No Further Action Request Report
Campus Peak
Meridian Campus Development
Lacey, Washington

November 26, 2013

Prepared for

Evergreen Heights, LLC.
Olympia, Washington

LANDAU ASSOCIATES
950 Pacific Avenue, Suite 515
Tacoma, WA 98402
(253) 926-2493

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INTRODUCTION

Campus Peak, part of the Meridian Campus Development, is currently undergoing residential housing development. Campus Peak is located in northwest quarter of Section 36, Township 19 North, Range 1 West in Lacey, Washington. Campus Peak is approximately 13.38 acres in size. The location of Campus Peak is shown on Figure 1. Copies of the official plat map for Campus Peak are presented in Appendix A.

Studies conducted by Washington State Department of Ecology (Ecology) and Thurston County found elevated levels of arsenic and lead in undisturbed surface soil in northern Thurston County as a result of emissions from the Tacoma Asarco Smelter (Ecology website 2013). Meridian Campus Development Partners conducted a study at the Meridian Campus Development in early 2005 to determine if the area was affected. Study results showed slightly elevated levels of arsenic, but not lead. Since the tracts were previously undeveloped forest land and no evidence of illegal dumping was found, there was no reason to suspect other contaminants besides wind-born arsenic and lead. Landau Associates prepared a *Cleanup Action Plan* (CAP; Landau Associates 2005a) and a *Draft Sampling and Analysis Plan* (SAP; Landau Associates 2005b) for cleanup of the Meridian Campus Development. Ecology issued an opinion on the *CAP* on March 2, 2006, approving the soil mixing cleanup method for the Meridian Campus Development (Ecology 2006).

The cleanup action and final grading has recently been completed at Campus Peak. Confirmation soil sampling and stockpile sampling was conducted to confirm that arsenic and lead concentrations at Campus Peak are below Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use after final grading activities.

SITE DESCRIPTION

Campus Peak is located in a residential, upland area with mildly undulating topography directly west of the Nisqually Delta. The elevation of the site is ranges from approximately 230 to 270 feet (ft) mean sea level (MSL).

The upland area is generally underlain by recessional outwash deposits and glacial till (Drost et al. 1999). The upper soil layer corresponding to the recessional outwash deposits is mapped as Alderwood gravelly sandy loam that is up to 40-inches thick overlying glacial till (USDA website 2013). The uppermost aquifer beneath the site is the Qva aquifer. The elevation of the Qva aquifer beneath the site was estimated to be between 125 and 150 ft MSL; over 100 ft below ground surface (BGS; Drost et al. 1999).

SITE CHARACTERIZATION SAMPLING AND CLEANUP

Characterization sampling was performed for the entire Meridian Campus Development in March 2005. A total of 50 characterization soil samples were collected from 0 to 6 inches BGS throughout the Meridian Campus Development. Characterization sample results indicated arsenic concentrations throughout the development ranged from 2.8 to 40.5 milligrams per kilogram (mg/kg) and lead concentrations ranged from 5 to 146 mg/kg. Four of the characterization samples were collected from the Campus Peak area, formerly referred to as the MF1 development area. The Campus Peak characterization sample results indicate arsenic and lead concentrations ranged from 5.5 to 18 mg/kg and 7 to 33 mg/kg, respectively. A comparison of the Meridian Campus Development characterization sample results to the MTCA Method A cleanup levels for unrestricted land use indicate that 18 out of 50 samples reported arsenic concentrations above the cleanup level (20 mg/kg) while all 50 samples results were below the lead cleanup level (250 mg/kg).

Although characterization samples for Campus Peak indicate no arsenic or lead concentrations above MTCA Method A cleanup levels, the area was included in the Ecology-approved cleanup action plan for the entire Meridian Campus Development. As mentioned above, the approved cleanup plan included mixing the upper soil layer (about 6 to 8 inches BGS) from the surface and the collection of confirmation and stockpile samples to evaluate effectiveness of the cleanup action. The approved cleanup action is outlined in the *CAP* (Landau Associates 2005a).

At Campus Peak, the upper soil layer was scraped, mixed, and stockpiled. Due to limited space, the stockpiled material generated from Campus Peak and two other development areas (Campus Drive and Campus Highlands North, Division 2) were combined and stored on the Campus Highlands North Division 2 tract, as shown on Figure 2. Soil is contained in a single stockpile, 500-ft long by 230-ft wide by 5- to 8-ft high; the total volume is approximately 30,000 cubic yards (yd^3) of material to form the stockpile.

STOCKPILE SAMPLING

Upon completion of the soil removal at Campus Peak, Campus Drive, and Campus Highlands North Division 2, representative composite soil samples were collected. Based on the estimated 30,000 yd^3 stockpile volume, a total of 30 composite samples were collected. Stockpile sampling was conducted in general accordance to the procedures provided in the *SAP* (Landau Associates 2005b). The stockpile was visually segregated into 30 sections based on a grid pattern as shown on Figure 2. Four discrete samples were collected from each grid section; samples were collected from between 2 and 18 inches in depth. An equal portion of each of the four discrete samples was composited into a single sample. The

stockpile samples were submitted to TestAmerica Laboratories, Inc., located in Fife, Washington, for arsenic and lead analysis by U.S. Environmental Protection Agency (EPA) Method 6010B.

CONFIRMATION SAMPLING

Final at-grade confirmation sampling was conducted on September 13, 2013. Sampling was conducted in general accordance to procedures in the *SAP* (Landau Associates 2005b) as modified to comply with recommendations in Ecology's opinion letter (Ecology 2006) regarding the *CAP*. Confirmation soil samples were collected from 11 locations within Campus Peak to meet the minimum requirement of 10 samples per tract. Samples were collected as small-scale composites from 0 to 6 inches BGS in accordance with Ecology's request (Ecology 2006). The small-scale composite for Campus Peak consisted of three samples collected within a 10 square foot (ft^2) area and composited to generate a single sample. All samples were submitted to TestAmerica Laboratories, Inc. for arsenic and lead analysis by EPA Method 6010B. Typical soil surface was brown, silty, sandy gravel. Samples were collected in locations to provide for adequate coverage of the entire tract specifically focusing on areas that may become residential yards and areas designated for community parks or open space. The locations of all samples were recorded using a handheld Trimble® global positioning system. The final at-grade confirmation sample locations are shown on Figure 3.

SAMPLE RESULTS

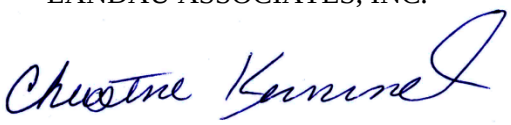
All the stockpile and the confirmation samples results indicate arsenic and lead concentrations were below the respective MTCA Method A soil cleanup levels for unrestricted land use (20 mg/kg for arsenic and 250 mg/kg for lead) as described below:

- Stockpile sample results:
  - Results from 30 stockpile samples indicate arsenic concentrations ranged from 7.7 to 13 mg/kg and lead concentrations ranged from 11 to 17 mg/kg. Based on the analytical results, the stockpiled soil will be used as topsoil to support hydroseeding for erosion control within Campus Peak. Stockpile sample results are presented on Table 1. The laboratory data package is presented in Appendix B.
- Final confirmation sample results:
  - The analytical results for 11 final at-grade confirmation samples indicate arsenic concentrations ranged from non-detect at the laboratory reporting limit to 7.3 mg/kg. Lead concentrations ranged from 1.7 to 8 mg/kg. Final confirmation sample results are provided on Table 2. The laboratory data package is presented in Appendix B.

SUMMARY

The analytical results from the stockpile and final confirmation samples collected throughout Campus Peak indicate that site cleanup activities have been completed to MTCA standards. Based on the completed cleanup action, it is our recommendation that the Campus Peak property does not contain elevated arsenic and lead concentrations above the MTCA Method A cleanup levels for unrestricted land use and we are requesting a No Further Action determination from Ecology. We trust this report provides you with the necessary information. If you have any questions or require additional information, please contact the undersigned.

LANDAU ASSOCIATES, INC.



Christine B. Kimmel, L.G.
Associate

SMM/CBK/jrc

REFERENCES

Drost, B.W., D.M. Ely, and W.E. Lum, II. 1999. *Conceptual Model and Numerical Simulation of the Ground-Water System in the Unconsolidated Sediments of Thurston County, Washington.*U.S. Geological Survey Water-Resources Investigations Report 99-4165. Prepared in cooperation with the Thurston County Health Department.

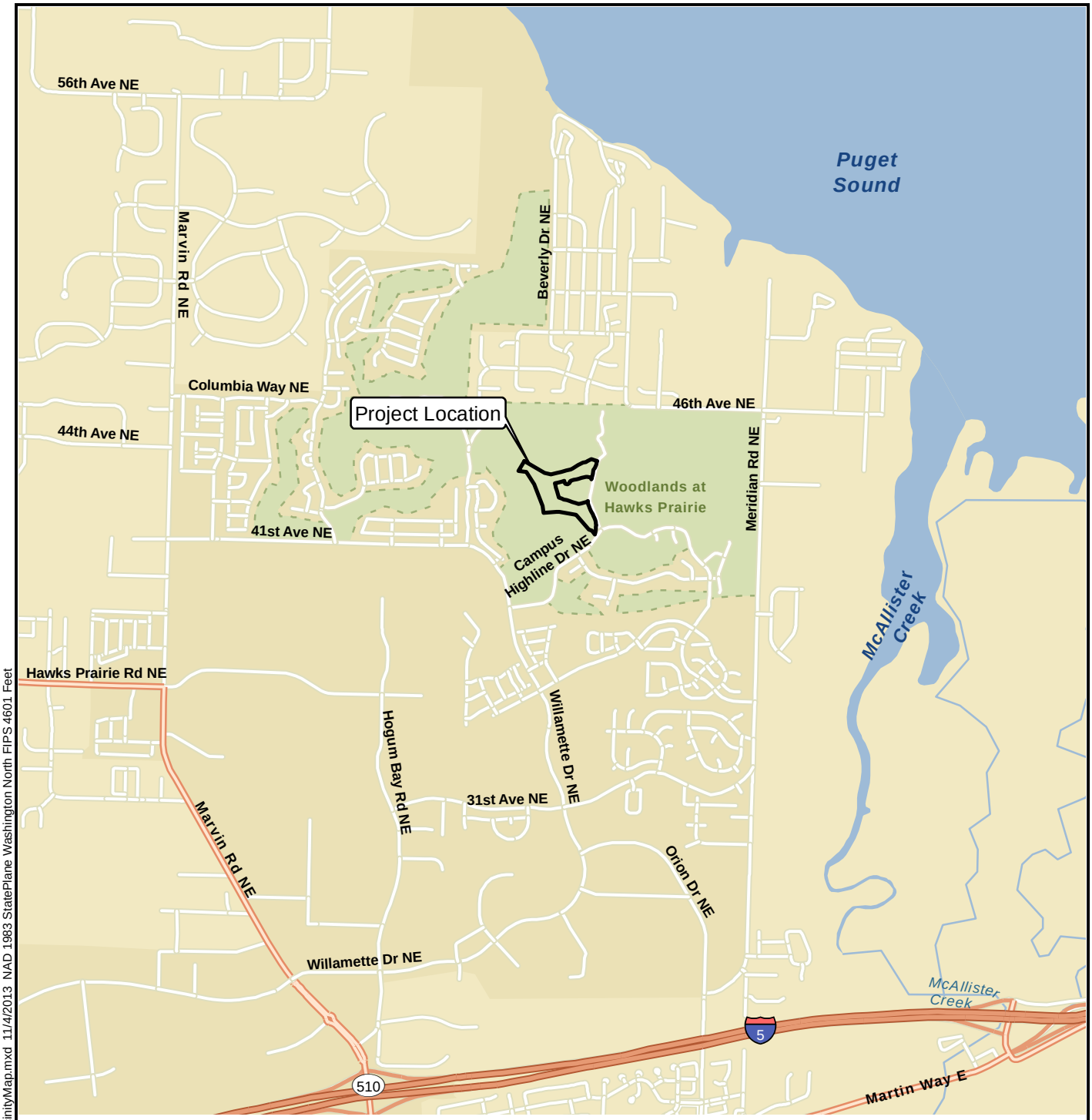
Ecology website. 2013. *Tacoma Smelter Plume*. http://www.ecy.wa.gov/programs/tcp/sites_brochure/tacoma_smelter/2011/ts-hp.htm. Washington State Department of Ecology. Accessed October 30.

Ecology. 2006. Letter: *Opinion Pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the Following Hazardous Waste Sites - Name: Meridian Campus Development; Address: Northwest Intersection of Willamette Drive NE and Campus Glen Drive NE, Thurston County, Washington; Facility/Site Number: 9945; VCP No.: SW0690.* From Joyce Mercuri, Washington State Department of Ecology, to Eric Weber, Landau Associates. January 24.

Landau Associates. 2005a. Cleanup Action Plan and Site Characterization, Meridian Campus Development, Lacey, Washington. Prepared for Meridian Campus Development Partners, LLC. June 16.

Landau Associates. 2005b. Draft Sampling and Analysis Plan, Meridian Campus, Lacey, Washington. Prepared for Meridian Campus Development Partners, LLC. February 4.

USDA website. 2013. *Web Soil Survey, Thurston County Soil Survey*. http://websoilsurvey.nrcs.usda.gov/app/. U.S. Department of Agriculture, Natural Resources Conservation Service. Accessed October 30.



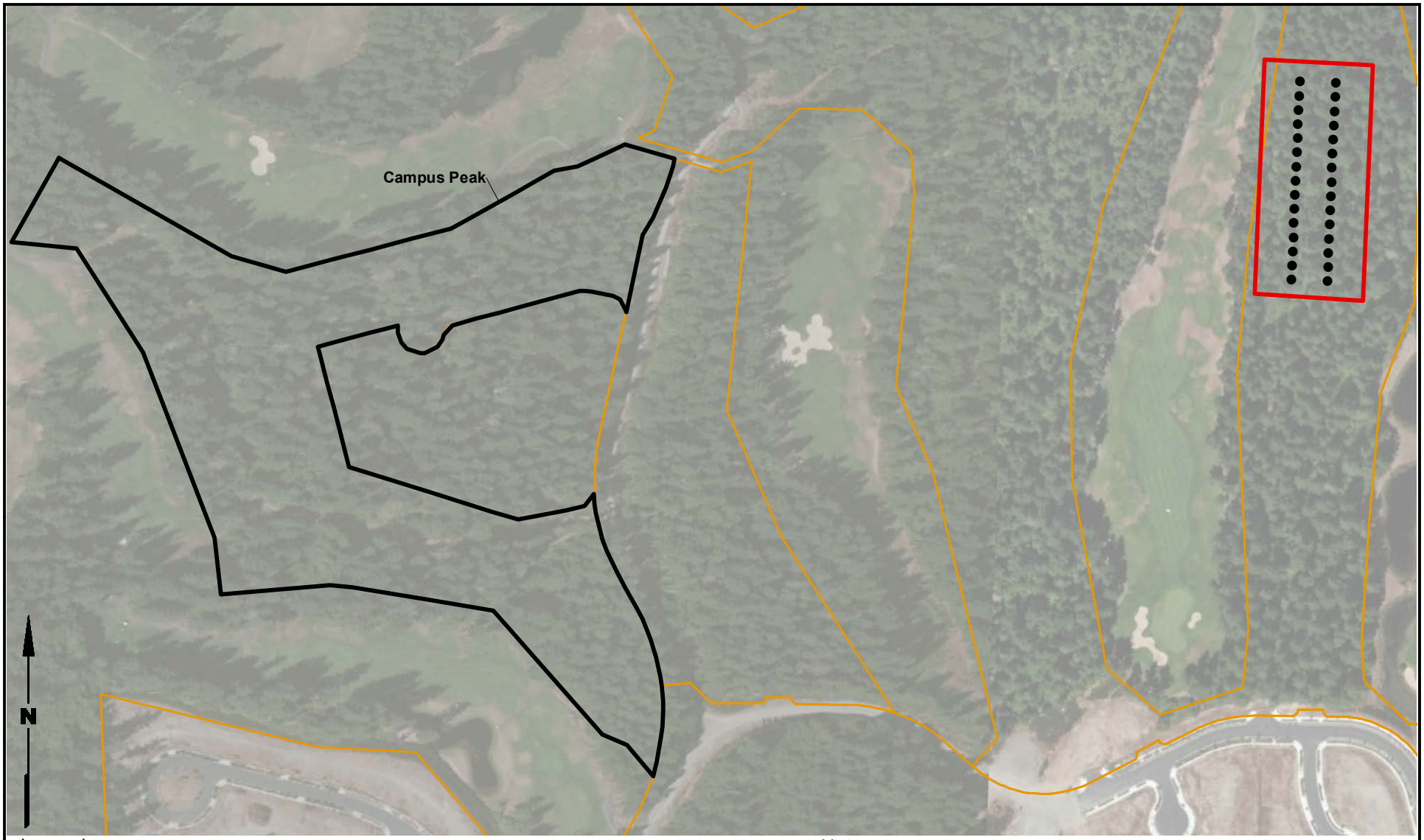
Data Sources: Thurston County GIS; Esri 2012.

G:\Projects\867\002\030031\NFA Request\Figure1VicinityMap.mxd 11/4/2013 NAD 1983 StatePlane Washington North FIPS 4601 Feet

LANDAU ASSOCIATES

Campus Peak Lacey, Washington	**Vicinity Map**	Figure 1

G:\Projects\867\002\030\031\NFA Request\Figure2StockpileSamples.mxd 11/7/2013 NAD 1983 StatePlane Washington South FIPS 4602 Feet



Legend

- Approximate Location of Stockpile Sample Location
- Campus Peak
- Stockpile Perimeter
- Parcels

0 300 600

Scale in Feet

Notes

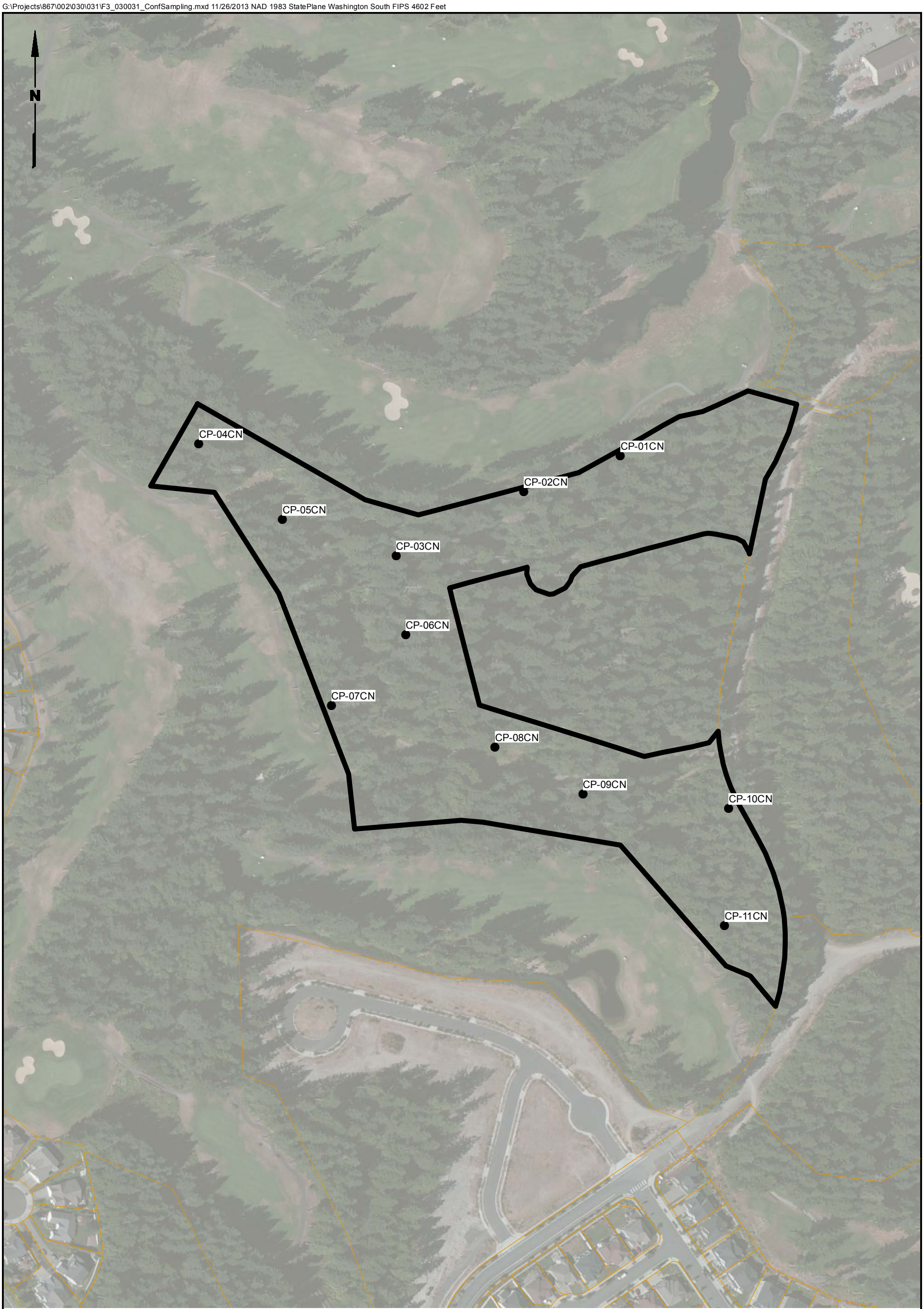
1. The 30,000 cubic ft stockpile contains material from multiple tracts, including Campus Peak.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Esri World Imagery.

LANDAU ASSOCIATES

Campus Peak Lacey, Washington	**Stockpile Samples**	Figure 2

G:\Projects\867\002\030\031\F3_030031_ConfSampling.mxd 11/26/2013 NAD 1983 StatePlane Washington South FIPS 4602 Feet



Legend

- Final Confirmation Sampling
- Subject Property

0 200 400

Scale in Feet

Data Source: Esri World Imagery

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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Campus Peak Lacey, Washington	**Final Confirmation Sampling**	Figure 3

TABLE 1
SOIL STOCKPILE SAMPLE RESULTS
CAMPUS PEAK
LACEY, WASHINGTON

Sample ID	Lab ID	Sample Date	Arsenic (mg/kg)	Lead (mg/kg)
SP-01-COMP	580-38367-27	5/7/2013	9.1	12
SP-02-COMP	580-38367-29	5/7/2013	8.6	12
SP-03-COMP	580-38367-25	5/7/2013	9.6	13
SP-04-COMP	580-38367-26	5/7/2013	8.9	13
SP-05-COMP	580-38367-24	5/7/2013	9.8	14
SP-06-COMP	580-38367-30	5/7/2013	13	13
SP-07-COMP	580-38367-23	5/7/2013	11	16
SP-08-COMP	580-38367-22	5/7/2013	11	16
SP-09-COMP	580-38367-21	5/7/2013	9.9	15
SP-10-COMP	580-38367-20	5/7/2013	10	15
SP-11-COMP	580-38367-18	5/7/2013	9.7	14
SP-12-COMP	580-38367-19	5/7/2013	9.5	14
SP-13-COMP	580-38367-16	5/7/2013	10	15
SP-14-COMP	580-38367-17	5/7/2013	9	12
SP-15-COMP	580-38367-15	5/7/2013	8.9	13
SP-16-COMP	580-38367-14	5/7/2013	9.2	13
SP-17-COMP	580-38367-13	5/7/2013	8.2	11
SP-18-COMP	580-38367-12	5/7/2013	8.6	13
SP-19-COMP	580-38367-11	5/7/2013	7.7	11
SP-20-COMP	580-38367-10	5/7/2013	12	15
SP-21-COMP	580-38367-8	5/7/2013	10	15
SP-22-COMP	580-38367-9	5/7/2013	9.9	14
SP-23-COMP	580-38367-6	5/7/2013	10	16
SP-24-COMP	580-38367-7	5/7/2013	10	14
SP-25-COMP	580-38367-4	5/7/2013	11	17
SP-26-COMP	580-38367-5	5/7/2013	10	15
SP-27-COMP	580-38367-2	5/7/2013	11	16
SP-28-COMP	580-38367-3	5/7/2013	8.5	12
SP-29-COMP	580-38367-1	5/7/2013	11	16
SP-30-COMP	580-38367-28	5/7/2013	9.8	14
		MTCA Method A Cleanup Level: Unrestricted Use	20	250

mg/kg = milligrams per kilogram

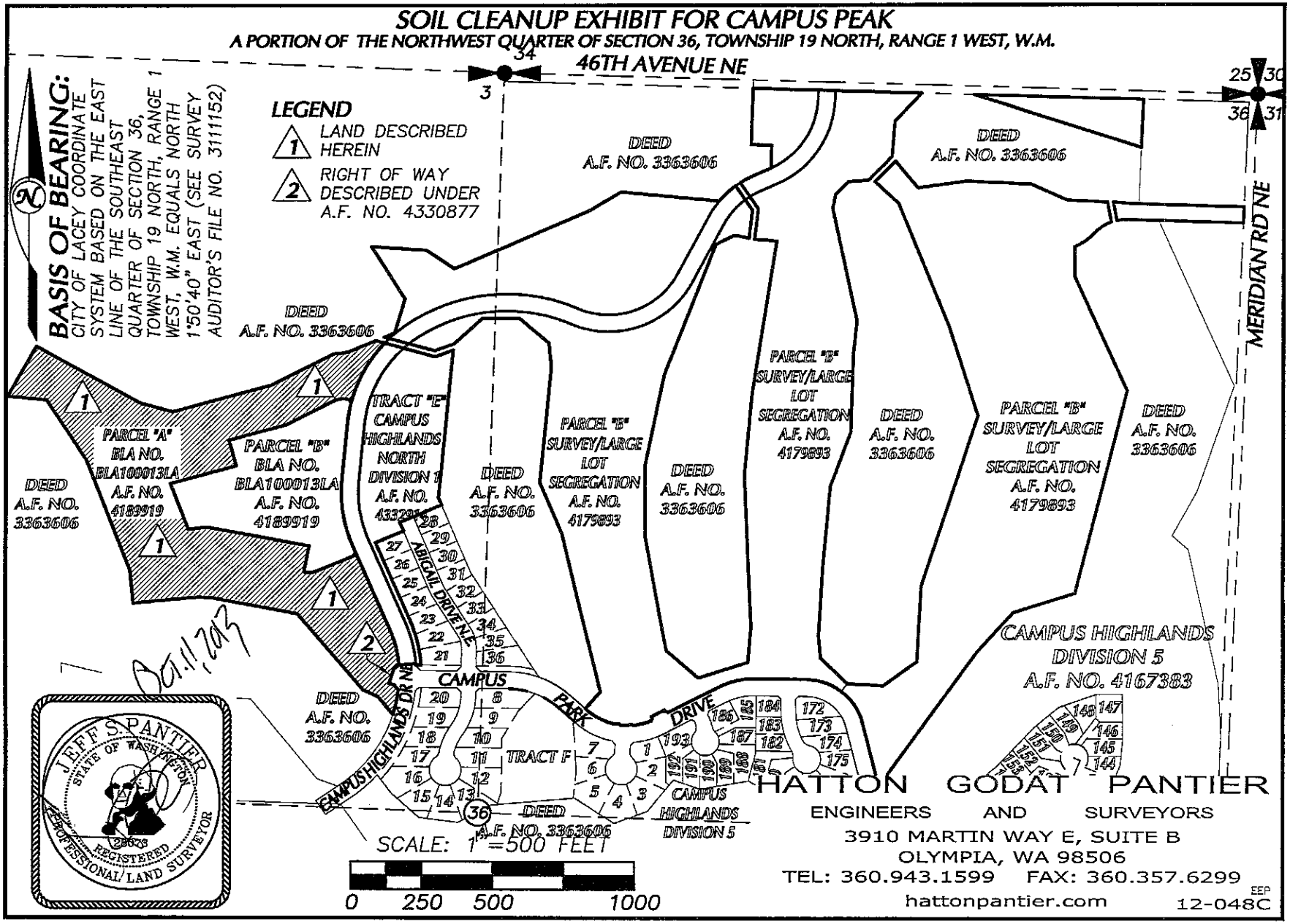
TABLE 2
FINAL SOIL CONFIRMATION SAMPLE RESULTS
CAMPUS PEAK
LACEY, WASHINGTON

Sample ID	Lab ID	Sample date	Arsenic (mg/kg)	Lead (mg/kg)
CP-01cn-6	580-40288-1	9/13/2013	3.4	3.2
CP-02cn-6	580-40288-2	9/13/2013	2.6	2.5
CP-03cn-6	580-40288-3	9/13/2013	3.5	3
CP-04cn-6	580-40288-4	9/13/2013	3.4	3
CP-05cn-6	580-40288-5	9/13/2013	4.2	4.4
CP-06cn-6	580-40288-6	9/13/2013	2.9	2.4
CP-07cn-6	580-40288-7	9/13/2013	3	3.1
CP-08cn-6	580-40288-8	9/13/2013	3.9	3.7
CP-09cn-6	580-40288-9	9/13/2013	7.3	8
CP-10cn-6	580-40288-10	9/13/2013	<0.31	1.7
CP-11cn-6	580-40288-11	9/13/2013	3.1	2.2
		MTCA Method A Cleanup Level: Unrestricted Use	20	250

mg/kg = milligrams per kilogram

APPENDIX A

Campus Peak Plat Map


SOIL CLEANUP EXHIBIT FOR CAMPUS PEAK
A PORTION OF THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 19 NORTH, RANGE 1 WEST, W.M.
46TH AVENUE NE
BASIS OF BEARING:
CITY OF LACEY COORDINATE SYSTEM BASED ON THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 19 NORTH, RANGE 1 WEST, W.M. EQUALS NORTH 1°50'40" EAST (SEE SURVEY AUDITOR'S FILE NO. 3111152)
LEGEND
1 LAND DESCRIBED HEREIN
2 RIGHT OF WAY DESCRIBED UNDER A.F. NO. 4330877
DEED A.F. NO. 3363606
PARCEL "A" BLA NO. BLA100013LA A.F. NO. 4189919
PARCEL "B" BLA NO. BLA100013LA A.F. NO. 4189919
TRACT "E" CAMPUS HIGHLANDS NORTH DIVISION 1 A.F. NO. 4332915
PARCEL "B" SURVEY/LARGE LOT SEGREGATION A.F. NO. 4179893
PARCEL "B" SURVEY/LARGE LOT SEGREGATION A.F. NO. 4179893
DEED A.F. NO. 3363606
PARCEL "B" SURVEY/LARGE LOT SEGREGATION A.F. NO. 4179893
DEED A.F. NO. 3363606
DEED A.F. NO. 3363606
DEED A.F. NO. 3363606
DEED A.F. NO. 3363606
DEED A.F. NO. 3363606
MERIDIAN RD NE
ABIGAIL DRIVE NE
CAMPUS HIGHLANDS DR NE
CAMPUS PARK DRIVE
TRACT F
CAMPUS HIGHLANDS DIVISION 5
CAMPUS HIGHLANDS DIVISION 5 A.F. NO. 4167383
DEED A.F. NO. 3363606
DEED A.F. NO. 3363606
JEFF S. PANTIER STATE OF WASHINGTON 28078 REGISTERED PROFESSIONAL LAND SURVEYOR
Oct. 1, 2013
SCALE: 1" = 500 FEET
0 250 500 1000
HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com
EEP
12-048C

APPENDIX B

Laboratory Analytical Data Packages

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-38367-1
Client Project/Site: Meridian Campus

For:
Landau & Associates, Inc.
950 Pacific Avenue, Suite 515
Tacoma, Washington 98402

Attn: Jessica Stone

Authorized for release by:
5/15/2013 2:44:41 PM

Melissa Armstrong, Project Manager I
melissa.armstrong@testamericainc.com

Table of Contents

Job ID: 580-38367-1

Laboratory: TestAmerica Seattle

Narrative

Receipt
The samples were received on 5/8/2013 8:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 5.3° C.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Landau & Associates, Inc.
Project/Site: Meridian Campus

TestAmerica Job ID: 580-38367-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-38367-1	SP-29-COMP	Solid	05/07/13 17:12	05/08/13 08:10
580-38367-2	SP-27-COMP	Solid	05/07/13 17:07	05/08/13 08:10
580-38367-3	SP-28-COMP	Solid	05/07/13 17:03	05/08/13 08:10
580-38367-4	SP-25-COMP	Solid	05/07/13 16:56	05/08/13 08:10
580-38367-5	SP-26-COMP	Solid	05/07/13 16:52	05/08/13 08:10
580-38367-6	SP-23-COMP	Solid	05/07/13 16:46	05/08/13 08:10
580-38367-7	SP-24-COMP	Solid	05/07/13 16:42	05/08/13 08:10
580-38367-8	SP-21-COMP	Solid	05/07/13 16:36	05/08/13 08:10
580-38367-9	SP-22-COMP	Solid	05/07/13 16:31	05/08/13 08:10
580-38367-10	SP-20-COMP	Solid	05/07/13 16:26	05/08/13 08:10
580-38367-11	SP-19-COMP	Solid	05/07/13 16:21	05/08/13 08:10
580-38367-12	SP-18-COMP	Solid	05/07/13 16:16	05/08/13 08:10
580-38367-13	SP-17-COMP	Solid	05/07/13 16:11	05/08/13 08:10
580-38367-14	SP-16-COMP	Solid	05/07/13 16:06	05/08/13 08:10
580-38367-15	SP-15-COMP	Solid	05/07/13 16:01	05/08/13 08:10
580-38367-16	SP-13-COMP	Solid	05/07/13 15:57	05/08/13 08:10
580-38367-17	SP-14-COMP	Solid	05/07/13 15:51	05/08/13 08:10
580-38367-18	SP-11-COMP	Solid	05/07/13 15:46	05/08/13 08:10
580-38367-19	SP-12-COMP	Solid	05/07/13 15:41	05/08/13 08:10
580-38367-20	SP-10-COMP	Solid	05/07/13 15:35	05/08/13 08:10
580-38367-21	SP-09-COMP	Solid	05/07/13 15:28	05/08/13 08:10
580-38367-22	SP-08-COMP	Solid	05/07/13 15:18	05/08/13 08:10
580-38367-23	SP-07-COMP	Solid	05/07/13 15:10	05/08/13 08:10
580-38367-24	SP-05-COMP	Solid	05/07/13 15:02	05/08/13 08:10
580-38367-25	SP-03-COMP	Solid	05/07/13 14:49	05/08/13 08:10
580-38367-26	SP-04-COMP	Solid	05/07/13 14:41	05/08/13 08:10
580-38367-27	SP-01-COMP	Solid	05/07/13 14:33	05/08/13 08:10
580-38367-28	SP-30-COMP	Solid	05/07/13 17:17	05/08/13 08:10
580-38367-29	SP-02-COMP	Solid	05/07/13 14:24	05/08/13 08:10
580-38367-30	SP-06-COMP	Solid	05/07/13 14:56	05/08/13 08:10

LANDAU ASSOCIATES

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☒ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

Chain-of-Custody Record

38367

Date 5/7/13
Page 1 of 2

Project Name ~~Lacey~~ Meridian Campus
Project No. 867002.020.021
Project Location/Event Lacey, WA : Stockpile
Sampler's Name Sierra Mott
Project Contact Jessica Stone
Send Results To Jessica Stone, Anne Halvorsen

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

	Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: Lead	Testing Parameters: Arsenic
1	SP-29-COMP	6/7/13	1712	Soil	1	X	X
2	SP-27-COMP		1707			X	X
3	SP-28-COMP		1703			X	X
4	SP-25-COMP		1656			X	X
5	SP-26-COMP		1652			X	X
6	SP-23-COMP		1646			X	X
7	SP-24-COMP		1642			X	X
8	SP-21-COMP		1636			X	X
9	SP-22-COMP		1631			X	X
10	SP-20-COMP		1626			X	X
11	SP-19-COMP		1621			X	X
12	SP-18-COMP		1616			X	X
13	SP-17-COMP		1611			X	X
14	SP-16-COMP		1606			X	X
15	SP-15-COMP		1601			X	X
16	SP-13-COMP		1557			X	X
17	SP-14-COMP		1551			X	X
18	SP-11-COMP	↓	1546	↓	↓	X	X

Observations/Comments

X Allow water samples to settle, collect aliquot from clear portion
X NWTPH-Dx - run acid wash/silica gel cleanup
___ run samples standardized to _____ product
___ Analyze for EPH if no specific product identified
VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt
___ Dissolved metal water samples field filtered

530-38367 Chain of

Special Shipment/Handling or Storage Requirements: Coolers w/ Ice

Method of Shipment: Drop-off

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: Cathy Crabb	Signature:	Signature:
Printed Name: Sierra Mott	Printed Name: Cathy Crabb	Printed Name:	Printed Name:
Company: LAI	Company: TAL Sea	Company:	Company:
Date: 6/8/13 Time: 0810	Date: 5/8/13 Time: 8:10	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/08

☐ Seattle/Edmonds (425) 776-0907
☒ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

38307

Date 5/7/13
Page 2 of 2

Project Name Meridian Campus (Campus Meridian) Project No. 167002.020.021
Project Location/Event Lacey, WA: Stockpile
Sampler's Name Sierra Mott
Project Contact Jessica Stone
Send Results To Jessica Stone, Anne Halvorsen

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

	Sample I.D.	Date	Time	Matrix	No. of Containers	Lead	Arsenic	Observations/Comments
19	SP-12-COMP	5/7/13	1541	Soil	1	X	X	
20	SP-10-COMP		1535			X	X	
21	SP-09-COMP		1528			X	X	
22	SP-08-COMP		1518			X	X	
23	SP-07-COMP		1610			X	X	
24	SP-05-COMP		1502			X	X	
25	SP-03-COMP		1449			X	X	
26	SP-04-COMP		1441			X	X	
27	SP-01-COMP		1493			X	X	
28	SP-30-COMP		1717			X	X	
29	SP-02-COMP		1424			X	X	
30	SP-06-COMP		1456			X	X	

Observations/Comments
- X Allow water samples to settle, collect aliquot from clear portion
- X NWTPH-Dx - run acid wash/silica gel cleanup
- ___ run samples standardized to _____ product
- ___ Analyze for EPH if no specific product identified
- VOC/BTEX/VPH (soil):
  - ___ non-preserved
  - ___ preserved w/methanol
  - ___ preserved w/sodium bisulfate
  - ___ Freeze upon receipt
- ___ Dissolved metal water samples field filtered
- Other _____

Cooler/TB Dig/IR cor 5.3 unc 5.8
Cooler Dsc Lagerdale @ Lab —
Wet Packs Packing bitter
w/o client drop off

Special Shipment/Handling or Storage Requirements: Coolers w/ ice

Method of Shipment: drop off

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: Cathy Crabb	Signature:	Signature:
Printed Name: Sierra Mott	Printed Name: Cathy Crabb	Printed Name:	Printed Name:
Company: LAI	Company: TAL	Company:	Company:
Date: 5/6/13 Time: 0810	Date: 5/8/13 Time: 8:10	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative Rev 5/09

5/15/2013

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-38367-1

Login Number: 38367
List Number: 1
Creator: Balles, Racheal

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present.
Sample custody seals, if present, are intact.	N/A	
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.	N/A	
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	

Method: 6010B - Metals (ICP)

Client Sample ID: SP-29-COMP — **Lab Sample ID: 580-38367-1**
Date Collected: 05/07/13 17:12 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 85.4**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		3.2	mg/Kg		05/13/13 12:02	05/13/13 19:13	1
Lead	16		1.6	mg/Kg		05/13/13 12:02	05/14/13 12:13	1

Client Sample ID: SP-27-COMP — **Lab Sample ID: 580-38367-2**
Date Collected: 05/07/13 17:07 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.6**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		2.9	mg/Kg		05/13/13 12:02	05/13/13 19:17	1
Lead	16		1.4	mg/Kg		05/13/13 12:02	05/14/13 12:16	1

Client Sample ID: SP-28-COMP — **Lab Sample ID: 580-38367-3**
Date Collected: 05/07/13 17:03 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 89.9**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.5		3.1	mg/Kg		05/13/13 12:02	05/13/13 19:21	1
Lead	12		1.5	mg/Kg		05/13/13 12:02	05/14/13 12:20	1

Client Sample ID: SP-25-COMP — **Lab Sample ID: 580-38367-4**
Date Collected: 05/07/13 16:56 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 94.0**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		3.0	mg/Kg		05/13/13 12:02	05/13/13 19:24	1
Lead	17		1.5	mg/Kg		05/13/13 12:02	05/14/13 12:24	1

Client Sample ID: SP-26-COMP — **Lab Sample ID: 580-38367-5**
Date Collected: 05/07/13 16:52 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 89.9**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		2.8	mg/Kg		05/13/13 12:02	05/13/13 19:28	1
Lead	15		1.4	mg/Kg		05/13/13 12:02	05/14/13 12:28	1

Client Sample ID: SP-23-COMP — **Lab Sample ID: 580-38367-6**
Date Collected: 05/07/13 16:46 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.0**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		3.2	mg/Kg		05/13/13 12:02	05/13/13 19:32	1
Lead	16		1.6	mg/Kg		05/13/13 12:02	05/14/13 12:32	1

Client Sample ID: SP-24-COMP — **Lab Sample ID: 580-38367-7**
Date Collected: 05/07/13 16:42 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.6**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		2.5	mg/Kg		05/13/13 12:02	05/13/13 19:36	1
Lead	14		1.2	mg/Kg		05/13/13 12:02	05/14/13 12:36	1

Client Sample ID: SP-21-COMP — **Lab Sample ID: 580-38367-8**
Date Collected: 05/07/13 16:36 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 92.6**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		3.0	mg/Kg		05/13/13 12:02	05/13/13 19:40	1
Lead	15		1.5	mg/Kg		05/13/13 12:02	05/14/13 12:40	1

Method: 6010B - Metals (ICP)

Client Sample ID: SP-22-COMP — **Lab Sample ID: 580-38367-9**
Date Collected: 05/07/13 16:31 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.3**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.9		2.8	mg/Kg		05/13/13 12:02	05/13/13 19:50	1
Lead	14		1.4	mg/Kg		05/13/13 12:02	05/14/13 12:49	1

Client Sample ID: SP-20-COMP — **Lab Sample ID: 580-38367-10**
Date Collected: 05/07/13 16:26 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.3**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		2.6	mg/Kg		05/13/13 12:02	05/13/13 19:53	1
Lead	15		1.3	mg/Kg		05/13/13 12:02	05/14/13 12:53	1

Client Sample ID: SP-19-COMP — **Lab Sample ID: 580-38367-11**
Date Collected: 05/07/13 16:21 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 89.5**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.7		2.7	mg/Kg		05/13/13 12:02	05/13/13 19:57	1
Lead	11		1.4	mg/Kg		05/13/13 12:02	05/14/13 12:57	1

Client Sample ID: SP-18-COMP — **Lab Sample ID: 580-38367-12**
Date Collected: 05/07/13 16:16 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.8**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.6		2.8	mg/Kg		05/13/13 12:02	05/13/13 20:01	1
Lead	13		1.4	mg/Kg		05/13/13 12:02	05/14/13 13:01	1

Client Sample ID: SP-17-COMP — **Lab Sample ID: 580-38367-13**
Date Collected: 05/07/13 16:11 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 93.2**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.2		2.7	mg/Kg		05/13/13 12:02	05/13/13 20:05	1
Lead	11		1.3	mg/Kg		05/13/13 12:02	05/14/13 13:05	1

Client Sample ID: SP-16-COMP — **Lab Sample ID: 580-38367-14**
Date Collected: 05/07/13 16:06 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 92.0**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.2		3.1	mg/Kg		05/13/13 12:02	05/13/13 20:09	1
Lead	13		1.5	mg/Kg		05/13/13 12:02	05/14/13 13:09	1

Client Sample ID: SP-15-COMP — **Lab Sample ID: 580-38367-15**
Date Collected: 05/07/13 16:01 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 92.2**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.9		2.9	mg/Kg		05/13/13 13:37	05/14/13 13:30	1
Lead	13		1.4	mg/Kg		05/13/13 13:37	05/14/13 13:30	1

Client Sample ID: SP-13-COMP — **Lab Sample ID: 580-38367-16**
Date Collected: 05/07/13 15:57 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.6**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		3.0	mg/Kg		05/13/13 13:37	05/14/13 13:54	1
Lead	15		1.5	mg/Kg		05/13/13 13:37	05/14/13 13:54	1

Method: 6010B - Metals (ICP)

Client Sample ID: SP-14-COMP — **Lab Sample ID: 580-38367-17**
Date Collected: 05/07/13 15:51 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 94.2**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.0		2.7	mg/Kg		05/13/13 13:37	05/14/13 13:58	1
Lead	12		1.3	mg/Kg		05/13/13 13:37	05/14/13 13:58	1

Client Sample ID: SP-11-COMP — **Lab Sample ID: 580-38367-18**
Date Collected: 05/07/13 15:46 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 90.5**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.7		2.5	mg/Kg		05/13/13 13:37	05/14/13 14:02	1
Lead	14		1.3	mg/Kg		05/13/13 13:37	05/14/13 14:02	1

Client Sample ID: SP-12-COMP — **Lab Sample ID: 580-38367-19**
Date Collected: 05/07/13 15:41 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 94.5**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.5		2.6	mg/Kg		05/13/13 13:37	05/14/13 14:06	1
Lead	14		1.4	mg/Kg		05/13/13 13:37	05/14/13 14:06	1

Client Sample ID: SP-10-COMP — **Lab Sample ID: 580-38367-20**
Date Collected: 05/07/13 15:35 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 92.7**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		3.2	mg/Kg		05/13/13 13:37	05/14/13 14:10	1
Lead	15		1.6	mg/Kg		05/13/13 13:37	05/14/13 14:10	1

Client Sample ID: SP-09-COMP — **Lab Sample ID: 580-38367-21**
Date Collected: 05/07/13 15:28 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 92.1**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.9		2.7	mg/Kg		05/13/13 13:37	05/14/13 14:13	1
Lead	15		1.3	mg/Kg		05/13/13 13:37	05/14/13 14:13	1

Client Sample ID: SP-08-COMP — **Lab Sample ID: 580-38367-22**
Date Collected: 05/07/13 15:18 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 93.7**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		3.0	mg/Kg		05/13/13 13:37	05/14/13 14:17	1
Lead	16		1.5	mg/Kg		05/13/13 13:37	05/14/13 14:17	1

Client Sample ID: SP-07-COMP — **Lab Sample ID: 580-38367-23**
Date Collected: 05/07/13 15:10 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 90.0**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		3.0	mg/Kg		05/13/13 13:37	05/14/13 14:26	1
Lead	16		1.5	mg/Kg		05/13/13 13:37	05/14/13 14:26	1

Client Sample ID: SP-05-COMP — **Lab Sample ID: 580-38367-24**
Date Collected: 05/07/13 15:02 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 89.4**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.8		2.8	mg/Kg		05/13/13 13:37	05/14/13 14:29	1
Lead	14		1.4	mg/Kg		05/13/13 13:37	05/14/13 14:29	1

Method: 6010B - Metals (ICP)

Client Sample ID: SP-03-COMP — **Lab Sample ID: 580-38367-25**
Date Collected: 05/07/13 14:49 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 91.2**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.6		3.0	mg/Kg		05/13/13 13:37	05/14/13 14:33	1
Lead	13		1.5	mg/Kg		05/13/13 13:37	05/14/13 14:33	1

Client Sample ID: SP-04-COMP — **Lab Sample ID: 580-38367-26**
Date Collected: 05/07/13 14:41 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 89.4**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.9		3.3	mg/Kg		05/13/13 13:37	05/14/13 14:36	1
Lead	13		1.6	mg/Kg		05/13/13 13:37	05/14/13 14:36	1

Client Sample ID: SP-01-COMP — **Lab Sample ID: 580-38367-27**
Date Collected: 05/07/13 14:33 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 86.7**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.1		2.2	mg/Kg		05/13/13 13:37	05/14/13 14:40	1
Lead	12		1.1	mg/Kg		05/13/13 13:37	05/14/13 14:40	1

Client Sample ID: SP-30-COMP — **Lab Sample ID: 580-38367-28**
Date Collected: 05/07/13 17:17 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 90.3**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.8		2.6	mg/Kg		05/13/13 13:37	05/14/13 14:44	1
Lead	14		1.3	mg/Kg		05/13/13 13:37	05/14/13 14:44	1

Client Sample ID: SP-02-COMP — **Lab Sample ID: 580-38367-29**
Date Collected: 05/07/13 14:24 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 84.5**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.6		2.7	mg/Kg		05/13/13 13:37	05/14/13 14:48	1
Lead	12		1.4	mg/Kg		05/13/13 13:37	05/14/13 14:48	1

Client Sample ID: SP-06-COMP — **Lab Sample ID: 580-38367-30**
Date Collected: 05/07/13 14:56 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 90.6**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		2.6	mg/Kg		05/13/13 13:37	05/14/13 14:52	1
Lead	13		1.3	mg/Kg		05/13/13 13:37	05/14/13 14:52	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-135490/21-A
Matrix: Solid
Analysis Batch: 135558

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 135490

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	mg/Kg		05/13/13 12:02	05/13/13 18:27	1
Lead	ND		1.5	mg/Kg		05/13/13 12:02	05/13/13 18:27	1

Lab Sample ID: LCS 580-135490/22-A
Matrix: Solid
Analysis Batch: 135558

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 135490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	184		mg/Kg		92	80 - 120
Lead	50.0	45.9		mg/Kg		92	80 - 120

Lab Sample ID: LCSD 580-135490/23-A
Matrix: Solid
Analysis Batch: 135558

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 135490

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	175		mg/Kg		88	80 - 120	5	20
Lead	50.0	43.6		mg/Kg		87	80 - 120	5	20

Lab Sample ID: LCSSRM 580-135490/24-A
Matrix: Solid
Analysis Batch: 135558

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 135490

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	237	229		mg/Kg		96.7	71.3 - 129.1
Lead	103	94.4		mg/Kg		91.7	70.9 - 128.2

Lab Sample ID: MB 580-135509/20-A
Matrix: Solid
Analysis Batch: 135615

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 135509

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	mg/Kg		05/13/13 13:37	05/14/13 13:18	1
Lead	ND		1.5	mg/Kg		05/13/13 13:37	05/14/13 13:18	1

Lab Sample ID: LCS 580-135509/21-A
Matrix: Solid
Analysis Batch: 135615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 135509

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	175		mg/Kg		87	80 - 120
Lead	50.0	43.3		mg/Kg		87	80 - 120

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 580-135509/22-A
Matrix: Solid
Analysis Batch: 135615

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 135509

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	181		mg/Kg		91	80 - 120	4	20
Lead	50.0	45.0		mg/Kg		90	80 - 120	4	20

Lab Sample ID: 580-38367-15 MS
Matrix: Solid
Analysis Batch: 135615

Client Sample ID: SP-15-COMP
Prep Type: Total/NA
Prep Batch: 135509

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	8.9		193	186		mg/Kg		92	80 - 120
Lead	13		48.3	55.4		mg/Kg		88	80 - 120

Lab Sample ID: 580-38367-15 MSD
Matrix: Solid
Analysis Batch: 135615

Client Sample ID: SP-15-COMP
Prep Type: Total/NA
Prep Batch: 135509

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	8.9		189	182		mg/Kg		91	80 - 120	2	20
Lead	13		47.4	54.5		mg/Kg		88	80 - 120	2	20

Lab Sample ID: 580-38367-15 DU
Matrix: Solid
Analysis Batch: 135615

Client Sample ID: SP-15-COMP
Prep Type: Total/NA
Prep Batch: 135509

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	8.9		8.89		mg/Kg		0.2	20
Lead	13		13.4		mg/Kg		4	20

Client Sample ID: SP-29-COMP
Date Collected: 05/07/13 17:12
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-1
Matrix: Solid
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:13	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:13	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-27-COMP
Date Collected: 05/07/13 17:07
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-2
Matrix: Solid
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:17	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:16	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-28-COMP
Date Collected: 05/07/13 17:03
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-3
Matrix: Solid
Percent Solids: 89.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:21	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:20	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-25-COMP
Date Collected: 05/07/13 16:56
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-4
Matrix: Solid
Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:24	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:24	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Meridian Campus

TestAmerica Job ID: 580-38367-1

Client Sample ID: SP-26-COMP

Lab Sample ID: 580-38367-5
Matrix: Solid
Percent Solids: 89.9

Date Collected: 05/07/13 16:52
Date Received: 05/08/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:28	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:28	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-23-COMP

Lab Sample ID: 580-38367-6
Matrix: Solid
Percent Solids: 91.0

Date Collected: 05/07/13 16:46
Date Received: 05/08/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:32	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:32	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-24-COMP

Lab Sample ID: 580-38367-7
Matrix: Solid
Percent Solids: 91.6

Date Collected: 05/07/13 16:42
Date Received: 05/08/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:36	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:36	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-21-COMP

Lab Sample ID: 580-38367-8
Matrix: Solid
Percent Solids: 92.6

Date Collected: 05/07/13 16:36
Date Received: 05/08/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:40	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:40	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-22-COMP — **Lab Sample ID: 580-38367-9**
Date Collected: 05/07/13 16:31 — Matrix: Solid
Date Received: 05/08/13 08:10 — Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:50	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:49	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-20-COMP — **Lab Sample ID: 580-38367-10**
Date Collected: 05/07/13 16:26 — Matrix: Solid
Date Received: 05/08/13 08:10 — Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:53	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:53	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-19-COMP — **Lab Sample ID: 580-38367-11**
Date Collected: 05/07/13 16:21 — Matrix: Solid
Date Received: 05/08/13 08:10 — Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 19:57	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 12:57	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-18-COMP — **Lab Sample ID: 580-38367-12**
Date Collected: 05/07/13 16:16 — Matrix: Solid
Date Received: 05/08/13 08:10 — Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 20:01	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 13:01	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-17-COMP
Date Collected: 05/07/13 16:11
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-13
Matrix: Solid
Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 20:05	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 13:05	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-16-COMP
Date Collected: 05/07/13 16:06
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-14
Matrix: Solid
Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135558	05/13/13 20:09	HM	TAL SEA
Total/NA	Prep	3050B			135490	05/13/13 12:02	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135598	05/14/13 13:09	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-15-COMP
Date Collected: 05/07/13 16:01
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-15
Matrix: Solid
Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 13:30	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-13-COMP
Date Collected: 05/07/13 15:57
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-16
Matrix: Solid
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 13:54	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-14-COMP
Date Collected: 05/07/13 15:51
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-17
Matrix: Solid
Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 13:58	HM	TAL SEA

Client Sample ID: SP-14-COMP — **Lab Sample ID: 580-38367-17**
Date Collected: 05/07/13 15:51 — **Matrix: Solid**
Date Received: 05/08/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-11-COMP — **Lab Sample ID: 580-38367-18**
Date Collected: 05/07/13 15:46 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 90.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:02	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-12-COMP — **Lab Sample ID: 580-38367-19**
Date Collected: 05/07/13 15:41 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 94.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:06	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-10-COMP — **Lab Sample ID: 580-38367-20**
Date Collected: 05/07/13 15:35 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 92.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:10	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-09-COMP — **Lab Sample ID: 580-38367-21**
Date Collected: 05/07/13 15:28 — **Matrix: Solid**
Date Received: 05/08/13 08:10 — **Percent Solids: 92.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:13	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-08-COMP
Date Collected: 05/07/13 15:18
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-22
Matrix: Solid
Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:17	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-07-COMP
Date Collected: 05/07/13 15:10
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-23
Matrix: Solid
Percent Solids: 90.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:26	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-05-COMP
Date Collected: 05/07/13 15:02
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-24
Matrix: Solid
Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:29	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-03-COMP
Date Collected: 05/07/13 14:49
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-25
Matrix: Solid
Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:33	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-04-COMP
Date Collected: 05/07/13 14:41
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-26
Matrix: Solid
Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:36	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Meridian Campus

TestAmerica Job ID: 580-38367-1

Client Sample ID: SP-01-COMP

Date Collected: 05/07/13 14:33
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-27
Matrix: Solid
Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:40	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-30-COMP

Date Collected: 05/07/13 17:17
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-28
Matrix: Solid
Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:44	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-02-COMP

Date Collected: 05/07/13 14:24
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-29
Matrix: Solid
Percent Solids: 84.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:48	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Client Sample ID: SP-06-COMP

Date Collected: 05/07/13 14:56
Date Received: 05/08/13 08:10

Lab Sample ID: 580-38367-30
Matrix: Solid
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			135509	05/13/13 13:37	PAB	TAL SEA
Total/NA	Analysis	6010B		1	135615	05/14/13 14:52	HM	TAL SEA
Total/NA	Analysis	D 2216		1	135408	05/10/13 12:02	RD	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Landau & Associates, Inc.
Project/Site: Meridian Campus

TestAmerica Job ID: 580-38367-1

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-14
California	NELAP	9	01115CA	01-31-14
L-A-B	DoD ELAP		L2236	06-19-13
L-A-B	ISO/IEC 17025		L2236	06-19-13
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-13
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-40288-1
Client Project/Site: Campus Peak

For:
Landau & Associates, Inc.
950 Pacific Avenue, Suite 515
Tacoma, Washington 98402

Attn: Jessica Stone

Kristine D. Allen

Authorized for release by:
10/1/2013 3:32:23 PM
Kristine Allen, Project Manager I
kristine.allen@testamericainc.com

Designee for

Melissa Armstrong, Project Manager I
(253)922-2310 x135
melissa.armstrong@testamericainc.com

Table of Contents

Case Narrative

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Job ID: 580-40288-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 9/13/2013 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 6.0º C.

Metals

No analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-40288-1	CP-11cn-6	Solid	09/13/13 11:08	09/13/13 15:00
580-40288-2	CP-05cn-6	Solid	09/13/13 10:10	09/13/13 15:00
580-40288-3	CP-10cn-6	Solid	09/13/13 11:03	09/13/13 15:00
580-40288-4	CP-09cn-6	Solid	09/13/13 10:50	09/13/13 15:00
580-40288-5	CP-07cn-6	Solid	09/13/13 10:32	09/13/13 15:00
580-40288-6	CP-03cn-6	Solid	09/13/13 09:51	09/13/13 15:00
580-40288-7	CP-04cn-6	Solid	09/13/13 10:03	09/13/13 15:00
580-40288-8	CP-06cn-6	Solid	09/13/13 10:24	09/13/13 15:00
580-40288-9	CP-08cn-6	Solid	09/13/13 10:43	09/13/13 15:00
580-40288-10	CP-01cn-6	Solid	09/13/13 09:40	09/13/13 15:00
580-40288-11	CP-02cn-6	Solid	09/13/13 09:29	09/13/13 15:00

40288

☐ Seattle/Edmonds (425) 778-0907
☒ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 9/13/13

Page 1 of 1

10/1/2013

Project Name Campus Peak Project No. 867002.030.031

Project Location/Event Lacey/Confirmation Sampling

Sampler's Name Brittany Gordon/Kristin Hooper

Project Contact Jessica Stone, Christine Kummell

Send Results To Jessica Stone, Christine Kummell

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

	Sample I.D.	Date	Time	Matrix	No. of Containers	PB	NS	Observations/Comments
1	CP-11cn-6	9/13/13	1108	Soil	1	X	X	
2	CP-05cn-6		1010			X	X	
3	CP-10cn-6		1103			X	X	
4	CP-09cn-6		1050			X	X	
5	CP-07cn-6		1032			X	X	
6	CP-03cn-6		0951			X	X	
7	CP-04cn-6		1003			X	X	
8	CP-06cn-6		1024			X	X	
9	CP-08cn-6		1043			X	X	
10	CP-01cn-6		0940			X	X	
11	CP-02cn-6		0929			X	X	

Cooler/TB Dig/IR cor 6.0 unc 5.9
Cooler Dsc Yellow tape @ Lab
Wet Packs Packing bubble
w/o client drop

_X_ Allow water samples to settle, collect aliquot from clear portion

_X_ NWTPH-Dx - run acid wash/silica gel cleanup

___ run samples standardized to _____ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

___ Dissolved metal water samples field filtered

Other
___
___
___
___

580-40288 Chain of Custody

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Brittany Gordon	Signature: Cathy Cragle	Signature:	Signature:
Printed Name: BRITTANY GORDON	Printed Name: Cathy Cragle	Printed Name:	Printed Name:
Company: LAI	Company: TA-Sea	Company:	Company:
Date: 9/13/13 Time: 0300	Date: 9/13/13 Time: 15:00	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/09

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-40288-1

Login Number: 40288

List Source: TestAmerica Seattle

List Number: 1

Creator: Riley, Nicole M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
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.	N/A	
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	

Method: 6010B - Metals (ICP)

Client Sample ID: CP-11cn-6 — **Lab Sample ID: 580-40288-1**
Date Collected: 09/13/13 11:08 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 94.3**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		2.4	mg/Kg	☼	09/29/13 17:30	09/30/13 16:06	1
Lead	2.2		1.2	mg/Kg	☼	09/29/13 17:30	09/30/13 16:06	1

Client Sample ID: CP-05cn-6 — **Lab Sample ID: 580-40288-2**
Date Collected: 09/13/13 10:10 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 90.1**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		2.9	mg/Kg	☼	09/29/13 17:30	09/30/13 16:30	1
Lead	4.4		1.4	mg/Kg	☼	09/29/13 17:30	09/30/13 16:30	1

Client Sample ID: CP-10cn-6 — **Lab Sample ID: 580-40288-3**
Date Collected: 09/13/13 11:03 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 96.9**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.9	mg/Kg	☼	09/29/13 17:30	09/30/13 16:33	1
Lead	1.7		1.5	mg/Kg	☼	09/29/13 17:30	09/30/13 16:33	1

Client Sample ID: CP-09cn-6 — **Lab Sample ID: 580-40288-4**
Date Collected: 09/13/13 10:50 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 87.2**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.3		2.7	mg/Kg	☼	09/29/13 17:30	09/30/13 16:37	1
Lead	8.0		1.3	mg/Kg	☼	09/29/13 17:30	09/30/13 16:37	1

Client Sample ID: CP-07cn-6 — **Lab Sample ID: 580-40288-5**
Date Collected: 09/13/13 10:32 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 86.0**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		2.3	mg/Kg	☼	09/29/13 17:30	09/30/13 16:41	1
Lead	3.1		1.2	mg/Kg	☼	09/29/13 17:30	09/30/13 16:41	1

Client Sample ID: CP-03cn-6 — **Lab Sample ID: 580-40288-6**
Date Collected: 09/13/13 09:51 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 92.3**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.5		2.1	mg/Kg	☼	09/29/13 17:30	09/30/13 16:44	1
Lead	3.0		1.1	mg/Kg	☼	09/29/13 17:30	09/30/13 16:44	1

Client Sample ID: CP-04cn-6 — **Lab Sample ID: 580-40288-7**
Date Collected: 09/13/13 10:03 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 92.1**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		2.3	mg/Kg	☼	09/29/13 17:30	09/30/13 16:48	1
Lead	3.0		1.1	mg/Kg	☼	09/29/13 17:30	09/30/13 16:48	1

Client Sample ID: CP-06cn-6 — **Lab Sample ID: 580-40288-8**
Date Collected: 09/13/13 10:24 — **Matrix: Solid**
Date Received: 09/13/13 15:00 — **Percent Solids: 93.3**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		2.0	mg/Kg	☼	09/29/13 17:30	09/30/13 16:52	1
Lead	2.4		0.99	mg/Kg	☼	09/29/13 17:30	09/30/13 16:52	1

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Method: 6010B - Metals (ICP)

Client Sample ID: CP-08cn-6
Date Collected: 09/13/13 10:43
Date Received: 09/13/13 15:00

Lab Sample ID: 580-40288-9
Matrix: Solid
Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.9		2.8	mg/Kg	☼	09/29/13 17:30	09/30/13 16:56	1
Lead	3.7		1.4	mg/Kg	☼	09/29/13 17:30	09/30/13 16:56	1

Client Sample ID: CP-01cn-6
Date Collected: 09/13/13 09:40
Date Received: 09/13/13 15:00

Lab Sample ID: 580-40288-10
Matrix: Solid
Percent Solids: 94.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		2.3	mg/Kg	☼	09/29/13 17:30	09/30/13 16:59	1
Lead	3.2		1.2	mg/Kg	☼	09/29/13 17:30	09/30/13 16:59	1

Client Sample ID: CP-02cn-6
Date Collected: 09/13/13 09:29
Date Received: 09/13/13 15:00

Lab Sample ID: 580-40288-11
Matrix: Solid
Percent Solids: 90.4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		2.3	mg/Kg	☼	09/29/13 17:30	09/30/13 17:03	1
Lead	2.5		1.1	mg/Kg	☼	09/29/13 17:30	09/30/13 17:03	1

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-146101/16-A
Matrix: Solid
Analysis Batch: 146205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 146101

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	mg/Kg		09/29/13 17:30	09/30/13 15:52	1
Lead	ND		1.5	mg/Kg		09/29/13 17:30	09/30/13 15:52	1

Lab Sample ID: LCS 580-146101/17-A
Matrix: Solid
Analysis Batch: 146205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 146101

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	191		mg/Kg		96	80 - 120
Lead	50.0	49.8		mg/Kg		100	80 - 120

Lab Sample ID: LCSD 580-146101/18-A
Matrix: Solid
Analysis Batch: 146205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 146101

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	190		mg/Kg		95	80 - 120	1	20
Lead	50.0	49.4		mg/Kg		99	80 - 120	1	20

Lab Sample ID: LCSSRM 580-146101/19-A
Matrix: Solid
Analysis Batch: 146205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 146101

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	237	227		mg/Kg		95.8	71.3 - 129.1
Lead	103	105		mg/Kg		101.5	70.9 - 128.2

Lab Sample ID: 580-40288-1 MS
Matrix: Solid
Analysis Batch: 146205

Client Sample ID: CP-11cn-6
Prep Type: Total/NA
Prep Batch: 146101

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	3.1		182	179		mg/Kg	☼	97	80 - 120
Lead	2.2		45.5	46.7		mg/Kg	☼	98	80 - 120

Lab Sample ID: 580-40288-1 MSD
Matrix: Solid
Analysis Batch: 146205

Client Sample ID: CP-11cn-6
Prep Type: Total/NA
Prep Batch: 146101

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	3.1		179	172		mg/Kg	☼	94	80 - 120	4	20
Lead	2.2		44.7	44.9		mg/Kg	☼	96	80 - 120	4	20

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 580-40288-1 DU
Matrix: Solid
Analysis Batch: 146205

Client Sample ID: CP-11cn-6
Prep Type: Total/NA
Prep Batch: 146101

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	3.1			3.08		mg/Kg	☼			0.8	20
Lead	2.2			2.20		mg/Kg	☼			1	20

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Client Sample ID: CP-11cn-6
Lab Sample ID: 580-40288-1
Date Collected: 09/13/13 11:08
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:06	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-05cn-6
Lab Sample ID: 580-40288-2
Date Collected: 09/13/13 10:10
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:30	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-10cn-6
Lab Sample ID: 580-40288-3
Date Collected: 09/13/13 11:03
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:33	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-09cn-6
Lab Sample ID: 580-40288-4
Date Collected: 09/13/13 10:50
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:37	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-07cn-6
Lab Sample ID: 580-40288-5
Date Collected: 09/13/13 10:32
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 86.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:41	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Client Sample ID: CP-03cn-6

Lab Sample ID: 580-40288-6
Date Collected: 09/13/13 09:51
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:44	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-04cn-6

Lab Sample ID: 580-40288-7
Date Collected: 09/13/13 10:03
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:48	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-06cn-6

Lab Sample ID: 580-40288-8
Date Collected: 09/13/13 10:24
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 93.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:52	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-08cn-6

Lab Sample ID: 580-40288-9
Date Collected: 09/13/13 10:43
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:56	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Client Sample ID: CP-01cn-6

Lab Sample ID: 580-40288-10
Date Collected: 09/13/13 09:40
Matrix: Solid
Date Received: 09/13/13 15:00
Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 16:59	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Client Sample ID: CP-02cn-6
Date Collected: 09/13/13 09:29
Date Received: 09/13/13 15:00

Lab Sample ID: 580-40288-11
Matrix: Solid
Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			146101	09/29/13 17:30	PAB	TAL SEA
Total/NA	Analysis	6010B		1	146205	09/30/13 17:03	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	145250	09/18/13 12:52	JJP	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Landau & Associates, Inc.
Project/Site: Campus Peak

TestAmerica Job ID: 580-40288-1

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-14
California	NELAP	9	01115CA	01-31-14
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-13
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-14