

# **EXHIBIT H**



## ON-SITE TECHNICAL SERVICES, INC

72 Railroad Avenue  
Wellsville, New York 14895

Phone: (585) 593-1824  
Fax: (585) 593-7471

February 24, 2015

Mr. Mark Domagala  
NYSDEC – Region 8  
Division of Solid and Hazardous Materials  
6274 East Avon-Lima Road  
Avon, New York 14414

RECEIVED

FEB 26 2015

Division of Materials Management  
NYSDEC - Region 8 Avon

Re: Hakes C & D Landfill Painted Post, New York – 4<sup>th</sup> Quarter 2014 Radiological Test Results

Dear Mark:

On behalf of Hakes C & D Landfill, the purpose of this letter is to present results of the fourth quarter 2014 leachate radiological testing. Leachate sampling and analysis for radiological testing is required as detailed in section 2.6.3 of the March 2012 Environmental Monitoring Plan (EMP). The initial radiological sampling of each landfill cell and combined leachate was completed in May 2012. Therefore, the sampling required in the fourth quarter 2014 includes only landfill cells which contain gas well waste. Currently the cells containing gas well waste includes Cells 5 and 6. Leachate samples were collected from Cells 5 and 6 on November 11, 2014 and sent to ALS Environmental in Rochester, New York. A laboratory results summary table that includes minimum detectable concentration (MDC), field sampling forms and the laboratory analytical report are attached.

Please feel free to call myself at 585-593-1824 or Jerry Leone at 607-435-9996 if you have any questions.

Sincerely,

Jonathan E. Brandes, P.G.  
Senior Geologist

cc: Jerry Leone, Casella Waste Systems Inc.

Enclosures

Mark Amann, NYSDEC  
Richard Clarkson, NYSDEC  
Timothy Rice, NYSDEC

Table 1

**Fourth Quarter 2014 Leachate Radiological Analytical Results  
Hakes C and D Landfill  
Painted Post, New York**

Radionuclide	Cell 5 Leachate 11/11/2014 Act ± Unc (MDC) pCi/L	Cell 6 Leachate 11/11/2014 Act ± Unc (MDC) pCi/L
Actinium-228 (EPA 901.1)	-6.837 ± 120.320 (30.58)	10.409 ± 24.611 (48.16)
Actinium-228, Dissolved (EPA 901.1)	-26.581 ± 91.130 (102.7)	9.886 ± 30.538 (59.54)
Bismuth-212 (EPA 901.1)	-20.414 ± 78.455 (107.5)	-10.516 ± 420.640 (185.4)
Bismuth-212, Dissolved (EPA 901.1)	-25.026 ± 237.650 (325)	-11.62 ± 464.800 (94.07)
Bismuth-214 (EPA 901.1)	-0.226 ± 9.291 (15.45)	-4.361 ± 29.908 (27.92)
Bismuth-214, Dissolved (EPA 901.1)	6221.7 ± 670.090 (57.08)	-10.736 ± 429.430 (35.06)
Cesium-134 (EPA 901.1)	0.018 ± 3.795 (6.95)	-1.461 ± 6.674 (12.34)
Cesium-134, Dissolved (EPA 901.1)	18.583 ± 122.550 (202.5)	-1.931 ± 9.353 (16.93)
Cesium-137 (EPA 901.1)	0 ± 4.798 (8.73)	-0.2 ± 7.990 (6.009)
Cesium-137, Dissolved (EPA 901.1)	-23.293 ± 21.840 (35.49)	-0.221 ± 8.829 (13.7)
Lead-212 (EPA 901.1)	-1.043 ± 16.386 (12.77)	2.106 ± 11.720 (22.55)
Lead-212, Dissolved (EPA 901.1)	1205.7 ± 187.920 (162.1)	-6.937 ± 214.460 (26.04)
Lead-214 (EPA 901.1)	11.765 ± 7.949 (10.42)	-0.068 ± 11.656 (24.3)
Lead-214, Dissolved (EPA 901.1)	6818.9 ± 738.230 (73.28)	8.47 ± 15.521 (28.85)
Potassium-40 (EPA 901.1)	22.019 ± 50.369 (96.66)	109.74 ± 112.200 (206.1)
Potassium-40, Dissolved (EPA 901.1)	49.679 ± 149.290 (255.1)	79.214 ± 127.930 (249)
Radium-226 (EPA 901.1)	22.673 ± 97.209 (180.2)	116.87 ± 148.630 (264.7)
Radium-226 (EPA 903.1)	2.68 ± 1.88 (0.908)	1.4 ± 1.68 (0.946)
Radium-226, Dissolved (EPA 901.1)	37.208 ± 567.340 (947.8)	146.1 ± 127.750 (212.1)
Radium-226, Dissolved (EPA 903.1)	3.11 ± 1.57 (0.527)	1.71 ± 0.985 (0.966)
Radium-228 (EPA 901.1)	-6.837 ± 120.320 (30.58)	10.409 ± 24.611 (48.16)
Radium-228 (EPA 904.0)	3.14 ± 0.942 (1.19)	3.57 ± 1.29 (1.84)
Radium-228, Dissolved (EPA 901.1)	-26.581 ± 91.130 (102.7)	9.886 ± 30.538 (59.54)
Radium-228, Dissolved (EPA 904.0)	1.01 ± 0.513 (0.9)	2.01 ± 0.674 (0.912)
Thallium-208 (EPA 901.1)	-1.255 ± 38.779 (7.649)	-0.017 ± 7.625 (15.8)
Thallium-208, Dissolved (EPA 901.1)	-12.905 ± 21.692 (30.68)	-5.66 ± 63.906 (18.47)
Thorium-232 (EPA 901.1)	-981.84 ± 39274.000 (14230)	927.75 ± 4090.100 (7345)
Thorium-232, Dissolved (EPA 901.1)	-10170 ± 41412.000 (56830)	-811.94 ± 11917.000 (7399)
Thorium-234 (EPA 901.1)	124.82 ± 138.410 (638.6)	31.213 ± 234.030 (425.2)
Thorium-234, Dissolved (EPA 901.1)	1225.5 ± 1564.500 (2572)	-59.642 ± 772.250 (421.9)
Total Uranium (EPA 908.0)	0.334 ± 0.287 (0.45)	0.0554 ± 0.380 (0.669)
Total Uranium, Dissolved (EPA 908.0)	0.778 ± 0.592 (0.918)	-0.084 ± 0.267 (0.498)
Uranium-235 (EPA 901.1)	-12.206 ± 87.172 (46.67)	0.845 ± 29.212 (57.04)
Uranium-235, Dissolved (EPA 901.1)	-97.448 ± 219.760 (316.6)	-19.512 ± 147.980 (99.7)
Uranium-238 (EPA 901.1)	64.726 ± 90.801 (159.4)	50.771 ± 132.180 (234.5)
Uranium-238, Dissolved (EPA 901.1)	-402.38 ± 650.120 (849.1)	75.716 ± 137.740 (242.3)

**Notes:**

Act + Unc (MDC) = Activity ± Uncertainty (Minimum Detectable Concentration)

Dissolved - Indicates sample filtered with 0.45 micron filter prior to analysis.

Each of EPA 901.1, EPA 903.1, EPA 904.0 & EPA 908.0 are laboratory analysis methods.

# Groundwater Suppression and Leachate Sampling Field Form

## On-Site Technical Services, Inc.

Project: Hakes C&D Landfill, Painted Post, New York

Date: 11-11-14

Sampling Location: Cell 5 Leachate Sample ID: Leach 5-1114 Arrival Time: 1530

**Weather Conditions:**

Temp. 60 ° F  Sunny ( ) Partly Cloudy ( ) Cloudy ( ) Light Rain ( ) Hvy. Rain ( ) Snow

Wind Conditions: 5-15 mph

**Location Type**

( ) Groundwater Suppression  Leachate ( ) Secondary Leachate ( ) Surface Water/Sediment ( ) Res. Water  
( ) Other \_\_\_\_\_

**Flow and Depth Information (as appropriate)**

Depth: NA Estimated Flow: NA

Comments: Sampled from pre-filled buckets

**Field Parameters (as appropriate)**

Meter: YSI 556 (sn: 0541715A0), Hach 2100P (sn: 12410)

Field Parameters tested in: ( ) Submerged Probe ( ) Cup  
Note: Turbidity measured from a vial grab sample

Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)
<u>1530</u>	<u>6.83</u>	<u>5468</u>	<u>152</u>	<u>NA</u>	<u>18.65</u>	<u>7.5</u>

**Sample Information**

Sample Type:  Grab ( ) Composite Sample Location: ( ) Discharge Pipe ( ) Pond ( ) Ditch  Bucket

Location Description/Condition: Cell 5 rises

Sample Collection Equipment/Method: 1000 mL Jug Sample Time: 1535

Sample Description (clarity/color): cloudy / Amber color Sample Odor  (Y) or (N) Explain: Leachate odor

Other Observations/Comments: \_\_\_\_\_

Analysis Requested: RAD Number of Containers: 10

Sampling Completion: Time 1550 Date 11-11-14 Samplers TJL/ud



# Groundwater Suppression and Leachate Sampling Field Form On-Site Technical Services, Inc.

Project: Hakes C&D Landfill, Painted Post, New York

Date: 11-11-14

Sampling Location: Leach 6 Sample ID: Leach 6-1114 Arrival Time: 1517

### Weather Conditions:

Temp. 63 F  Sunny ( ) Partly Cloudy ( ) Cloudy ( ) Light Rain ( ) Hvy. Rain ( ) Snow

Wind Conditions: 5-10 mph

### Location Type

( ) Groundwater Suppression  Leachate ( ) Secondary Leachate ( ) Surface Water/Sediment ( ) Res. Water  
( ) Other \_\_\_\_\_

### Flow and Depth Information (as appropriate)

Depth: NA Estimated Flow: NA

Comments: \_\_\_\_\_

### Field Parameters (as appropriate)

Meter: YSI.556 (sn: 06E2511AP), Hach 2100P (sn: 13309)

Field Parameters tested in: ( ) Submerged Probe ( ) Cup  
Note: Turbidity measured from a vial grab sample

Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)
<u>1530</u>	<u>6.61</u>	<u>11981</u>	<u>185.0</u>	<u>NA</u>	<u>22.17</u>	<u>-163.6</u>

### Sample Information

Sample Type:  Grab ( ) Composite Sample Location:  Discharge Pipe ( ) Pond ( ) Ditch

Location Description/Condition: Cell 6 Riser Collect in bucket by Mike Hakes

Sample Collection Equipment/Method: \_\_\_\_\_ Sample Time: 1530

Sample Description (clarity/color): DK Transparent Sample Odor (Y) or (N) Explain: Leachate odor

Other Observations/Comments: \_\_\_\_\_

Analysis Requested: Rad Nuc Sample Number of Containers: 10

Sampling Completion: Time 1543 Date 11/11/14 Samplers K Dye



1565 Jefferson Rd., Bldg 300, Suite 360  
Rochester, NY 14623  
T: +1 585 288 5380  
F: +1 585 288 8475  
[www.alsglobal.com](http://www.alsglobal.com)

November 26, 2014

Mr. Joe Boyles  
Casella Waste Systems  
Hyland Facility  
6653 Herdman Road  
Angelica, NY 14709

Re: Hakes C&D Landfill – Tank Sediment  
Service Request # R1408480

Dear Mr. Boyles:

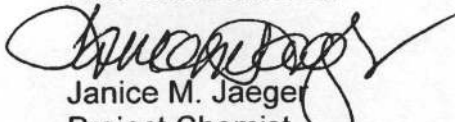
Enclosed is the analytical data report for the above referenced facility. A total of one sample was subcontracted to Pace Analytical for Radiological Testing.

This report consists of one (1) package: the sample data summary package. The summary package has been e-mailed to your attention and to On-Site. A hard copy of the summary package has also been mailed to On-Site. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,

ALS Environmental



Janice M. Jaeger  
Project Chemist

enc.

cc: Mr. Jon Brandes  
On-Site  
72 Railroad Avenue  
Wellsville, NY 14895

**Columbia Analytical Services-**  
 1565 Jefferson Road  
 Bldg 300, Suite 360  
 Rochester, NY 14623

800.695.7222  
 www.caslab.com

**Client:** Casella/On-Site  
 4376 Manning Ridge Road  
 Painted Post, NY 14870

**Project Manager:** Joe Boyles/Jon Brandes

**CHAIN of CUSTODY**

**Project:** Hakes - Leachate Tank Sediment  
**Telephone No.:** 585-593-1824  
**Fax No.:** 585-593-7471

Page 1 of 4  
 Method of Shipment: **FED EX**

Special Detection Limit / Reporting

PDF to Joe and On-Site.  
 Hard copy and EDD to On-Site.

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.	Sampling Date	Sampling Time	Total: Gamma Spec (901.1), Ra-226 (903.1), Ra-228 (904.0)	Total: Uranium (908.0)	Turn Around Time (working days)
			Soil	Water	Air	Other						
Leach SED-1014	5X					X	10-22-14	1230	X	X		

Sample Received Intact:		Temperature received:		Received by (Sign & Print Name)	
Yes	No	Ice	No ice	Received by	Date
				Received by	Time
				Received by	Time
				Received by laboratory	Time
				Received by laboratory	Time

Lab Work No.

**R1408480**  
 Casella Waste Systems  
 Hakes Leachate Tank Sediment

5







# Cooler Receipt and Preservation Check Form

R1408480

5

Casella Waste Systems  
Hakes Leachate Tank Sediment



Project/Client Casella Folder Number R14-8480

Cooler received on 10/23/14 by: DW

COURIER: ALS UPS REDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<input checked="" type="checkbox"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="checkbox"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="checkbox"/> N
4	Circle: <del>Wet Ice</del> Dry Ice Gel packs present?	<input checked="" type="checkbox"/> N

5a	Perchlorate samples have required headspace?	Y N <input checked="" type="checkbox"/> NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y N <input checked="" type="checkbox"/> NA
6	Where did the bottles originate?	ALS/ROC CLIENT
7	Soil VOA received as:	<u>Bulk</u> Encore 5035set NA

8. Temperature Readings Date: 10/23/14 Time: 1320 ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>3:0°</u>						
Correction Factor (°C)	<u>10.0°</u>						
Corrected Temp (°C)	<u>3:0°</u>						
Within 0-6°C?	<input checked="" type="checkbox"/> N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: Ice melted Poorly Packed Same Day Rule

& Client Approval to Run Samples: Standing Approval Client aware at drop-off Client notified by: \_\_\_\_\_

All samples held in storage location: R-002 by DW on 10/23/14 at 1320  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

PC Secondary Review: DW 10/24/14

Cooler Breakdown: Date: 10/24/14 Time: 1755 by: D

- Were all bottle labels complete (i.e. analysis, preservation, etc.)?  YES NO
- Did all bottle labels and tags agree with custody papers?  YES NO
- Were correct containers used for the tests indicated?  YES NO
- Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated  N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol).					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

Yes=All samples OK  
No=Samples were preserved at The lab as listed  
PM OK to Adjust:

\*\*Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 122313-13214  
Other Comments:

PC Secondary Review: DW 11/3/14 \*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



November 25, 2014

Ms. Janice Jaeger  
ALS Environmental Columbia  
1565 Jefferson Road  
Building 300  
Rochester, NY 14623

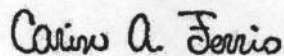
RE: Project: R1408480  
Pace Project No.: 30133050

Dear Ms. Jaeger:

Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carin Ferris  
carin.ferris@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: R1408480  
Pace Project No.: 30133050

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ACCLASS DOD-ELAP Accreditation #: ADE-1544  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California/TNI Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Guam/PADEP Certification  
Hawaii/PADEP Certification  
Idaho Certification  
Illinois/PADEP Certification  
Indiana/PADEP Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188  
Utah/TNI Certification #: PA014572014-4  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin/PADEP Certification  
Wyoming Certification #: 8TMS-Q

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: R1408480  
Pace Project No.: 30133050

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30133050001	R1408480-001	Solid	10/22/14 12:30	10/28/14 10:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: R1408480  
Pace Project No.: 30133050

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30133050001	R1408480-001	EPA 901.1	MAH	2
		HSL-300	LAL	3

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: R1408480  
Pace Project No.: 30133050

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**Method:** EPA 901.1  
**Description:** 901.1 Gamma Spec INGROWTH  
**Client:** ALS Environmental Columbia  
**Date:** November 25, 2014

**General Information:**

1 sample was analyzed for EPA 901.1. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 901.1 with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: R1408480  
Pace Project No.: 30133050

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**Method:** HSL-300  
**Description:** HSL300(AS) Actinides  
**Client:** ALS Environmental Columbia  
**Date:** November 25, 2014

**General Information:**

1 sample was analyzed for HSL-300. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

Analyte Comments:

QC Batch: RADC/22088

N2: The lab does not hold TNI accreditation for this parameter.

- BLANK (Lab ID: 813942)
  - Uranium-234
  - Uranium-235
  - Uranium-238
- R1408480-001 (Lab ID: 30133050001)
  - Uranium-234
  - Uranium-235
  - Uranium-238

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: R1408480  
Pace Project No.: 30133050

**Sample: R1408480-001**      **Lab ID: 30133050001**      Collected: 10/22/14 12:30      Received: 10/28/14 10:15      Matrix: Solid  
PWS:      Site ID:      Sample Type:

**Results reported on a "dry-weight" basis**

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	2.118 ± 0.468 (0.323) C:NA T:NA	pCi/g	11/25/14 10:27	13982-63-3	
Radium-228	EPA 901.1	1.839 ± 0.584 (0.997) C:NA T:NA	pCi/g	11/25/14 10:27	15262-20-1	
Uranium-234	HSL-300	0.076 ± 0.193 (0.443) C:NA T:90%	pCi/g	11/13/14 20:56	13966-29-5	N2
Uranium-235	HSL-300	-0.011 ± 0.161 (0.224) C:NA T:90%	pCi/g	11/13/14 20:56	15117-96-1	N2
Uranium-238	HSL-300	0.243 ± 0.211 (0.314) C:NA T:90%	pCi/g	11/13/14 20:56		N2

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: R1408480  
Pace Project No.: 30133050

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QC Batch: RADC/22088      Analysis Method: HSL-300  
QC Batch Method: HSL-300      Analysis Description: HSL300(AS) Actinides  
Associated Lab Samples: 30133050001

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METHOD BLANK: 813942      Matrix: Solid  
Associated Lab Samples: 30133050001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Uranium-234	0.042 ± 0.120 (0.285) C:NA T:111%	pCi/g	11/13/14 20:52	N2
Uranium-235	-0.024 ± 0.119 (0.221) C:NA T:111%	pCi/g	11/13/14 20:52	N2
Uranium-238	0.091 ± 0.128 (0.252) C:NA T:111%	pCi/g	11/13/14 20:52	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: R1408480  
Pace Project No.: 30133050

QC Batch: RADC/22100

Analysis Method: EPA 901.1

QC Batch Method: EPA 901.1

Analysis Description: 901.1 Gamma Spec Ingrowth

Associated Lab Samples: 30133050001

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: R1408480  
Pace Project No.: 30133050

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold TNI accreditation for this parameter.

## REPORT OF LABORATORY ANALYSIS

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# ALS Environmental Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Janice Jaeger

Project Number: R1408480  
 Project Manager: Janice Jaeger

Lab Code	Sample ID	# of Cont.	Matrix	Sample			Lab ID	Gamma Spec 901.1
				Date	Time	Time		
R1408480-001	LeachSED-1014	5	Soil	10/22/14	1230	ACZ	X	

30133050

001

Warning by HSL 300 1

Special Instructions/Comments Excel EDD	Turnaround Requirements RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 STANDARD	Report Requirements I. Results Only II. Results + QC Summaries III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data PQL/MDL/J EDD	Invoice Information PO# R1408480 Bill to
	Requested FAX Date: _____ Requested Report Date: 11/07/14	P - Test is Authorized for Prep Only	

Test is On Hold

Relinquished By: Steph 10/27/14 1800 Received By: July 10/28/14 1005 Airbill Number: \_\_\_\_\_

30133050

R1408480

**Ship To: Pace PA**  
Pace Analytical Services  
1638 Roseytown Road  
Suites 2,3, & 4  
Greensburg, PA 15601

PC AW

Date 10/24/14

SMO \_\_\_\_\_

Date \_\_\_\_\_

**Instructions:**

Ice \_\_\_\_\_  
Dry Ice \_\_\_\_\_  
No Ice \_\_\_\_\_

**Shipping:**

Overnight \_\_\_\_\_  
2nd Day \_\_\_\_\_  
Ground \_\_\_\_\_

Bill to Client Account \_\_\_\_\_

Comments:

[Empty rectangular box for comments]





Sample Condition Upon Receipt

WV

30133050

Client Name: ALS

Project # 30133050

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 553084944964

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other \_\_\_\_\_

Thermometer Used 8 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: 3.9 °C Correction Factor: 0.1 °C Final Temp: 3.8 °C

Date and initials of person examining contents: 10-28-14

Temp should be above freezing to 6°C Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>SL</u>		
All containers needing preservation have been checked:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, collform, TOC, O&G, WI-DRO (water):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>AMC</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: Janice Jaeger Date/Time: 10/29/14

Comments/ Resolution: VIA 1064114 email: Gamma spec is RABOB & RABOB

Project Manager Review: Conno Senio Date: 10/29/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)





Project Number: 30133050  
 Client Name: ALS

Item No.	Matrix Code	Glass Jar (12) (250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other
100	75	230	230																					