

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

Chain of Custody/Analysis Request

COC/Lab Request #:
2013-935

Page 1 of 1

Client Contact:

Lab Agreement # : 126310011

Site Name: Los Alamos National Laboratory

Project Number :

Analysis Turnaround Time:

24 Hour - ☐ Other - ☐

7 Day - ☐

14 Day - ☐

21 Day - ☐

28 Day - ☒

Rad Screening Info:

Field Sample ID

Sample Date

Sample
Time

Sample
Matrix

WSP-CL04

WSP-GENINORG

WSP-GrossA/B

WSP-H-3

WSP-Met+B+SN+SR+U

WSP-NH3+NO3/NO2+PO4

WSP-RAD

WSP-TKN+TOC

Special Instructions:

CAPU-13-34780

Jun 6 2013

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CAPU-13-34788

Jun 6 2013

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CAPU-13-34770

Jun 6 2013

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CAPU-13-34771

Jun 6 2013

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Special Instructions:

Relinquished by:

Relinquished by:

Relinquished by:

S. Shewood

Date/Time:

Date/Time:

Date/Time:

6/7/13 3 pm

Received by:

Received by:

Received by:

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 4238

EVENT NAME:

LA/Pueblo (TA-21 and General
Surveillance Monitoring Group)
Q3 MY2013 Sampling
Event_Pueblo

SAMPLE ID: CAPU-13-34770

WORK ORDER:

	<u>AS PLANNED</u>	<u>AS COLLECTED</u>		<u>AS PLANNED</u>	<u>AS COLLECTED</u>
DATE COLLECTED (MM/DD/YYYY):		06/06/2013	FIELD MATRIX:	WG	OK
TIME COLLECTED (HH:MM):		1156	MEDIA:	UA	↓
PRS ID:		OK	SAMPLE TECH CODE:	UA	GSP
LOCATION ID: TW-2Ar		↓	FIELD PREP:	UF	OK
LOCATION TYPE:		↓	FIELD QC TYPE:	FD	↓
PORT: SINGLE COMPLETION		↓	SAMPLE USAGE:	QC	↓

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA	WSP-GrossA/B	1 LITER POLY	1	NONE	Y	NA
↓	WSP-H-3	250 ML AMBER GLASS	1	ICE	↓	↓
↓	WSP-RAD	1 GAL POLY	1	HNO3	↓	↓
	WSP-TKN+TOC	500 ML AMBER GLASS	1	H2SO4	↓	↓

SAMPLE COMMENTS:

NA

LOCATION COMMENTS:

NA

FIELD PARAMETERS:

Dissolved Oxygen NA mg/L Oxidation-Reduction Potential NA MV pH NA SU
Specific Conductance NA uS/cm Temperature NA deg C Turbidity NA NTU

COLLECTED BY (PRINT) W. Shaw

RELINQUISHED BY (Printed Name) (Signature)	Date/Time 6/6/13	RECEIVED BY (Printed Name) (Signature)	Date/Time 6/6/13
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date 05/29/2013

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 4238 EVENT NAME: LA/Pueblo (TA-21 and General Surveillance Monitoring Group)
Q3 MY2013 Sampling
Event_Pueblo

SAMPLE ID: CAPU-13-34771 WORK ORDER:

	<u>AS PLANNED</u>	<u>AS COLLECTED</u>		<u>AS PLANNED</u>	<u>AS COLLECTED</u>
DATE COLLECTED (MM/DD/YYYY):		06/06/2013	FIELD MATRIX:	WG	OK
TIME COLLECTED (HH:MM):		1156	MEDIA:	UA	↓
PRS ID:		OK	SAMPLE TECH CODE:	UA	GSP
LOCATION ID: TW-2Ar		↓	FIELD PREP:	F	OK
LOCATION TYPE:		↓	FIELD QC TYPE:	FD	↓
PORT: SINGLE COMPLETION			SAMPLE USAGE:	QC	↓

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA	WSP-CL04	250 ML POLY	1	ICE	Y	NA
↓	WSP-GENINORG	1 LITER POLY	1	ICE	↓	↓
↓	WSP-Met+B+SN+SR+U	1 LITER POLY	1	HNO3	↓	↓
↓	WSP-NH3+NO3/NO2+PO4	500 ML AMBER GLASS	1	H2SO4	↓	↓

SAMPLE COMMENTS: NA

LOCATION COMMENTS: NA

FIELD PARAMETERS:

Dissolved Oxygen NA mg/L Oxidation-Reduction Potential NA MV pH NA SU
Specific Conductance NA uS/cm Temperature NA deg C Turbidity NA NTU

COLLECTED BY (PRINT) W. Shaw

RELINQUISHED BY (Printed Name) William Shaw (Signature) <i>W. Shaw</i>	Date/Time 6/6/2013	RECEIVED BY (Printed Name) M. Martin (Signature) <i>M. Martin</i>	Date/Time 6/6/2013
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date 05/29/2013

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 4238 EVENT NAME: LA/Pueblo (TA-21 and General Surveillance Monitoring Group)
Q3 MY2013 Sampling
Event_Pueblo

SAMPLE ID: CAPU-13-34780 WORK ORDER: NA

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED (MM/DD/YYYY):		06/06/2013	FIELD MATRIX:	WG	OK
TIME COLLECTED (HH:MM):		1156	MEDIA:	UA	↓
PRS ID:		OK	SAMPLE TECH CODE:	UA	GSP
LOCATION ID: TW-2Ar		↓	FIELD PREP:	UF	OK
LOCATION TYPE: MON		↓	FIELD QC TYPE: REG		↓
PORT: SINGLE COMPLETION		↓	SAMPLE USAGE: INV		↓

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA	WSP-GrossA/B	1 LITER POLY	1	NONE	Y	NA
↓	WSP-H-3	250 ML AMBER GLASS	1	ICE	↓	↓
↓	WSP-RAD	1 GAL POLY	1	HNO3	↓	↓
↓	WSP-TKN+TOC	500 ML AMBER GLASS	1	H2SO4	↓	↓

SAMPLE COMMENTS:

Sampled within 50' of running diesel generator

LOCATION COMMENTS: NA

FIELD PARAMETERS:

Dissolved Oxygen 8.18 mg/L Oxidation-Reduction Potential 128.6 MV pH 6.69 SU
Specific Conductance 385 uS/cm Temperature 14.80 deg C Turbidity 0.6 NTU

COLLECTED BY (PRINT) D. W. Shaw
DF 6/6/13

RELINQUISHED BY (Printed Name) (Signature)	Date/Time 1310 6/6/13	RECEIVED BY (Printed Name) (Signature)	Date/Time 6/6/13 1310
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date 05/29/2013

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 4238 EVENT NAME: LA/Pueblo (TA-21 and General Surveillance Monitoring Group)
Q3 MY2013 Sampling
Event_Pueblo

SAMPLE ID: CAPU-13-34788 WORK ORDER: NA

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED (MM/DD/YYYY):		06/06/2013	FIELD MATRIX:	WG	OK
TIME COLLECTED (HH:MM):		1156	MEDIA:	UA	↓
PRS ID:		OK	SAMPLE TECH CODE:	UA	GSP
LOCATION ID: TW-2Ar		↓	FIELD PREP:	F	OK
LOCATION TYPE: MON		↓	FIELD QC TYPE: REG		↓
PORT: SINGLE COMPLETION		↓	SAMPLE USAGE: INV		↓

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA	WSP-CL04	250 ML POLY	1	ICE	Y	NA
↓	WSP-GENINORG	1 LITER POLY	1	ICE	↓	↓
↓	WSP-Met+B+SN+SR+U	1 LITER POLY	1	HNO3	↓	↓
↓	WSP-NH3+NO3/NO2+PO4	500 ML AMBER GLASS	1	H2SO4	↓	↓

SAMPLE COMMENTS: NA

LOCATION COMMENTS: NA

FIELD PARAMETERS:

Dissolved Oxygen NA mg/L Oxidation-Reduction Potential NA MV pH NA SU
Specific Conductance NA uS/cm Temperature NA deg C Turbidity NA NTU

COLLECTED BY (PRINT) W. Shaw

RELINQUISHED BY (Printed Name) William Shaw (Signature) <i>[Signature]</i>	Date/Time 1310 6/6/13	RECEIVED BY (Printed Name) <i>[Signature]</i> (Signature) <i>[Signature]</i>	Date/Time 6/6/13 1310
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date 05/29/2013

Data Validation Report

Chain Of Custody No. 2013-935-1

1. Distribution Of Samples In EDD.

	Analytical	Regular	Field	Trip	Field	Equipment
SDG	Method	Samples	Duplicates	Blanks	Blanks	Blanks
330967	EPA:901.1		1			

	Analytical	Analysis	Prep	Regular	Field	Trip	Field	Equipment	Method	Matrix	Matrix
SDG	Method	Lot ID	Lot ID	Samples	Duplicates	Blanks	Blanks	Blanks	Blanks	Spikes	Spike Dups
330967	EPA:901.1	1320741	1320741		1					1	

2. Distribution Of Analytes In EDD.

Analytical Method	Method Category	Field Sample ID	Lab Sample ID	Sample Purpose	Target Analytes	Surrogates	Spikes	TICS
EPA:901.1	RAD	Buckman08-12-34754	1202923135	DUP	1	0	0	0
EPA:901.1	RAD	CAPU-13-34770	330967001	FD	1	0	0	0
EPA:901.1	RAD	LCS	1202923136	LCS	0	0	3	0
EPA:901.1	RAD	MB	1202923134	MB	1	0	0	0

3. Are any analytes missing?

No.

4. Were any holding times exceeded?

No.

5. Any contaminants in blanks?

No.

Any samples affected by the presence of contaminants in blanks?

No.

6. Any surrogate recoveries outside the control limits?

No.

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

No.

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

No.

9. Any Field Duplicate RPDs outside the desired limits?

No.

Analytical	Post-Digestion	Lab Control	Lab Control	Blank	Blank	Lab	Storage	Preparation	Reagent
Spikes	Spikes	Samples	Sample Dups	Spikes	Spike Dups	Duplicates	Blanks	Blanks	Blanks
		1				1			

10. Any Lab Duplicate RPDs outside the desired limits?

No.

11. Any required reporting limits exceeded?

No.

12. Additional Validator's Comments.

None.

13. Display Flagged Data.

Location ID	Chain Of Custody No	Field Sample ID	Sample Purpose	Analysis Type Code	Analytical Suite	Analytical Method	Parameter Name	Lab Qualifier	Validation Qualifier	Validation Reason Codes	Detected
TW-2Ar	2013-935-1	CAPU-13-34770	FD	RE	RAD	EPA:901.1	Cesium-137	U	U	R5	N

Reason Code**Description**

R5

Analyte is not detected because the amount reported is less than the MDC.

14. Useable Result Count.

Field	Location	Sample	Analytical	No. Unuseable	Total No. Of
Sample ID	ID	Purpose	Method	Records	Records
CAPU-13-34770	TW-2Ar	FD	EPA:901.1	0	1

Lab Result	Lab Units	Report Result	Report Units	Report MDA	Report Uncertainty	Lab Matrix	Sample Date	Percent Moisture	Analysis Lot ID	Validation Status Code	Use Flag
1.55	pCl/L	1.55	pCl/L	5.86	1.55	W	6/6/2013		1320741	VAL	Y



August 09, 2013

www.gel.com

Mr. Keith Greene
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL-WQH Water Samples
Work Order: 330967
SDG: 2013-935-1

Dear Mr. Greene:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 08, 2013, and analyzed for Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Sincerely,

Hope Taylor for
Valerie Davis
Project Manager

Purchase Order: 63641-10
Chain of Custody: 2013-935
Enclosures



ARS International (63641-10)
LANL-WQH Water Samples
Work Order #: 330967
SDG: 2013-935-1

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Case Narrative

**Case Narrative for
ARS International (63641-10)
LANL-WQH Water Samples
Workorder #: 330967
SDG # : 2013-935-1**

August 12, 2013

Laboratory Identification:

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

Summary

Sample receipt The sample arrived at GEL Laboratories LLC, Charleston, South Carolina on June 08, 2013 for analysis. The sample was delivered with proper chain of custody documentation and signatures. The samples were screened according to GEL Standard Operating Procedure. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C). Shipping container temperature was checked, documented, and within specifications. There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following sample:

<u>Laboratory ID</u>	<u>Client ID</u>
330967001	CAPU-13-34770

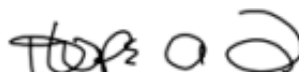
Case Narrative

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

Data Package

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

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



Hope Taylor for
Valerie Davis
Project Manager

List of current GEL Certifications as of 09 August 2013

State	Certification
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP A2LA ISO 17025	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Nevada	SC000122011-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-8
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

Chain of Custody and Supporting Documentation

327280

[illegible]

SAMPLE RECEIPT & REVIEW FORM

Client: <u>LANL</u>		SDG/AR/COC/Work Order: <u>2013-935</u>
Received By: <u>MIC</u>		Date Received: <u>6-8-13</u>
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0.00</u>
Classified Radioactive II or III by RSO?	<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?	<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?	<input checked="" type="checkbox"/>	

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Ice bags <u>Blue ice</u> Dry ice None Other (describe) *all temperatures are recorded in Celsius
2a	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>455212</u> Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
7	Are Encore containers present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
12	Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
14	Carrier and tracking number.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other <u>5462 9833 0803 20c RADCHK</u> <u>0814 4c</u> <u>0799 4c</u>

Comments (Use Continuation Form if needed):

ORIGIN ID: SAFA (505) 665-9966
KEITH GREENE
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JUN13
ACTWGT: 60.0 LB MAN
CRD: 0014176/CAFE25

BILL

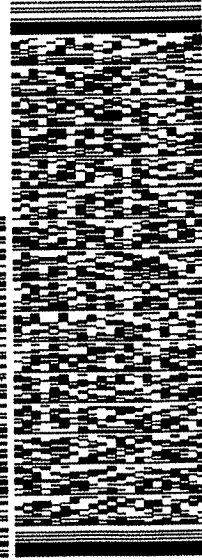
TO VALERIE DAVIS

GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: WE991158W100

FedEx
Express



1 of 3
SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 5462 9833 0799
0201

MASTER ##

X0 CHSA

29407
SC-US CHS



ORIGIN ID: SAFA (505) 665-9966
KEITH GREENE
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JUN13
ACTWGT: 31.0 LB MAN
CRD: 0014176/CAFE2511

BILL SENDER

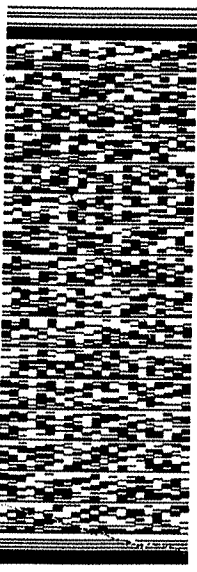
TO VALERIE DAVIS

GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: WE991158W100

FedEx
Express



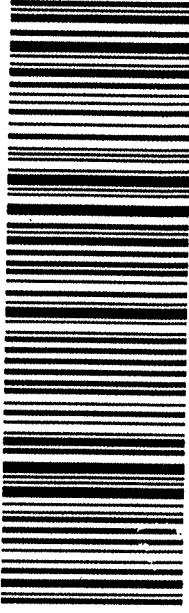
3 of 3
SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 5462 9833 0814
0263

MASTER #

X0 CHSA

29407
SC-US CHS



Print # 169148-434 PRT2 08/10 *

500CT/D777/188C

5210960901111111

ORIGIN ID: SAFA (505) 665-9966
KEITH GREENE
LOS ALAMOS NATL LAB
1A00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 07JUN13
ACTWT: 28.0 LB MAN
CRD: 0014176/CREE2511

BILL SENDER

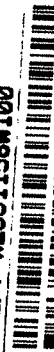
TO **VALERIE DAVIS**
GENERAL ENGINEERING LAB
2040 SAVAGE RD

202

CHARLESTON SC 29407

(843) 556-8171

REF: WE991158W100



FedEx
Express



2 of 3

NPS# 5462 9833 0803

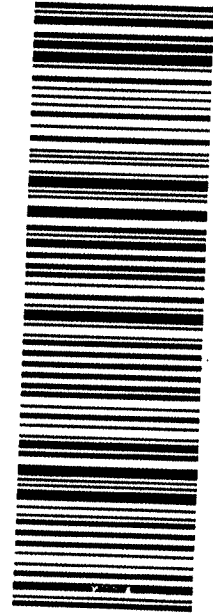
Mstr# 5462 9833 0799

SATURDAY 12:00P
PRIORITY OVERNIGHT

0201

X0 CHSA

29407
SC-US CHS



Print # 166148-434 PRTZ 08/10

580CT/D777/188C

J1131186090125

Subject: FW: New Request: Cs reanalysis ISSUE=430 PROJ=220
From: "Patel, Nita" <npatel@lanl.gov>
Date: 8/2/2013 3:53 PM
To: "Valerie Davis (vsd@gel.com)" <vsd@gel.com>
CC: "Greene, Keith R" <kgreene@lanl.gov>

Hello Valerie, Can you please reanalyze the below? Thank you, Nita

From: ENV Data Systems [mailto:env_data_systems@lanl.gov]
Sent: Friday, August 02, 2013 10:34 AM
To: Patel, Nita
Subject: New Request: Cs reanalysis ISSUE=430 PROJ=220

When replying, type your text above this line.

Notification of Request Registration

Workspace: ENV Data Systems
Request: Cs reanalysis
Request Number:430

Priority: 1 **Status:**Request
Date: 08/02/2013 **Time:** 10:34:39
Created By:115164

[Click here to view Request in Browser](#)

Description:
Entered on 08/02/2013 at 10:34:39 MDT (GMT-0600) by 115164:
Please reanalyze CAPU-13-34770 for Cs-137

Current Assignees:

CC(s):

Request Information:

Request Type::Focused Validation **Customer Priority::**Routine
System:: EIM/Intellus
Justification::
need reanalysis

Contact Information:

Z Number:	115164	Full Name:	David B. Rogers
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Organization:	ET-EI: ENVIRONMENTAL INVES TIGATIONS		

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

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

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

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

Radiological Analysis

**Radiochemistry Case Narrative
ARS International (ARSL)
SDG 2013-935-1
Work Order 330967**

Method/Analysis Information

Product: Cs-137
Analytical Method: EPA 901.1
Analytical Batch Number: 1320741

Sample ID	Client ID
330967001	CAPU-13-34770
1202923134	Method Blank (MB)
1202923135	330965001(Buckman08-12-34754) Sample Duplicate (DUP)
1202923136	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 25.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. The initial Calibrations were performed in August 2012, May 2013, June 2013 and August 2013.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 330965001 (Buckman08-12-34754). The QC was from ARSL work order 330965.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Additional Comments

Additional comments were not required for this sample set.

Blank Decision Level

The blank result is less than the decision level.

Qualifier Information

Manual qualifiers were not required.

Certification Statement

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

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Qualifier Definition Report for

ARSL001 ARS International (63641-10)

Client SDG: 2013-935-1 GEL Work Order: 330967


The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

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

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

Signature: 

Name: Theresa Austin

Date: 09 AUG 2013

Title: Group Leader

Sample Data Summary

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Mr. Keith Greene
Project: LANL-WQH Water Samples

Report Date: August 9, 2013

Client Sample ID: CAPU-13-34770
Sample ID: 330967001
Matrix: W
Collect Date: 06-JUN-13
Receive Date: 08-JUN-13
Collector: Client

Project: ESHL00210
Client ID: ARSL001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

Cs-137 "As Received"

Cesium-137	U	1.55	+/-1.55	5.86	2.70	+/-1.59	8.00	pCi/L		MXR1	08/07/13	1349	1320741	1
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The following Analytical Methods were performed

Method	Description
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1	EPA 901.1
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Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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Notes:

TPU and Counting Uncertainty are calculated at the 68% confidence level (1-sigma).

Quality Control Data

GEL LABORATORIES LLC

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QC Summary

Report Date: August 9, 2013

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Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Mr. Keith Greene

Workorder: 330967

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1320741										
QC1202923135	330965001	DUP									
Cesium-137	U	0.00233	U	1.90	pCi/L	0.287		(0-1)	MXR1	08/08/1308:22	
	Uncert:	+/-1.61		+/-1.64							
	TPU:	+/-1.61		+/-1.70							
QC1202923136	LCS										
Americium-241	11000			10700	pCi/L		96.8	(80%-120%)	MXR1	08/08/1308:22	
	Uncert:			+/-332							
	TPU:			+/-590							
Cesium-137	23800			23500	pCi/L		98.8	(80%-120%)			
	Uncert:			+/-160							
	TPU:			+/-1000							
Cobalt-60	20400			19700	pCi/L		96.8	(80%-120%)			
	Uncert:			+/-176							
	TPU:			+/-846							
QC1202923134	MB										
Cesium-137			U	0.032	pCi/L				MXR1	08/07/1313:50	
	Uncert:			+/-2.15							
	TPU:			+/-2.15							

Notes:

TPU and Counting Uncertainty are calculated at the 68% confidence level (1-sigma).

The Qualifiers in this report are defined as follows:

**	Analyte is a Tracer compound
<	Result is less than value reported
>	Result is greater than value reported
BD	Results are either below the MDC or tracer recovery is low
FA	Failed analysis.
H	Analytical holding time was exceeded
J	Value is estimated
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	REMP Result > MDC/CL and < RDL
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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QC Summary

Workorder: 330967

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Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
UI	Gamma Spectroscopy--Uncertain identification									
UJ	Gamma Spectroscopy--Uncertain identification									
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.									
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.									
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
h	Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.