

8/10/2016

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Richland
2800 George Washington Way
Richland, WA 99352
Tel: (509)375-3131

TestAmerica Job ID: 300-3678-1
TestAmerica Sample Delivery Group: WC1345
Client Project/Site: F16-007

For:
CH2M Hill Plateau Remediation Company
PO BOX 1600
Mail Stop R3-50
Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:
8/10/2016 1:00:00 PM
Steven Campbell, Project Mgmt. Assistant
steven.campbell@testamericainc.com

Designee for
Whitney Ritari, Project Manager I
(509)375-3131 ext164
whitney.ritari@testamericainc.com

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this package. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the attached signature.

The laboratory is accredited to EPA 7196A in Solid and Chemical Materials, per Washington State Department of Ecology this is approved for non-discharge water samples. The sample/ sample duplicate RPD agreement is not applicable if one or both results are less than five times the MDL.



LINKS

Review your project results through
TotalAccess

Have a Question?



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www.testamericainc.com

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Chain of Custody	5
Detection Summary	6
Client Sample Results	7
QC Sample Results	8
QC Association Summary	9
Lab Chronicle	10
Method Summary	11
Sample Summary	12
Receipt Checklists	13

Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
SDG: WC1345

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
U	Analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
SDG: WC1345

Job ID: 300-3678-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-3678-1**

Comments

No additional comments.

Receipt

The sample was received on 8/8/2016 1:35 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.3° C.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F16-007-212

PAGE 1 OF 1

COLLECTOR
Juan Aguilar
CHPRC

SAMPLING LOCATION
C9411, I-012

COMPANY CONTACT
TODAK, D

PROJECT DESIGNATION
FY2016 200-UP-1 Remedial Action Wells Sampling and Analysis - Water

FIELD LOGBOOK NO.
HNF-0-045-5/17

ACTUAL SAMPLE DEPTH
317.29'

PROJECT COORDINATOR
TODAK, D

PRICE CODE
7H

AIR QUALITY **DATA TURNAROUND**
30 Days / 30 Days

ICE CHEST NO.
N/A

SHIPPED TO
TestAmerica Incorporated, Richland

OFFSITE PROPERTY NO.
N/A

SAF NO.
F16-007

COA
300192

BILL OF LADING/AIR BILL NO.
N/A

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

ORIGINAL

MATRIX*
A=Air
DI=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Sill
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WF=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA

PRESERVATION
Cool <=6C

HOLDING TIME
48 Hours

TYPE OF CONTAINER
P

NO. OF CONTAINER(S)
1

VOLUME
500mL

SAMPLE ANALYSIS
300.0 ANIONS, IC: COMMON (Nitrogen in Nitrate);

Handwritten notes:
300192
WCR345
Due 9-1-16

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B34T94	WATER	AUG 08 2016	1007

FILTER

300-3678 COC



CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Juan Aguilar CHPRC	AUG 08 2016 1055	Juan Aguilar CHPRC	AUG 08 2016 1055
BE Bridges CHPRC	AUG 08 2016 1355	J. Beck, TABL	AUG 08 2016 1355
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

FILTER

LABORATORY SECTION

RECEIVED BY

DISPOSAL METHOD

TITLE

DISPOSED BY

DATE/TIME

DATE/TIME

PRINTED ON 6/2/2016

FSR ID = FSR33040

TRVL NUM = TRVL-16-166

A-6003-618 (REV 2)

Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
SDG: WC1345

Client Sample ID: B34T94

Lab Sample ID: 300-3678-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.99	D	0.056	0.028	mg/L	2		300.0	Total/NA

- 1
- 2
- 3
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This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
SDG: WC1345

Client Sample ID: B34T94

Lab Sample ID: 300-3678-1

Date Collected: 08/08/16 10:07

Matrix: Water

Date Received: 08/08/16 13:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.99	D	0.056	0.028	mg/L			08/09/16 16:17	2

- 1
- 2
- 3
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QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
 SDG: WC1345

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-5197/15
 Matrix: Water
 Analysis Batch: 5197

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.014	U	0.028	0.014	mg/L			08/09/16 15:46	1

Lab Sample ID: LCS 300-5197/16
 Matrix: Water
 Analysis Batch: 5197

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.26	2.27		mg/L		101	80 - 120

Lab Sample ID: 300-3678-1 MS
 Matrix: Water
 Analysis Batch: 5197

Client Sample ID: B34T94
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.99	D	0.452	1.43	D	mg/L		98	75 - 125

Lab Sample ID: 300-3678-1 DU
 Matrix: Water
 Analysis Batch: 5197

Client Sample ID: B34T94
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.99	D	0.977	D	mg/L		0.8	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
 SDG: WC1345

HPLC/IC

Analysis Batch: 5197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3678-1	B34T94	Total/NA	Water	300.0	
MB 300-5197/15	Method Blank	Total/NA	Water	300.0	
LCS 300-5197/16	Lab Control Sample	Total/NA	Water	300.0	
300-3678-1 MS	B34T94	Total/NA	Water	300.0	
300-3678-1 DU	B34T94	Total/NA	Water	300.0	

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- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
 SDG: WC1345

Client Sample ID: B34T94

Lab Sample ID: 300-3678-1

Date Collected: 08/08/16 10:07

Matrix: Water

Date Received: 08/08/16 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			5197	08/09/16 16:17	RLC	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-5197/15

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			5197	08/09/16 15:46	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-5197/16

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			5197	08/09/16 16:01	RLC	TAL RCH

Client Sample ID: B34T94

Lab Sample ID: 300-3678-1 MS

Date Collected: 08/08/16 10:07

Matrix: Water

Date Received: 08/08/16 13:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			5197	08/09/16 16:32	RLC	TAL RCH

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
SDG: WC1345

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131



Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-007

TestAmerica Job ID: 300-3678-1
SDG: WC1345

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3678-1	B34T94	Water	08/08/16 10:07	08/08/16 13:35

- 1
- 2
- 3
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- 6
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- 9
- 10
- 11
- 12
- 13

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3678-1

SDG Number: WC1345

Login Number: 3678

List Number: 1

Creator: Bock, Julie A

List Source: TestAmerica Richland

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
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	
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 is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	