FINAL

SITE CLOSURE REPORT
LAND USE CONTROL/INSTITUTIONAL CONTROL SITE
BUILDING 211

FORMER GRIFFISS AIR FORCE BASE SITE
ROME, NEW YORK

Prepared for:

Air Force Civil Engineer Center
Building 45
706 Brooks Road
Rome, New York 13441

Prepared by:

FPM Remediations, Inc.
584 Phoenix Drive
Rome, NY 13441

In association with:

10901 Lowell Avenue, Suite 271
Overland Park, Kansas 66210

Contract Number FA8903-10-D-8595/
Delivery Order 0014

October 2013

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LIST OF ACRONYMS

AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AOI	Area of Interest
cm^3	Centimeter Cubed
CQCR	Chemical Quality Control Report
EPA	United States Environmental Protection Agency
FPM	FPM Remediations, Inc.
LUC/IC	Land Use Control/Institutional Control
mg/kg	milligram per kilogram
µg	Microgram
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
OTH	Other Site
PA/SI	Preliminary Assessment/Site Inspection
SCO	Site Cleanup Objective
UFP QAPP	Uniform Federal Policy Quality Assurance Project Plan

1.0 INTRODUCTION

FPM Remediations, Inc. (FPM), in association with CAPE, Inc., under contract with the Air Force Civil Engineer Center (AFCEC), conducted site closure activities at the Building 211 Land use Control/Institutional Control (LUC/IC) Site at the former Griffiss Air Force Base (AFB) in Rome, New York. These sites are illustrated on Figure 1.

1.1 Purpose

The Griffiss Local Redevelopment Agency has implemented reuse and redevelopment for the former Griffiss AFB that includes a mixture of commercial, industrial and airport use. The Air Force's initiative to reduce its long-term environmental liabilities and life cycle costs through site closure creates an opportunity to optimize benefits to the local public, the federal government, and the environment. An evaluation of the site, including concrete sampling of the building slab was conducted to determine if residual contamination is at levels below the Title 6 - New York Codes, Rules and Regulations (6-NYCRR) Part 375 Residential use Soil Cleanup Objectives (SCOs) (New York State Department of Environmental Conservation (NYSDEC), December 2006).

2.0 BUILDING 211

2.1 Site Background

Building 211 is located near the intersection of Hangar Road and March Street in the west central portion of the installation and was used as a drinking water chlorination facility (Figure 1).

The site is located in Parcel F3A and has been transferred. Environmental Baseline Survey site designation OTH-211 (DW-211) was a mercury spill from a broken manifold gauge in Building 211 which occurred in 1985. The site was remediated in 2000. Confirmation wipe sample results showed mercury concentrations ranging from 2.08 microgram (µg)/100 centimeter cubed (cm^3) to 4.80 µg/100 cm^3. The site-specific action level was 5 µg/100 cm^3. A project to encapsulate the residual contamination was completed in July 2002. The building was demolished in 2011 and the slab was left in place due to its proximity to underground utilities. Following demolition, the slab was covered with soil and asphalt cuttings.

A ROD was not required because it was part of the Area of Interest (AOI) group and was closed during the Preliminary Assessment/Site Inspection (PA/SI) investigation period. The Building 211 site is currently subject to the maintenance of the integrity of the encapsulation. LUC/ICs for the site, provided in the Parcel F3A deed, include:

"The grantee is notified in Exhibit E (deed) that an encapsulation project was completed in the Building 211 pipe vault. The Grantee covenants to be responsible for maintaining the integrity of the encapsulation and for complying with all applicable Federal, State, and Local laws relating to the disposal of demolition debris if Building 211 is demolished or modified."

2.1.1 Concrete Slab Sampling Results

Concrete samples were collected at six locations within the slab of the former building and analyzed for mercury (United States Environmental Protection Agency [EPA] Method SW7471). Figure 1 shows the sample locations. Because the building slab was covered with soil and asphalt cuttings, the six selected sampling locations were exposed by manual removal of the approximately 1-ft layer of soil and asphalt cuttings. Following this removal, samples were collected using a 1-inch diameter concrete drill bit to a depth of approximately 2 inches. To obtain sufficient concrete chips and dust for analysis, 3 aliquot points at each location were drilled. Following sample collection, the points were fully restored with concrete and the manually removed soil and asphalt cuttings was placed back over the sampling locations to pre-sampling conditions.

Since the samples were collected over a small area (approximately 150 square feet), the samples were analyzed separately and then mathematically composited. The composited mercury concentration was 0.803 milligram per kilogram (mg/kg) which is below the 6-NYCRR Part 375 Residential use SCO of 0.81 mg/kg. All sampling results are presented in Table 1. All field sampling forms are attached in the daily chemical quality control reports (CQCRs) in Appendix A. The validated data are attached in Appendix B and the raw lab data are provided in Appendix C.

2.2 RECOMMENDATIONS

The 2013 composite concrete sampling mercury concentration is below the 6-NYCRR Part 375 Residential use SCO. Therefore, it is requested that New York State and USEPA concur that the deed restriction at the Building 211 be removed.

3.0 REFERENCES

Air Force, Basewide Environmental Baseline Survey for the Griffiss Air Force Base, September 1994.

Air Force, Updated Basewide Environmental Baseline Survey for the Griffiss Air Force Base, November 2005.

Air Force, Deed for Parcels F-3A and F-3B, former Griffiss Air Force Base, 2004.

CAPE/FPM, Updated 2013 Final Uniform Federal Policy Quality Assurance Project Plan for Performance Based-Remediation at the former Griffiss AFB, New York, May 2013.

CAPE/FPM/AECOM, Final Addenda Health and Safety Plan for Performance Based-Remediation at the former Griffiss AFB, New York, July 2012.

CAPE/FPM, Final 2012 Land Use Control/Institutional Control Site Inspection Report at the former Griffiss AFB, New York, March 2013.

CAPE/FPM, Final Site Closure Plan for Land use Control/Institutional Control Sites at the former Griffiss AFB, New York, March 2013.

NYSDEC, 6-NYCRR Part 375 Environmental Remediation Programs, December 2006.

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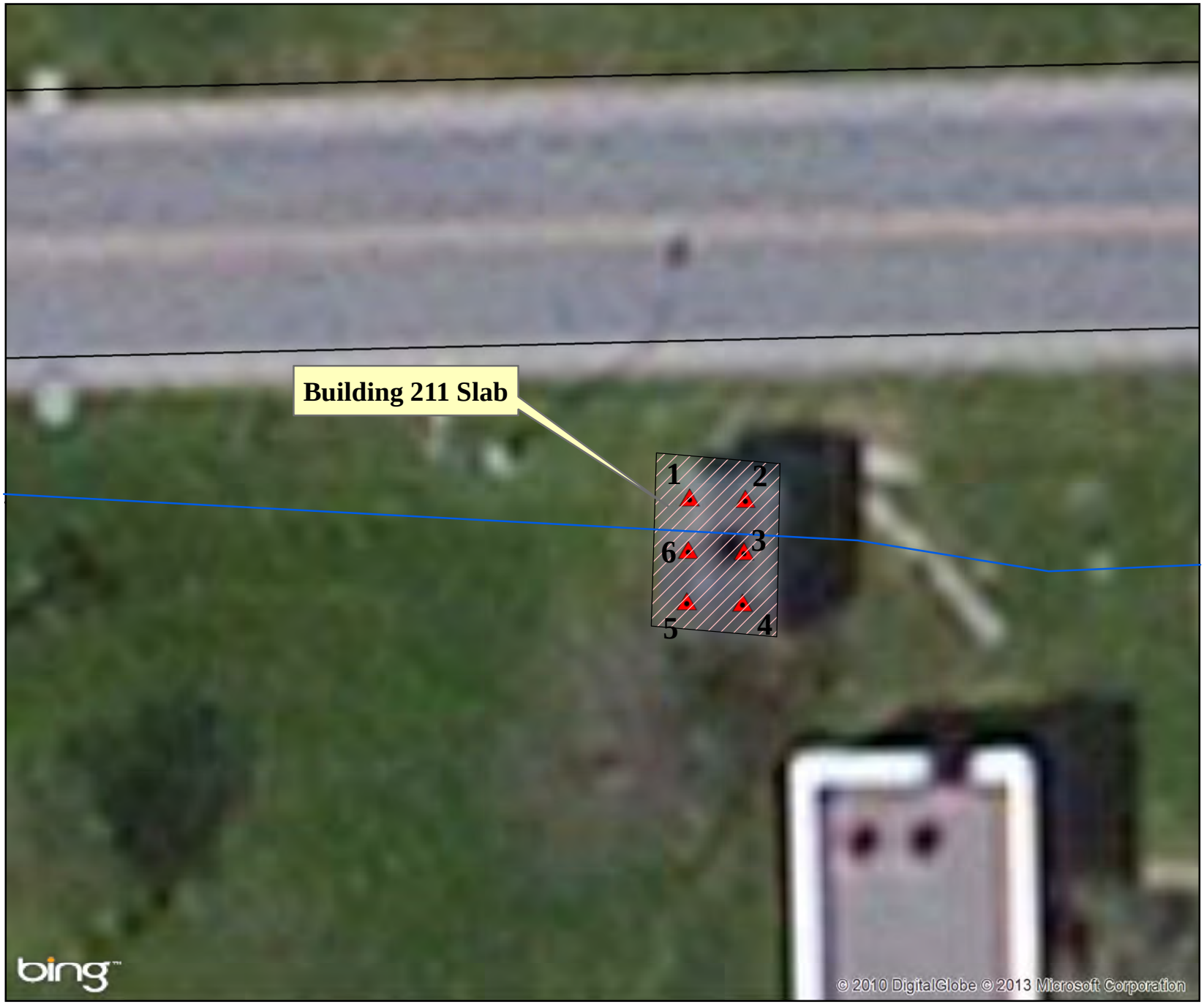
Tables

Table 1
Concrete Sampling Results

Sample Location	NYCRR Part 375 Residential use Soil Cleanup Objectives (mg/Kg)	Building 211 Concrete Slab						
Sample ID		211SCS0101AA	211SCS0201AA	211SCS0301AA	211SCS0401AA	211SCS0501AA	211SCS0601AA	Mean Mercury Concentration
Date of Collection		5/14/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013	5/14/2013	
Sample Depth (ft bgs)		0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	
Metals (mg/Kg)								
mercury	0.81	0.48	1.80	0.25	0.18	0.89	0.73	0.803

Figures



N

Site Location

Legend

- Sample Location
- Water Pipeline
- Existing Road
- Building Slab

10 5 0 10

Feet

United States Air Force
Former Griffiss Air Force Base
Rome, New York

Figure 1
Building 211
Sampling Locations

FPM Remediations, Inc.

Y:\GIS_Projects\Griffiss\Projects\1015-11-01\Mod_2\LUCIC Site Closure Plan\Figure_1_B211_SampLoc.mxd

Appendix A
Daily Chemical Quality Control Reports

Daily Chemical Quality Control Report

Project/Delivery Order Number: __1015-11-01_ ___ Date: 5/14/2013__

Project Name/Site Number: _Site Closure Sampling at Building 211

Weather conditions: Temperature: __56.7 F__ Barometric reading: ____30.04_ __
Wind speed and direction: ____0-4_mph, SSE _____
Significant wind changes: __16 mph _____

General description of tasks completed: Concrete Sampling at former building slab.

Explain any departures from the SAP or deviations from approved procedures during the day's field activities: None

Explain any technical problems encountered in the field or field equipment/field analytical instrument malfunction: None

Corrective actions taken or instructions obtained from AFCEE/USACE personnel: No corrective actions necessary.
None

Sampling shipment completed: √ Yes □ No Airbill #: …. …. ….

DCQCR Prepared by: ___Daniel Baldyga _____ Date: ____5/14/13 _____

CQCC Signature:  Date:____5/14/13 _____

ATTACHMENTS:

Checklist	Daily Chemical Quality Control Report Attachments
	✓ Field sampling forms
	✓ Equipment Calibration Log
	✓ Copies of COCs
	✓ SDG Table (See accompanying COCs).
	✓ Daily Health and Safety Meeting Form

SOIL / SEDIMENT SAMPLING FORM

Project: 1015-11-01 Sampled by: DB/JW

Site and Site Code (**SITEID**): Building 211

Sampling Location ID. (**LOCID**): 211SCS-1

Date (**LOGDATE**): 5/14/13 Time: 1200

FIELD OBSERVATIONS:

Sample Depth or Interval	Material Description/ Color
0-4"	Concrete

Comments/Observations:

Sample Time: 1200 Sample ID: 211SCS01101AA

Sample Time: _____ Sample ID: _____

Sample Time: _____ Sample ID: _____

SOIL / SEDIMENT SAMPLING FORM

Project: 1015-11-01 Sampled by: DB/JW

Site and Site Code (**SITEID**): Building 211

Sampling Location ID. (**LOCID**): 211 SCS-2

Date (**LOGDATE**): 5/14/13 Time: 1215

FIELD OBSERVATIONS:

Sample Depth or Interval	Material Description/ Color
0-4"	concrete

Comments/Observations:

Sample Time: 1215 Sample ID: 211SCS02aMM

Sample Time: _____ Sample ID: _____

Sample Time: _____ Sample ID: _____

SOIL / SEDIMENT SAMPLING FORM

Project: 1015-11-01 Sampled by: DB/JW

Site and Site Code (**SITEID**): Building 211

Sampling Location ID. (**LOCID**): 211SC5-3

Date (**LOGDATE**): 5/14/13 Time: 1220

FIELD OBSERVATIONS:

Sample Depth or Interval	Material Description/ Color
0-4"	concrete

Comments/Observations:

Sample Time: 1220 Sample ID: 211SCS03014A

Sample Time: _____ Sample ID: _____

Sample Time: _____ Sample ID: _____

SOIL / SEDIMENT SAMPLING FORM

Project: 1015-11-01 Sampled by: DB/JW

Site and Site Code (**SITEID**): Building 211

Sampling Location ID. (**LOCID**): 211SCS -4

Date (**LOGDATE**): 5/14/13 Time: 1230

FIELD OBSERVATIONS:

Sample Depth or Interval	Material Description/ Color
~~0-5"~~ 0-4"	concrete

Comments/Observations:

Sample Time: 1230 Sample ID: 211SCS0401AA

Sample Time: Sample ID:

Sample Time: Sample ID:

SOIL / SEDIMENT SAMPLING FORM

Project: 1015-11-01 Sampled by: DB/JW

Site and Site Code (**SITEID**): Building 21

Sampling Location ID. (**LOCID**): 211SCS-5

Date (**LOGDATE**): 5/14/13 Time: 1245

FIELD OBSERVATIONS:

Sample Depth or Interval	Material Description/ Color
0-4"	Concrete

Comments/Observations:

Sample Time: 1245 Sample ID: 211SCS050114

Sample Time: _____ Sample ID: _____

Sample Time: _____ Sample ID: _____

SOIL / SEDIMENT SAMPLING FORM

Project: 1015-11-01 Sampled by: DB/JW

Site and Site Code (**SITEID**): Building 211

Sampling Location ID. (**LOCID**): 211SCS-6

Date (**LOGDATE**): 5/14/13 Time: 1120

FIELD OBSERVATIONS:

Sample Depth or Interval	Material Description/ Color
0-4"	concrete

Comments/Observations:

Duplicate sample taken at this location.

Sample Time: 1120 Sample ID: 211SCS0001AA

Sample Time: 1120 Sample ID: 211SCS0001AC (duplicate)

Sample Time: Sample ID:

CHAIN OF CUSTODY RECORD

COC#: _1_ SDG#: _ 8 _ (Open/Closed) Cooler ID#: _A_

Ship to:	Project Name: Griffiss AFB Building 211	Send Results to:
Elaine Walker Test America Laboratories, Inc. 4955 Yarrow Street Arvada, Colorado Tel: 303-736-0156	Sampler Name: Justin Damann	Daniel Baldyga FPM Remediations, Inc 584 Phoenix Drive Rome, NY 13441 Phone: (315) 336-7721 Ext. 207
Carrier: Test America courier.	Sampler Signature:	

Analyses requested

Field Sample ID	LocID	Date 2013	Time	MATRIX	SMCODE	SACODE	SBD/SED	# of Containers	Mercury: note 1 4 oz glass jar	Mercury note 1 250 mL poly (HNO_3).	Comments
211SCS0101AA	211SCS-1	5/14	1200	SO	G	N	0/0	1	1		
211SCS0201AA	211SCS-2	5/14	1215	SO	G	N	0/0	1	1		
211SCS0301AA	211SCS-3	5/14	1220	SO	G	N	0/0	1	1		
211SCS0401AA	211SCS-4	5/14	1230	SO	G	N	0/0	1	1		
211SCS0501AA	211SCS-5	5/14	1245	SO	G	N	0/0	1	1		
211SCS0601AA	211SCS-6	5/14	1120	SO	G	N	0/0	1	1		
211SCS0601AC	211SCS-6	5/14	1120	SO	G	FD	0/0	1	1		
051413AE	FIELDQC	5/14	1330	WQ	G	EB	0/0	1		1	

Sample Condition Upon Receipt at Laboratory: Cooler Temperature:

Special Instructions/Comments: Analyses to be conducted in compliance with AFCEE QAPP 4.0

Note 1: Mercury: method SW7471B

#1 Released by: (Sig)	Date:	#2 Released by: (Sig)	Date: 5/14/13	#3 Released by: (Sig)	Date:
Company Name:	Time:	Company Name: FPM	Time: 1630	Company Name:	Time:
#1 Received by: (Sig) Daniel Baldyga	Date:	#2 Received by: (Sig)	Date: 5-14-13	#3 Received by: (Sig)	Date:
Company Name: FPM	Time:	Company Name: TA Spa	Time: 16130	Company Name:	Time:

Daily Health and Safety Meeting Form

Date: 5/14/13 *Time :* 1000

Location: FPM office (sample room)

Weather Conditions: sunny / windy / 60°(lower)

Meeting Type: Daily Health and Safety

Personnel Present:
Josh Wenzel, Dan Baldyga, Karl Wilkenson, Mike Grifasi

Visitors Present: None

Visitor Training: None

PPE Required: Modified D

Possible risks, injuries, concerns:
dust from drilling (wear dust masks) and traffic on Hanga-Road

Anticipated Releases to Environment (if so, describe and detail response action/control measures implemented):
None

Property Damage:
None

Description (include sequence of events describing step by step how incident happened):
None

Analysis for, and Implementation of Corrective/Preventative Procedure to Prevent Future Occurrences (to be formulated by SSHO + FOM, approved by PM, and SSHO implemented):
None

Report made by (Name): Daniel Baldyga

SSHP Organization Title: Site Safety and Health Officer

Appendix B
Raw Laboratory Results

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-42264-1

Job Description: Griffiss AFB Bldg 211

For:
FPM Remediations Inc
584 Phoenix Drive
Rome, NY 13441

Attention: Daniel Baldyga

M. Elaine Walker

Approved for release.
Elaine Walker
Project Manager I
5/30/2013 3:49 PM

Elaine Walker, Project Manager I
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0156
elaine.walker@testamericainc.com
05/30/2013

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Table of Contents

CASE NARRATIVE
Client: FPM Remediations Inc
Project: Griffiss AFB Bldg 211
Report Number: 280-42264-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

Eight samples were received on 05/15/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.9ºC.

TOTAL MERCURY (CVAA) - SOIL

Samples 211SCS0101AA (280-42264-1), 211SCS0201AA (280-42264-2), 211SCS0301AA (280-42264-3), 211SCS0401AA (280-42264-4), 211SCS0501AA (280-42264-5), 211SCS0601AA (280-42264-6), and 211SCS0601AC (280-42264-7) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 05/17/2013.

Mercury failed the recovery criteria high for the matrix spike duplicate (MSD) of sample 211SCS0101AA (280-42264-1) in batch 280-175087. Mercury also exceeded the RPD limit. The matrix spike (MS) and associated laboratory control sample (LCS) recoveries met acceptance criteria, and the sample results have been flagged accordingly.

Sample 211SCS0201AA (280-42264-2) required a dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the mercury analyses.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY (CVAA) - WATER

Sample 051413AE (280-42264-8) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The sample was prepared and analyzed on 05/22/2013.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples 211SCS0101AA (280-42264-1), 211SCS0201AA (280-42264-2), 211SCS0301AA (280-42264-3), 211SCS0401AA (280-42264-4), 211SCS0501AA (280-42264-5), 211SCS0601AA (280-42264-6), and 211SCS0601AC (280-42264-7) were analyzed for percent solids in accordance with EPA SW846 3550C. The samples were analyzed on 05/22/2013.

No difficulties were encountered during the % solids analyses.

All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: FPM Remediations Inc

Job Number: 280-42264-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-42264-1	211SCS0101AA	Solid	05/14/2013 1200	05/15/2013 0915
280-42264-2	211SCS0201AA	Solid	05/14/2013 1215	05/15/2013 0915
280-42264-3	211SCS0301AA	Solid	05/14/2013 1220	05/15/2013 0915
280-42264-4	211SCS0401AA	Solid	05/14/2013 1230	05/15/2013 0915
280-42264-5	211SCS0501AA	Solid	05/14/2013 1245	05/15/2013 0915
280-42264-6	211SCS0601AA	Solid	05/14/2013 1120	05/15/2013 0915
280-42264-7FD	211SCS0601AC	Solid	05/14/2013 1120	05/15/2013 0915
280-42264-8EB	051413AE	Water	05/14/2013 1330	05/15/2013 0915

EXECUTIVE SUMMARY - Detections

Client: FPM Remediations Inc Job Number: 280-42264-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-42264-1	**211SCS0101AA**					
Mercury		480	J	18	ug/Kg	7471B
Percent Moisture		2.7		0.10	%	Moisture
Percent Solids		97		0.10	%	Moisture
280-42264-2	**211SCS0201AA**					
Mercury		1800	D	200	ug/Kg	7471B
Percent Moisture		3.9		0.10	%	Moisture
Percent Solids		96		0.10	%	Moisture
280-42264-3	**211SCS0301AA**					
Mercury		250		19	ug/Kg	7471B
Percent Moisture		2.4		0.10	%	Moisture
Percent Solids		98		0.10	%	Moisture
280-42264-4	**211SCS0401AA**					
Mercury		180		20	ug/Kg	7471B
Percent Moisture		3.8		0.10	%	Moisture
Percent Solids		96		0.10	%	Moisture
280-42264-5	**211SCS0501AA**					
Mercury		890		20	ug/Kg	7471B
Percent Moisture		2.0		0.10	%	Moisture
Percent Solids		98		0.10	%	Moisture
280-42264-6	**211SCS0601AA**					
Mercury		730		19	ug/Kg	7471B
Percent Moisture		3.0		0.10	%	Moisture
Percent Solids		97		0.10	%	Moisture
280-42264-7FD	**211SCS0601AC**					
Mercury		490		19	ug/Kg	7471B
Percent Moisture		4.2		0.10	%	Moisture
Percent Solids		96		0.10	%	Moisture

METHOD SUMMARY

Client: FPM Remediations Inc

Job Number: 280-42264-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	TAL DEN	SW846 7471B	
Preparation, Mercury	TAL DEN		SW846 7471B
Percent Moisture	TAL DEN	EPA Moisture	
Matrix: Water			
Mercury (CVAA)	TAL DEN	SW846 7470A	
Preparation, Mercury	TAL DEN		SW846 7470A

Lab References:

TAL DEN = TestAmerica Denver

Method References:

EPA = US Environmental Protection Agency

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

METHOD / ANALYST SUMMARY

Client: FPM Remediations Inc

Job Number: 280-42264-1

Method	Analyst	Analyst ID
SW846 7470A	Mooney, Joseph C	JM
SW846 7471B	Mooney, Joseph C	JM
EPA Moisture	Benson, Alex F	AFB

Client: FPM Remediations Inc | Job Number: 280-42264-1

Client Sample ID: **211SCS0101AA**

Lab Sample ID: 280-42264-1 | Date Sampled: 05/14/2013 1200
Client Matrix: Solid | % Moisture: 2.7 | Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	05/17/2013 1721			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		480	J	5.8	18

Client: FPM Remediations Inc | Job Number: 280-42264-1

Client Sample ID: **211SCS0201AA**

Lab Sample ID: 280-42264-2 | Date Sampled: 05/14/2013 1215
Client Matrix: Solid | % Moisture: 3.9 | Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	10			Initial Weight/Volume:	0.54 g
Analysis Date:	05/17/2013 1750			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		1800	D	64	200

Client: FPM Remediations Inc | Job Number: 280-42264-1

Client Sample ID: **211SCS0301AA**

Lab Sample ID: 280-42264-3 | Date Sampled: 05/14/2013 1220
Client Matrix: Solid | % Moisture: 2.4 | Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.54 g
Analysis Date:	05/17/2013 1752			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		250		6.3	19

Client: FPM Remediations Inc | Job Number: 280-42264-1

Client Sample ID: **211SCS0401AA**

Lab Sample ID: 280-42264-4 | Date Sampled: 05/14/2013 1230
Client Matrix: Solid | % Moisture: 3.8 | Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	05/17/2013 1754			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		180		6.6	20

Client: FPM Remediations Inc | Job Number: 280-42264-1

Client Sample ID: **211SCS0501AA**

Lab Sample ID: 280-42264-5 | Date Sampled: 05/14/2013 1245
Client Matrix: Solid | % Moisture: 2.0 | Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	05/17/2013 1757			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		890		6.5	20

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: **211SCS0601AA**

Lab Sample ID: 280-42264-6
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 05/14/2013 1120
Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	05/17/2013 1759			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		730		6.1	19

Client: FPM Remediations Inc | Job Number: 280-42264-1

Client Sample ID: **211SCS0601AC**

Lab Sample ID: 280-42264-7FD | Date Sampled: 05/14/2013 1120

Client Matrix: Solid | % Moisture: 4.2 | Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	05/17/2013 1801			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		490		6.3	19

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: **051413AE**

Lab Sample ID: 280-42264-8EB
Client Matrix: Water

Date Sampled: 05/14/2013 1330
Date Received: 05/15/2013 0915

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	280-175699	Instrument ID:	MT_033
Prep Method:	7470A	Prep Batch:	280-175047	Lab File ID:	130522aa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	05/22/2013 1635			Final Weight/Volume:	30 mL
Prep Date:	05/22/2013 1220				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Mercury	0.080	U	0.027	0.20

General Chemistry

Client Sample ID: **211SCS0101AA**

Lab Sample ID: 280-42264-1 Date Sampled: 05/14/2013 1200
Client Matrix: Solid Date Received: 05/15/2013 0915

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Moisture	2.7		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N
Percent Solids	97		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N

General Chemistry

Client Sample ID: **211SCS0201AA**

Lab Sample ID: 280-42264-2 Date Sampled: 05/14/2013 1215
Client Matrix: Solid Date Received: 05/15/2013 0915

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Moisture	3.9		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N
Percent Solids	96		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N

General Chemistry

Client Sample ID: **211SCS0301AA**

Lab Sample ID: 280-42264-3 Date Sampled: 05/14/2013 1220
Client Matrix: Solid Date Received: 05/15/2013 0915

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Moisture	2.4		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N
Percent Solids	98		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N

General Chemistry

Client Sample ID: **211SCS0401AA**

Lab Sample ID: 280-42264-4 Date Sampled: 05/14/2013 1230

Client Matrix: Solid Date Received: 05/15/2013 0915

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Moisture	3.8		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N
Percent Solids	96		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N

General Chemistry

Client Sample ID: **211SCS0501AA**

Lab Sample ID: 280-42264-5 Date Sampled: 05/14/2013 1245
Client Matrix: Solid Date Received: 05/15/2013 0915

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Moisture	2.0		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N
Percent Solids	98		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N

General Chemistry

Client Sample ID: **211SCS0601AA**

Lab Sample ID: 280-42264-6 Date Sampled: 05/14/2013 1120

Client Matrix: Solid Date Received: 05/15/2013 0915

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Moisture	3.0		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N
Percent Solids	97		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N

General Chemistry

Client Sample ID: **211SCS0601AC**

Lab Sample ID: 280-42264-7FD Date Sampled: 05/14/2013 1120

Client Matrix: Solid Date Received: 05/15/2013 0915

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Moisture	4.2		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N
Percent Solids	96		%	0.10	0.10	1.0	Moisture
Analysis Batch: 280-175507	Analysis Date: 05/22/2013 1454						DryWt Corrected: N

Client: FPM Remediations Inc

Job Number: 280-42264-1

Method Blank - Batch: 280-175047

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 280-175047/1-A	Analysis Batch:	280-175699	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-175047	Lab File ID:	130522aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/22/2013 1630	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	05/22/2013 1220				
Leach Date:	N/A				

Analyte	Result	Qual	DL	LOQ
Mercury	0.080	U	0.027	0.20

Lab Control Sample - Batch: 280-175047

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 280-175047/2-A	Analysis Batch:	280-175699	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-175047	Lab File ID:	130522aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/22/2013 1633	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	05/22/2013 1220				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	5.38	108	80 - 120	

Method Blank - Batch: 280-174722

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 280-174722/1-A	Analysis Batch:	280-175087	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.57 g
Analysis Date:	05/17/2013 1716	Units:	ug/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				
Leach Date:	N/A				

Analyte	Result	Qual	DL	LOQ
Mercury	14	U	5.8	18

Lab Control Sample - Batch: 280-174722

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCS 280-174722/2-A	Analysis Batch:	280-175087	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.51 g
Analysis Date:	05/17/2013 1718	Units:	ug/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	490	523	107	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-174722

Method: 7471B
Preparation: 7471B

MS Lab Sample ID:	280-42264-1	Analysis Batch:	280-175087	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	0.53 g
Analysis Date:	05/17/2013 1735			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				
Leach Date:	N/A				

MSD Lab Sample ID:	280-42264-1	Analysis Batch:	280-175087	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	0.52 g
Analysis Date:	05/17/2013 1742			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	94	757	80 - 120	127	20	D	D J

Client: FPM Remediations Inc

Job Number: 280-42264-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-174722

Method: 7471B
Preparation: 7471B

MS Lab Sample ID:	280-42264-1	Units: ug/Kg	MSD Lab Sample ID:	280-42264-1	
Client Matrix:	Solid		Client Matrix:	Solid	
Dilution:	10		Dilution:	10	
Analysis Date:	05/17/2013 1735		Analysis Date:	05/17/2013 1742	
Prep Date:	05/17/2013 1150		Prep Date:	05/17/2013 1150	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Mercury	480	485	494	938	D	4230	D J

Serial Dilution - Batch: 280-174722

Method: 7471B
Preparation: 7471B

Lab Sample ID:	280-42264-1	Analysis Batch:	280-175087	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	0.59 g
Analysis Date:	05/17/2013 1723	Units:	ug/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	%Diff	Limit	Qual
Mercury	480	495	2.5	10	D

DATA REPORTING QUALIFIERS

Client: FPM Remediations Inc Job Number: 280-42264-1

Lab Section	Qualifier	Description
Metals		
	J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
	D	The reported value is from a dilution.
	U	Undetected at the Limit of Detection.

Client: FPM Remediations Inc

Job Number: 280-42264-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-174722					
LCS 280-174722/2-A	Lab Control Sample	T	Solid	7471B	
MB 280-174722/1-A	Method Blank	T	Solid	7471B	
280-42264-1	211SCS0101AA	T	Solid	7471B	
280-42264-1MS	Matrix Spike	T	Solid	7471B	
280-42264-1MSD	Matrix Spike Duplicate	T	Solid	7471B	
280-42264-2	211SCS0201AA	T	Solid	7471B	
280-42264-3	211SCS0301AA	T	Solid	7471B	
280-42264-4	211SCS0401AA	T	Solid	7471B	
280-42264-5	211SCS0501AA	T	Solid	7471B	
280-42264-6	211SCS0601AA	T	Solid	7471B	
280-42264-7FD	211SCS0601AC	T	Solid	7471B	
Prep Batch: 280-175047					
LCS 280-175047/2-A	Lab Control Sample	T	Water	7470A	
MB 280-175047/1-A	Method Blank	T	Water	7470A	
280-42264-8EB	051413AE	T	Water	7470A	
Analysis Batch:280-175087					
LCS 280-174722/2-A	Lab Control Sample	T	Solid	7471B	280-174722
MB 280-174722/1-A	Method Blank	T	Solid	7471B	280-174722
280-42264-1	211SCS0101AA	T	Solid	7471B	280-174722
280-42264-1MS	Matrix Spike	T	Solid	7471B	280-174722
280-42264-1MSD	Matrix Spike Duplicate	T	Solid	7471B	280-174722
280-42264-2	211SCS0201AA	T	Solid	7471B	280-174722
280-42264-3	211SCS0301AA	T	Solid	7471B	280-174722
280-42264-4	211SCS0401AA	T	Solid	7471B	280-174722
280-42264-5	211SCS0501AA	T	Solid	7471B	280-174722
280-42264-6	211SCS0601AA	T	Solid	7471B	280-174722
280-42264-7FD	211SCS0601AC	T	Solid	7471B	280-174722
Analysis Batch:280-175699					
LCS 280-175047/2-A	Lab Control Sample	T	Water	7470A	280-175047
MB 280-175047/1-A	Method Blank	T	Water	7470A	280-175047
280-42264-8EB	051413AE	T	Water	7470A	280-175047

Report Basis

T = Total

Client: FPM Remediations Inc

Job Number: 280-42264-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-175507					
280-42264-1	211SCS0101AA	T	Solid	Moisture	
280-42264-2	211SCS0201AA	T	Solid	Moisture	
280-42264-3	211SCS0301AA	T	Solid	Moisture	
280-42264-4	211SCS0401AA	T	Solid	Moisture	
280-42264-5	211SCS0501AA	T	Solid	Moisture	
280-42264-6	211SCS0601AA	T	Solid	Moisture	
280-42264-7FD	211SCS0601AC	T	Solid	Moisture	

Report Basis
T = Total

Client: FPM Remediations Inc Job Number: 280-42264-1

Laboratory Chronicle

Lab ID: 280-42264-1 **Client ID: 211SCS0101AA**

Sample Date/Time: 05/14/2013 12:00 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-1-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	280-42264-A-1-A		280-175087	280-174722	05/17/2013 17:21	1	TAL DEN	JM
A:Moisture	280-42264-A-1		280-175507		05/22/2013 14:54	1	TAL DEN	AFB

Lab ID: 280-42264-1 MS **Client ID: 211SCS0101AA**

Sample Date/Time: 05/14/2013 12:00 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-1-B MS		280-175087	280-174722	05/17/2013 11:50	10	TAL DEN	NF
A:7471B	280-42264-A-1-B MS		280-175087	280-174722	05/17/2013 17:35	10	TAL DEN	JM

Lab ID: 280-42264-1 MSD **Client ID: 211SCS0101AA**

Sample Date/Time: 05/14/2013 12:00 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-1-C MSD		280-175087	280-174722	05/17/2013 11:50	10	TAL DEN	NF
A:7471B	280-42264-A-1-C MSD		280-175087	280-174722	05/17/2013 17:42	10	TAL DEN	JM

Lab ID: 280-42264-1 SD **Client ID: 211SCS0101AA**

Sample Date/Time: 05/14/2013 12:00 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-1-A SD ^5		280-175087	280-174722	05/17/2013 11:50	5	TAL DEN	NF
A:7471B	280-42264-A-1-A SD ^5		280-175087	280-174722	05/17/2013 17:23	5	TAL DEN	JM

Lab ID: 280-42264-2 **Client ID: 211SCS0201AA**

Sample Date/Time: 05/14/2013 12:15 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-2-A		280-175087	280-174722	05/17/2013 11:50	10	TAL DEN	NF
A:7471B	280-42264-A-2-A		280-175087	280-174722	05/17/2013 17:50	10	TAL DEN	JM
A:Moisture	280-42264-A-2		280-175507		05/22/2013 14:54	1	TAL DEN	AFB

Client: FPM Remediations Inc Job Number: 280-42264-1

Laboratory Chronicle

Lab ID: 280-42264-3 **Client ID: 211SCS0301AA**

Sample Date/Time: 05/14/2013 12:20 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-3-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	280-42264-A-3-A		280-175087	280-174722	05/17/2013 17:52	1	TAL DEN	JM
A:Moisture	280-42264-A-3		280-175507		05/22/2013 14:54	1	TAL DEN	AFB

Lab ID: 280-42264-4 **Client ID: 211SCS0401AA**

Sample Date/Time: 05/14/2013 12:30 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-4-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	280-42264-A-4-A		280-175087	280-174722	05/17/2013 17:54	1	TAL DEN	JM
A:Moisture	280-42264-A-4		280-175507		05/22/2013 14:54	1	TAL DEN	AFB

Lab ID: 280-42264-5 **Client ID: 211SCS0501AA**

Sample Date/Time: 05/14/2013 12:45 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-5-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	280-42264-A-5-A		280-175087	280-174722	05/17/2013 17:57	1	TAL DEN	JM
A:Moisture	280-42264-A-5		280-175507		05/22/2013 14:54	1	TAL DEN	AFB

Lab ID: 280-42264-6 **Client ID: 211SCS0601AA**

Sample Date/Time: 05/14/2013 11:20 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-6-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	280-42264-A-6-A		280-175087	280-174722	05/17/2013 17:59	1	TAL DEN	JM
A:Moisture	280-42264-A-6		280-175507		05/22/2013 14:54	1	TAL DEN	AFB

Lab ID: 280-42264-7 **Client ID: 211SCS0601AC**

Sample Date/Time: 05/14/2013 11:20 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7471B	280-42264-A-7-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	280-42264-A-7-A		280-175087	280-174722	05/17/2013 18:01	1	TAL DEN	JM
A:Moisture	280-42264-A-7		280-175507		05/22/2013 14:54	1	TAL DEN	AFB

Client: FPM Remediations Inc

Job Number: 280-42264-1

Laboratory Chronicle

Lab ID: 280-42264-8 **Client ID:** 051413AE

Sample Date/Time: 05/14/2013 13:30 Received Date/Time: 05/15/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7470A	280-42264-A-8-A		280-175699	280-175047	05/22/2013 12:20	1	TAL DEN	JM
A:7470A	280-42264-A-8-A		280-175699	280-175047	05/22/2013 16:35	1	TAL DEN	JM

Lab ID: MB **Client ID:** N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7470A	MB 280-175047/1-A		280-175699	280-175047	05/22/2013 12:20	1	TAL DEN	JM
A:7470A	MB 280-175047/1-A		280-175699	280-175047	05/22/2013 16:30	1	TAL DEN	JM
P:7471B	MB 280-174722/1-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	MB 280-174722/1-A		280-175087	280-174722	05/17/2013 17:16	1	TAL DEN	JM

Lab ID: LCS **Client ID:** N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7470A	LCS 280-175047/2-A		280-175699	280-175047	05/22/2013 12:20	1	TAL DEN	JM
A:7470A	LCS 280-175047/2-A		280-175699	280-175047	05/22/2013 16:33	1	TAL DEN	JM
P:7471B	LCS 280-174722/2-A		280-175087	280-174722	05/17/2013 11:50	1	TAL DEN	NF
A:7471B	LCS 280-174722/2-A		280-175087	280-174722	05/17/2013 17:18	1	TAL DEN	JM

Lab References:

TAL DEN = TestAmerica Denver

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Hg Daily Spk_00812	05/18/13	05/17/13	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike_00053	1 mL	Mercury	0.1 mg/L
.Hg Mnth Spike_00053	06/01/13	05/02/13	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim_00005	1 mL	Mercury	10 mg/L
..Hg Ultra Prim_00005	03/27/14	Ultra Scientific, Lot L00365			(Purchased Reagent)		Mercury	1000 mg/L
Hg Daily Spk_00815	05/23/13	05/22/13	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike_00053	1 mL	Mercury	0.1 mg/L
.Hg Mnth Spike_00053	06/01/13	05/02/13	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim_00005	1 mL	Mercury	10 mg/L
..Hg Ultra Prim_00005	03/27/14	Ultra Scientific, Lot L00365			(Purchased Reagent)		Mercury	1000 mg/L
Hg H20 ICV_00531	05/23/13	05/22/13	1% HNO3, Lot K23022	100 mL	Hg Biwk ICV_00108	1 mL	Mercury	0.004 mg/L
.Hg Biwk ICV_00108	05/30/13	05/16/13	1% HNO3, Lot K23022	100 mL	Hg ICV Stock_00005	0.4 mL	Mercury	0.4 mg/L
..Hg ICV Stock_00005	03/27/14	Inorganic Ventures, Lot E2-HG02088			(Purchased Reagent)		Mercury	100 mg/L
Hg H2O CCV_00521	05/23/13	05/22/13	1% HNO3, Lot K23022	100 mL	Hg Daily Spk_00815	5 mL	Mercury	0.005 mg/L
.Hg Daily Spk_00815	05/23/13	05/22/13	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike_00053	1 mL	Mercury	0.1 mg/L
..Hg Mnth Spike_00053	06/01/13	05/02/13	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim_00005	1 mL	Mercury	10 mg/L
...Hg Ultra Prim_00005	03/27/14	Ultra Scientific, Lot L00365			(Purchased Reagent)		Mercury	1000 mg/L
Hg Soil CCV_00421	05/18/13	05/17/13	1% HNO3, Lot K14036	50 mL	Hg Daily Spk_00812	2.5 mL	Mercury	0.005 mg/L
.Hg Daily Spk_00812	05/18/13	05/17/13	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike_00053	1 mL	Mercury	0.1 mg/L
..Hg Mnth Spike_00053	06/01/13	05/02/13	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim_00005	1 mL	Mercury	10 mg/L
...Hg Ultra Prim_00005	03/27/14	Ultra Scientific, Lot L00365			(Purchased Reagent)		Mercury	1000 mg/L
Hg Soil ICV_00030	05/18/13	05/17/13	1% HNO3, Lot K23022	50 mL	Hg Biwk ICV_00108	0.5 mL	Mercury	0.004 mg/L
.Hg Biwk ICV_00108	05/30/13	05/16/13	1% HNO3, Lot K23022	100 mL	Hg ICV Stock_00005	0.4 mL	Mercury	0.4 mg/L
..Hg ICV Stock_00005	03/27/14	Inorganic Ventures, Lot E2-HG02088			(Purchased Reagent)		Mercury	100 mg/L

Certification Summary

Client: FPM Remediations Inc
Project/Site: Griffiss AFB Bldg 211

TestAmerica Job ID: 280-42264-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Denver	A2LA	DoD ELAP		2907.01
TestAmerica Denver	A2LA	ISO/IEC 17025		2907.01
TestAmerica Denver	Alaska (UST)	State Program	10	UST-30
TestAmerica Denver	Arizona	State Program	9	AZ0713
TestAmerica Denver	Arkansas DEQ	State Program	6	88-0687
TestAmerica Denver	California	State Program	9	2513
TestAmerica Denver	Colorado	State Program	8	N/A
TestAmerica Denver	Connecticut	State Program	1	PH-0686
TestAmerica Denver	Florida	NELAP	4	E87667
TestAmerica Denver	Idaho	State Program	10	CO00026
TestAmerica Denver	Illinois	NELAP	5	200017
TestAmerica Denver	Iowa	State Program	7	370
TestAmerica Denver	Kansas	NELAP	7	E-10166
TestAmerica Denver	Louisiana	NELAP	6	30785
TestAmerica Denver	Maine	State Program	1	CO0002
TestAmerica Denver	Maryland	State Program	3	268
TestAmerica Denver	Minnesota	NELAP	5	8-999-405
TestAmerica Denver	Nevada	State Program	9	CO0026
TestAmerica Denver	New Hampshire	NELAP	1	205310
TestAmerica Denver	New Jersey	NELAP	2	CO004
TestAmerica Denver	New Mexico	State Program	6	CO00026
TestAmerica Denver	New York	NELAP	2	11964
TestAmerica Denver	North Carolina DENR	State Program	4	358
TestAmerica Denver	North Dakota	State Program	8	R-034
TestAmerica Denver	Oklahoma	State Program	6	8614
TestAmerica Denver	Oregon	NELAP	10	CO200001
TestAmerica Denver	Pennsylvania	NELAP	3	68-00664
TestAmerica Denver	South Carolina	State Program	4	72002
TestAmerica Denver	Texas	NELAP	6	T104704183-08-TX
TestAmerica Denver	USDA	Federal		P330-08-00036
TestAmerica Denver	Utah	NELAP	8	QUAN5
TestAmerica Denver	Virginia	NELAP	3	460232
TestAmerica Denver	Washington	State Program	10	C583
TestAmerica Denver	West Virginia DEP	State Program	3	354
TestAmerica Denver	Wisconsin	State Program	5	999615430
TestAmerica Denver	Wyoming (UST)	A2LA	8	

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Denver Job Number: 280-42264-1

SDG No.:

Project: Griffiss AFB Bldg 211

Client Sample ID	Lab Sample ID
211SCS0101AA	280-42264-1
211SCS0201AA	280-42264-2
211SCS0301AA	280-42264-3
211SCS0401AA	280-42264-4
211SCS0501AA	280-42264-5
211SCS0601AA	280-42264-6
211SCS0601AC	280-42264-7
051413AE	280-42264-8

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 211SCS0101AA
Lab Sample ID: 280-42264-1
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Solid
Date Sampled: 05/14/2013 12:00
Reporting Basis: DRY
Date Received: 05/15/2013 09:15
% Solids: 97.3

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	480	18	14	5.8	ug/Kg		J	1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 211SCS0201AA
Lab Sample ID: 280-42264-2
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Solid
Date Sampled: 05/14/2013 12:15
Reporting Basis: DRY
Date Received: 05/15/2013 09:15
% Solids: 96.1

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	1800	200	150	64	ug/Kg		D	10	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 211SCS0301AA
Lab Sample ID: 280-42264-3
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Solid
Date Sampled: 05/14/2013 12:20
Reporting Basis: DRY
Date Received: 05/15/2013 09:15
% Solids: 97.6

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	250	19	15	6.3	ug/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 211SCS0401AA
Lab Sample ID: 280-42264-4
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Solid
Date Sampled: 05/14/2013 12:30
Reporting Basis: DRY
Date Received: 05/15/2013 09:15
% Solids: 96.2

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	180	20	16	6.6	ug/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 211SCS0501AA
Lab Sample ID: 280-42264-5
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Solid
Date Sampled: 05/14/2013 12:45
Reporting Basis: DRY
Date Received: 05/15/2013 09:15
% Solids: 98.0

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	890	20	16	6.5	ug/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 211SCS0601AA
Lab Sample ID: 280-42264-6
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Solid
Date Sampled: 05/14/2013 11:20
Reporting Basis: DRY
Date Received: 05/15/2013 09:15
% Solids: 97.0

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	730	19	15	6.1	ug/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 211SCS0601AC
Lab Sample ID: 280-42264-7
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Solid
Date Sampled: 05/14/2013 11:20
Reporting Basis: DRY
Date Received: 05/15/2013 09:15
% Solids: 95.8

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	490	19	15	6.3	ug/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 051413AE
Lab Sample ID: 280-42264-8
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG ID.:
Matrix: Water
Date Sampled: 05/14/2013 13:30
Reporting Basis: WET
Date Received: 05/15/2013 09:15

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

ICV Source: Hg Soil ICV_00030 Concentration Units: ug/L

CCV Source: Hg Soil CCV_00421

Analyte	ICV 280-175087/8 05/17/2013 14:10				CCV 280-175087/80 05/17/2013 17:00				CCV 280-175087/91 05/17/2013 17:25			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.34		4.00	108	5.36		5.00	107	5.32		5.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

ICV Source: Hg Soil ICV_00030 Concentration Units: ug/L

CCV Source: Hg Soil CCV_00421

Analyte	CCV 280-175087/104 05/17/2013 18:04											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.28		5.00	106								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

ICV Source: Hg H20 ICV_00531 Concentration Units: ug/L

CCV Source: Hg H2O CCV_00521

Analyte	ICV 280-175699/8 05/22/2013 15:47				CCV 280-175699/23 05/22/2013 16:22				CCV 280-175699/35 05/22/2013 16:51			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.01		4.00	100	5.40		5.00	108	5.49		5.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-175087/9 05/17/2013 14:12		CCB 280-175087/81 05/17/2013 17:02		CCB 280-175087/92 05/17/2013 17:27		CCB 280-175087/105 05/17/2013 18:06	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.10	U	0.10	U	0.10	U	0.10	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-175699/9 05/22/2013 15:49		CCB 280-175699/24 05/22/2013 16:24		CCB 280-175699/36 05/22/2013 16:53			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.080	U	0.080	U	0.080	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-175047/1-A

Instrument Code: MT_033 Batch No.: 175699

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.080	U		7470A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Concentration Units: ug/Kg Lab Sample ID: MB 280-174722/1-A

Instrument Code: MT_033 Batch No.: 175087

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	14	U		7471B

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: 211SCS0101AA MS
Lab ID: 280-42264-1 MS
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG No.:
Matrix: Solid
Concentration Units: ug/Kg
% Solids: 97.3

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	938		480		485	94	80-120	D	7471B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: 211SCS0101AA MSD
Lab ID: 280-42264-1 MSD
Lab Name: TestAmerica Denver
Job No.: 280-42264-1
SDG No.:
Matrix: Solid
Concentration Units: ug/Kg
% Solids: 97.3

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	4230		494	757	80-120	127	20	D J	7471B

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-175047/2-A

Lab Name: TestAmerica Denver Job No.: 280-42264-1

Sample Matrix: Water LCS Source: Hg Daily Spk_00815

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.38		108	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-174722/2-A

Lab Name: TestAmerica Denver Job No.: 280-42264-1

Sample Matrix: Solid LCS Source: Hg Daily Spk_00812

Analyte	Solid(ug/Kg)							
	True	Found	C	%R	Limits		Q	Method
Mercury	490	523		107	80	120		7471B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 280-42264-1

SDG No:

Lab Name: TestAmerica Denver Job No: 280-42264-1

Matrix: Solid Concentration Units: ug/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Mercury	480		495		2.5	D	7471B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-42264-1

SDG Number:

Matrix: Water Instrument ID: MT_033

Method: 7470A DL Date: 10/28/2011 16:20

Prep Method: 7470A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Mercury	253.7	0.2	0.027

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-42264-1

SDG Number:

Matrix: Water Instrument ID: MT_033

Method: 7470A XMDL Date: 11/30/2010 11:23

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.027

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-42264-1

SDG Number:

Matrix: Solid Instrument ID: MT_033

Method: 7471B DL Date: 10/28/2011 16:21

Prep Method: 7471B

Analyte	Wavelength/ Mass	LOQ (ug/Kg)	DL (ug/Kg)
Mercury	253.7	17	5.53

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-42264-1

SDG Number:

Matrix: Solid Instrument ID: MT_033

Method: 7471B XMDL Date: 11/30/2010 11:26

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.204	0.0664

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Prep Method: 7471B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 280-174722/1-A	05/17/2013 11:50	174722	0.57		50
LCS 280-174722/2-A	05/17/2013 11:50	174722	0.51		50
280-42264-1	05/17/2013 11:50	174722	0.59		50
280-42264-1 MS	05/17/2013 11:50	174722	0.53		50
280-42264-1 MSD	05/17/2013 11:50	174722	0.52		50
280-42264-2	05/17/2013 11:50	174722	0.54		50
280-42264-3	05/17/2013 11:50	174722	0.54		50
280-42264-4	05/17/2013 11:50	174722	0.52		50
280-42264-5	05/17/2013 11:50	174722	0.52		50
280-42264-6	05/17/2013 11:50	174722	0.56		50
280-42264-7	05/17/2013 11:50	174722	0.55		50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-175047/1-A	05/22/2013 12:20	175047		30	30
LCS 280-175047/2-A	05/22/2013 12:20	175047		30	30
280-42264-8	05/22/2013 12:20	175047		30	30

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Instrument ID: MT_033 Method: 7470A

Start Date: 05/22/2013 15:25 End Date: 05/22/2013 17:50

Lab Sample ID	D/F	Type	Time	Analytes																			
				Hg																			
STD0 280-175699/1 IC			15:25	X																			
STD1 280-175699/2 IC			15:28	X																			
STD2 280-175699/3 IC			15:30	X																			
STD3 280-175699/4 IC			15:32	X																			
STD4 280-175699/5 IC			15:34	X																			
STD5 280-175699/6 IC			15:37	X																			
STD6 280-175699/7 IC			15:39	X																			
ICV 280-175699/8	1		15:47	X																			
ICB 280-175699/9	1		15:49	X																			
CRA 280-175699/10			15:52																				
CCV 280-175699/11			15:54																				
CCB 280-175699/12			15:56																				
ZZZZZZ			15:59																				
ZZZZZZ			16:01																				
ZZZZZZ			16:03																				
ZZZZZZ			16:05																				
ZZZZZZ			16:08																				
ZZZZZZ			16:10																				
ZZZZZZ			16:12																				
ZZZZZZ			16:15																				
ZZZZZZ			16:17																				
ZZZZZZ			16:19																				
CCV 280-175699/23	1		16:22	X																			
CCB 280-175699/24	1		16:24	X																			
ZZZZZZ			16:28																				
MB 280-175047/1-A	1	T	16:30	X																			
LCS 280-175047/2-A	1	T	16:33	X																			
280-42264-8	1	T	16:35	X																			
ZZZZZZ			16:37																				
ZZZZZZ			16:40																				
ZZZZZZ			16:42																				
ZZZZZZ			16:44																				
ZZZZZZ			16:46																				
ZZZZZZ			16:49																				
CCV 280-175699/35	1		16:51	X																			
CCB 280-175699/36	1		16:53	X																			
ZZZZZZ			16:56																				
ZZZZZZ			16:58																				
ZZZZZZ			17:00																				
ZZZZZZ			17:03																				
ZZZZZZ			17:05																				
ZZZZZZ			17:07																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Instrument ID: MT_033 Method: 7470A

Start Date: 05/22/2013 15:25 End Date: 05/22/2013 17:50

Lab Sample ID	D / F	Type	Time	Analytes																			
				Hg																			
ZZZZZZ			17:10																				
ZZZZZZ			17:12																				
ZZZZZZ			17:14																				
ZZZZZZ			17:16																				
CCV 280-175699/47			17:19																				
CCB 280-175699/48			17:21																				
ZZZZZZ			17:23																				
ZZZZZZ			17:26																				
ZZZZZZ			17:28																				
ZZZZZZ			17:30																				
ZZZZZZ			17:33																				
ZZZZZZ			17:35																				
ZZZZZZ			17:37																				
ZZZZZZ			17:40																				
ZZZZZZ			17:42																				
ZZZZZZ			17:44																				
CCV 280-175699/59			17:47																				
CCB 280-175699/60			17:50																				

Prep Types

D = Dissolved

T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Instrument ID: MT_033 Method: 7471B

Start Date: 05/17/2013 13:50 End Date: 05/17/2013 18:21

Lab Sample ID	D/F	Type	Time	Analytes																			
				Hg																			
STD0 280-175087/1 IC			13:50	X																			
STD1 280-175087/2 IC			13:53	X																			
STD2 280-175087/3 IC			13:55	X																			
STD3 280-175087/4 IC			13:57	X																			
STD4 280-175087/5 IC			14:00	X																			
STD5 280-175087/6 IC			14:02	X																			
STD6 280-175087/7 IC			14:04	X																			
ICV 280-175087/8	1		14:10	X																			
ICB 280-175087/9	1		14:12	X																			
CRA 280-175087/10			14:14																				
CCV 280-175087/11			14:17																				
CCB 280-175087/12			14:19																				
ZZZZZZ			14:21																				
ZZZZZZ			14:24																				
ZZZZZZ			14:26																				
ZZZZZZ			14:28																				
ZZZZZZ			14:30																				
ZZZZZZ			14:33																				
ZZZZZZ			14:35																				
ZZZZZZ			14:37																				
ZZZZZZ			14:40																				
CCV 280-175087/22			14:42																				
CCB 280-175087/23			14:44																				
ZZZZZZ			14:47																				
CCV 280-175087/25			14:53																				
CCB 280-175087/26			14:55																				
ZZZZZZ			14:58																				
ZZZZZZ			15:00																				
ZZZZZZ			15:02																				
ZZZZZZ			15:04																				
ZZZZZZ			15:07																				
ZZZZZZ			15:09																				
ZZZZZZ			15:11																				
ZZZZZZ			15:14																				
ZZZZZZ			15:16																				
CCV 280-175087/36			15:18																				
CCB 280-175087/37			15:21																				
ZZZZZZ			15:23																				
ZZZZZZ			15:25																				
ZZZZZZ			15:28																				
ZZZZZZ			15:30																				
ZZZZZZ			15:32																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Instrument ID: MT_033 Method: 7471B

Start Date: 05/17/2013 13:50 End Date: 05/17/2013 18:21

Lab Sample ID	D / F	Type	Time	Analytes																			
				Hg																			
ZZZZZZ			15:34																				
ZZZZZZ			15:37																				
ZZZZZZ			15:39																				
ZZZZZZ			15:41																				
CCV 280-175087/47			15:44																				
CCB 280-175087/48			15:46																				
ZZZZZZ			15:48																				
ZZZZZZ			15:51																				
ZZZZZZ			15:53																				
ZZZZZZ			15:55																				
ZZZZZZ			15:58																				
ZZZZZZ			16:00																				
ZZZZZZ			16:02																				
ZZZZZZ			16:04																				
ZZZZZZ			16:07																				
CCV 280-175087/58			16:09																				
CCB 280-175087/59			16:11																				
ZZZZZZ			16:14																				
ZZZZZZ			16:16																				
ZZZZZZ			16:18																				
ZZZZZZ			16:21																				
ZZZZZZ			16:23																				
ZZZZZZ			16:25																				
ZZZZZZ			16:28																				
ZZZZZZ			16:30																				
ZZZZZZ			16:32																				
CCV 280-175087/69			16:35																				
CCB 280-175087/70			16:37																				
ZZZZZZ			16:39																				
ZZZZZZ			16:41																				
ZZZZZZ			16:44																				
ZZZZZZ			16:46																				
ZZZZZZ			16:48																				
ZZZZZZ			16:51																				
ZZZZZZ			16:53																				
ZZZZZZ			16:55																				
ZZZZZZ			16:57																				
CCV 280-175087/80	1		17:00	X																			
CCB 280-175087/81	1		17:02	X																			
ZZZZZZ			17:04																				
ZZZZZZ			17:07																				
ZZZZZZ			17:09																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Instrument ID: MT_033 Method: 7471B

Start Date: 05/17/2013 13:50 End Date: 05/17/2013 18:21

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			17:11																					
ZZZZZZ			17:14																					
MB 280-174722/1-A	1	T	17:16	X																				
LCS 280-174722/2-A	1	T	17:18	X																				
280-42264-1	1	T	17:21	X																				
280-42264-1 SD	5	T	17:23	X																				
CCV 280-175087/91	1		17:25	X																				
CCB 280-175087/92	1		17:27	X																				
ZZZZZZ			17:30																					
280-42264-1 MS	10	T	17:35	X																				
ZZZZZZ			17:37																					
280-42264-1 MSD	10	T	17:42	X																				
ZZZZZZ			17:45																					
280-42264-2	10	T	17:50	X																				
280-42264-3	1	T	17:52	X																				
280-42264-4	1	T	17:54	X																				
280-42264-5	1	T	17:57	X																				
280-42264-6	1	T	17:59	X																				
280-42264-7	1	T	18:01	X																				
CCV 280-175087/104	1		18:04	X																				
CCB 280-175087/105	1		18:06	X																				
ZZZZZZ			18:09																					
ZZZZZZ			18:12																					
ZZZZZZ			18:14																					
ZZZZZZ			18:16																					
CCV 280-175087/110			18:19																					
CCB 280-175087/111			18:21																					

Prep Types

T = Total/NA

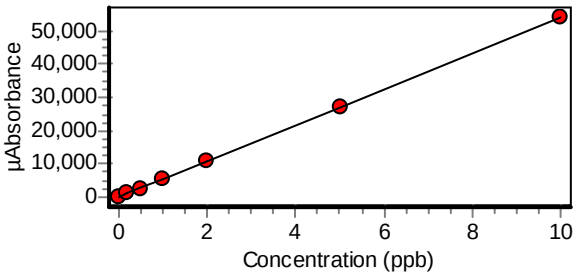
Report Generated By CETAC QuickTrace
Analyst: FredetteN
Worksheet file: C:\Program Files\QuickTrace\Worksheets\2013\05-May\130522aa.wsz
Date Started: 5/22/2013 2:21:21 PM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
Cal Blank	STD	05/22/13 03:25:42 pm	0.000	-30	9.53		1.00	1.00	1.00
Std1	STD	05/22/13 03:28:00 pm	0.200	1041	0.75		1.00	1.00	1.00
Std2	STD	05/22/13 03:30:18 pm	0.500	2572	0.12		1.00	1.00	1.00
Std3	STD	05/22/13 03:32:37 pm	1.000	5174	0.09		1.00	1.00	1.00
Std4	STD	05/22/13 03:34:57 pm	2.000	10915	0.18		1.00	1.00	1.00
Std5	STD	05/22/13 03:37:16 pm	5.000	27051	0.18		1.00	1.00	1.00
Std6	STD	05/22/13 03:39:37 pm	10.000	53876	0.11		1.00	1.00	1.00

Calibration

Equation: A = -53.156 + 5399.564C
R2: 0.99997
SEE: 126.7532
Flags:



ICV 2065471	ICV	05/22/13 03:47:34 pm	4.006	21576	0.10		1.00	1.00	1.00
% Recovery 100.14									
ICB	ICB	05/22/13 03:49:51 pm	0.012	14	24.21		1.00	1.00	1.00
CRA 2065473	CRDL	05/22/13 03:52:09 pm	0.204	1050	0.37		1.00	1.00	1.00
% Recovery 102.17									

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.
							ODF	
CCV 2065472	CCV	05/22/13 03:54:29 pm	5.178	27903	0.13		1.00	1.00
% Recovery 103.55							1.00	
CCB	CCB	05/22/13 03:56:46 pm	0.007	-16	15.26		1.00	1.00
							1.00	
MB 280-175061/1-A	UNK	05/22/13 03:59:03 pm	0.003	-36	7.30		1.00	1.00
							1.00	
LCS 280-175061/2-A	UNK	05/22/13 04:01:20 pm	5.362	28900	0.12		1.00	1.00
							1.00	
280-42263-A-1-D	UNK	05/22/13 04:03:38 pm	0.004	-34	9.99		1.00	1.00
							1.00	
280-42263-A-1-D sd@5	UNK	05/22/13 04:05:56 pm	0.008	-9	18.14		1.00	1.00
							1.00	
280-42263-A-1-E MS	UNK	05/22/13 04:08:14 pm	4.343	23399	0.23		1.00	1.00
							1.00	
280-42263-A-1-F MSD	UNK	05/22/13 04:10:33 pm	4.500	24247	0.34		1.00	1.00
							1.00	
280-42263-A-2-B	UNK	05/22/13 04:12:51 pm	-0.027	-200	1.79		1.00	1.00
							1.00	
280-42263-A-3-B	UNK	05/22/13 04:15:10 pm	0.001	-47	8.81		1.00	1.00
							1.00	
280-42263-A-4-B	UNK	05/22/13 04:17:30 pm	0.011	9	24.11		1.00	1.00
							1.00	
280-42334-C-1-A	UNK	05/22/13 04:19:49 pm	0.001	-48	9.39		1.00	1.00
							1.00	
CCV 2065472	CCV	05/22/13 04:22:09 pm	5.403	29122	0.11		1.00	1.00
% Recovery 108.07							1.00	
CCB	CCB	05/22/13 04:24:26 pm	-0.003	-67	6.92		1.00	1.00
							1.00	
280-42334-C-2-A	UNK	05/22/13 04:28:35 pm	0.003	-34	4.08		1.00	1.00
							1.00	
MB 280-175047/1-A	UNK	05/22/13 04:30:55 pm	0.011	6	85.51		1.00	1.00
							1.00	
LCS 280-175047/2-A	UNK	05/22/13 04:33:12 pm	5.375	28969	0.13		1.00	1.00
							1.00	

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-42264-A-8-A	UNK	05/22/13 04:35:29 pm	-0.005	-82	3.33		1.00	1.00	1.00
280-42334-C-3-A	UNK	05/22/13 04:37:46 pm	0.012	14	7.11		1.00	1.00	1.00
280-42335-A-3-B	UNK	05/22/13 04:40:04 pm	0.046	197	0.26		1.00	1.00	1.00
280-42335-A-4-D	UNK	05/22/13 04:42:22 pm	0.029	101	2.73		1.00	1.00	1.00
280-42335-A-4-D sd@5	UNK	05/22/13 04:44:40 pm	0.018	42	2.80		1.00	1.00	1.00
280-42335-A-4-E MS	UNK	05/22/13 04:46:58 pm	5.388	29038	0.27		1.00	1.00	1.00
280-42335-A-4-F MSD	UNK	05/22/13 04:49:17 pm	5.190	27973	0.15		1.00	1.00	1.00
CCV 2065472 % Recovery 109.78	CCV	05/22/13 04:51:37 pm	5.489	29585	0.15		1.00	1.00	1.00
CCB	CCB	05/22/13 04:53:54 pm	0.009	-4	10.38		1.00	1.00	1.00
280-42335-A-5-B	UNK	05/22/13 04:56:13 pm	0.213	1099	0.50		1.00	1.00	1.00
280-42335-A-6-B	UNK	05/22/13 04:58:32 pm	0.453	2392	0.38		1.00	1.00	1.00
280-42335-A-10-B	UNK	05/22/13 05:00:51 pm	0.012	14	9.80		1.00	1.00	1.00
280-42335-A-11-B	UNK	05/22/13 05:03:11 pm	0.014	24	10.99		1.00	1.00	1.00
280-42335-A-12-B	UNK	05/22/13 05:05:28 pm	0.078	366	0.38		1.00	1.00	1.00
280-42335-A-13-B	UNK	05/22/13 05:07:45 pm	0.001	-46	3.94		1.00	1.00	1.00
LB 280-175336/1-B	UNK	05/22/13 05:10:02 pm	0.013	15	26.46		1.00	1.00	1.00
LCS 280-175336/2-B	UNK	05/22/13 05:12:20 pm	5.790	31213	0.51		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-42487-B-2-B	UNK	05/22/13 05:14:38 pm	0.011	4	58.55		1.00	1.00	1.00
280-42487-B-2-B sd@5	UNK	05/22/13 05:16:56 pm	0.007	-18	20.70		1.00	1.00	1.00
CCV 2065472	CCV	05/22/13 05:19:16 pm	5.799	31261	0.50		1.00	1.00	1.00
% Recovery 115.99									
CCB	CCB	05/22/13 05:21:33 pm	0.002	-44	1.17		1.00	1.00	1.00
280-42487-B-2-C MS	UNK	05/22/13 05:23:51 pm	5.744	30960	0.36		1.00	1.00	1.00
280-42487-B-2-D MSD	UNK	05/22/13 05:26:10 pm	5.718	30820	0.34		1.00	1.00	1.00
MB 280-175045/1-A	UNK	05/22/13 05:28:29 pm	0.008	-8	19.85		1.00	1.00	1.00
LCS 280-175045/2-A	UNK	05/22/13 05:30:48 pm	5.897	31786	0.33		1.00	1.00	1.00
280-42274-I-2-A	UNK	05/22/13 05:33:08 pm	0.006	-20	16.05		1.00	1.00	1.00
280-42274-I-2-B MS	UNK	05/22/13 05:35:28 pm	5.879	31690	0.46		1.00	1.00	1.00
280-42274-I-2-C MSD	UNK	05/22/13 05:37:45 pm	5.828	31417	0.34		1.00	1.00	1.00
280-42274-I-3-A	UNK	05/22/13 05:40:02 pm	0.004	-33	9.97		1.00	1.00	1.00
280-42274-I-4-A	UNK	05/22/13 05:42:19 pm	0.006	-18	7.48		1.00	1.00	1.00
280-42364-I-1-A	UNK	05/22/13 05:44:37 pm	0.010	0	658.48		1.00	1.00	1.00
CCV 2065472	CCV	05/22/13 05:47:47 pm	5.842	31491	0.26		1.00	1.00	1.00
% Recovery 116.84									
CCB	CCB	05/22/13 05:50:04 pm	0.001	-50	12.45		1.00	1.00	1.00

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	40.00	90.00	61.50	4	1.50	50	253.65

Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

Baseline Correction

#1 Start time (s)	#1 End time (s)	#2 Start time (s)	#2 End time (s)
20.00	24.00		

Standby Mode

Enabled: Yes

Standby Options: pump slow

Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

Calibration

Settings

Algorithm	Through blank	Weighted fit	Cal. Type	Racalibration rate	Reslope rate	Reslope standard
Linear	No	No	Normal	0	0	N/A

Limits

Calibration slope		Reslope		Coeff. of Determination
Lower (%)	Upper (%)	Lower (%)	Upper (%)	
20	150	75	125	0.99500

Error action: Flag and continue

QC

GLP Override: Yes

QC Tests

CCB

Concentration (ppb)
0.1000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICB

Concentration (ppb)
0.0500

Failure flag: Z

Error action for manually inserted QC: Stop analysis

CCV

Concentration (ppb)	Low Limit %	High Limit %
5.0000	80.0000	120.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICV

Concentration (ppb)	Low Limit %	High Limit %
4.0000	94.6000	110.4000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

CRDL

Concentration (ppb)	Low Limit %	High Limit %
0.2000	50.0000	150.0000

Failure flag: Y

Error action for manually inserted QC: Stop analysis

Method(s):

245.1 245.1_DW

7470A 7471A 7471B

Applicable QC Batches: 175699

Mercury Analysis Raw Data Checklist

Analyst's Checklist

		yes	no	n/a
1.	Were the special instructions for prep and/or analysis followed?	☑	☐	☐
2.	Is the correlation coefficient ≥ 0.995?	☑	☐	☐
3.	Is the blank less than one-half the reporting limit or properly anomalized?	☑	☐	☐
4.	Are the LCSs within limits or properly anomalized?	☑	☐	☐
5.	Are the ICV and all CCVs within limits?	☑	☐	☐
6.	Are the ICB and all CCBs within ± one-half the reporting limit from zero?	☑	☐	☐
7.	Were the CCVs and CCBs run with at most 10 samples between each set?	☑	☐	☐
8.	Are the reporting limits correct and reflect any dilutions?	☑	☐	☐
9.	Are the benchsheets complete (including calibration and standard verification #'s)?	☑	☐	☐
10.	Are all comments, footnotes, and anomalies properly documented?	☑	☐	☐
11.	Are holding time violation forms completed and attached?	☑	☐	☐
12.	Have all sample data been entered into LIMS?	☑	☐	☐
13.	Have all QC data been entered into LIMS?	☑	☐	☐
14.	Have the data entered into LIMS been checked for errors?	☑	☐	☐
15.	For TCLP results, is the sample data within 20% of Regulatory Level (0.2 mg/L)?	☑	☐	☐
16.	Are all passing CRAs set to acceptable?	☑	☐	☐
17.	Is the PDF attached?	☑	☐	☐

Analyst's Name: Joe Mooney Date: 5/23/13

Data Review's Checklist

		yes	no	n/a
1.	Have the calculations been checked?	☑	☐	☐
2.	Is the correlation coefficient ≥ 0.995?	☑	☐	☐
3.	Is all the QC data within the control limits and/or properly anomalized?	☑	☐	☐
4.	Are all the significant figures and reporting limits correct?	☑	☐	☐
5.	Have any comments, footnotes, and anomalies been properly documented?	☑	☐	☐
6.	Have any data errors been documented and entered into LIMS?	☑	☐	☐
7.	Is prep date correct in LIMS?	☑	☐	☐
8.	If TCLP result within 20% of Reg. Level (0.2 mg/l) and MS < 50%, was MSA performed?	☑	☐	☐

Reviewed ~~by~~: Heidi Bowen Date: 5/28/13

Comments:

Anomalies:

Method(s):

245.1 245.1_DW

7470A 7471A 7471B

Applicable QC Batches: 175087

Mercury Analysis Raw Data Checklist

Analyst's Checklist

	yes	no	n/a
1. Were the special instructions for prep and/or analysis followed?	☑	☐	☐
2. Is the correlation coefficient ≥ 0.995?	☑	☐	☐
3. Is the blank less than one-half the reporting limit or properly anomalized?	☑	☐	☐
4. Are the LCSs within limits or properly anomalized?	☑	☐	☐
5. Are the ICV and all CCVs within limits?	☑	☐	☐
6. Are the ICB and all CCBs within ± one-half the reporting limit from zero?	☑	☐	☐
7. Were the CCVs and CCBs run with at most 10 samples between each set?	☑	☐	☐
8. Are the reporting limits correct and reflect any dilutions?	☑	☐	☐
9. Are the benchsheets complete (including calibration and standard verification #'s)?	☑	☐	☐
10. Are all comments, footnotes, and anomalies properly documented?	☑	☐	☐
11. Are holding time violation forms completed and attached?	☑	☐	☐
12. Have all sample data been entered into LIMS?	☑	☐	☐
13. Have all QC data been entered into LIMS?	☑	☐	☐
14. Have the data entered into LIMS been checked for errors?	☑	☐	☐
15. For TCLP results, is the sample data within 20% of Regulatory Level (0.2 mg/L)?	☑	☐	☑
16. Are all passing CRAs set to acceptable?	☑	☐	☐
17. Is the PDF attached?	☑	☐	☐

Analyst's Name: Joe Mooney Date: 5/20/13

Data Review's Checklist

	yes	no	n/a
1. Have the calculations been checked?	☑	☐	☐
2. Is the correlation coefficient ≥ 0.995?	☑	☐	☐
3. Is all the QC data within the control limits and/or properly anomalized?	☑	☐	☐
4. Are all the significant figures and reporting limits correct?	☑	☐	☐
5. Have any comments, footnotes, and anomalies been properly documented?	☑	☐	☐
6. Have any data errors been documented and entered into LIMS?	☑	☐	☐
7. Is prep date correct in LIMS?	☑	☐	☐
8. If TCLP result within 20% of Reg. Level (0.2 mg/l) and MS < 50%, was MSA performed?	☑	☐	☐

Reviewed by: Date: 5/21/13

Comments:

Anomalies:

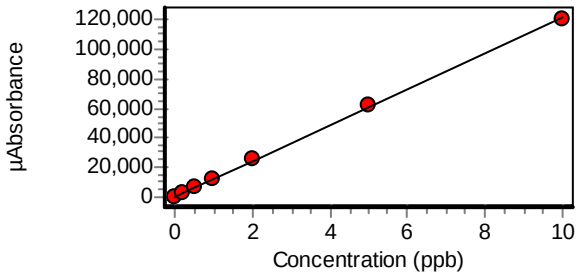
Report Generated By CETAC QuickTrace
Analyst: FredetteN
Worksheet file: C:\Program Files\QuickTrace\Worksheets\2013\05-May\130517aa.wsz
Date Started: 5/17/2013 1:34:08 PM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
Cal Blank	STD	05/17/13 01:50:54 pm	0.000	-15	131.39		1.00	1.00	1.00
Std1	STD	05/17/13 01:53:12 pm	0.200	2293	2.56		1.00	1.00	1.00
Std2	STD	05/17/13 01:55:30 pm	0.500	6176	0.20		1.00	1.00	1.00
Std3	STD	05/17/13 01:57:49 pm	1.000	12337	0.47		1.00	1.00	1.00
Std4	STD	05/17/13 02:00:09 pm	2.000	25430	2.04		1.00	1.00	1.00
Std5	STD	05/17/13 02:02:29 pm	5.000	62936	0.59		1.00	1.00	1.00
Std6	STD	05/17/13 02:04:49 pm	10.000	121010	0.21		1.00	1.00	1.00

Calibration

Equation: A = 403.718 + 12157.290C
R2: 0.99957
SEE: 1010.2380
Flags:



ICV 2058991	ICV	05/17/13 02:10:14 pm	4.336	53121	0.19		1.00	1.00	1.00
% Recovery 108.41									
ICB	ICB	05/17/13 02:12:31 pm	-0.037	-47	3.52		1.00	1.00	1.00
CRA 2058992	CRDL	05/17/13 02:14:49 pm	0.170	2466	0.18		1.00	1.00	1.00
% Recovery 84.80									

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.
							ODF	
CCV 2058969	CCV	05/17/13 02:17:09 pm	5.355	65505	0.33		1.00	1.00
% Recovery 107.10							1.00	
CCB	CCB	05/17/13 02:19:26 pm	-0.037	-43	17.02		1.00	1.00
							1.00	
MB 280-174619/1-A	UNK	05/17/13 02:21:43 pm	0.048	987	0.32		1.00	1.00
							1.00	
LCS 280-174619/2-A	UNK	05/17/13 02:24:00 pm	0.043	924	0.37		1.00	1.00
							1.00	
280-42238-A-1-D	UNK	05/17/13 02:26:18 pm	0.041	903	1.45		1.00	1.00
							1.00	
280-42238-A-1-E DU	UNK	05/17/13 02:28:36 pm	0.039	879	2.08		1.00	1.00
							1.00	
280-42238-A-1-F MS	UNK	05/17/13 02:30:54 pm	0.034	817	1.32		1.00	1.00
							1.00	
280-42238-A-2-B	UNK	05/17/13 02:33:13 pm	0.030	769	1.80		1.00	1.00
							1.00	
280-42238-A-3-B	UNK	05/17/13 02:35:31 pm	0.038	872	1.33		1.00	1.00
							1.00	
280-42238-A-4-B	UNK	05/17/13 02:37:51 pm	0.039	884	2.70		1.00	1.00
							1.00	
MB 280-174618/1-A	UNK	05/17/13 02:40:10 pm	0.036	837	0.92		1.00	1.00
							1.00	
CCV 2058969	CCV	05/17/13 02:42:30 pm	5.360	65566	0.07		1.00	1.00
% Recovery 107.20							1.00	
CCB	CCB	05/17/13 02:44:47 pm	-0.034	-12	9.27		1.00	1.00
							1.00	
LCS 280-174618/2-A	UNK	05/17/13 02:47:07 pm	0.041	897	2.68		1.00	1.00
							1.00	
CCV 2058969	CCV	05/17/13 02:53:31 pm	5.388	65904	0.09		1.00	1.00
% Recovery 107.75							1.00	
CCB	CCB	05/17/13 02:55:48 pm	-0.031	32	14.14		1.00	1.00
							1.00	
MB 280-174619/1-A	UNK	05/17/13 02:58:05 pm	-0.039	-73	13.67		1.00	1.00
							1.00	

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
LCS 280-174619/2-A	UNK	05/17/13 03:00:22 pm	5.381	65823	0.04		1.00	1.00	1.00
280-42238-A-1-D	UNK	05/17/13 03:02:40 pm	-0.026	87	5.13		1.00	1.00	1.00
280-42238-A-1-E DU	UNK	05/17/13 03:04:58 pm	-0.015	225	1.61		1.00	1.00	1.00
280-42238-A-1-F MS	UNK	05/17/13 03:07:16 pm	5.526	67578	0.19		1.00	1.00	1.00
280-42238-A-2-B	UNK	05/17/13 03:09:34 pm	-0.022	139	2.45		1.00	1.00	1.00
280-42238-A-3-B	UNK	05/17/13 03:11:53 pm	-0.001	392	1.92		1.00	1.00	1.00
280-42238-A-4-B	UNK	05/17/13 03:14:12 pm	-0.013	242	0.78		1.00	1.00	1.00
MB 280-174618/1-A	UNK	05/17/13 03:16:31 pm	-0.040	-84	3.46		1.00	1.00	1.00
CCV 2058969	CCV	05/17/13 03:18:51 pm	5.396	66002	0.48		1.00	1.00	1.00
% Recovery 107.92									
CCB	CCB	05/17/13 03:21:08 pm	-0.036	-37	11.28		1.00	1.00	1.00
LCS 280-174618/2-A	UNK	05/17/13 03:23:28 pm	5.438	66520	0.11		1.00	1.00	1.00
280-42229-A-1-J	UNK	05/17/13 03:25:48 pm	-0.017	191	1.02		1.00	1.00	1.00
280-42229-A-1-K DU	UNK	05/17/13 03:28:08 pm	-0.020	158	1.40		1.00	1.00	1.00
280-42229-A-1-L MS	UNK	05/17/13 03:30:25 pm	5.499	67256	0.28		1.00	1.00	1.00
280-42229-A-2-D	UNK	05/17/13 03:32:42 pm	-0.013	247	1.52		1.00	1.00	1.00
280-42229-A-3-D	UNK	05/17/13 03:34:59 pm	-0.020	155	0.82		1.00	1.00	1.00
280-42229-A-4-D	UNK	05/17/13 03:37:17 pm	-0.016	211	0.34		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-42229-A-5-D	UNK	05/17/13 03:39:34 pm	-0.021	149	1.77		1.00	1.00	1.00
280-42229-A-6-D	UNK	05/17/13 03:41:53 pm	-0.019	178	2.17		1.00	1.00	1.00
CCV 2058969	CCV	05/17/13 03:44:12 pm	5.377	65777	0.12		1.00	1.00	1.00
% Recovery 107.55									
CCB	CCB	05/17/13 03:46:30 pm	-0.039	-65	8.05		1.00	1.00	1.00
280-42229-A-7-D	UNK	05/17/13 03:48:48 pm	-0.007	318	0.33		1.00	1.00	1.00
280-42229-A-8-D	UNK	05/17/13 03:51:07 pm	-0.020	162	1.58		1.00	1.00	1.00
280-42229-A-9-D	UNK	05/17/13 03:53:26 pm	-0.019	175	0.86		1.00	1.00	1.00
280-42229-A-10-D	UNK	05/17/13 03:55:45 pm	-0.018	180	0.49		1.00	1.00	1.00
280-42229-A-11-D	UNK	05/17/13 03:58:04 pm	-0.024	112	1.36		1.00	1.00	1.00
280-42229-A-12-D	UNK	05/17/13 04:00:24 pm	-0.010	278	0.75		1.00	1.00	1.00
280-42229-A-13-D	UNK	05/17/13 04:02:41 pm	0.067	1222	0.54		1.00	1.00	1.00
280-42229-A-14-D	UNK	05/17/13 04:04:58 pm	0.000	407	1.13		1.00	1.00	1.00
280-42229-A-15-D	UNK	05/17/13 04:07:15 pm	0.011	543	0.27		1.00	1.00	1.00
CCV 2058969	CCV	05/17/13 04:09:35 pm	5.351	65456	0.13		1.00	1.00	1.00
% Recovery 107.02									
CCB	CCB	05/17/13 04:11:52 pm	-0.033	-1	192.40		1.00	1.00	1.00
MB 280-174719/1-A	UNK	05/17/13 04:14:10 pm	-0.037	-49	4.38		1.00	1.00	1.00
LCS 280-174719/2-A	UNK	05/17/13 04:16:28 pm	5.414	66218	0.10		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-42292-A-1-A	UNK	05/17/13 04:18:46 pm	0.019	636	0.65		1.00	1.00	1.00
280-42292-A-1-B DU	UNK	05/17/13 04:21:04 pm	0.027	726	0.32		1.00	1.00	1.00
280-42292-A-1-C MS	UNK	05/17/13 04:23:23 pm	5.396	66010	0.21		1.00	1.00	1.00
280-42292-A-2-A	UNK	05/17/13 04:25:42 pm	0.056	1082	0.14		1.00	1.00	1.00
280-42292-A-3-A	UNK	05/17/13 04:28:01 pm	0.043	930	0.22		1.00	1.00	1.00
280-42292-A-4-B	UNK	05/17/13 04:30:21 pm	0.051	1019	0.21		1.00	1.00	1.00
280-42292-A-5-A	UNK	05/17/13 04:32:40 pm	0.000	398	0.81		1.00	1.00	1.00
CCV 2058969	CCV	05/17/13 04:35:00 pm	5.351	65454	0.15		1.00	1.00	1.00
% Recovery 107.01									
CCB	CCB	05/17/13 04:37:17 pm	-0.033	2	87.00		1.00	1.00	1.00
280-42292-A-6-B	UNK	05/17/13 04:39:35 pm	0.029	751	0.77		1.00	1.00	1.00
280-42292-A-7-A	UNK	05/17/13 04:41:52 pm	0.019	637	0.47		1.00	1.00	1.00
280-42292-A-8-A	UNK	05/17/13 04:44:09 pm	0.046	960	0.42		1.00	1.00	1.00
280-42292-A-9-A	UNK	05/17/13 04:46:27 pm	0.065	1190	0.41		1.00	1.00	1.00
280-42292-A-10-B	UNK	05/17/13 04:48:45 pm	0.084	1428	0.36		1.00	1.00	1.00
280-42292-A-11-B	UNK	05/17/13 04:51:03 pm	0.039	877	0.20		1.00	1.00	1.00
280-42292-A-12-D	UNK	05/17/13 04:53:21 pm	0.019	639	0.08		1.00	1.00	1.00
280-42292-A-13-B	UNK	05/17/13 04:55:40 pm	0.020	648	0.45		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-42292-A-14-A	UNK	05/17/13 04:57:59 pm	-0.030	33	13.61		1.00	1.00	1.00
CCV 2058969	CCV	05/17/13 05:00:19 pm	5.361	65574	0.09		1.00	1.00	1.00
% Recovery 107.21									
CCB	CCB	05/17/13 05:02:36 pm	-0.034	-15	5.15		1.00	1.00	1.00
MB 280-174721/1-A	UNK	05/17/13 05:04:55 pm	-0.038	-61	1.48		1.00	1.00	1.00
LCS 280-174721/2-A	UNK	05/17/13 05:07:15 pm	5.311	64976	0.13		1.00	1.00	1.00
280-42255-A-1-A	UNK	05/17/13 05:09:34 pm	0.088	1479	0.11		1.00	1.00	1.00
280-42255-A-1-B MS	UNK	05/17/13 05:11:52 pm	5.322	65103	0.09		1.00	1.00	1.00
280-42255-A-1-C MSD	UNK	05/17/13 05:14:09 pm	5.364	65619	0.12		1.00	1.00	1.00
MB 280-174722/1-A	UNK	05/17/13 05:16:27 pm	-0.040	-81	2.52		1.00	1.00	1.00
LCS 280-174722/2-A	UNK	05/17/13 05:18:44 pm	5.337	65289	0.23		1.00	1.00	1.00
280-42264-A-1-A	UNK	05/17/13 05:21:02 pm	5.540	67761	0.41		1.00	1.00	1.00
280-42264-A-1-A sd@5	UNK	05/17/13 05:23:20 pm	1.136	14217	0.11		1.00	1.00	1.00
CCV 2058969	CCV	05/17/13 05:25:40 pm	5.321	65092	0.14		1.00	1.00	1.00
% Recovery 106.42									
CCB	CCB	05/17/13 05:27:57 pm	-0.033	0	724.81		1.00	1.00	1.00
280-42264-A-1-B MS	UNK	05/17/13 05:30:16 pm	10.363	126387	0.10	O	1.00	1.00	1.00
280-42264-A-1-B MS*	UNK	05/17/13 05:35:25 pm	0.967	12166	0.11		1.00	1.00	10.00
280-42264-A-1-C MSD	UNK	05/17/13 05:37:44 pm	36.403	442969	0.11	O	1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-42264-A-1-C MSD*	UNK	05/17/13 05:42:53 pm	4.274	52366	0.19		1.00	1.00	10.00
280-42264-A-2-A	UNK	05/17/13 05:45:12 pm	19.292	234941	0.15	O	1.00	1.00	1.00
280-42264-A-2-A*	UNK	05/17/13 05:50:19 pm	1.890	23381	0.21		1.00	1.00	10.00
280-42264-A-3-A	UNK	05/17/13 05:52:38 pm	2.642	32528	0.15		1.00	1.00	1.00
280-42264-A-4-A	UNK	05/17/13 05:54:57 pm	1.772	21952	0.13		1.00	1.00	1.00
280-42264-A-5-A	UNK	05/17/13 05:57:17 pm	9.103	111071	0.10		1.00	1.00	1.00
280-42264-A-6-A	UNK	05/17/13 05:59:35 pm	7.927	96771	0.08		1.00	1.00	1.00
280-42264-A-7-A	UNK	05/17/13 06:01:53 pm	5.195	63563	0.13		1.00	1.00	1.00
CCV 2058969 % Recovery 105.56	CCV	05/17/13 06:04:13 pm	5.278	64572	0.11		1.00	1.00	1.00
CCB	CCB	05/17/13 06:06:30 pm	-0.035	-22	16.52		1.00	1.00	1.00
280-42264-A-1-A@5	UNK	05/17/13 06:09:59 pm	1.151	14402	0.15		1.00	1.00	1.00
280-42264-A-1-A sd@25	UNK	05/17/13 06:12:17 pm	0.201	2852	0.21		1.00	1.00	1.00
280-42264-A-1-B MS@5	UNK	05/17/13 06:14:36 pm	2.160	26663	0.15		1.00	1.00	1.00
280-42264-A-1-C MSD@5	UNK	05/17/13 06:16:54 pm	9.312	113607	0.12		1.00	1.00	1.00
CCV 2058969 % Recovery 104.47	CCV	05/17/13 06:19:14 pm	5.223	63905	0.20		1.00	1.00	1.00
CCB	CCB	05/17/13 06:21:31 pm	-0.036	-34	4.28		1.00	1.00	1.00

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	40.00	90.00	61.00	4	1.50	50	253.65

Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

Baseline Correction

#1 Start time (s)	#1 End time (s)	#2 Start time (s)	#2 End time (s)
20.00	24.00		

Standby Mode

Enabled: Yes

Standby Options: pump slow

Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

Calibration

Settings

Algorithm	Through blank	Weighted fit	Cal. Type	Racalibration rate	Reslope rate	Reslope standard
Linear	No	No	Normal	0	0	N/A

Limits

Calibration slope		Reslope		Coeff. of Determination
Lower (%)	Upper (%)	Lower (%)	Upper (%)	
20	150	75	125	0.99500

Error action: Flag and continue

QC

GLP Override: Yes

QC Tests

CCB

Concentration (ppb)
0.1000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICB

Concentration (ppb)
0.0500

Failure flag: Z

Error action for manually inserted QC: Stop analysis

CCV

Concentration (ppb)	Low Limit %	High Limit %
5.0000	80.0000	120.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICV

Concentration (ppb)	Low Limit %	High Limit %
4.0000	94.6000	110.4000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

CRDL

Concentration (ppb)	Low Limit %	High Limit %
0.2000	50.0000	150.0000

Failure flag: Y

Error action for manually inserted QC: Stop analysis

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Batch Number: 175047 Batch Start Date: 05/22/13 12:20 Batch Analyst: Mooney, Joseph C

Batch Method: 7470A Batch End Date: 05/22/13 14:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Daily Spk 00815		
MB 280-175047/1		7470A, 7470A		<2	30 mL	30 mL			
LCS 280-175047/2		7470A, 7470A		<2	30 mL	30 mL	1.5 mL		
280-42264-A-8	051413AE	7470A, 7470A	T	<2	30 mL	30 mL			

Batch Notes	
Hydroxylamine Hydrochloride Lot	2BK0049-5/17
Sulfuric Acid Lot Number	0000032783-4/17
Lot # of hydrochloric acid	0000035187-5/9
Lot # of Nitric Acid	0000031542-5/8
Hood ID or number	HOOD3
Hot Block ID number	12 C-2
Potassium Persulfate Lot Number	121266-5/10
Potassium Permanganate Lot Number	0000028553-5/20
NaCL Lot #	0000021647-4/11
Oven, Bath or Block Temperature 1	92 Celsius
Oven, Bath or Block Temperature 2	92 Celsius
Pipette ID	MET58
Stannous Chloride Lot Number	0000038327-5/14
SOP Number	DVMT0017
Temperature	92
ID number of the thermometer	HG-1
Digestion Tube/Cup Lot #	ML27KK03
Uncorrected Temperature	92 Celsius
Uncorrected Temperature 2	92 Celsius
Visual ck - digestate F.V. consistency	YES-F.V.CKD

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Batch Number: 174722 Batch Start Date: 05/17/13 11:50 Batch Analyst: Fredette, Nick

Batch Method: 7471B Batch End Date: 05/17/13 12:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg Daily Spk 00812			
MB 280-174722/1		7471B, 7471B		0.57 g	50 mL				
LCS 280-174722/2		7471B, 7471B		0.51 g	50 mL	2.5 mL			
280-42264-A-1	211SCS0101AA	7471B, 7471B	T	0.59 g	50 mL				
280-42264-A-1 MS	211SCS0101AA	7471B, 7471B	T	0.53 g	50 mL	2.5 mL			
280-42264-A-1 MSD	211SCS0101AA	7471B, 7471B	T	0.52 g	50 mL	2.5 mL			
280-42264-A-2	211SCS0201AA	7471B, 7471B	T	0.54 g	50 mL				
280-42264-A-3	211SCS0301AA	7471B, 7471B	T	0.54 g	50 mL				
280-42264-A-4	211SCS0401AA	7471B, 7471B	T	0.52 g	50 mL				
280-42264-A-5	211SCS0501AA	7471B, 7471B	T	0.52 g	50 mL				
280-42264-A-6	211SCS0601AA	7471B, 7471B	T	0.56 g	50 mL				
280-42264-A-7	211SCS0601AC	7471B, 7471B	T	0.55 g	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Batch Number: 174722 Batch Start Date: 05/17/13 11:50 Batch Analyst: Fredette, Nick

Batch Method: 7471B Batch End Date: 05/17/13 12:20

Batch Notes	
Hydroxylamine Hydrochloride Lot	2BK0049-4/29
Aqua Regia Lot Number	0000025627-5/17
Balance ID	24750837
Lot # of hydrochloric acid	0000035187-5/9
Lot # of Nitric Acid	000025627-4/24
Hood ID or number	HOOD4
Hot Block ID number	15
Potassium Permanganate Lot Number	0000028553-5/16
NaCL Lot #	95
Oven, Bath or Block Temperature 1	94 Celsius
Oven, Bath or Block Temperature 2	94 Celsius
Pipette ID	MET58
Repittetor Volume Check	95
Stannous Chloride Lot Number	0000030393-5/14
SOP Number	DVMT0023
ID number of the thermometer	HG-4
Digestion Tube/Cup Lot #	ML27KK03

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-42264-1

SDG No.:

Project: Griffiss AFB Bldg 211

Client Sample ID	Lab Sample ID
211SCS0101AA	280-42264-1
211SCS0201AA	280-42264-2
211SCS0301AA	280-42264-3
211SCS0401AA	280-42264-4
211SCS0501AA	280-42264-5
211SCS0601AA	280-42264-6
211SCS0601AC	280-42264-7

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-42264-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: Moisture LOQ Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	LOQ (%)	
Percent Moisture		0.1	
Percent Solids		0.1	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Instrument ID: NOEQUIP Method: Moisture

Start Date: 05/22/2013 14:54 End Date: 05/22/2013 14:54

Lab Sample ID	D/F	Type	Time	Analytes	
				%Sol	Moist
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
280-42264-1	1	T	14:54	X	X
280-42264-2	1	T	14:54	X	X
280-42264-3	1	T	14:54	X	X
280-42264-4	1	T	14:54	X	X
280-42264-5	1	T	14:54	X	X
280-42264-6	1	T	14:54	X	X
280-42264-7	1	T	14:54	X	X
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		
ZZZZZZ			14:54		

Prep Types

T = Total/NA

TestAmerica Denver

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Wet Chemistry Data Review Checklist For Gravimetric Methods

Test Name/Method #: % MOISTURE Analysis Date: 5/23/13

SOP #: _____ Analyst: Sullivan, J Benson, A Instrument: _____

Lot / Sample Numbers	Matrix	Prep Batch	Batch	Method	Special Inst
42470	Solid	—	175486	%M	Don't Batch W/ other Job
42477	Solid	—	175488	%M	Don't Batch w/other jobs
42053, 42386, 42412,	Solid	—	175496	%M	Q4
42473	Solid	—	175497	%M	Don't Batch W/other Jobs
42475	Solid	—	175499	%M	Don't Batch W/ other Jobs
41518, 42432,	Solid	—	175500	%M	Q4
42337, 42500, 42480, 42264 42400,	Solid	—	175507	%M	Q4

	Yes	No	N/A	2nd Level
A. Balance, Oven, and DI Water QC Checks				
1. Was the balance calibration verified before and after processing samples and noted in the "Balance Calibration Log" for the date(s) the samples were processed?	✓			—
2. Was the oven temperature within method requirements and recorded in the "Oven Temperature" logbook for the date(s) the samples were processed?	✓			—
3. Was the daily conductivity check of the deionized water recorded in the "Conductivity Logbook"?			✓	—
B. Method Requirements				
1. If sample is visibly oily, was this noted on the benchsheet?	✓			—
2. Was final residue weight within minimum/maximum requirements?	✓			—
3. Were the initial and final drying dates and times recorded on the benchsheet and were all samples dried for at least one hour?	✓			—
C. Sample Results				
1. TDS/Conductivity ratio or historical data checked?			✓	—
2. For % Moisture, was the Final Dried Weight < the Initial Pan Weight or is the result greater than 100%?	✓			—
3. Were sample analyses done within holding time?			✓	—
4. Were special client requirements met?	✓			—
5. Were data that were manually transcribed from instrument printouts into TALS verified 100% including significant figures and units?	✓			—
6. Do the prep and analysis dates in TALS reflect the actual dates? Lots/Dates report checked?	✓			—
7. STD/True Value information is updated and included?			✓	—
8. Are raw data copies prepared, scanned, and uploaded?	✓			—
D. Preparation/Matrix QC				
1. Method blank < RL or all reported samples > 10 X RL?			✓	—
2. Method blank < ½ RL or NCM provided?			✓	—
3. LCS/LCSD run for batch and within QC limits?			✓	—
4. DUP run for batch and RPD < 20% for samples >5 X RL?	✓			—

Analyst: JS Date: 5/23/13

Comments: _____

2nd Level Reviewer: _____ Date: 5/23/13

Comments: _____

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-42264-1

SDG No.:

Batch Number: 175507 Batch Start Date: 05/22/13 14:54 Batch Analyst: Benson, Alex F

Batch Method: Moisture Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	AnalysisComment	
280-42264-A-1	211SCS0101AA	Moisture	T	8	1.34 g	17.35 g	16.91 g		
280-42264-A-2	211SCS0201AA	Moisture	T	9	1.33 g	17.14 g	16.53 g		
280-42264-A-3	211SCS0301AA	Moisture	T	10	1.34 g	17.03 g	16.66 g		
280-42264-A-4	211SCS0401AA	Moisture	T	11	1.34 g	17.06 g	16.47 g		
280-42264-A-5	211SCS0501AA	Moisture	T	12	1.32 g	14.85 g	14.58 g	insuffiecient sample volume	
280-42264-A-6	211SCS0601AA	Moisture	T	13	1.31 g	13.87 g	13.49 g	insuffiecient sample volume	
280-42264-A-7	211SCS0601AC	Moisture	T	14	1.32 g	17.10 g	16.44 g		

Batch Notes	
Balance ID	24950432 No Unit
Date samples were placed in the oven	5/22/13
Oven Temp when samples are put in oven	104 Degrees C
Time samples were place in the oven	1528
Date samples were removed from oven	5/23/13
Oven Temp when samples removed from oven	105 Degrees C
Time Samples were removed from oven	0745
Oven ID	Moisture
ID number of the thermometer	F
Uncorrected In Temperature	104 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

280-42264 Chain of Custody

CHAIN OF CUSTODY RECORD

COC#: _1_ SDG#: _ 8 _ (Open/Closed) Cooler ID#: _A_

Ship to: Elaine Walker Test America Laboratories, Inc. 4955 Yarrow Street Arvada, Colorado Tel: 303-736-0156	Project Name: Griffiss AFB Building 211 Sampler Name: Justin Damann	Send Results to: Daniel Baldyga FPM Remediations, Inc 584 Phoenix Drive Rome, NY 13441
Carrier: Test America courier.	Sampler Signature:	Phone: (315) 336-7721 Ext. 207

Analyses requested

Field Sample ID	LocID	Date 2013	Time	MATRIX	SMCODE	SACODE	SBD/SED	# of Containers	Mercury: note 1 4 oz glass jar	Mercury note 1 250 mL poly (HNO_3).	Comments
211SCS0101AA	211SCS-1	5/14	1200	SO	G	N	0/0	1	1		
211SCS0201AA	211SCS-2	5/14	1215	SO	G	N	0/0	1	1		
211SCS0301AA	211SCS-3	5/14	1220	SO	G	N	0/0	1	1		
211SCS0401AA	211SCS-4	5/14	1230	SO	G	N	0/0	1	1		
211SCS0501AA	211SCS-5	5/14	1245	SO	G	N	0/0	1	1		
211SCS0601AA	211SCS-6	5/14	1120	SO	G	N	0/0	1	1		
211SCS0601AC	211SCS-6	5/14	1120	SO	G	FD	0/0	1	1		
051413AE	FIELDQC	5/14	1330	WQ	G	EB	0/0	1		1	

Sample Condition Upon Receipt at Laboratory: Cooler Temperature: 1.9 IR3

Special Instructions/Comments: Analyses to be conducted in compliance with AFCEE QAPP 4.0 5/16/13 AB

Note 1: Mercury: method SW7471B

#1 Released by: (Sig)	Date:	#2 Released by: (Sig)	Date: 5/14/13	#3 Released by: (Sig)	Date: 5-14-13
Company Name:	Time:	Company Name: FPM	Time: 1630	Company Name: TA Syr	Time: 19:20
#1 Received by: (Sig) Daniel Baldyga	Date:	#2 Received by: (Sig)	Date: 5-14-13	#3 Received by: (Sig)	Date: 5/16/13
Company Name: FPM	Time:	Company Name: TA Syr	Time: 1630	Company Name: TAJ	Time: 0915

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 280-42264-1

Login Number: 42264

List Source: TestAmerica Denver

List Number: 1

Creator: Broander, Laura

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.	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	
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.	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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix C
Validated Laboratory Results

FPM Remediations, Inc.
Data Verification and Usability Report
Former Griffiss AFB
Building 211
Contract No. FA8903-10-D-8595, Delivery Order No. 0014

FPM Project No. 1015-11-01

TestAmerica Job # 280-42264-1

Laboratory:	TestAmerica Laboratories, Inc.
Sample Matrix:	Soil
Number of Samples:	8
Analytical Protocol:	DOD QSM version 4.2, as per project-specific UFP QAPP
Data Reviewer:	Connie van Hoesel
Sample Date:	May 14, 2013

LIST OF DATA VERIFICATION SAMPLES

This verification report pertains to the following environmental samples and corresponding QC samples:

Sample ID	Date	QC Samples	Date
211SCS0101AA	5/14/13	051413AE	5/14/13
211SCS0201AA	5/14/13		
211SCS0301AA	5/14/13		
211SCS0401AA	5/14/13		
211SCS0501AA	5/14/13		
211SCS0601AA	5/14/13	211SCS0601AC	5/14/13

Notes:

Refer to attached chain-of-custody for detailed sampling information and sample specific analyses requested.
AA – Primary environmental samples
AC – Field duplicate sample
AE – Equipment blank

DELIVERABLES

The data deliverable report was per requirements of the DOD QSM, version 4.2, as specified in the project-specific QAPP. The report consisted of the following major sections: lab attachment letter, case narrative, chain-of-custody, lab qualifier definitions, analytical results (sheet 2) based on analytical batch, calibration summaries, method blank summaries, laboratory control sample summaries, matrix spike/matrix spike duplicate summaries, holding time forms, performance checks, surrogate and internal standard recoveries, as applicable.

ANALYTICAL METHODS

The analytical test methods and QA/QC requirements used for the sample analyses were per methods as specified in the DOD QSM, version 4.2, with project-specific modifications as listed in the project-specific QAPP. The analytical methods employed included SW-846 7471B, Mercury.

VERIFICATION GUIDANCE

The analytical work was performed by TestAmerica Denver in accordance with the DOD QSM, version 4.2, and QC requirements of the respective analytical methods and of the project-specific QAPP. The data usability analysis was based on the reviewer's professional judgment and on an assessment of how this data would fare with respect to the DOD QSM, and the criteria as listed in the project-specific QAPP.

QA/QC CRITERIA

The following QA/QC criteria were reviewed for the metals analyses, as applicable:

- Method detection limits and limits of quantitation (DL, LOQ)
- Holding times
- Initial and Continuing calibration summaries
- Method blanks
- Field duplicate results
- Serial dilution results
- Matrix spike/matrix spike duplicate (MS/MSD) analysis
- Laboratory control samples (LCS)
- Results reported between DL and LOQ (J-flag)
- Sample storage and preservation
- Data system printouts
- Qualitative and quantitative compound identification
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The items listed above were in compliance with DOD QSM, version 4.2, and project-specific QAPP criteria and protocols with exceptions discussed in the text below. The data have been verified according to the procedures outlined above and qualified accordingly.

GENERAL NOTES:

SAMPLE LABELING/CHAIN-OF-CUSTODY

No errors in the chain-of-custody were noted. There were no discrepancies noted between the sample labels and the chain-of-custody, or the cooler contents and the chain-of-custody.

MERCURY

- According to the case narrative, the following sample was analyzed at an initial dilution:

Sample	Dilution
211SCS0201AA	1:10

The dilution results only are reported and are used in data verification as representing original results.

- The following table summarizes QC exceedances of the matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and/or RPDs for parent sample 211SCS0101AA. The spike analytes, MS recoveries, MSD recoveries, spike recovery QC limits, and RPDs and their QC limit between the MS and MSD are listed.

Parent Sample: 211SCS0101AA

Spike Compounds	MS %Rec	MSD %Rec	QC Limits	RPD % (QC limit 20%)	Flag Applied	Rationale
Mercury	94	***757***	80-120	***127***	J	%Rec and RPD outside QC limits

Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices. Generally, these data alone cannot be used to evaluate the precision and accuracy of individual samples. A matrix spike and matrix spike duplicate analysis is an aliquot of sample spiked with known concentrations of all the analytes in the method. According to the QAPP, the MS/MSD result is used to assess whether the sample matrix may bias the results. The QAPP-recommended frequency of analysis is one MS/MSD per 20 samples. Exceedances of either percent recovery (%Rec) control limits of spike concentrations or relative percent difference (RPD) control limits between the MS and MSD results, according to the QAPP require a "J" (estimated) qualifier for the specific analyte in all samples collected from the same site matrix as the parent. However, due to the varied nature of environmental samples, such as locations, depths, physical characteristics (dissolved and suspended solids, turbidity, pH, organic content, etc.), it is difficult to assign one set of MS/MSD sample analysis as truly representative of an entire site matrix. Therefore, based on the definition of this type of QA/QC sample, using professional judgment it is deemed inappropriate to qualify more than the actual parent sample due to a percent recovery or RPD exceedance. This approach is in accordance with the EPA National Functional guidelines, which states that the MS/MSD results are not used alone to qualify the entire data package, however, can be used in conjunction with other QC criteria to determine the need for some qualification of the data. Using professional judgment, no corrective action and/or flagging is deemed required for minimal exceedances (i.e., within 1% of the control limits).

Corrective Action: As discussed above, "J" flags were applied to the associated results in parent samples 211SCS0101AA only.

DATA USABILITY RESULTS

MERCURY

Based on the evaluation of all information in the analytical data groups, the results for mercury are usable with the data qualifiers as noted. Using the verification approach as presented above, the results for all above samples are 100% usable.

DATA USABILITY SUMMARY

All data in Job # 280-42264-1 are valid and usable with qualifications as noted in the data review.

Signed: Concordia van Hoesel Date: 7/2/13

ATTACHMENTS

- Chain-of-custody
- Laboratory case narrative
- Qualified final data verification results on annotated Lab Sheet 2s

SAMPLE SUMMARY

Client: FPM Remediations Inc

Job Number: 280-42264-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-42264-1	211SCS0101AA	Solid	05/14/2013 1200	05/15/2013 0915
280-42264-2	211SCS0201AA	Solid	05/14/2013 1215	05/15/2013 0915
280-42264-3	211SCS0301AA	Solid	05/14/2013 1220	05/15/2013 0915
280-42264-4	211SCS0401AA	Solid	05/14/2013 1230	05/15/2013 0915
280-42264-5	211SCS0501AA	Solid	05/14/2013 1245	05/15/2013 0915
280-42264-6	211SCS0601AA	Solid	05/14/2013 1120	05/15/2013 0915
280-42264-7FD	211SCS0601AC	Solid	05/14/2013 1120	05/15/2013 0915
280-42264-8EB	051413AE	Water	05/14/2013 1330	05/15/2013 0915

CASE NARRATIVE
Client: FPM Remediations Inc
Project: Griffiss AFB Bldg 211
Report Number: 280-42264-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
Eight samples were received on 05/15/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.9°C.

TOTAL MERCURY (CVAA) - SOIL
Samples 211SCS0101AA (280-42264-1), 211SCS0201AA (280-42264-2), 211SCS0301AA (280-42264-3), 211SCS0401AA (280-42264-4), 211SCS0501AA (280-42264-5), 211SCS0601AA (280-42264-6), and 211SCS0601AC (280-42264-7) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 05/17/2013.

Mercury failed the recovery criteria high for the matrix spike duplicate (MSD) of sample 211SCS0101AA (280-42264-1) in batch 280-175087. Mercury also exceeded the RPD limit. The matrix spike (MS) and associated laboratory control sample (LCS) recoveries met acceptance criteria, and the sample results have been flagged accordingly.

Sample 211SCS0201AA (280-42264-2) required a dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the mercury analyses.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY (CVAA) - WATER
Sample 051413AE (280-42264-8) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The sample was prepared and analyzed on 05/22/2013.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS
Samples 211SCS0101AA (280-42264-1), 211SCS0201AA (280-42264-2), 211SCS0301AA (280-42264-3), 211SCS0401AA (280-42264-4), 211SCS0501AA (280-42264-5), 211SCS0601AA (280-42264-6), and 211SCS0601AC (280-42264-7) were analyzed for percent solids in accordance with EPA SW846 3550C. The samples were analyzed on 05/22/2013.

No difficulties were encountered during the % solids analyses.

All quality control parameters were within the acceptance limits.

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: 211SCS0101AA

Lab Sample ID: 280-42264-1
Client Matrix: Solid

% Moisture: 2.7

Date Sampled: 05/14/2013 1200
Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	05/17/2013 1721			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		480	J	5.8	18

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: **211SCS0201AA**

Lab Sample ID: 280-42264-2
Client Matrix: Solid

% Moisture: 3.9

Date Sampled: 05/14/2013 1215
Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	10			Initial Weight/Volume:	0.54 g
Analysis Date:	05/17/2013 1750			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		1800	D	64	200

CMT 7/2/13

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: 211SCS0301AA

Lab Sample ID: 280-42264-3
Client Matrix: Solid

% Moisture: 2.4

Date Sampled: 05/14/2013 1220
Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.54 g
Analysis Date:	05/17/2013 1752			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		250		6.3	19

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: **211SCS0401AA**

Lab Sample ID: 280-42264-4
Client Matrix: Solid

% Moisture: 3.8

Date Sampled: 05/14/2013 1230
Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	05/17/2013 1754			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		180		6.6	20

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: 211SCS0501AA

Lab Sample ID: 280-42264-5
Client Matrix: Solid

% Moisture: 2.0

Date Sampled: 05/14/2013 1245
Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	05/17/2013 1757			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		890		6.5	20

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: **211SCS0601AA**

Lab Sample ID: 280-42264-6
Client Matrix: Solid

% Moisture: 3.0

Date Sampled: 05/14/2013 1120
Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	05/17/2013 1759			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		730		6.1	19

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: **211SCS0601AC**

Lab Sample ID: 280-42264-7FD

Client Matrix: Solid

% Moisture: 4.2

Date Sampled: 05/14/2013 1120

Date Received: 05/15/2013 0915

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	280-175087	Instrument ID:	MT_033
Prep Method:	7471B	Prep Batch:	280-174722	Lab File ID:	130517aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	05/17/2013 1801			Final Weight/Volume:	50 mL
Prep Date:	05/17/2013 1150				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	DL	LOQ
Mercury		490		6.3	19

Client: FPM Remediations Inc

Job Number: 280-42264-1

Client Sample ID: **051413AE**

Lab Sample ID: 280-42264-8EB
Client Matrix: Water

Date Sampled: 05/14/2013 1330
Date Received: 05/15/2013 0915

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	280-175699	Instrument ID:	MT_033
Prep Method:	7470A	Prep Batch:	280-175047	Lab File ID:	130522aa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	05/22/2013 1635			Final Weight/Volume:	30 mL
Prep Date:	05/22/2013 1220				

Analyte	Result (ug/L)	Qualifier	DL	LOQ
Mercury	0.080	U	0.027	0.20