TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. 1991-135-11/002

Honeywell Ponds E

Lot #: F9E150228

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TESTAMERICA LABORATORIES, INC.

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January 7, 2010

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Case Narrative
LOT NUMBER: F9E150228
Revised

This report contains the analytical results for the two samples received under chain of custody by STL St. Louis on May 15, 2009. These samples are associated with your Honeywell Ponds E project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by STL St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

This report is revised to report Chemistry data on a wet-weight basis.

Grain size analysis was performed at the Burlington, VT laboratory. TOC analysis was performed at the Denver, CO laboratory.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Trace ICP Metals

Batch 9140214 (TCLP):
The CRI for arsenic spiked at 10ppb was outside the upper limit of the established QC criteria (130.5%). The concentrations of the samples were at such a level as to make the quantification of a spiked standard at this level unnecessary.
Affected Samples:
F9E150228 (1): E-97 LOWER F9E150228 (2): E-97 UPPER

Cation Exchange Capacity

Batch 9149113:
The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limit has been adjusted for the dilution since no analysis at a lesser dilution was performed.
Affected Samples:
F9E150228 (1): E-97 LOWER F9E150228 (2): E-97 UPPER

There were no nonconformances or observations noted with any other analysis on this lot.

METHODS SUMMARY

F9E150228

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Bulk Density	ASTM D-5057-90	ASTM D-5057-90
Cation-Exchange Capacity	SW846 9081	SW846 9081
Chloride	MCAWW 300.0A	MCAWW 300.0A
Gamma Spectroscopy - Radium-226 & Hits	EML GA-01-R MOD	
Isotopic Thorium by Alpha Spectroscopy	EML A-01-R MOD	
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 1311/7470
Method D2216 Percent H2O Dry 105 Degrees C, Weigh	ASTM Moisture,	ASTM ASTM 2216
Soil and Waste pH	SW846 9045C	SW846 DI-LEACHA
Sulfide	MCAWW 376.1	MCAWW 376.1
Total Organic Carbon	SW846 9060	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 1311/3010

References:

ASTM Annual Book Of ASTM Standards.

EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL" HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F9E150228

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LC5V8	001	E-97 LOWER	05/14/09	08:50
LC50M	002	E-97 UPPER	05/14/09	08:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Andrews Engineering, Inc.

Client Sample ID: E-97 LOWER

TOTAL Metals

Lot-Sample #...: F9E150228-001 **Matrix.....:** SOLID
Date Sampled...: 05/14/09 08:50 **Date Received..:** 05/15/09
% Moisture.....: 47

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9140060						
Uranium	**216**	**50.0**	**mg/kg**	**SW846 6010B**	**05/20/09**	**LC5V81AH**
		Dilution Factor: 1		Analysis Time..: 21:14		

Andrews Engineering, Inc.

Client Sample ID: E-97 LOWER

TCLP Metals

Lot-Sample #...: F9E150228-001 **Matrix.....:** SOLID
Date Sampled...: 05/14/09 08:50 **Date Received..:** 05/15/09
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9140214						
Silver	ND	20.0	ug/L	SW846 6010B	05/20-05/22/09	LC5V81AK
		Dilution Factor: 1		Analysis Time..: 23:31		
Arsenic	**87.5**	**20.0**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LC5V81AL**
		Dilution Factor: 1		Analysis Time..: 23:31		
Barium	**54.1 B,J**	**100**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LC5V81AM**
		Dilution Factor: 1		Analysis Time..: 23:31		
Cadmium	ND	10.0	ug/L	SW846 6010B	05/20-05/22/09	LC5V81AN
		Dilution Factor: 1		Analysis Time..: 23:31		
Chromium	**16.7 B**	**20.0**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LC5V81AP**
		Dilution Factor: 1		Analysis Time..: 23:31		
Lead	ND	40.0	ug/L	SW846 6010B	05/20-05/22/09	LC5V81AQ
		Dilution Factor: 1		Analysis Time..: 23:31		
Selenium	ND	30.0	ug/L	SW846 6010B	05/20-05/22/09	LC5V81AR
		Dilution Factor: 1		Analysis Time..: 23:31		
Prep Batch #...: 9155049						
Mercury	**0.81 B,J**	**1.0**	**ug/L**	**SW846 7470A**	**06/04/09**	**LC5V81AT**
		Dilution Factor: 1		Analysis Time..: 11:59		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Andrews Engineering, Inc.

Client Sample ID: E-97 LOWER

General Chemistry

Lot-Sample #...: F9E150228-001 **Work Order #...:** LC5V8 **Matrix.....:** SOLID
Date Sampled...: 05/14/09 08:50 **Date Received..:** 05/15/09
% Moisture.....: 47

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)	**12.4**	**0.10**	**No Units**	**SW846 9045C**	**05/30/09**	**9149264**
		Dilution Factor: 1		Analysis Time..: 00:00		
Cation Exchange Capacity	**9.4**	**2.5**	**meq/100g**	**SW846 9081**	**05/29-06/08/09**	**9149113**
		Dilution Factor: 5		Analysis Time..: 00:00		
Chloride	**24.2 J**	**2.0**	**mg/kg**	**MCAWW 300.0A**	**06/01-06/02/09**	**9152365**
		Dilution Factor: 1		Analysis Time..: 00:00		
Density	**1.2**		**g/mL**	**ASTM D-5057-90**	**06/02/09**	**9153158**
		Dilution Factor: 1		Analysis Time..: 00:00		
Percent Moisture	**46.6**	**0.10**	**%**	**ASTM Moisture, %**	**05/25-05/26/09**	**9146053**
		Dilution Factor: 1		Analysis Time..: 00:00		
Total Organic Carbon	**1.0 B**	**2.0**	**g/kg**	**SW846 9060**	**06/18/09**	**9168529**
		Dilution Factor: 1		Analysis Time..: 08:04		
Total Sulfide	ND	10.0	mg/kg	MCAWW 376.1	06/02/09	9152376
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

Andrews Engineering, Inc.

Client Sample ID: E-97 UPPER

TOTAL Metals

Lot-Sample #...: F9E150228-002 **Matrix.....:** SOLID
Date Sampled...: 05/14/09 08:40 **Date Received..:** 05/15/09
% Moisture.....: 44

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9140060						
Uranium	**110**	**50.0**	**mg/kg**	**SW846 6010B**	**05/20/09**	**LC50M1AL**
		Dilution Factor: 1		Analysis Time..: 21:20		

Andrews Engineering, Inc.

Client Sample ID: E-97 UPPER

TCLP Metals

Lot-Sample #...: F9E150228-002 **Matrix.....:** SOLID
Date Sampled...: 05/14/09 08:40 **Date Received..:** 05/15/09
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9140214						
Silver	ND	20.0	ug/L	SW846 6010B	05/20-05/22/09	LC50M1AN
		Dilution Factor: 1		Analysis Time..: 23:37		
Arsenic	**118**	**20.0**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LC50M1AP**
		Dilution Factor: 1		Analysis Time..: 23:37		
Barium	**57.3 B,J**	**100**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LC50M1AQ**
		Dilution Factor: 1		Analysis Time..: 23:37		
Cadmium	**1.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LC50M1AR**
		Dilution Factor: 1		Analysis Time..: 23:37		
Chromium	**8.1 B**	**20.0**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LC50M1AT**
		Dilution Factor: 1		Analysis Time..: 23:37		
Lead	ND	40.0	ug/L	SW846 6010B	05/20-05/22/09	LC50M1AU
		Dilution Factor: 1		Analysis Time..: 23:37		
Selenium	ND	30.0	ug/L	SW846 6010B	05/20-05/22/09	LC50M1AV
		Dilution Factor: 1		Analysis Time..: 23:37		
Prep Batch #...: 9155049						
Mercury	**0.80 B,J**	**1.0**	**ug/L**	**SW846 7470A**	**06/04/09**	**LC50M1AW**
		Dilution Factor: 1		Analysis Time..: 12:05		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Andrews Engineering, Inc.

Client Sample ID: E-97 UPPER

General Chemistry

Lot-Sample #...: F9E150228-002 **Work Order #...:** LC50M **Matrix.....:** SOLID
Date Sampled...: 05/14/09 08:40 **Date Received..:** 05/15/09
% Moisture.....: 44

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)	**12.4**	**0.10**	**No Units**	**SW846 9045C**	**05/30/09**	**9149264**
		Dilution Factor: 1		Analysis Time..: 00:00		
Cation Exchange Capacity	**10.1**	**2.5**	**meq/100g**	**SW846 9081**	**05/29-06/08/09**	**9149113**
		Dilution Factor: 5		Analysis Time..: 00:00		
Chloride	**13.1 J**	**2.0**	**mg/kg**	**MCAWW 300.0A**	**06/01-06/02/09**	**9152365**
		Dilution Factor: 1		Analysis Time..: 00:00		
Density	**1.1**		**g/mL**	**ASTM D-5057-90**	**06/02/09**	**9153158**
		Dilution Factor: 1		Analysis Time..: 00:00		
Percent Moisture	**44.2**	**0.10**	**%**	**ASTM Moisture, %**	**05/25-05/26/09**	**9146053**
		Dilution Factor: 1		Analysis Time..: 00:00		
Total Organic Carbon	**2.0**	**2.0**	**g/kg**	**SW846 9060**	**06/18/09**	**9168529**
		Dilution Factor: 1		Analysis Time..: 08:04		
Total Sulfide	ND	10.0	mg/kg	MCAWW 376.1	06/02/09	9152376
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F9E200000-060 **Prep Batch #...:** 9140060						
Uranium	ND	50.0	mg/kg	SW846 6010B	05/20/09	LDDFX1AA
		Dilution Factor: 1				
		Analysis Time..: 18:59				

NOTE(S):

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

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F9E190000-256 **Prep Batch #...:** 9155049						
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908						
Mercury	**0.82 B**	**1.0**	**ug/L**	**SW846 7470A**	**06/04/09**	**LDAPK1AJ**
		Dilution Factor: 1				
		Analysis Time..: 11:39				
MB Lot-Sample #: F9E190000-256 **Prep Batch #...:** 9140214						
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908						
Arsenic	ND	20.0	ug/L	SW846 6010B	05/20-05/22/09	LDAPK1AC
		Dilution Factor: 1				
		Analysis Time..: 22:20				
Barium	**2.3 B**	**100**	**ug/L**	**SW846 6010B**	**05/20-05/22/09**	**LDAPK1AD**
		Dilution Factor: 1				
		Analysis Time..: 22:20				
Cadmium	ND	10.0	ug/L	SW846 6010B	05/20-05/22/09	LDAPK1AE
		Dilution Factor: 1				
		Analysis Time..: 22:20				
Chromium	ND	20.0	ug/L	SW846 6010B	05/20-05/22/09	LDAPK1AF
		Dilution Factor: 1				
		Analysis Time..: 22:20				
Lead	ND	40.0	ug/L	SW846 6010B	05/20-05/22/09	LDAPK1AG
		Dilution Factor: 1				
		Analysis Time..: 22:20				
Selenium	ND	30.0	ug/L	SW846 6010B	05/20-05/22/09	LDAPK1AH
		Dilution Factor: 1				
		Analysis Time..: 22:20				
Silver	ND	20.0	ug/L	SW846 6010B	05/20-05/22/09	LDAPK1AA
		Dilution Factor: 1				
		Analysis Time..: 22:20				

NOTE(S):

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

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F9E150228 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cation Exchange Capacity		Work Order #: LDX3C1AA		MB Lot-Sample #:	F9E290000-113	
	ND	0.50	meq/100g	SW846 9081	05/29-06/08/09	9149113
		Dilution Factor: 1				
		Analysis Time..: 00:00				
Chloride		Work Order #: LD6PP1AA		MB Lot-Sample #:	F9F010000-365	
	0.24 B	**2.0**	**mg/kg**	**MCAWW 300.0A**	**06/01-06/02/09**	**9152365**
		Dilution Factor: 1				
		Analysis Time..: 00:00				
Total Organic Carbon		Work Order #: LE5WJ1AA		MB Lot-Sample #:	D9F170000-529	
	ND	2.0	g/kg	SW846 9060	06/18/09	9168529
		Dilution Factor: 1				
		Analysis Time..: 08:04				
Total Sulfide		Work Order #: LD5R11AA		MB Lot-Sample #:	F9F010000-376	
	ND	10.0	mg/kg	MCAWW 376.1	06/02/09	9152376
		Dilution Factor: 1				
		Analysis Time..: 00:00				

NOTE(S):

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

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F9E200000-060 **Prep Batch #...:** 9140060					
Uranium	112	(80 - 120)	SW846 6010B	05/20/09	LDDFX1AC
		Dilution Factor: 1	Analysis Time..: 19:05		

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F9E200000-214 **Prep Batch #...:** 9140214					
Silver	95	(80 - 120)	SW846 6010B	05/20-05/22/09	LDD661AA
		Dilution Factor: 1	Analysis Time..: 22:26		
Arsenic	106	(80 - 120)	SW846 6010B	05/20-05/22/09	LDD661AC
		Dilution Factor: 1	Analysis Time..: 22:26		
Barium	107	(80 - 120)	SW846 6010B	05/20-05/22/09	LDD661AD
		Dilution Factor: 1	Analysis Time..: 22:26		
Cadmium	106	(80 - 120)	SW846 6010B	05/20-05/22/09	LDD661AE
		Dilution Factor: 1	Analysis Time..: 22:26		
Chromium	103	(80 - 120)	SW846 6010B	05/20-05/22/09	LDD661AF
		Dilution Factor: 1	Analysis Time..: 22:26		
Lead	103	(80 - 120)	SW846 6010B	05/20-05/22/09	LDD661AG
		Dilution Factor: 1	Analysis Time..: 22:26		
Selenium	107	(80 - 120)	SW846 6010B	05/20-05/22/09	LDD661AH
		Dilution Factor: 1	Analysis Time..: 22:26		
LCS Lot-Sample#: F9F040000-049 **Prep Batch #...:** 9155049					
Mercury	95	(80 - 120)	SW846 7470A	06/04/09	LD9301AA
		Dilution Factor: 1	Analysis Time..: 11:41		

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: F9E150228 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	WO#:LE5WJ1AC-LCS/LE5WJ1AD-LCSD					LCS Lot-Sample#: D9F170000-529	
	73 TOC	(46 - 130)			SW846 9060	06/18/09	9168529
	61 TOC	(46 - 130)	18	(0-20)	SW846 9060	06/18/09	9168529

Dilution Factor: 1 Analysis Time..: 08:04

NOTE(S):

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

TOC Soil samples are not analyzed in quadruplicate.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)		Work Order #: LD0V81AA	LCS Lot-Sample#: F9E290000-264		
	100	(99 - 101)	SW846 9045C	05/30/09	9149264
		Dilution Factor: 1	Analysis Time..: 00:00		
Chloride		Work Order #: LD6PP1AC	LCS Lot-Sample#: F9F010000-365		
	95	(90 - 110)	MCAWW 300.0A	06/01-06/02/09	9152365
		Dilution Factor: 1	Analysis Time..: 00:00		
Total Sulfide		Work Order #: LD5R11AC	LCS Lot-Sample#: F9F010000-376		
	97	(90 - 110)	MCAWW 376.1	06/02/09	9152376
		Dilution Factor: 1	Analysis Time..: 00:00		

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/14/09 11:25 **Date Received..:** 05/15/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F9E150215-001 **Prep Batch #...:** 9140060						**% Moisture.....:** 46	
Uranium	83	(75 - 125)			SW846 6010B	05/20/09	LC5NQ1AE
	77	(75 - 125)	1.8	(0-30)	SW846 6010B	05/20/09	LC5NQ1AF
		Dilution Factor: 1					
		Analysis Time..: 19:37					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/14/09 11:25 **Date Received..:** 05/15/09

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F9E150215-001 **Prep Batch #...:** 9140060									
								% Moisture.....: 46	
Uranium									
	271	100	354	mg/kg	83		SW846 6010B	05/20/09	LC5NQ1AE
	271	100	348	mg/kg	77	1.8	SW846 6010B	05/20/09	LC5NQ1AF
			Dilution Factor: 1						
			Analysis Time..: 19:37						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/12/09 10:15 **Date Received..:** 05/13/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F9E140145-001 **Prep Batch #...:** 9140214							
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908							
Arsenic	104	(75 - 125)			SW846 6010B	05/20-05/22/09	LC1M01A9
	106	(75 - 125)	2.2	(0-20)	SW846 6010B	05/20-05/22/09	LC1M01CA
		Dilution Factor: 1					
		Analysis Time..: 22:46					
Barium	113	(75 - 125)			SW846 6010B	05/20-05/22/09	LC1M01CC
	116	(75 - 125)	2.2	(0-20)	SW846 6010B	05/20-05/22/09	LC1M01CD
		Dilution Factor: 1					
		Analysis Time..: 22:46					
Cadmium	97	(75 - 125)			SW846 6010B	05/20-05/22/09	LC1M01CE
	99	(75 - 125)	1.4	(0-20)	SW846 6010B	05/20-05/22/09	LC1M01CF
		Dilution Factor: 1					
		Analysis Time..: 22:46					
Chromium	97	(75 - 125)			SW846 6010B	05/20-05/22/09	LC1M01CG
	99	(75 - 125)	1.7	(0-20)	SW846 6010B	05/20-05/22/09	LC1M01CH
		Dilution Factor: 1					
		Analysis Time..: 22:46					
Lead	97	(75 - 125)			SW846 6010B	05/20-05/22/09	LC1M01CJ
	99	(75 - 125)	2.4	(0-20)	SW846 6010B	05/20-05/22/09	LC1M01CK
		Dilution Factor: 1					
		Analysis Time..: 22:46					
Selenium	98	(75 - 125)			SW846 6010B	05/20-05/22/09	LC1M01CL
	101	(75 - 125)	2.3	(0-20)	SW846 6010B	05/20-05/22/09	LC1M01CM
		Dilution Factor: 1					
		Analysis Time..: 22:46					
Silver	108	(75 - 125)			SW846 6010B	05/20-05/22/09	LC1M01A7
	110	(75 - 125)	2.1	(0-20)	SW846 6010B	05/20-05/22/09	LC1M01A8
		Dilution Factor: 1					
		Analysis Time..: 22:46					

MS Lot-Sample #: F9E140145-001 **Prep Batch #...:** 9155049
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/12/09 10:15 **Date Received..:** 05/13/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Mercury	91	(70 - 130)			SW846 7470A	06/04/09	LC1M01CR
	87	(70 - 130)	4.5	(0-20)	SW846 7470A	06/04/09	LC1M01CT

Dilution Factor: 1
Analysis Time..: 11:46

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/12/09 10:15 **Date Received..:** 05/13/09

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F9E140145-001 **Prep Batch #...:** 9140214									
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908									
Arsenic									
	219	2000	2300	ug/L	104		SW846 6010B	05/20-05/22/09	LC1M01A9
	219	2000	2350	ug/L	106	2.2	SW846 6010B	05/20-05/22/09	LC1M01CA
			Dilution Factor: 1						
			Analysis Time..: 22:46						
Barium									
	53.8	2000	2320	ug/L	113		SW846 6010B	05/20-05/22/09	LC1M01CC
	53.8	2000	2370	ug/L	116	2.2	SW846 6010B	05/20-05/22/09	LC1M01CD
			Dilution Factor: 1						
			Analysis Time..: 22:46						
Cadmium									
	ND	2000	1950	ug/L	97		SW846 6010B	05/20-05/22/09	LC1M01CE
	ND	2000	1980	ug/L	99	1.4	SW846 6010B	05/20-05/22/09	LC1M01CF
			Dilution Factor: 1						
			Analysis Time..: 22:46						
Chromium									
	10.4	2000	1960	ug/L	97		SW846 6010B	05/20-05/22/09	LC1M01CG
	10.4	2000	1990	ug/L	99	1.7	SW846 6010B	05/20-05/22/09	LC1M01CH
			Dilution Factor: 1						
			Analysis Time..: 22:46						
Lead									
	ND	2000	1940	ug/L	97		SW846 6010B	05/20-05/22/09	LC1M01CJ
	ND	2000	1990	ug/L	99	2.4	SW846 6010B	05/20-05/22/09	LC1M01CK
			Dilution Factor: 1						
			Analysis Time..: 22:46						
Selenium									
	ND	2000	1970	ug/L	98		SW846 6010B	05/20-05/22/09	LC1M01CL
	ND	2000	2010	ug/L	101	2.3	SW846 6010B	05/20-05/22/09	LC1M01CM
			Dilution Factor: 1						
			Analysis Time..: 22:46						
Silver									
	ND	200	216	ug/L	108		SW846 6010B	05/20-05/22/09	LC1M01A7
	ND	200	221	ug/L	110	2.1	SW846 6010B	05/20-05/22/09	LC1M01A8
			Dilution Factor: 1						
			Analysis Time..: 22:46						

MS Lot-Sample #: F9E140145-001 **Prep Batch #...:** 9155049
Leach Date.....: 05/19/09 **Leach Batch #..:** P913908

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/12/09 10:15 **Date Received..:** 05/13/09

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Mercury									
	ND	25.0	22.6	ug/L	91		SW846 7470A	06/04/09	LC1M01CR
	ND	25.0	21.6	ug/L	87	4.5	SW846 7470A	06/04/09	LC1M01CT

Dilution Factor: 1
Analysis Time..: 11:46

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/12/09 10:15 **Date Received..:** 05/13/09

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
						% Moisture.....: 47	
Total Organic Carbon		WO#: LC1M01CU-MS/LC1M01CV-MSD				MS Lot-Sample #: F9E140145-001	
	109	(46 - 130)			SW846 9060	06/18/09	9168529
	107	(46 - 130)	1.7	(0-20)	SW846 9060	06/18/09	9168529
		Dilution Factor: 1					
		Analysis Time..: 16:15					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/12/09 10:15 **Date Received..:** 05/13/09

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
					% Moisture.....: 47				
Total Organic Carbon			WO#: LC1M01CU-MS/LC1M01CV-MSD				MS Lot-Sample #: F9E140145-001		
	1.3	120	132	g/kg	109		SW846 9060	06/18/09	9168529
	1.3	120	130	g/kg	107	1.7	SW846 9060	06/18/09	9168529
			Dilution Factor: 1						
			Analysis Time..: 16:15						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/04/09 14:00 **Date Received..:** 05/06/09

Percnt Moisture: 4.1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #...: LCJNP1A9		MS Lot-Sample #: F9E070213-001	
	104	(90 - 110)	MCAWW 300.0A	06/01-06/02/09	9152365
		Dilution Factor: 1	Analysis Time..: 00:00		
Total Sulfide		Work Order #...: LC1M61A4		MS Lot-Sample #: F9E140145-002	
	98 N	(0.0- 0.0)	MCAWW 376.1	06/02/09	9152376
		Dilution Factor: 1	Analysis Time..: 00:00		

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F9E150228 **Matrix.....:** SOLID
Date Sampled...: 05/04/09 14:00 **Date Received..:** 05/06/09

Percnt Moisture: 4.1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #...: LCJNP1A9			MS Lot-Sample #: F9E070213-001		
	18.3	20.0	39.2	mg/kg	104	MCAWW 300.0A	06/01-06/02/09	9152365
			Dilution Factor: 1		Analysis Time..: 00:00			
Total Sulfide			Work Order #...: LC1M61A4			MS Lot-Sample #: F9E140145-002		
	ND	1000	980 N	mg/kg	98	MCAWW 376.1	06/02/09	9152376
			Dilution Factor: 1		Analysis Time..: 00:00			

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Work Order #...:** LC5VW-SMP LC5VW-DUP **Matrix.....:** SOLID

Date Sampled...: 05/14/09 09:20 **Date Received..:** 05/15/09

% Moisture.....: 45

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #:	F9E150215-012	
	44.5	44.5	%	0.022	(0-0.0)	ASTM Moisture, %	05/25-05/26/09	9146053

Dilution Factor: 1 Analysis Time..: 00:00

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Work Order #...:** LDMVN-SMP LDMVN-DUP **Matrix.....:** SOLID

Date Sampled...: 05/21/09 08:10 **Date Received..:** 05/23/09

% Moisture.....: 4.1

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)						SD Lot-Sample #: F9E230123-001		
	7.5	7.5	No Units	0.40	(0-0.0)	SW846 9045C	05/30/09	9149264

Dilution Factor: 1 Analysis Time..: 00:00

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Work Order #...:** LCJNP-SMP LCJNP-DUP **Matrix.....:** SOLID

Date Sampled...: 05/04/09 14:00 **Date Received..:** 05/06/09

% Moisture.....: 48

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride						SD Lot-Sample #: F9E070213-001		
	18.3 J	18.5	mg/kg	0.78	(0-20)	MCAWW 300.0A	06/01-06/02/09	9152365

Dilution Factor: 1 Analysis Time..: 00:00

NOTE(S):

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

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Work Order #...:** LC1M6-SMP LC1M6-DUP **Matrix.....:** SOLID

Date Sampled...: 05/12/09 10:24 **Date Received..:** 05/13/09

% Moisture.....: 45

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Sulfide						SD Lot-Sample #:	F9E140145-002	
	ND	ND	mg/kg	0	(0-0.0)	MCAWW 376.1	06/02/09	9152376

Dilution Factor: 1 Analysis Time..: 00:00

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F9E150228 **Work Order #...:** LC1M0-SMP LC1M0-DUP **Matrix.....:** SOLID

Date Sampled...: 05/12/09 10:15 **Date Received..:** 05/13/09

% Moisture.....: 47

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Density						SD Lot-Sample #: F9E140145-001		
	1.5	1.4	g/mL	6.5	(0-0.0)	ASTM D-5057-90	06/02/09	9153158
			Dilution Factor: 1			Analysis Time..: 00:00		
Cation Exchange Capacity						SD Lot-Sample #: F9E140145-001		
	8.2	8.3	meq/100g	1.1	(0-30)	SW846 9081	05/29-06/08/09	9149113
			Dilution Factor: 5			Analysis Time..: 00:00		

Andrews Engineering, Inc.

Client Sample ID: E-97 LOWER

Radiochemistry

Lab Sample ID: F9E150228-001
Work Order: LC5V8
Matrix: SOLID

Date Collected: 05/14/09 0850
Date Received: 05/15/09 0930

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Ra-226 & Hits By DOE GA-01R MOD			**pCi/g**		**GA-01-R MOD**			
Bismuth 214	**0.71**		**0.41**	**0.47**	05/18/09	06/09/09	9138462	
Lead 212	0.05	U	0.17	0.29	05/18/09	06/09/09	9138462	
Lead 214	**1.01**		**0.30**	**0.40**	05/18/09	06/09/09	9138462	
Protactinium 234M	**154**		**29**	**12**	05/18/09	06/09/09	9138462	
Protactinium 231	1.1	U	2.4	4.1	05/18/09	06/09/09	9138462	
Radium (226)	**0.71**		**0.41**	**0.47**	05/18/09	06/09/09	9138462	
Thorium 232	0.17	U	0.38	0.67	05/18/09	06/09/09	9138462	
Thorium 234	**162**		**16**	**9**	05/18/09	06/09/09	9138462	
Uranium 235	**7.0**		**1.1**	**1.4**	05/18/09	06/09/09	9138462	
--- Other Detected Radionuclides ---								
Potassium 40	**4.9**		**2.0**	**2.2**	05/18/09	06/09/09	9138462	
Iso URANIUM (SHORT CT) DOE A-01-R MOD			**pCi/g**		**A-01-R MOD**			
Uranium 234	**123**		**11**	**0.2**	05/21/09	05/30/09	9141383	53
Uranium 235/236	**6.0**		**1.1**	**0.1**	05/21/09	05/30/09	9141383	53
Uranium 238	**129**		**12**	**0.3**	05/21/09	05/30/09	9141383	53
Iso THORIUM (SHORT CT) DOE A-01-R MOD			**pCi/g**		**A-01-R MOD**			
Thorium 228	-0.009	U	0.10	0.23	05/21/09	06/01/09	9141381	94
Thorium 230	**1.52**		**0.39**	**0.18**	05/21/09	06/01/09	9141381	94
Thorium 232	0.046	U	0.073	0.12	05/21/09	06/01/09	9141381	94

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

Andrews Engineering, Inc.

Client Sample ID: E-97 UPPER

Radiochemistry

Lab Sample ID: F9E150228-002
Work Order: LC50M
Matrix: SOLID

Date Collected: 05/14/09 0840
Date Received: 05/15/09 0930

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Ra-226 & Hits By DOE GA-01R MOD			pCi/g		GA-01-R MOD			
Bismuth 214	**0.48**		**0.23**	**0.29**	05/18/09	06/08/09	9138462	
Lead 212	0.02	U	0.14	0.27	05/18/09	06/08/09	9138462	
Lead 214	**0.85**		**0.32**	**0.32**	05/18/09	06/08/09	9138462	
Protactinium 234M	**62**		**23**	**22**	05/18/09	06/08/09	9138462	
Protactinium 231	0.2	U	2.4	4.3	05/18/09	06/08/09	9138462	
Radium (226)	**0.48**		**0.23**	**0.29**	05/18/09	06/08/09	9138462	
Thorium 232	-0.05	U	0.38	0.71	05/18/09	06/08/09	9138462	
Thorium 234	**93**		**11**	**7**	05/18/09	06/08/09	9138462	
Uranium 235	**5.7**		**1.0**	**1.1**	05/18/09	06/08/09	9138462	
--- Other Detected Radionuclides ---								
Potassium 40	**8.9**		**2.6**	**2.0**	05/18/09	06/08/09	9138462	
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	**75.9**		**7.0**	**0.2**	05/21/09	05/30/09	9141383	67
Uranium 235/236	**3.61**		**0.77**	**0.15**	05/21/09	05/30/09	9141383	67
Uranium 238	**75.3**		**7.0**	**0.2**	05/21/09	05/30/09	9141383	67
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	0.005	U	0.084	0.19	05/21/09	05/31/09	9141381	96
Thorium 230	**0.80**		**0.26**	**0.13**	05/21/09	05/31/09	9141381	96
Thorium 232	0.029	U	0.070	0.14	05/21/09	05/31/09	9141381	96

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F9E150228
Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Lab Sample ID Batch #	Yld %
Gamma Ra-226 & Hits By DOE GA-010R MOD			**pCi/g**	**GA-01-R MOD**			**F9E180000-462B**	
Bismuth 214	0.027	U	0.075	0.15	05/18/09	06/08/09	9138462	
Lead 212	0.01	U	0.048	0.091	05/18/09	06/08/09	9138462	
Lead 214	0.0	U	0.073	0.13	05/18/09	06/08/09	9138462	
Protactinium 234M	2.5	U	3.6	6.0	05/18/09	06/08/09	9138462	
Protactinium 231	-0.03	U	0.77	1.4	05/18/09	06/08/09	9138462	
Radium (226)	0.027	U	0.075	0.15	05/18/09	06/08/09	9138462	
Thorium 232	0.0	U	0.030	0.11	05/18/09	06/08/09	9138462	
Thorium 234	0.09	U	0.70	1.2	05/18/09	06/08/09	9138462	
Uranium 235	-0.02	U	0.21	0.27	05/18/09	06/08/09	9138462	
Iso THORIUM (SHORT CT) DOE A-01-R MOD			**pCi/g**	**A-01-R MOD**			**F9E210000-381B**	
Thorium 228	0.005	U	0.023	0.060	05/21/09	05/31/09	9141381	88
Thorium 230	**0.076**		**0.059**	**0.047**	**05/21/09**	**05/31/09**	**9141381**	**88**
Thorium 232	0.0	U	0.0095	0.030	05/21/09	05/31/09	9141381	88
Iso URANIUM (SHORT CT) DOE A-01-R MOD			**pCi/g**	**A-01-R MOD**			**F9E210000-383B**	
Uranium 234	0.0006	U	0.022	0.062	05/21/09	05/29/09	9141383	94
Uranium 235/236	0.012	U	0.025	0.034	05/21/09	05/29/09	9141383	94
Uranium 238	0.018	U	0.028	0.042	05/21/09	05/29/09	9141383	94

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only
Bold results are greater than the MDC

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F9E150228
Matrix: SOLID

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gamma Ra-226 & Hits By DOE GA-010R MOD		**pCi/g**		**GA-01-R MOD**			**F9E180000-462C**
Radium (226)	12.2	11.0	0.92	0.37		90	(82 - 110)
Thorium 232	9.50	9.80	0.84	0.40		103	(89 - 130)
	Batch #:	9138462		**Analysis Date:**	06/08/09		
Iso THORIUM (SHORT CT) DOE A-01-R MOD		**pCi/g**		**A-01-R MOD**			**F9E210000-381C**
Thorium 230	57.4	59.8	6.7	0.4	90	104	(83 - 126)
	Batch #:	9141381		**Analysis Date:**	05/31/09		
Iso URANIUM (SHORT CT) DOE A-01-R MOD		**pCi/g**		**A-01-R MOD**			**F9E210000-383C**
Uranium 234	19.2	18.0	3.0	0.5	79	94	(69 - 125)
Uranium 238	19.2	17.9	3.0	0.4	79	93	(68 - 121)
	Batch #:	9141383		**Analysis Date:**	05/29/09		

NOTE(S)
MDC is determined by instrument performance only
Calculations are performed before rounding to avoid round-off error in calculated results

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F9E150228 Date Sampled: 05/14/09
Matrix: SOLID Date Received: 05/15/09

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision	
Gamma Ra-226 & Hits By DOE GA-01OR MOD			**pCi/g**		**GA-01-R MOD**				**F9E150228-001**	
Bismuth 214	0.71		0.41		0.68		0.30		5	%RPD
Lead 212	0.05	U	0.17		0.09	U	0.19		61	%RPD
Lead 214	1.01		0.30		0.91		0.27		10	%RPD
Protactinium 231	1.1	U	2.4		-0.1	U	2.3		247	%RPD
Protactinium 234M	154		29		159		27		3	%RPD
Radium (226)	0.71		0.41		0.68		0.30		5	%RPD
Thorium 232	0.17	U	0.38		0.18	U	0.37		4	%RPD
Thorium 234	162		16		164		15		1	%RPD
Uranium 235	7.0		1.1		9.0		1.3		25	%RPD
---Other Dedected Radionuclides---										
Potassium 40	4.9		2.0		7.5		2.1		42	%RPD
	Batch #:		9138462	(Sample)	9138462	(Duplicate)				
Iso THORIUM (SHORT CT) DOE A-01-R MOD			**pCi/g**		**A-01-R MOD**				**F9E070213-001**	
Thorium 228	0.01	U	0.12	87	0.004	U	0.095	84	113	%RPD
Thorium 230	1.04		0.33	87	1.25		0.35	84	18	%RPD
Thorium 232	0.028	U	0.066	87	0.033	U	0.080	84	16	%RPD
	Batch #:		9141381	(Sample)	9141381	(Duplicate)				
Iso URANIUM (SHORT CT) DOE A-01-R MOD			**pCi/g**		**A-01-R MOD**				**F9E070213-001**	
Uranium 234	58.1		5.4	77	63.5		5.9	69	9	%RPD
Uranium 235/236	3.60		0.74	77	3.50		0.75	69	3	%RPD
Uranium 238	60.5		5.7	77	67.2		6.3	69	11	%RPD
	Batch #:		9141383	(Sample)	9141383	(Duplicate)				

NOTE(S)

Data are incomplete without the case narrative.
Calculations are performed before rounding to avoid round-off error in calculated results

LOT#F9E150228_REVISED

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
ANDREWS ENGINEERING, INC	CHISEK	5/15/09	127349
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 2**
3300 GINGER CREEK DR.	(217) 622-3084		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
SPRINGFIELD / IL / 62711	BRINES	ROMANKO	
Project Name and Location (State)	**Carrier/Waybill Number**		
HONEYWELL METROPOLIS			
Contract/Purchase Order/Quote No.			
91-135-11			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Sludge	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: total U 6020	% moisture	RCRA TCLP metals	Isotopes	grain size	Hydrometer density	CEC	chloride/sulfate	TOC	pH	Special Instructions/ Conditions of Receipt
E-96 WHITE	5/14/09	0915					X							X	X									
E-98	5/14/09	0820					X							X	X									
E-97U	5/14/09	0835					X							X	X									
E-95U	5/14/09	1020					X							X	X									
E-96	5/14/09	0920					X							X	X									
E-97LOWER	5/14/09	0850					X							X	X	X	X	X	X	X	X	X	X	250G x3
E-97 UPPER	5/14/09	0840					X							X	X	X	X	X	X	X	X	X	X	↓

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.	James Stuffkeam	5-15-08	0830	Charles D. Shea	5-15-09	0830
2.	Charles D. Shea	5-15-08	1126	Mary Potter	5/15/09	1126
3.						

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): 19E150215
228
234

CONDITION UPON RECEIPT FORM

Client: Andrews

Quote No: 81890, 80525

COC/RFA No: 127348, 49

113

Initiated By: [signature] Date: 05.15.09 Time: 1124

Shipping Information

Shipper: FedEx UPS DHL Courier (Client) Other: _____ Multiple Packages: Y (N)

Shipping # (s):*				Sample Temperature (s):**			
1.		6.		1.	2	6.	
2.		7.		2.		7.	
3.		8.		3.		8.	
4.		9.		4.		9.	
5.		10.		5.		10.	

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid or Rad tests- Liquid or Solids

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	Y (N)	Are there custody seals present on the cooler?	8.	Y (N)	Are there custody seals present on bottles?
2.	Y N (N/A)	Do custody seals on cooler appear to be tampered with?	9.	Y N (N/A)	Do custody seals on bottles appear to be tampered with?
3.	(Y) N	Were contents of cooler frisked after opening, but before unpacking?	10.	Y N (N/A)	Was sample received with proper pH[1]? (If not, make note below)
4.	(Y) N	Sample received with Chain of Custody?	11.	(Y) N	Sample received in proper containers?
5.	(Y) N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	Y N (N/A)	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6.	Y (N)	Was sample received broken?	13.	Y N (N/A)	Was Internal COC/Workshare received?
7.	(Y) N	Is sample volume sufficient for analysis?	14.	Y N (N/A)	Was pH taken by original TestAmerica lab?

[1] For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX and soils.

Notes:

There is tape covering client i.d.'s, Makes them very difficult to identify.

Corrective Action:

- ☐ Client Contact Name: _____ Informed by: _____
- ☐ Sample(s) processed "as is"
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Project Management Review: K. C. Date: 05-21-09

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN