 - 125				04/15/14
4-Bromofluorobenzene	460-00-4				104.3	75 - 125				04/15/14
SAMPLE		Sample #140657002								
1,2-Dichloroethane-d4	17060-07-0				98.5	75 - 125				04/15/14
Toluene-d8	2037-26-5				104.9	75 - 125				04/15/14
4-Bromofluorobenzene	460-00-4				103.4	75 - 125				04/15/14
SAMPLE		Sample #140657003								
1,2-Dichloroethane-d4	17060-07-0				106.1	75 - 125				04/15/14
Toluene-d8	2037-26-5				106.7	75 - 125				04/15/14

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

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Rev. 1

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF140657

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
4-Bromofluorobenzene	460-00-4				107.5	75 - 125				04/15/14
SAMPLE			Sample #140657004							
1,2-Dichloroethane-d4	17060-07-0				102	75 - 125				04/15/14
Toluene-d8	2037-26-5				106.6	75 - 125				04/15/14
4-Bromofluorobenzene	460-00-4				107	75 - 125				04/15/14
SAMPLE			Sample #140657005							
1,2-Dichloroethane-d4	17060-07-0				101	75 - 125				04/15/14
Toluene-d8	2037-26-5				105.7	75 - 125				04/15/14
4-Bromofluorobenzene	460-00-4				104.8	75 - 125				04/15/14

* - QC result out of range

n/a - Not Applicable

REVISED140657 -

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 12 pages
Including cover page

Waste Sampling and Characterization Facility
P.O. Box 650 S3-30, Richland WA 99352
Phone: (509) 373-7005/FAX: (509) 372-0456

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

WSCF Laboratory

PO Box 650 S3-30
 Richland, WA 99352

ATTN: Scot Fitzgerald

Customer Code: CHPRC
CA CN: 403315
Work Order #: 140657
Customer Work ID: F14-002-006
Due Date: 04/28/2014 **(7C)**

The following samples were received from you on 4/10/2014 11:20:00 AM. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact WSCF Client Services. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
140657001	B2V623	WATER	4/10/2014 09:03	4/10/2014 11:20
Procedure		Compound List		
Anions by Ion Chromatography (Water)		NO3		
SW-846 8260B Volatiles		Not a standard service list. There are too many compounds to list individually.		
Sample #	Sample ID	Matrix	Collected	Received
140657002	B2V624	WATER	4/10/2014 09:31	4/10/2014 11:20
Procedure		Compound List		
Anions by Ion Chromatography (Water)		NO3		
SW-846 8260B Volatiles		Not a standard service list. There are too many compounds to list individually.		
Sample #	Sample ID	Matrix	Collected	Received
140657003	B2V625	WATER	4/10/2014 09:46	4/10/2014 11:20
Procedure		Compound List		
Anions by Ion Chromatography (Water)		NO3		
SW-846 8260B Volatiles		Not a standard service list. There are too many compounds to list individually.		
Sample #	Sample ID	Matrix	Collected	Received
140657004	B2V626	WATER	4/10/2014 10:21	4/10/2014 11:20
Procedure		Compound List		
Anions by Ion Chromatography (Water)		NO3		
SW-846 8260B Volatiles		Not a standard service list. There are too many compounds to list individually.		
Sample #	Sample ID	Matrix	Collected	Received
140657005	B2V627	WATER	4/10/2014 10:28	4/10/2014 11:20
Procedure		Compound List		
Anions by Ion Chromatography (Water)		NO3		
SW-846 8260B Volatiles		Not a standard service list. There are too many compounds to list individually.		

Chain of Custody

CHAINHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	
COLLECTOR Kevin Patterson	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT
SAMPLING LOCATION 299-W6-15, 1-001	PROJECT DESIGNATION 200-20-1 No-Flow Well Sampling - Water	FIELD NO. 140657	SAF NO. F-1-4-002
ICE CHEST NO. (N/A)	FIELD NO. 140657	ACTUAL SAMPLE DEPTH 321 ft	COA 30310ES:0
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A	PRICE CODE 7C
			AIR QUALITY <input type="checkbox"/>
			METHOD OF SHIPMENT GOVERNMENT VEHICLE
			ORIGINAL

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINERS(S)	VOLUME	SPECIAL HANDLING AND/OR STORAGE
01-Dum 01-Lime 05-Drum Scale 1-Liquid 0-Oil 5-S&S SH-Sediment T-Tissue V-Vegetation W-Water W1-Wipe X-Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATRA Dangerous Goods Regulations that are not releasable per DOE Order 458.1.	7 Days	40 hours	60L	3	40ml	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
140657					1	60ml	301 & ANIONS IN SPECIAL INSTRUCTIONS (Nitrate)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	RECEIVED BY/SCORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TITLE
320623	WATER	MAR 10 2011	0903	COVASSON	MAR 10 2011	DO CHITKHA/RT	MAR 10 2011	DO CHITKHA/RT	MAR 10 2011	DO CHITKHA/RT	MAR 10 2011	TR-14-027
SPECIAL INSTRUCTIONS SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS												

Chain of Custody

CHAINHILL Metcru Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 2 OF 2
COLLECTOR Kevin Pattison	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days	
SAMPLING LOCATION 299-W6-15; 1-001	PROJECT DESIGNATION 200-ZP-1 No-Flow Well Sampling - Water	FIELD LOGBOOK NO. N/A	SAP. NO. F14-002	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. (N/A)	ACTUAL SAMPLE DEPTH N/A	COA 3031105310	METHOD OF SHIPMENT GOVERNMENT VEHICLE		ORIGINAL	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A				

SPECIAL INSTRUCTIONS
 * The CACN for WSCF Analytical is 403315. The 200 Area S&GR Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. The laboratory is to report all TICs for Method 8260 in the hardcopy and electronically load only those TICs that have a match in HEIS. (RUL-14-017)
 (1) 8260_VOA_GCMS: COMMON {1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroform, Ethylbenzene, Methylene chloride, Tetrachloroethene, Toluene, Trichloroethane, Vinyl chloride, Xylenes (total)}; 8260_VOA_GCMS: CH 01 {1,1,1,2,2-Tetrachloroethane, 1,2-Dichloroethene (Total), 1,2-Dichloropropane, 2-Hexanone, Bromoform, Bromoethane, Chloroethane, Chloroethene, cis-1,3-Dichloropropene, Dibromochloroethane, styrene, trans-1,3-Dichloropropene}; 8260_VOA_GCMS: COMMON (Add-on) {Bromochloromethane};

TRAL-14-027

PRINTED ON 12/9/2013

A-5000-03R (REV 2)

Chain of Custody

CH2M Hill Plateau Remediation Company COLLECTOR: Kevin Peterson SAMPLING LOCATION: 299-W6-15, 1-002 ICE CHEST NO. (N/A)		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST COMPANY CONTACT: EVANS, RT PROJECT DESIGNATION: 200-29-1 No-Flow Well Sampling - Water FIELD LOGBOOK NO. HNF-4-500-18.5 OFFSITE PROPERTY NO. N/A		TELEPHONE NO. 373-7924 PROJECT COORDINATOR: EVANS, RT SAF NO. F14-002 COA: 33310E510 BILL OF LADING/AIR BILL NO. N/A		F14-002-007 PRICE CODE: 7C AIR QUALITY: <input type="checkbox"/> METHOD OF SHIPMENT: GOVERNMENT VEHICLE DATA TURNAROUND: 15 Days / 15 Days ORIGINAL
SHIPPED TO Waste Sampling & Characterization		PRESERVATION: Cool-dry 14-18°C / 55-65°F HOLDING TIME: 7 Days TYPE OF CONTAINER: 30L NO. OF CONTAINER(S): 3 VOLUME: 40mL		ACTUAL SAMPLE DEPTH: 301 ft		BILL OF LADING/AIR BILL NO. N/A
MATRIX* A=Air L=Leum LI=Liquid DL=Drum S=Solid L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water W/W=Water W/Wide K=Other		POSSIBLE SAMPLE HAZARDS/ REMARKS Contains radioactive material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		SPECIAL HANDLING AND/OR STORAGE		SEE ITEM (1) IN SPECIAL INSTRUCTIONS (Nitrogen in Head)
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	✓	✓	
D2V624	WATER	MAY 10 2014	0931	✓	✓	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	4.10.14	RECEIVED BY/STORED IN	4/10/14	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS TR-L-14-027	
RELINQUISHED BY/REMOVED FROM	MAY 10 2014	RECEIVED BY/STORED IN	MAY 10 2014		
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN			
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

PRINTED ON 12/9/2013

Chain of Custody

CH2MHILL PARCAU Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 2 OF 2	
COLLECTOR	Kevin Patterson	COMPANY CONTACT	EVANS, RT	TELEPHONE NO.	373-7924
SAMPLING LOCATION	299-W6-1S, I-002	PROJECT DESIGNATION	200-ZP-1-No-Flow Well Sampling - Water		
ICE CHEST NO.	(N/A)	FIELD LOGBOOK NO.	HNF-44-506	ACTUAL SAMPLE DEPTH	301 ft
SHIPPED TO	Waste Sampling & Characterization	OFFSITE PROPERTY NO.	N/A	COA	303105310
SPECIAL INSTRUCTIONS		BILL OF LADING/AIR BILL NO.		N/A	

* The CACN for WSCF Analytical is 403315 □** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. □** The laboratory is to reports all TICs for Method 8260. In the hardcopy and electronically load only those TICs that have a match in HPLS. I.RVI-14-017
 (1) 8260_VOA_GCMS: COMMON {1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroform, Ethylbenzene, Methylene chloride, Tetrachloroethene, Toluene, Trichloroethylene, Vinyl chloride, Xylenes (total)}; 8260_VOA_GCMS: CH 01 {1,1,2,2-Tetrachloroethane, 1,2-Dichloroethene (Total), 1,2-Dichloropropane, 2-Hexanone, Bromoform, Bromomethane, Chloroethane, Chloromethane, cis-1,3-Dichloropropene, Dibromochloromethane, Styrene, trans-1,3-Dichloropropene}; 8260_VOA_GCMS: COMMON (Add-on) {Bromochloromethane};

TRV-14-027

PRINTED ON 12/9/2013

A-9003-618 (REV 2)

Chain of Custody

CHAINHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F14-003-008	PAGE 1 OF 2
COLLECTOR Kevin Patterson	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 days / 15 Days
SAMPLING LOCATION 299-W6-15, 1-003	PROJECT DESIGNATION 200-ZP-1 No-Flow Well Sampling - Water	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 4.21 ft	SAF NO. F14-002	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. (N/A)	NO. OF CONTAINERS(S) 3	VOLUME 40ml	GOAL 40ml	COA 303112ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A	ORIGINAL		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINERS(S)	VOLUME	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	NO. OF CONTAINERS(S)	VOLUME	SPECIAL HANDLING AND/OR STORAGE
32V925	Water	7 Days	48 hours	305*	3	40ml	SEE LIST (C) IN SPECIAL INSTRUCTIONS	303112ES10 (Method 8140)	3	40ml	SEE LIST (C) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Kevin Patterson	RECEIVED BY/STORED IN C. Johnson	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
LABORATORY SECTION	RECEIVED BY	TITLE
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME

TR-14-027

Chain of Custody

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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR Kevin Peterson	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	FS4-002-008	PAGE 2 OF 2
SAMPLING LOCATION 299-Wb-15, 1-003	PROJECT DESIGNATION 200-ZP-1 No-Flow Well Sampling - Water	FIELD LOGBOOK NO. HW-NS08-085	SAF NO. F14-002	PRICE CODE 7C	DATA TURNAROUND 13 Days / 15 Days
ICE CHEST NO. (N/A)	ACTUAL SAMPLE DEPTH 421 Ft.	COA 303110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	<input type="checkbox"/>	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			
SPECIAL INSTRUCTIONS					
<p>* The CACN for WSCF Analytical is 403315. □ ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis SKI applies to this SAF. □ ** The laboratory is to report all TICs for Method 8260 in the hardcopy and electronically load only those TICs that have a match in HEIS. TRVL-14 017</p> <p>(1) 8260_VOA_GCMS: COMMON {1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroform, Ethylbenzene, Methylene chloride, Tetrachloroethene, Toluene, Trichloroethene, Vinyl chloride, Xylenes (total)}; 8260_VOA_GCMS: CH 01 {1,1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane, 1,2-Dichloroethene (Total), 1,2-Dichloropropane, 2-Hexanone, Bromoform, Bromomethane, Chloroethane, Chloroethene, cis-1,3-Dichloropropene, Dibromochloromethane, Styrene, trans-1,3-Dichloropropene}; 8260_VOA_GCMS: COMMON (Add-on) {Bromochloromethane};</p>					

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Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPL E ANALYSIS REQUEST		PAGE 2 OF 3	
COLLECTOR Kevin Paterson	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 295-W6-15, 1-014	PROJECT DESIGNATION 200-ZP-1, No-Pow Well Sampling - Water	FIELD LOGBOOK NO. HMF-44-908-108.5	SAF NO. F14-002	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. (N/A)	ACTUAL SAMPLE DEPTH 44 ft	COA 303110ES10	BILL OF LADING/AIR BILL NO. N/A	ORIGINAL	
SHIPPED TO Waste Sampling & Characterization					

SPECIAL INSTRUCTIONS
 * The CACN for WSCF Analytical is 403315.□** The 200 Arca S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. □** The laboratory is to reports all TICs for Method 8260 in the hardcopy and electronically lead only those TICs that have a match in HES. TRVL-14-017
 (1) 8260 VOA GCMS: COMMON {1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroform, Ethylbenzene, Methylene chloride, Tetrachloroethane, Toluene, Trichloroethene, Vinyl chloride, Xylenes (total)}; 8260 VOA GCMS: CH 01 {1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane, 2-Hexanone, Bromoform, Bromodichloroethane, Chloroethane, Chloromethane, ds-1,3-Dichloropropene, Dibromodichloromethane, Styrene, trans-1,3-Dichloropropene}; 8260 VOA GCMS: COMMON (Add-on) {Bromochloromethane};

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A-5000-01R (REV 2)

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	
COLLECTOR Kevin Ballester	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT
SAMPLING LOCATION 295 W6-15, 1 005	PROJECT DESIGNATION 200-ZP-1 No-Flow Well Sampling - Water	FIELD LOGBOOK NO. HM# 14-808-08.546	ACTUAL SAMPLE DEPTH 459 ft.
ICE CHEST NO. (N/A)	OFFSITE PROPERTY NO. N/A	SAF NO. F14-002	METHOD OF SHIPMENT GOVERNMENT VEHICLE
SHIPPED TO Waste Sampling & Characterization		COA 30318E310	BILL OF LADING/AIR BILL NO. N/A
MATRIX* A-Air L-Liquid D-Dredium S-Solid L-Liquid C-Coil S-Soil SE-Sediment T-Tissue V-Vegetation W-Water WT-Water X-Xenob	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 C-FR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 450.1.	PRESERVATION HOLDING TIME TYPE OF CONTAINER NO. OF CONTAINER(S) VOLUME	PREPARED BY DATE TIME RECEIVED BY DATE TIME NO. OF CONTAINER(S) VOLUME
SAMPLE NO. R2V627	MATRIX* WATER	SAMPLE DATE MAY 19 2014	SAMPLE TIME 1028

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELIQUISHED BY/REMOVED FROM Kevin Ballester	RECEIVED BY/STORED IN C. Evans	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
DATE/TIME MAY 19 2014 11:20	DATE/TIME MAY 19 2014 11:20	
RELIQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELIQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELIQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELIQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELIQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
LABORATORY SECTION	RECEIVED BY	TITLE
DISPOSAL METHOD	DISPOSED BY	DATE/TIME

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A 6003 618 (REV 2)

Chain of Custody

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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR Kevin Patterson	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7974	PROJECT COORDINATOR EVANS, RT		
SAMPLING LOCATION 293-M-15-1-075	PROJECT DESIGNATION 200-2P-1 No-Flow Well Sampling Water	FIELD LOGBOOK NO. NMF-4-608-68-5-6	SAF NO. E14-102	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 DAYS
ICE CHEST NO. (N/A)	ACTUAL SAMPLE DEPTH 459 ft	COA 303110E310	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

SPECIAL INSTRUCTIONS

* The CACN for WSCF Analytical is 403315.□** The 200 Area S8GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.□** The laboratory is to reports all TICs for Method 8260 in the hardcopy and electronically load only those TICs that have a match in HHS. TRVL-14-017

(1) 8260_VOA_GCMS: COMMON {1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroform, Ethylbenzene, Methylene chloride, Tetrachloroethane, Toluene, Trichloroethylene, Vinyl chloride, Xylenes (total)}; 8260_VOA_GCMS: CH 01 {1,1,2,2-Tetrachloroethane, 1,2-Dichloropropane, 2-Hexanone, Bromoform, Bromoethane, Bromochloroethane, Chloromethane, cis-1,3-Dichloropropene, Dibromochloroethane, Styrene, trans-1,3-Dichloropropene}; 8260_VOA_GCMS: COMMON (Add-on) {Bromochloromethane};

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4-6093-618 (REV 2)