

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica St. Louis  
13715 Rider Trail North  
Earth City, MO 63045  
Tel: (314)298-8566

TestAmerica Job ID: 160-27291-1

TestAmerica Sample Delivery Group: SL2821  
Client Project/Site: F18-019

For:

CH2M Hill Plateau Remediation Company  
PO BOX 1600, MS H8-41  
Richland, Washington 99352

Attn: Mr. Scot Fitzgerald



Authorized for release by:  
3/28/2018 3:31:40 PM

Jayna Awalt, Project Manager II  
(314)298-8566

[jayna.awalt@testamericainc.com](mailto:jayna.awalt@testamericainc.com)



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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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Client: CH2M Hill Plateau Remediation Company  
Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
SDG: SL2821

Job ID: 160-27291-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352  
March 28, 2018  
Attention: Scot Fitzgerald

---

SDG : SL2821  
Number of Samples : 2 samples  
Sample Matrix : Soil  
Data Deliverable : Summary  
Date SDG Closed : March 13, 2018

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II. Introduction

On March 13, 2 samples were received by TestAmerica - St. Louis for analysis. The samples were received within temperature criteria. See the COC and receipt checklists for documentation of any variations on receipt conditions and temperature. Upon receipt, samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

The following SAFs are associated with this SDG: F18-019

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with an LCS/LCS duplicate.

Note: For Metals analyses, per standard practice, all 6020 water and soil samples are initially prepared at 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner. These dilutions do not necessitate a narrative note; however, they are flagged "D" due to a limitation in the LIMS.

For solid matrices, all Metals analyses (including Hg) use a Standard Reference Material for the Laboratory Control Sample (LCS). Certificate for this source material may be obtained from TASL.

For Anion analysis, samples have been started at a 2x dilution per CHPRC direction. The samples are flagged accordingly with a "D" flag if sample concentration is above the MDL/RL. Non-conformance will be included in the below section only if dilution is greater than 2x.

For WTPH methods, the lab utilizes method 8015B. Per CHPRC direction, the method name in the electronic data has been modified to read WTPH in the place of 8015B.

Per CHPRC direction, due to the short hold times for Nitrate, Nitrite and Phosphate by IC (48 hours) as well as pH analysis (24 hours), a SIR request is not needed when samples are run outside 1x hold but within 2x hold. A narrative comment will be included below if a sample is run outside the lab-specified hold time for waters.

For extractable and volatile organic analyses, several analytes are considered poor performers and will not meet CHPRC QC limits. Per CHPRC direction, the lab's statistical limits have been reported. Excursions outside these statistical limits will include a non-conformance in the sections below.



Client: CH2M Hill Plateau Remediation Company  
Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
SDG: SL2821

## Job ID: 160-27291-1 (Continued)

### Laboratory: TestAmerica St. Louis (Continued)

#### IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** - For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte above the MDL/RL and Method Blank is greater than 5% of the sample concentration.
- **B** - For inorganics and radiochemistry, Method Blank reported above the MDC/MDL.
- **J** - For organic analyses, the sample is estimated and less than the RL. If on Method Blank, indicates Method Blank contamination.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL/RL and Method Blank concentration is greater than 5% of the sample concentration.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For ICPMS Metals analyses, per standard practice, all samples are initially prepared at a 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner and will not be narrated below. Only dilutions above 2x will be narrated and considered a true dilution for these samples.
- **N** - For inorganics, rad and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** - For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.
- **o** - For all analyses, the LCS (LCSD) recoveries are outside QC limits.
- **P** - For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.
- **X**- Organics and Anions IC - Sample concentration over calibration and/or surrogate recovery outside QC limits.
- **X**- Inorganics - The analyte present in the original sample is > 4x the spike concentration.
- **X**- Radiochemistry - Carrier or Tracer recovery is outside limits.
- **Z**- Sample was prepped or analyzed beyond the specified sample holding time.
- **y** - RPD is outside established limits.

There were no observations or non-conformances associated with the following methods:

#### Ethylene Glycol

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager or designee and the laboratory's client services representative as verified by their signature on this report.

Reviewed and approved:

Jayna Awalt  
St. Louis Project Manager

## Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-27291-1

SDG Number: SL2821

Login Number: 27291

List Source: TestAmerica St. Louis

List Number: 1

Creator: Clarke, Jill C

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble <del>is</del> $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F18-019-004	PAGE 1 OF 1
COLLECTOR Malcom Chunn CHPRC SL2821		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION RTL IP Paint Shop		PROJECT DESIGNATION RTL D4 Activities In Process - Soil		SAF NO. F18-019	ORIGINAL	
ICE CHEST NO. GWS-579		FIELD LOGBOOK NO. HNF-N-507 38	ACTUAL SAMPLE DEPTH 0-6"	PURCHASE ORDER/CHARGE CODE 304708	METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO TestAmerica St. Louis		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. 7800 0541 4381		

<b>MATRIX*</b> A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	<b>PRESERVATION</b>	Cool <=6C		
		<b>HOLDING TIME</b>	14 Days		
		<b>TYPE OF CONTAINER</b>	aG		
		<b>NO. OF CONTAINER(S)</b>	1		
		<b>VOLUME</b>	250mL		
<b>SPECIAL HANDLING AND/OR STORAGE</b> <del>RADIOACTIVE TIE TO: 833507</del> bb 3-12-18		<b>SAMPLE ANALYSIS</b>	8015_VOA_GS: COMMON (Ethylene glycol);		
<b>SAMPLE NO.</b>	<b>FILTERED</b>	<b>MATRIX*</b>	<b>SAMPLE DATE</b>	<b>SAMPLE TIME</b>	
33J510	N/A	SOIL	MAR 1 2 2018	0829	✓

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Malcom Chunn CHPRC	MAR 1 2 2018 1020	SSU-1	MAR 1 2 2018 1020	TRVL-18-096
SSU-1	MAR 1 2 2018 1125	Janelle Zunker CHPRC	MAR 1 2 2018 1125	
Janelle Zunker CHPRC	MAR 1 2 2018 1400	FEDEX		
		Jill Clarke	3-13-18 0940	

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<b>FINAL SAMPLE DISPOSITION</b>	<b>DISPOSAL METHOD</b>	<b>DISPOSED BY</b>	<b>DATE/TIME</b>
---------------------------------	------------------------	--------------------	------------------



CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F18-019-008	PAGE 1 OF 1
COLLECTOR Malcom Chunn CHPRC SL2821		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION RTL IP North of building		PROJECT DESIGNATION RTL D4 Activities In Process - Soil		SAF NO. F18-019	ORIGINAL	
ICE CHEST NO. GWS-57A		FIELD LOGBOOK NO. HNF-N-50738	ACTUAL SAMPLE DEPTH 0-611	PURCHASE ORDER/CHARGE CODE 304708	METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO TestAmerica St. Louis		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. 7800 0541 4381		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.  <b>SPECIAL HANDLING AND/OR STORAGE</b> RADIOACTIVE TIE TO: B33511 by 3.12.18	<b>PRESERVATION</b>	Cool <=6C		
		<b>HOLDING TIME</b>	14 Days		
		<b>TYPE OF CONTAINER</b>	aG		
		<b>NO. OF CONTAINER(S)</b>	1		
		<b>VOLUME</b>	250mL		
		<b>SAMPLE ANALYSIS</b>	8015_VOA_GS: COMMON (Ethylene glycol);		
<b>SAMPLE NO.</b>	<b>FILTERED</b>	<b>MATRIX*</b>	<b>SAMPLE DATE</b>	<b>SAMPLE TIME</b>	
B33514	N/A	SOIL	MAR 12 2018	0912	✓

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CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
Malcom Chunn CHPRC M.C. MAR 12 2018 1020	SSU-1 MAR 12 2018 1020	TRVL-18-096
SSU-1 MAR 12 2018 1125	Janelle Zunker CHPRC MAR 12 2018 1125	
Janelle Zunker CHPRC MAR 12 2018 1400	FED EX	
FED EX	Jill Clarke 3.13.18 0940	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY DATE/TIME

3/28/2018

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**780005414381**

Ship date:

Mon 3/12/2018

Richland, WA US

Actual delivery:

Tue 3/13/2018 9:19 am

EARTH CITY, MO US

**Delivered**

Signed for by: B.DANIELS

Travel History

Date/Time	Activity	Location
<b>3/13/2018 - Tuesday</b>		
9:19 am	Delivered	EARTH CITY, MO
7:30 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:23 am	At local FedEx facility	EARTH CITY, MO
5:29 am	At destination sort facility	BERKELEY, MO
4:43 am	Departed FedEx location	MEMPHIS, TN
12:08 am	Arrived at FedEx location	MEMPHIS, TN
<b>3/12/2018 - Monday</b>		
4:49 pm	Left FedEx origin facility	PASCO, WA
3:15 pm	Picked up	PASCO, WA
3:02 pm	Shipment information sent to FedEx	

Shipment Facts

<b>Tracking Number</b>	780005414381	<b>Service</b>	FedEx Standard Overnight
<b>Weight</b>	76 lbs / 34.47 kgs	<b>Dimensions</b>	29x16x15 in.
<b>Delivered To</b>	Shipping/Receiving	<b>Total pieces</b>	1
<b>Total shipment weight</b>	76 lbs / 34.47 kgs	<b>Terms</b>	Recipient
<b>Shipper reference</b>	GWS-579	<b>Packaging</b>	Your Packaging
<b>Special handling section</b>	Deliver Weekday, Additional Handling Surcharge	<b>Standard transit</b>	3/13/2018 by 3:00 pm

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Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
 SDG: SL2821

**Qualifiers**

**GC VOA**

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

**Glossary**

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
SDG: SL2821

Method	Method Description	Protocol	Laboratory
8015B	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	TAL SL
Moisture	Percent Moisture	EPA	TAL SL

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Client: CH2M Hill Plateau Remediation Company  
Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
SDG: SL2821

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-27291-1	B3J510	Soil	03/12/18 08:29	03/13/18 09:40
160-27291-2	B3J514	Soil	03/12/18 09:12	03/13/18 09:40

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**03/28/2018**  
**Client Sample Results**

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Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
 SDG: SL2821

**Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble**

**Client Sample ID: B3J510**  
**Date Collected: 03/12/18 08:29**  
**Date Received: 03/13/18 09:40**

**Lab Sample ID: 160-27291-1**  
**Matrix: Soil**  
**Percent Solids: 95.3**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	13	U	100	13	mg/Kg	☒		03/25/18 13:14	1
Surrogate	%Recovery	Qualifier	Limits						
Isobutyl alcohol	98		40 - 140						
Prepared	Analyzed	Dil Fac							
	03/25/18 13:14	1							

**Client Sample ID: B3J514**  
**Date Collected: 03/12/18 09:12**  
**Date Received: 03/13/18 09:40**

**Lab Sample ID: 160-27291-2**  
**Matrix: Soil**  
**Percent Solids: 95.0**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	15	J	100	13	mg/Kg	☒		03/25/18 14:51	1
Surrogate	%Recovery	Qualifier	Limits						
Isobutyl alcohol	91		40 - 140						
Prepared	Analyzed	Dil Fac							
	03/25/18 14:51	1							

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
SDG: SL2821

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 160-357435/1-A  
Matrix: Solid  
Analysis Batch: 357447

Client Sample ID: Method Blank  
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	13	U	100	13	mg/Kg			03/25/18 12:10	1
Surrogate	%Recovery	MB Qualifier	Limits			D	Prepared	Analyzed	Dil Fac
Isobutyl alcohol	97		40 - 140					03/25/18 12:10	1

Lab Sample ID: LCS 160-357435/2-A  
Matrix: Solid  
Analysis Batch: 357447

Client Sample ID: Lab Control Sample  
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene glycol	200	157		mg/Kg		79	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Isobutyl alcohol	103		40 - 140				

Lab Sample ID: 160-27291-1 MS  
Matrix: Soil  
Analysis Batch: 357447

Client Sample ID: B3J510  
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene glycol	13	U	206	151		mg/Kg	☼	74	67 - 121
Surrogate	MS %Recovery	MS Qualifier	Limits						
Isobutyl alcohol	99		40 - 140						

Lab Sample ID: 160-27291-1 MSD  
Matrix: Soil  
Analysis Batch: 357447

Client Sample ID: B3J510  
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene glycol	13	U	206	184		mg/Kg	☼	90	67 - 121	20	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Isobutyl alcohol	109		40 - 140								

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
 SDG: SL2821

**GC VOA**

**Leach Batch: 357435**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-27291-1	B3J510	Soluble	Soil	DI Leach	
160-27291-2	B3J514	Soluble	Soil	DI Leach	
MB 160-357435/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 160-357435/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
160-27291-1 MS	B3J510	Soluble	Soil	DI Leach	
160-27291-1 MSD	B3J510	Soluble	Soil	DI Leach	

**Analysis Batch: 357447**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-27291-1	B3J510	Soluble	Soil	8015B	357435
160-27291-2	B3J514	Soluble	Soil	8015B	357435
MB 160-357435/1-A	Method Blank	Soluble	Solid	8015B	357435
LCS 160-357435/2-A	Lab Control Sample	Soluble	Solid	8015B	357435
160-27291-1 MS	B3J510	Soluble	Soil	8015B	357435
160-27291-1 MSD	B3J510	Soluble	Soil	8015B	357435

**General Chemistry**

**Analysis Batch: 355364**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-27291-1	B3J510	Total/NA	Soil	Moisture	
160-27291-2	B3J514	Total/NA	Soil	Moisture	
160-27291-2 DU	B3J514	Total/NA	Soil	Moisture	



Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F18-019

TestAmerica Job ID: 160-27291-1  
 SDG: SL2821

**Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)**

**Matrix: Soil**

**Prep Type: Soluble**

**Percent Surrogate Recovery (Acceptance Limits)**

Lab Sample ID	Client Sample ID	IBA2 (40-140)
160-27291-1	B3J510	98
160-27291-1 MS	B3J510	99
160-27291-1 MSD	B3J510	109
160-27291-2	B3J514	91

**Surrogate Legend**

IBA = Isobutyl alcohol

**Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)**

**Matrix: Solid**

**Prep Type: Soluble**

**Percent Surrogate Recovery (Acceptance Limits)**

Lab Sample ID	Client Sample ID	IBA2 (40-140)
LCS 160-357435/2-A	Lab Control Sample	103
MB 160-357435/1-A	Method Blank	97

**Surrogate Legend**

IBA = Isobutyl alcohol

