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

June 24, 2014

Prepared for

Rob Rice Homes
Olympia, Washington

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

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INTRODUCTION

Campus Fairways, part of the Meridian Campus Development, is located in portions of Section 36, Township 19 North, Range 01 West in Lacey, Washington. Campus Fairways is a proposed development and encompasses approximately 22 acres. One stormwater facility is located to the northwest of proposed residential lots comprising Campus Fairways and is considered part of Campus Fairways. The location of Campus Fairways including the stormwater facility is shown on Figure 1 and copies of the official plat maps and legal description are provided 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 2014). Meridian Campus Development Partners conducted a study at the Meridian Campus Development in early 2005 to determine if the area was potentially affected by the Asarco Smelter. Study results indicated slightly elevated levels of arsenic, but not lead at the development. 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 Fairways. Confirmation soil sampling and stockpile sampling was conducted to confirm that arsenic and lead concentrations at Campus Fairways are below Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use after final grading activities.

SITE DESCRIPTION

Campus Fairways is located in a residential, upland area with mildly undulating topography directly west of the Nisqually Delta. The elevation of the site ranges from approximately 220 to 275 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 2014). The uppermost aquifer beneath the site is the Qva aquifer. The elevation of the groundwater in 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 METHOD

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 50.75 milligrams per kilogram (mg/kg) and lead concentrations ranged from 5 to 146 mg/kg. 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 sample results reported arsenic concentrations above the cleanup level (20 mg/kg) while all 50 sample results were below the lead cleanup level (250 mg/kg). Two characterization samples were collected within the Campus Fairways area of the development (SF1-4CZ-6 and SF1-5CZ-6) with arsenic concentrations ranging from 12.6 to 16.5 mg/kg and lead concentrations ranging from 26 to 43 mg/kg, which are below MTCA Method A cleanup levels.

The approved cleanup plan for the entire Meridian Campus Development 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). In accordance with the CAP, at Campus Fairways, the upper soil layer was scraped, mixed, and stockpiled. Soil was contained in a single stockpile, with a total volume of approximately 30,000 cubic yards (yd^3).

STOCKPILE SAMPLING

Upon completion of the soil removal at Campus Fairways, representative composite soil samples were collected from the stockpile. Based on the estimated 30,000 yd^3 stockpile volume, a total of 20 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 20 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. (TestAmerica), 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 January 27, 2014 and April 18, 2014. 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 52 locations within Campus Fairways and were collected as small-scale composites from 0 to 6 inches BGS in accordance with Ecology's request (Ecology 2006). All samples were submitted to TestAmerica for arsenic and lead analysis by EPA Method 6010B. Typical soil surface was brown, fine to coarse sand with gravel. The locations of all samples were recorded using a handheld Trimble® GPS. The final at-grade confirmation sample locations are shown on Figure 3.

Final at-grade confirmation sampling was conducted at a stormwater facility associated with Campus Fairways. Two soil samples were collected from the proposed stormwater facility October 10, 2013. The locations of the confirmation sample locations are shown on Figure 3.

SAMPLE RESULTS

All the stockpile and the final at-grade confirmation sample 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:

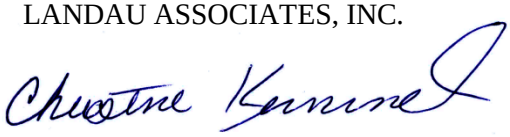
- Stockpile sample results:
  - Results from 20 stockpile samples indicate arsenic concentrations ranged from 7.6 to 15 mg/kg and lead concentrations ranged from 11 to 16 mg/kg. Based on the analytical results, the stockpiled soil will be used as topsoil to support hydroseeding for erosion control within areas of the development. 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 52 final at-grade confirmation samples indicate arsenic concentrations ranged from non-detect at the laboratory reporting limit to 12 mg/kg. Lead concentrations ranged from 2.0 to 19 mg/kg. Final confirmation sample results are provided on Table 2. The laboratory data package is presented in Appendix B.
  - The analytical results for the two final at-grade confirmation samples within the stormwater cell indicate arsenic concentrations were below the laboratory reporting limit and lead concentrations ranged from 1.8 to 2.0 mg/kg, which are below the MTCA Method A cleanup level for unrestricted land use (250 mg/kg).

SUMMARY

The analytical results from the stockpile and final confirmation samples collected throughout Campus Fairways indicate that site cleanup activities have been completed to MTCA standards. Based on the completed cleanup action, it is our recommendation that the Campus Fairways 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

SDS/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.

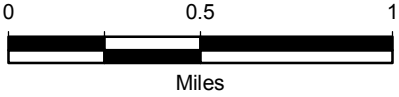
Ecology website. 2014. *Tacoma Smelter Plume*. http://www.ecy.wa.gov/programs/tcp/sites_brochure/tacoma_smelter/2011/ts-hp.htm. Washington State Department of Ecology. Accessed May 15.

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. 2014. *Web Soil Survey, Thurston County Soil Survey*. http://websoilsurvey.nrcs.usda.gov/app/. U.S. Department of Agriculture, Natural Resources Conservation Service. Accessed May 15.

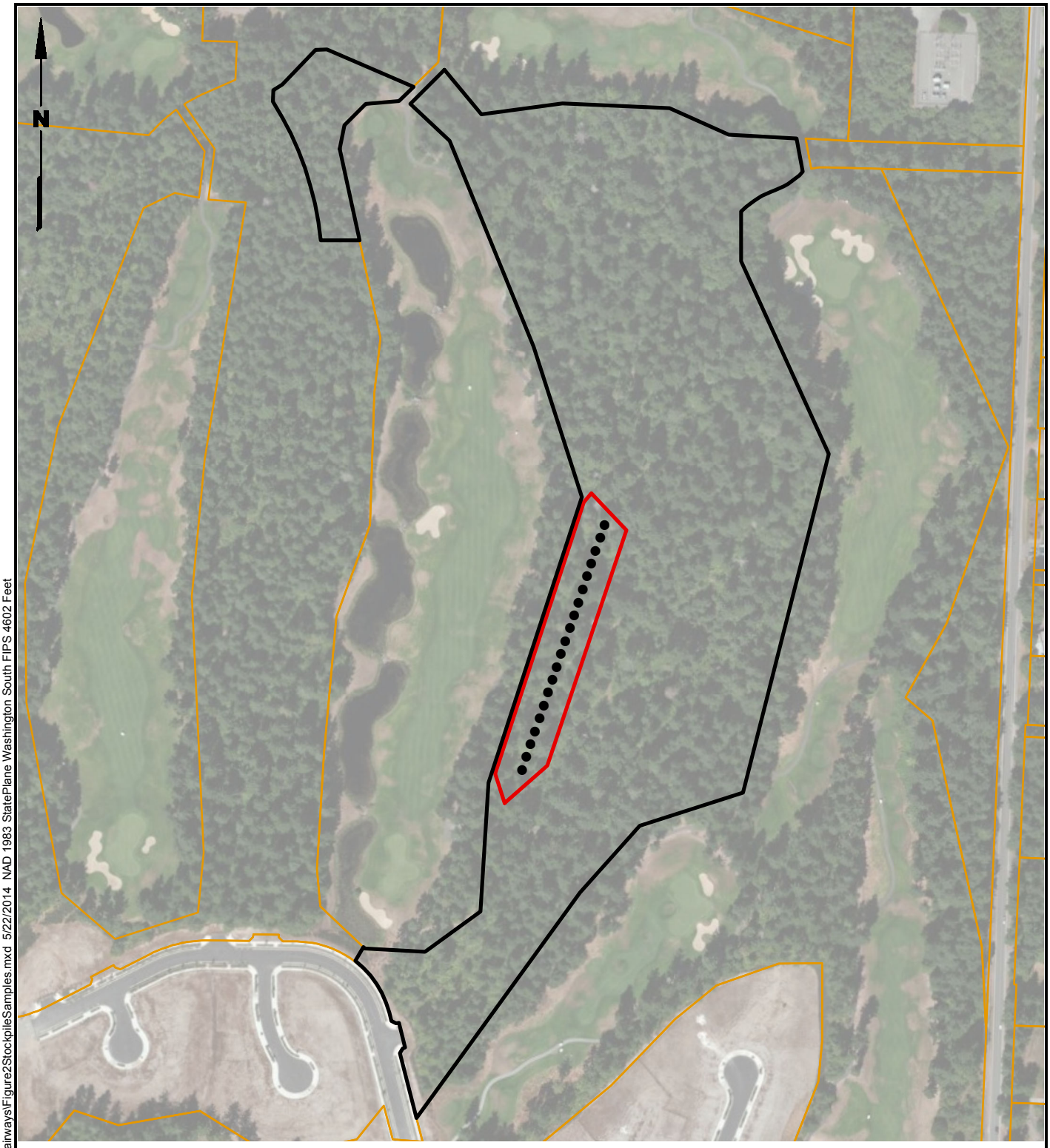


Data Sources: Thurston County GIS; Esri 2012.

G:\Projects\867\002\040\042\Campus Fairways\Figure1VicinityMap.mxd 5/22/2014 NAD 1983 StatePlane Washington North FIPS 4601 Feet

LANDAU ASSOCIATES

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



Legend

- Approximate Location of Stockpile Sample Location
- Subject Property
- Stockpile Perimeter
- Parcels

Note

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

0 300 600

Scale in Feet

Data Sources: Thurston County GIS; Esri World Imagery.

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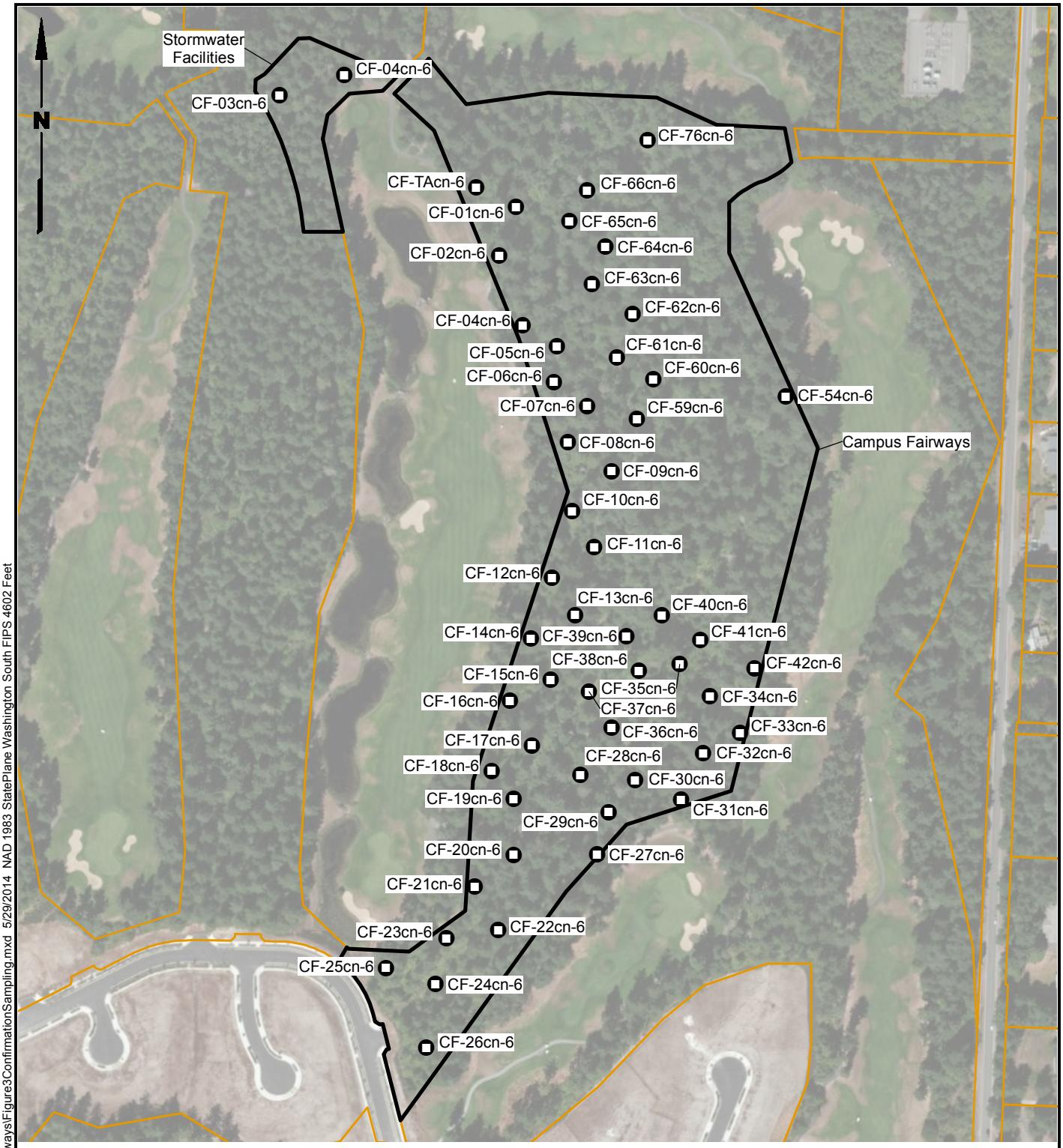
LANDAU ASSOCIATES

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



Legend

- Confirmation Sampling Location
- Subject Property
- Parcels

Note

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

0 300 600

Scale in Feet

Data Sources: Thurston County GIS; Esri World Imagery.

G:\Projects\867\002\040\042\Campus Fairways\Figure3ConfirmationSampling.mxd 5/29/2014 NAD 1983 StatePlane Washington South FIPS 4602 Feet

LANDAU ASSOCIATES

Campus Fairways Lacey, Washington	**Confirmation Sample Locations**	Figure 3

TABLE 1
STOCKPILE SAMPLING RESULTS
CAMPUS FAIRWAYS
LACEY, WASHINGTON

Sample ID	Sample date	Arsenic (mg/kg)	Lead (mg/kg)
CF-SP-01-comp	9/30/2013	11	14
CF-SP-02-comp	9/30/2013	11	16
CF-SP-03-comp	9/30/2013	10	14
CF-SP-04-comp	9/30/2013	9.0	15
CF-SP-05-comp	9/30/2013	12	16
CF-SP-06-comp	9/30/2013	11	16
CF-SP-07-comp	9/30/2013	11	14
CF-SP-08-comp	9/30/2013	11	15
CF-SP-09-comp	9/30/2013	12	15
CF-SP-10-comp	9/30/2013	10	14
CF-SP-11-comp	9/30/2013	15	14
CF-SP-12-comp	9/30/2013	11	16
CF-SP-13-comp	9/30/2013	10	14
CF-SP-14-comp	9/30/2013	8.2	12
CF-SP-15-comp	9/30/2013	7.6	11
CF-SP-16-comp	9/30/2013	8.4	12
CF-SP-17-comp	9/30/2013	8.5	11
CF-SP-18-comp	9/30/2013	8.5	11
CF-SP-19-comp	9/30/2013	10	15
CF-SP-20-comp	9/30/2013	8.7	13
MTCA Method A Cleanup Level: Unrestricted Use		20	250

TABLE 2
SOIL SAMPLING RESULTS
CAMPUS FAIRWAYS
LACEY, WASHINGTON

Sample ID	Lab ID	Sample Date	Arsenic Method 6010B (mg/kg)	Lead Method 6010B (mg/kg)
CF-01cn-6	580-42083-15	1/27/2014	3.4	3.1
CF-02cn-6	580-42083-14	1/27/2014	4.5	5.4
CF-04cn-6	580-42083-13	1/27/2014	3.1	3.2
CF-05cn-6	580-42083-12	1/27/2014	4.2	3.7
CF-06cn-6	580-42083-11	1/27/2014	5.0	5.6
CF-07cn-6	580-42083-10	1/27/2014	3.7	3.6
CF-08cn-6	580-42083-9	1/27/2014	5.2	4.5
CF-09cn-6	580-42083-37	1/27/2014	2.9	2.6
CF-10cn-6	580-42083-38	1/27/2014	9.2	8.8
CF-11cn-6	580-42083-39	1/27/2014	2.8	2.5
CF-12cn-6	580-42083-40	1/27/2014	3.4	2.5
CF-13cn-6	580-42083-41	1/27/2014	3.0	2.4
CF-14cn-6	580-42083-42	1/27/2014	5.5	5.7
CF-15cn-6	580-42083-43	1/27/2014	3.1	3.0
CF-16cn-6	580-42083-44	1/27/2014	3.9	3.9
CF-17cn-6	580-42083-45	1/27/2014	2.9	1.9
CF-18cn-6	580-42083-46	1/27/2014	7.6	6.7
CF-19cn-6	580-42083-47	1/27/2014	4.1	3.6
CF-20cn-6	580-42083-36	1/27/2014	3.2	2.4
CF-21cn-6	580-42083-35	1/27/2014	2.8	2.2
CF-22cn-6	580-42083-34	1/27/2014	2.7	2.0
CF-23cn-6	580-42083-33	1/27/2014	3.3	2.1
CF-24cn-6	580-42083-32	1/27/2014	3.4	2.8
CF-25cn-6	580-42083-31	1/27/2014	2.8	2.4
CF-26cn-6	580-42083-30	1/27/2014	3.1	2.2
CF-27cn-6	580-42083-49	1/27/2014	2.5	2.5
CF-28cn-6	580-42083-29	1/27/2014	4.1	3.5
CF-29cn-6	580-42083-28	1/27/2014	3.6	3.2
CF-30cn-6	580-42083-27	1/27/2014	3.3	2.6
CF-31cn-6	580-42083-48	1/27/2014	3.1	3.0
CF-32cn-6	580-42083-26	1/27/2014	4.4	2.1

TABLE 2
SOIL SAMPLING RESULTS
CAMPUS FAIRWAYS
LACEY, WASHINGTON

Sample ID	Lab ID	Sample Date	Arsenic Method 6010B (mg/kg)	Lead Method 6010B (mg/kg)
CF-33cn-6	580-42083-25	1/27/2014	2.6	2.2
CF-34cn-6	580-42083-23	1/27/2014	3.0	2.3
CF-35cn-6	580-42083-24	1/27/2014	3.0	2.4
CF-36cn-6	580-42083-16	1/27/2014	2.6	2.2
CF-37cn-6	580-42083-17	1/27/2014	2.9	1.9
CF-38cn-6	580-42083-18	1/27/2014	2.8	2.5
CF-39cn-6	580-42083-19	1/27/2014	2.8	2.1
CF-40cn-6	580-42083-20	1/27/2014	<2.8	1.7
CF-41cn-6	580-42083-21	1/27/2014	2.4	1.7
CF-42cn-6	580-42083-22	1/27/2014	3.6	2.7
CF-54cn-6	580-43246-1	4/18/2014	4.9	6.8
CF-59cn-6	580-42083-8	1/27/2014	3.2	3.1
CF-60cn-6	580-42083-7	1/27/2014	3.2	2.8
CF-61cn-6	580-42083-6	1/27/2014	3.3	2.8
CF-62cn-6	580-42083-5	1/27/2014	2.4	1.7
CF-63cn-6	580-42083-4	1/27/2014	3.4	2.9
CF-64cn-6	580-42083-3	1/27/2014	3.0	2.4
CF-65cn-6	580-42083-2	1/27/2014	2.7	2.1
CF-66cn-6	580-42083-1	1/27/2014	5.0	2.8
CF-76cn-6	580-43246-2	4/18/2014	9.6	14.0
CF-TAcn-6	580-43246-3	4/18/2014	12.0	19.0
Samples Collected from the Additional Stormwater Facility-Campus Fairways				
CF-03cn-6/CHdiv2-12cn-6 (a)	580-40868-1	10/10/13	<2.8	1.8
CF-04cn-6/CHdv2-13cn-6 (a)	580-40868-2	10/10/13	<2.8	2.0
MTCA Method A Cleanup Level Unrestricted Use:			20	250

a) The stormwater facility was initially part of the Campus Highlands Division II area; however, the facilty was later reasigned to the Campus Fairways area.

APPENDIX A

Campus Fairways Plat Map

CAMPUS ESTATES - DIVISION 2

ENGINEERED ROUGH GRADING PLANS

THESE PLANS ARE FOR FILL, GRADING AND EROSION CONTROL ONLY. DESIGN, SIZING AND CONFIGURATION, AND / OR ELEVATIONS RELATED TO THE PUBLIC WORKS' IMPROVEMENTS WILL BE ADDRESSED WITH THE CIVIL PLANS. FUTURE WALLS TO BE DESIGNED, REVIEWED AND PERMITTED SEPARATELY.

WALLS SHOWN FOR INFORMATIONAL PURPOSES ONLY. FUTURE WALLS TO BE DESIGNED, REVIEWED AND & PERMITTED SEPARATELY.

NOTE:
ROCK WALLS SHOWN FOR INFORMATIONAL PURPOSES ONLY. SEE SEPARATE WALL STRUCTURAL PLANS FOR DESIGN INFORMATION. EARTHWORK GRADING TO BE HELD SHORT OF RETAINING WALLS WITH SLOPES NOT TO EXCEED 2:1 PRIOR TO CONSTRUCTION OF RETAINING WALLS.

NOTE:
1. GRADING OF 5,000 CUBIC YARDS (CUT AND FILL COMBINED) OR MORE SHALL BE DEEMED "ENGINEERED GRADING".
2. ALL PAD ELEVATIONS AND PROPOSED CONTOURS ARE "FINISH GRADE". SUBGRADE ELEVATIONS WILL BE APPROXIMATELY 1 FOOT LOWER THAN THOSE SHOWN FOR ROADWAY AREAS AND APPROXIMATELY 8 INCHES LOWER THAN THOSE SHOWN FOR ALL LOT AND LANDSCAPE AREAS.
3. ARSENIC SAMPLING STOCKPILE AREA SHARED WITH CAMPUS HIGHLANDS DRIVE NE EXTENSION PROJECT.

* PRIOR TO CLEARING AREAS IDENTIFIED FOR POTENTIAL TREE RETENTION (REAR OF LOTS 16-34, TRACTS G, K, N) FLAGGING SHALL BE IN PLACE TO KEEP EQUIPMENT OUT OF THESE AREAS. *

SEE TIMELINE FOR TREE PROTECTION ACTIVITY SHEET 4.

POLUTION PREVENTION TEAM MEMBERS AS FOUND IN CSWPPP

CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL)	ROB RICE (360) 754-7010
CIVIL ENGINEER	HATTON GODAT PANTIER (BLAKE WILKERSON) (360) 943-1599
EMERGENCY ECOLOGY CONTACT	SPILL REPORT HOTLINE (360) 407-6300
OWNER CONTACT	ROB RICE (360) 754-7010
NON EMERGENCY ECOLOGY CONTACT	GARIN SCHRIEVE (360) 407-6271

EARTHWORK CALCULATIONS

CUT	32,000 CY
FILL	20,000 CY

FOR PERMITTING PURPOSES ONLY
NOT TO BE USED FOR BIDDING

CITY OF LACEY

VERTICAL DATUM (NGVD 29)

BENCHMARK 1
FOUND 2.5" IRON PIPE WITH PK NAIL IN THE TOP AND IN A CASE, LOCATED 80'+/- SOUTH OF INTERSECTION OF MERIDIAN ROAD NE AND CAMPUS PARK DRIVE NE. CITY OF LACEY CONTROL NUMBER 156. NGVD29 ELEV.= 240.41'

BENCHMARK 2
FOUND 3" BRASS W/PUNCH IN CASE AT INTERSECTION OF CAMERON DRIVE NE AND MERRILL COURT NE. NGVD29 ELEV.= 265.49'

MERIDIAN(HORIZ DATUM)

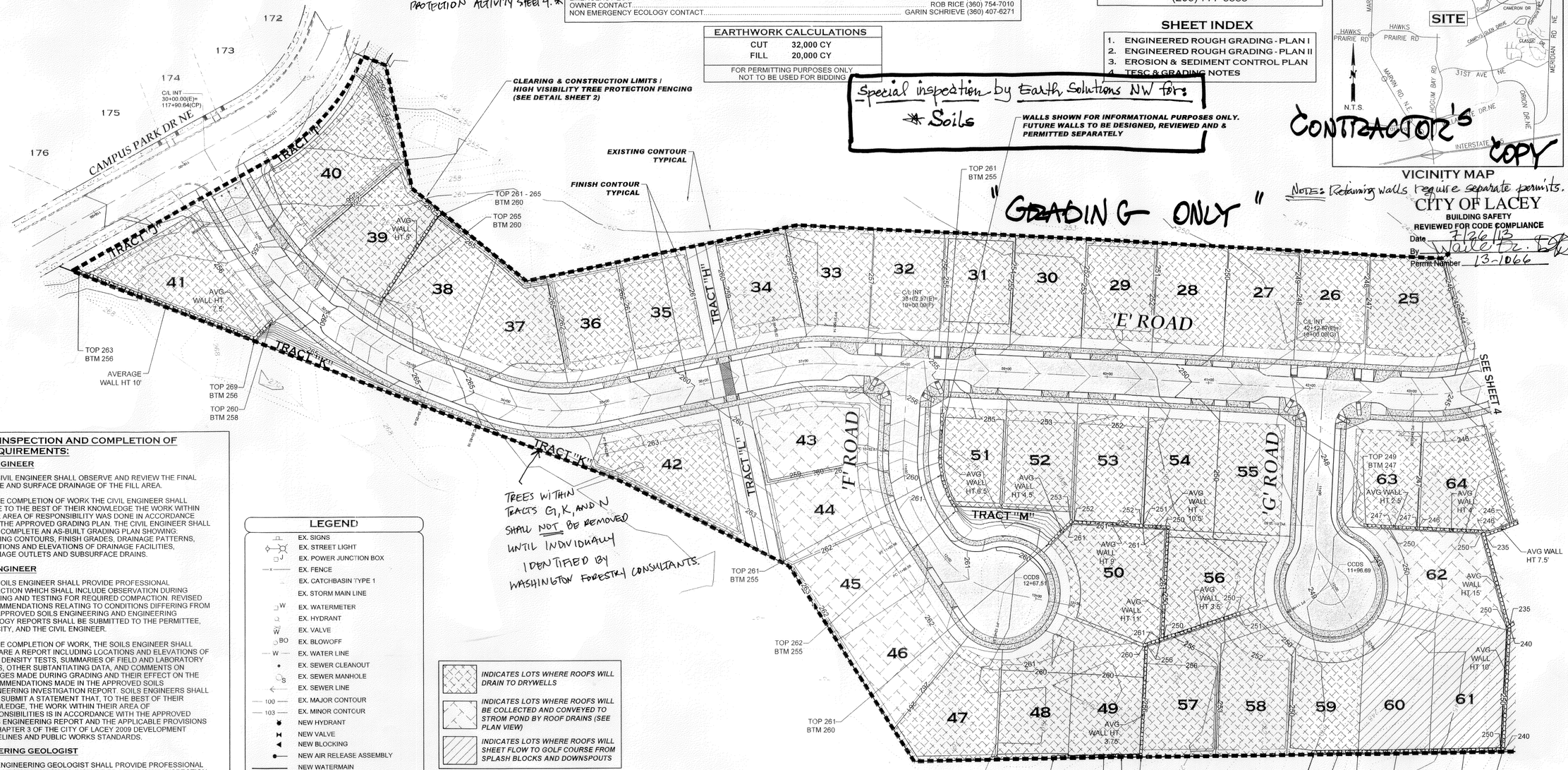
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE LINE BETWEEN FOUND MONUMENTS CITY OF LACEY POINT DESIGNATIONS 164 AND 156 (NORTH 01° 50' 40" EAST), AND CITY OF LACEY POINT DESIGNATION 164 WAS HELD FOR POSITION.

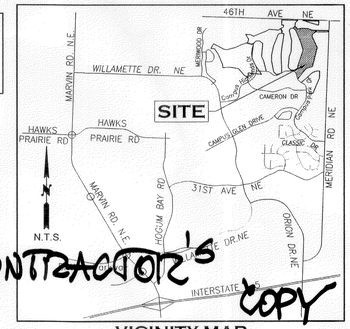
50 25 0 50 100
SCALE: 1" = 50'

PREPARED FOR
STATEWIDE MORTGAGE SERVICES COMPANY
425 PIKE STREET
SEATTLE, WA 98101
(206) 777-8388

SHEET INDEX

Special inspection by Earth Solutions NW for:
* Soils





VICINITY MAP

CONTRACTOR'S COPY

"GRADING ONLY"

NOTE: Retaining walls require separate permits.

CITY OF LACEY
BUILDING SAFETY
REVIEWED FOR CODE COMPLIANCE
Date 7/26/13
By Wade Bz. BSD
Permit Number 13-1066

"GRADING ONLY"

GRADING INSPECTION AND COMPLETION OF WORK REQUIREMENTS:

A. CIVIL ENGINEER

1. THE CIVIL ENGINEER SHALL OBSERVE AND REVIEW THE FINAL GRADE AND SURFACE DRAINAGE OF THE FILL AREA.
2. AT THE COMPLETION OF WORK THE CIVIL ENGINEER SHALL STATE TO THE BEST OF THEIR KNOWLEDGE THE WORK WITHIN THEIR AREA OF RESPONSIBILITY WAS DONE IN ACCORDANCE WITH THE APPROVED GRADING PLAN. THE CIVIL ENGINEER SHALL ALSO COMPLETE AN AS-BUILT GRADING PLAN SHOWING: EXISTING CONTOURS, FINISH GRADES, DRAINAGE PATTERNS, LOCATIONS AND ELEVATIONS OF DRAINAGE FACILITIES, DRAINAGE OUTLETS AND SUBSURFACE DRAINS.

B. SOILS ENGINEER

1. THE SOILS ENGINEER SHALL PROVIDE PROFESSIONAL INSPECTION WHICH SHALL INCLUDE OBSERVATION DURING GRADING AND TESTING FOR REQUIRED COMPACTION. REVISED RECOMMENDATIONS RELATING TO CONDITIONS DIFFERING FROM THE APPROVED SOILS ENGINEERING AND ENGINEERING GEOLOGY REPORTS SHALL BE SUBMITTED TO THE PERMITTEE, THE CITY, AND THE CIVIL ENGINEER.
2. AT THE COMPLETION OF WORK, THE SOILS ENGINEER SHALL PREPARE A REPORT INCLUDING LOCATIONS AND ELEVATIONS OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY TESTS, OTHER SUBTANTIATING DATA, AND COMMENTS ON CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE APPROVED SOILS ENGINEERING INVESTIGATION REPORT. SOILS ENGINEERS SHALL ALSO SUBMIT A STATEMENT THAT, TO THE BEST OF THEIR KNOWLEDGE, THE WORK WITHIN THEIR AREA OF RESPONSIBILITIES IS IN ACCORDANCE WITH THE APPROVED SOILS ENGINEERING REPORT AND THE APPLICABLE PROVISIONS OF CHAPTER 3 OF THE CITY OF LACEY 2009 DEVELOPMENT GUIDELINES AND PUBLIC WORKS STANDARDS.

C. ENGINEERING GEOLOGIST

1. THE ENGINEERING GEOLOGIST SHALL PROVIDE PROFESSIONAL INSPECTION WHICH SHALL INCLUDE PROFESSIONAL INSPECTION OF BEDROCK EXCAVATION TO DETERMINE IF CONDITIONS ENCOUNTERED ARE IN CONFORMANCE WITH THE APPROVED REPORT. REVISED RECOMMENDATIONS RELATING TO CONDITIONS DIFFERING FROM THE APPROVED GEOTECHNICAL REPORT SHALL BE SUBMITTED TO THE SOILS ENGINEER.
2. AT THE COMPLETION OF WORK THE GEOLOGIST SHALL PREPARE A REPORT INCLUDING A FINAL DESCRIPTION OF THE GEOLOGY OF THE SITE AND ANY NEW INFORMATION DISCLOSED DURING GRADING AND THE EFFECT OF SAME ON THE RECOMMENDATIONS INCORPORATED IN THE APPROVED GRADING PLAN. THE GEOLOGIST SHALL ALSO SUBMIT A STATEMENT THAT, TO THE BEST OF THE THEIR KNOWLEDGE, THE WORK WITHIN THEIR AREA OF RESPONSIBILITIES IS IN ACCORDACE WITH THE APPROVED GEOTECHNICAL REPORT AND APPLICABLE PROVISIONS OF CHAPTER 3 OF THE CITY OF LACEY DEVELOPEMENT GUIDELINES AND PUBLIC WORKS STANDARDS.

LEGEND

	EX. SIGNS
	EX. STREET LIGHT
J	EX. POWER JUNCTION BOX
x	EX. FENCE
	EX. CATCHBASIN TYPE 1
	EX. STORM MAIN LINE
W	EX. WATERMETER
	EX. HYDRANT
W	EX. VALVE
BO	EX. BLOWOFF
W	EX. WATER LINE
	EX. SEWER CLEANOUT
S	EX. SEWER MANHOLE
	EX. SEWER LINE
100	EX. MAJOR CONTOUR
103	EX. MINOR CONTOUR
	NEW HYDRANT
	NEW VALVE
	NEW BLOCKING
	NEW AIR RELEASE ASSEMBLY
	NEW WATERMAIN
	NEW CATCHBASIN TYPE 2-48
	NEW CATCHBASIN TYPE 1
	NEW STORM MAIN LINE
	NEW SEWER CLEANOUT
	NEW SEWER FORCEMAIN
	NEW GRAVITY SEWER LINE
	NEW PED SCALE LIGHT
	NEW LIGHTING J BOX
	NEW TRANSFROMER & SERVICE DISCONNECT
100	FINISH MAJOR CONTOUR
103	FINISH MINOR CONTOUR
	NEW WALL

INDICATES LOTS WHERE ROOFS WILL DRAIN TO DRYWELLS

INDICATES LOTS WHERE ROOFS WILL BE COLLECTED AND CONVEYED TO STROM POND BY ROOF DRAINS (SEE PLAN VIEW)

INDICATES LOTS WHERE ROOFS WILL SHEET FLOW TO GOLF COURSE FROM SPLASH BLOCKS AND DOWNSPOUTS

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All approved plans must be on job site at time of inspection.

RECEIVED
JUL 26 2013
BY

TREES WITHIN TRACTS G, K, AND N SHALL NOT BE REMOVED UNTIL INDIVIDUALLY IDENTIFIED BY WASHINGTON FORESTRY CONSULTANTS.

CONTRACTOR'S COPY

"GRADING ONLY"

DESIGNED BY: RBW
DRAWN BY: BSM
CHECKED BY: SDH
DATE: APRIL 2013
SCALE: H 1" = 50' V N/A

REVISIONS: DATE:

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

MERIDIAN CAMPUS
CAMPUS ESTATES - DIVISION 2, LACEY, WA
ENGINEERED GRADING PERMIT #6
ENGINEERED ROUGH GRADING
PLAN - I
PORTIONS OF SECTION 36, TOWNSHIP 19 N, RANGE 1 W, W.M.

CONTRACTOR'S COPY

AGENCY NO. 10-180
SHEET: 1 OF 4
E:/dgn/12-000/12-048/12-048A2
INDEX: 12-048A2-grd.dwg
JOB: 12-048A2

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WALLS SHOWN FOR INFORMATIONAL PURPOSES ONLY. FUTURE WALLS TO BE DESIGNED, REVIEWED AND & PERMITTED SEPARATELY.

THESE PLANS ARE FOR FILL, GRADING AND EROSION CONTROL ONLY. DESIGN, SIZING AND CONFIGURATION, AND / OR ELEVATIONS RELATED TO THE PUBLIC WORKS' IMPROVEMENTS WILL BE ADDRESSED WITH THE CIVIL PLANS. FUTURE WALLS TO BE DESIGNED, REVIEWED AND PERMITTED SEPARATELY.

NOTE:
ROCK WALLS SHOWN FOR INFORMATIONAL PURPOSES ONLY. SEE SEPARATE WALL STRUCTURAL PLANS FOR DESIGN INFORMATION. EARTHWORK GRADING TO BE HELD SHORT OF RETAINING WALLS WITH SLOPES NOT TO EXCEED 2:1 PRIOR TO CONSTRUCTION OF RETAINING WALLS.

- *INDICATES LOTS WHERE ROOFS WILL DRAIN TO DRYWELLS*
- *INDICATES LOTS WHERE ROOFS WILL BE COLLECTED AND CONVEYED TO STROM POND BY ROOF DRAINS (SEE PLAN VIEW)*
- *INDICATES LOTS WHERE ROOFS WILL SHEET FLOW TO GOLF COURSE FROM SPLASH BLOCKS AND DOWNSPOUTS*

CITY OF LACEY

VERTICAL DATUM (NGVD 29)

BENCHMARK 1
FOUND 2.5" IRON PIPE WITH PK NAIL IN THE TOP AND IN A CASE. LOCATED 80'+/- SOUTH OF INTERSECTION OF MERIDIAN ROAD NE AND CAMPUS PARK DRIVE NE. CITY OF LACEY CONTROL NUMBER 156. NGVD29 ELEV.= 240.41'

BENCHMARK 2
FOUND 3" BRASS W/PUNCH IN CASE AT INTERSECTION OF CAMERON DRIVE NE AND MERRILL COURT NE. NGVD29 ELEV.= 265.49'

MERIDIAN(HORIZ DATUM)

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE LINE BETWEEN FOUND MONUMENTS CITY OF LACEY POINT DESIGNATIONS 164 AND 156 (NORTH 01° 50' 40" EAST), AND CITY OF LACEY POINT DESIGNATION 164 WAS HELD FOR POSITION.

SCALE: 1" = 50'

FINISH CONTOUR TYPICAL

EXISTING CONTOUR TYPICAL

CLEARING & CONSTRUCTION LIMITS / HIGH VISIBILITY TREE PROTECTION FENCING (SEE DETAIL SHEET 2)

* TREES LOCATED ON REAR OF LOTS 16-36 SHALL NOT BE CLEARED PRIOR TO INDIVIDUAL IDENTIFICATION BY WASHINGTON FORESTRY CONSULTANTS.

DETAILED YARD & ROOF DRAINAGE PLANS OF THIS AREA TO BE SUBMITTED WITH FINAL GRADING / RETAINING WALL DESIGN PLANS.

SEE SHEET 3

'E' ROAD

'H' ROAD

'I' ROAD

TRACT "G"

TRACT "N"

TRACT R

TRACT Q

TRACT P

TRACT T

TRACT U

TRACT V

CAMPUS HIGHLANDS DR NE

CCDS 12+08.98

CCDS 14+95.13

LARGE LOT

AVG WALL HT 7.5'
AVG WALL HT 5.5'
AVG WALL HT 9'
AVG WALL HT 3'
AVG WALL HT 7'
AVG WALL HT 3'
AVG WALL HT 3'
AVG WALL HT 7'
AVG WALL HT 3'
AVG WALL HT 6'
TOP 234 BTM 240
AVG WALL HT 8'
AVG WALL HT 14'
AVG WALL HT 13.75'
AVG WALL HT 15'
AVG WALL HT 13'
AVG WALL HT 11'
AVG WALL HT 11.5'
AVG WALL HT 14'
AVG WALL HT 6.5'
AVG WALL HT 4'
AVG WALL HT 6.5'
AVG WALL HT 10'
AVG WALL HT 6'
AVG WALL HT 3'
AVG WALL HT 6.5'
AVERAGE WALL HT 4.5'
TOP 215 BTM 214
AVERAGE WALL HT 6'
TOP 215 BTM 207
AVERAGE WALL HT 7.75'
TOP 206 BTM 191.50
AVERAGE WALL HT 12.5'
TOP 205 - 206 BTM 195 - 195.50
TOP 205 BTM 198.50
AVERAGE WALL HT 8.25'
AVERAGE WALL HT 3.75'
TOP 215 - 216 BTM 212.50
AVERAGE WALL HT 3.25'
AVERAGE WALL HT 4.25'
TOP 217 BTM 213
AVERAGE WALL HT 3.25'
TOP 215 - 217 BTM 212.50
TOP 215 BTM 211
AVERAGE WALL HT 3.25'
TOP 215 BTM 211
AVERAGE WALL HT 7.5'
AVERAGE WALL HT 8'
AVERAGE WALL HT 6.75'
TOP 234 BTM 225.50
AVERAGE WALL HT 11.25'
AVERAGE WALL HT 13.5'
AVERAGE WALL HT 4.5'
TOP 217 BTM 210
AVERAGE WALL HT 9.5'
AVERAGE WALL HT 3.75'

SEGMENTED BLOCK WALL BY OTHERS (TYPICAL)

WALLS SHOWN FOR INFORMATIONAL PURPOSES ONLY. FUTURE WALLS TO BE DESIGNED, REVIEWED & PERMITTED SEPARATELY.

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DESIGNED BY: RBW
DRAWN BY: BSM
CHECKED BY: SDH
DATE: APRIL 2013
SCALE: H 1" = 50'
V NA

STEVEN D. HATTON — 24193 — REGISTERED PROFESSIONAL ENGINEER

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

REVISIONS: DATE:

MERIDIAN CAMPUS

CAMPUS ESTATES - DIVISION 2, LACEY, WA
ENGINEERED GRADING PERMIT #6

ENGINEERED ROUGH GRADING PLAN - II

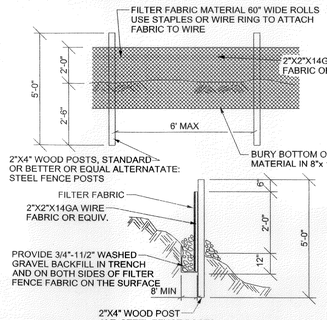
PORTIONS OF SECTION 36, TOWNSHIP 19 N, RANGE 1 W, W.M.

LACEY

AGENCY NO. 10-180
SHEET: 2 OF 4
E:/dgn/12-000/12-048/12-048A2
INDEX: 12-048A2-grd.dwg
JOB: 12-048A2

FILTER FABRIC FENCE NOTES:

1. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY FASTENED AT BOTH ENDS TO POST.
2. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ABOVE NOTES APPLYING.
7. FILTER FABRIC FENCES SHALL NOT BE REMOVED BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
8. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

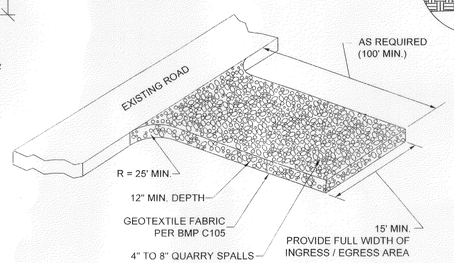


FILTER FABRIC FENCE DETAIL

BMP C233

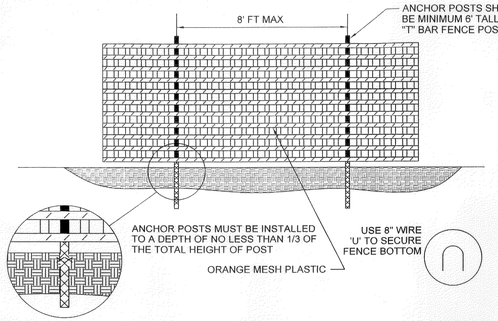
STABILIZED CONSTRUCTION ENTRANCE NOTES:

1. MATERIAL SHALL BE 4 INCH TO 8 INCH QUARRY SPALLS AND MAY BE TOP-DRESSED WITH 1 INCH TO 3 INCH ROCK. (STATE STANDARD SPECIFICATIONS.)
2. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 100 FEET LONG. WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA. SMALLER PADS MAY BE APPROVED FOR SINGLE-FAMILY RESIDENTIAL AND SMALL COMMERCIAL SITES.
3. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
4. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH A SILT FENCE.



STABILIZED CONSTRUCTION ENTRANCE

BMP C105

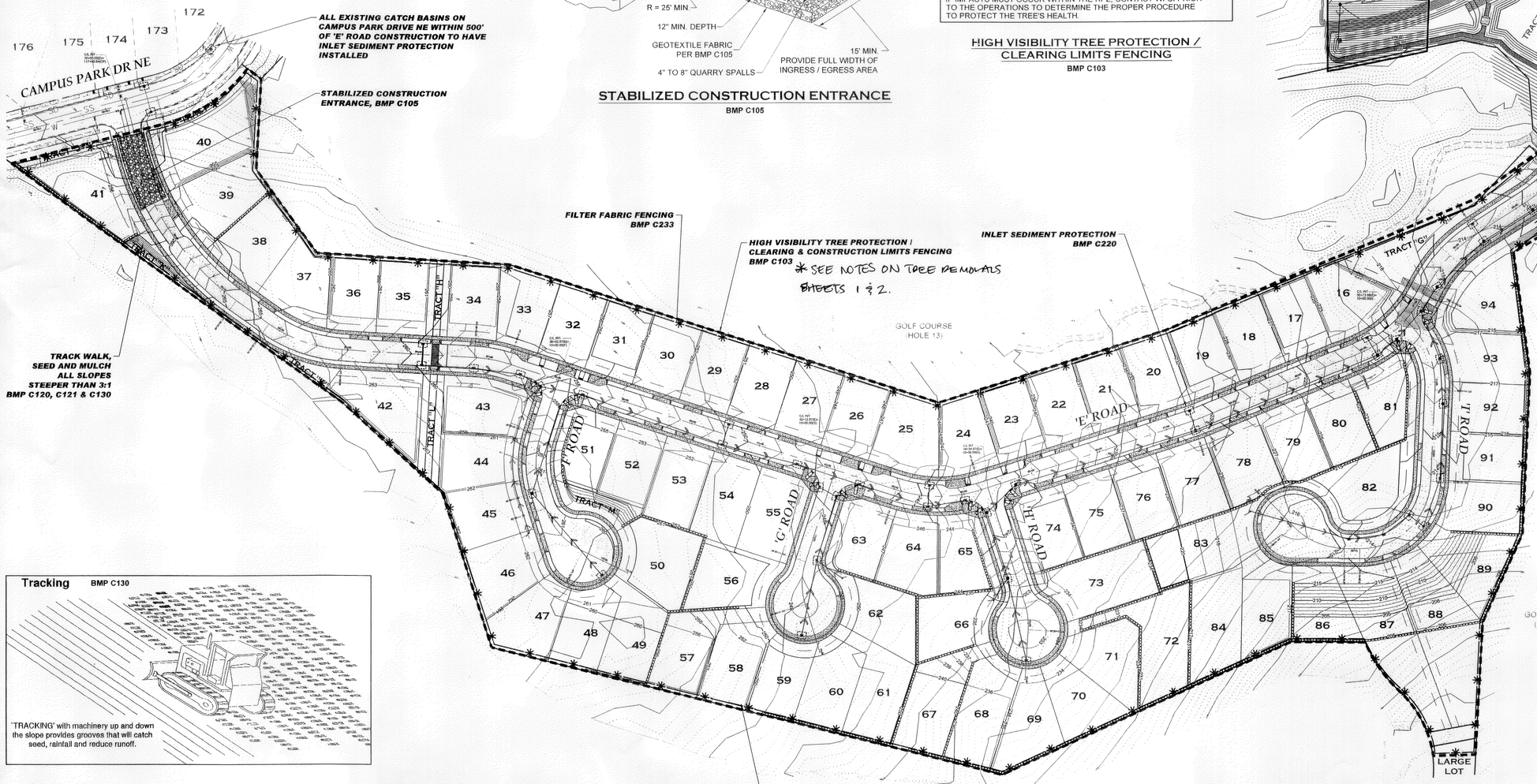


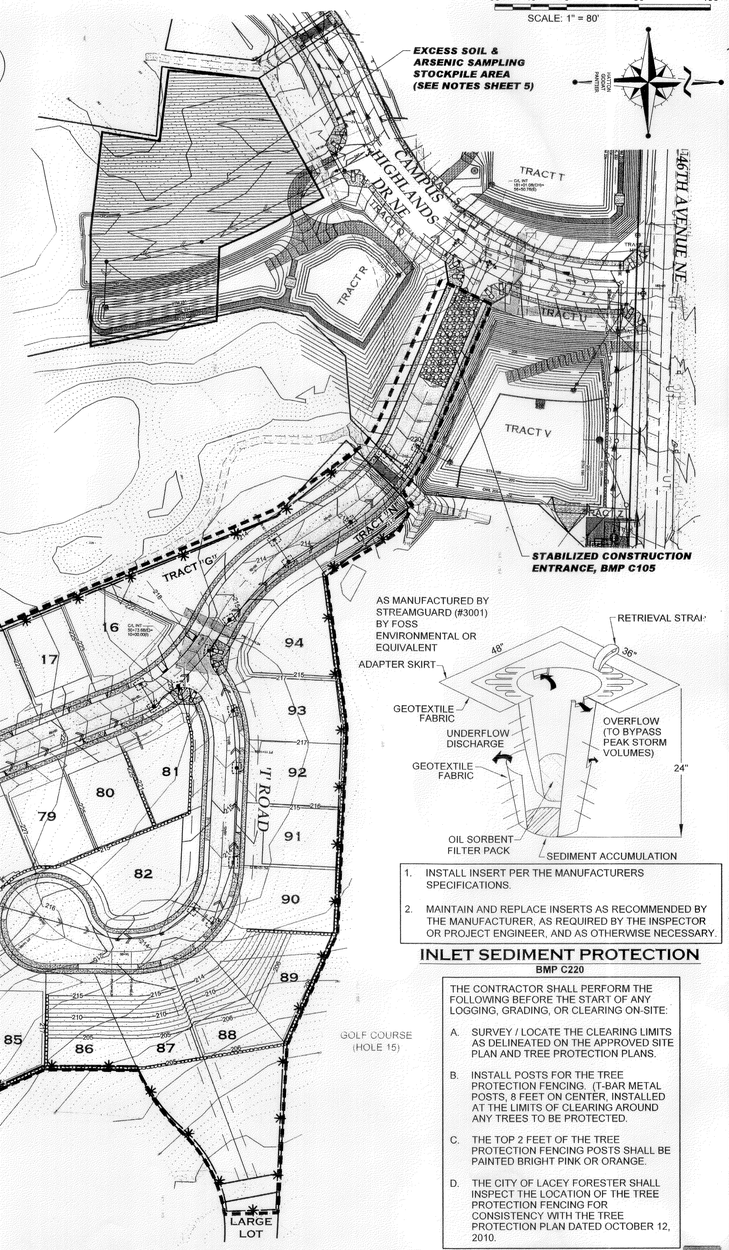
THE TREE PROTECTION FENCE SHOULD BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND GRADING, AND NOT BE REMOVED UNTIL FINAL LANDSCAPING IS IN PROGRESS. AT NO TIME SHALL EQUIPMENT ENTER INTO THE ROOT PROTECTION ZONE (RPZ). ALL BRUSH CLEANUP WITHIN THE RPZ SHOULD BE COMPLETED BY HAND TO PREVENT DISTURBANCE OF NATIVE GROUND COVERS. NO CUTS OR FILLS, UTILITY TRENCHING, MODIFICATIONS TO DRAINAGE OR CONCRETE RISE WATER SHOULD IMPACT THE RPZ. NO WIRES, CABLES, OR OTHER DEVICES SHOULD BE ATTACHED TO PROTECTED TREES DURING CONSTRUCTION.

IF IMPACTS MUST OCCUR WITHIN THE RPZ, CONTACT WFCI PRIOR TO THE OPERATIONS TO DETERMINE THE PROPER PROCEDURE TO PROTECT THE TREE'S HEALTH.

HIGH VISIBILITY TREE PROTECTION / CLEARING LIMITS FENCING

BMP C103





CITY OF LACEY

VERTICAL DATUM (NGVD 29)

BENCHMARK 1
FOUND 2.5" IRON PIPE WITH PK NAIL IN THE TOP AND IN A CASE, LOCATED 80'+/- SOUTH OF INTERSECTION OF MERIDIAN ROAD NE AND CAMPUS PARK DRIVE NE. CITY OF LACEY CONTROL NUMBER 156. NGVD29 ELEV.= 240.41'

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80 40 0 80 160
SCALE: 1" = 80'

1. INSTALL INSERT PER THE MANUFACTURERS SPECIFICATIONS.
2. MAINTAIN AND REPLACE INSERTS AS RECOMMENDED BY THE MANUFACTURER, AS REQUIRED BY THE INSPECTOR OR PROJECT ENGINEER, AND AS OTHERWISE NECESSARY.

INLET SEDIMENT PROTECTION

BMP C220

THE CONTRACTOR SHALL PERFORM THE FOLLOWING BEFORE THE START OF ANY LOGGING, GRADING, OR CLEARING ON-SITE:

A. SURVEY / LOCATE THE CLEARING LIMITS AS DELINEATED ON THE APPROVED SITE PLAN AND TREE PROTECTION PLANS.

B. INSTALL POSTS FOR THE TREE PROTECTION FENCING. (T-BAR METAL POSTS, 8 FEET ON CENTER, INSTALLED AT THE LIMITS OF CLEARING AROUND ANY TREES TO BE PROTECTED.

C. THE TOP 2 FEET OF THE TREE PROTECTION FENCING POSTS SHALL BE PAINTED BRIGHT PINK OR ORANGE.

D. THE CITY OF LACEY FORESTER SHALL INSPECT THE LOCATION OF THE TREE PROTECTION FENCING FOR CONSISTENCY WITH THE TREE PROTECTION PLAN DATED OCTOBER 12, 2010.

SEEDING BMP 120 & MULCHING BMP 121 NOTES LOCATED ON SHEET 4.

Tracking BMP C130

'TRACKING' with machinery up and down the slope provides grooves that will catch seed, rainfall and reduce runoff.

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DESIGNED BY: RBW
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DATE: APRIL 2013
SCALE H 1" = 80'
V N/A

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REVISIONS: DATE:

MERIDIAN CAMPUS

CAMPUS ESTATES - DIVISION 2, LACEY, WA
ENGINEERED GRADING PERMIT #6

TEMPORARY EROSION & SEDIMENT CONTROL PLAN

PORTIONS OF SECTION 36, TOWNSHIP 19 N, RANGE 1 W, W.M.

AGENCY NO. 10-180
SHEET: 3 OF 4
E:/dgn/12-000/12-048/12-048A2
INDEX: 12-048A2-ec.dwg
JOB: 12-048A2

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ARSENIC SAMPLING / TESTING REQUIREMENTS

1. CONTRACTOR SHALL MAINTAIN SUITABLE AND AVAILABLE ACCESS FOR GOLF CART OPERATIONS THROUGHOUT CONSTRUCTION.
2. FOLLOWING CLEARING & VEGETATION REMOVAL, CONTRACTOR SHALL STRIP 12 INCHES OF TOP SOIL FROM WITHIN THE PROJECT LIMITS.
3. STOCKPILE STRIPPED TOP SOIL IN THE AREA INDICATED ON CAMPUS HIGHLANDS DRIVE EXTENSION PLANS. STOCKPILE FROM CAMPUS PEAKSHALL BE APPROXIMATELY 10,000 - 12,000 CUBIC YARDS.
4. PRIOR TO STOCKPILING, OR AS THE MATERIAL IS STOCKPILED, CONTRACTOR SHALL SCREEN THE MATERIAL TO REMOVE VEGETATIVE MATTER.
5. ONCE SCREENED AND STOCKPILED THE OWNER WILL CONDUCT TESTS ON THE MATERIAL FOR ARSENIC. CONTRACTOR SHALL ALLOW IN HIS SCHEDULE ONE WEEK FOR TESTING AND APPROVAL TO REMOVE THE MATERIAL.
6. UPON RECEIVING APPROVAL, CONTRACTOR SHALL REMOVE CLEAN MATERIAL AND CONTINUE STRIPPING AND SCREENING AS REQUIRED TO COMPLETE A FULL 12 INCHES OF REMOVAL OF TOPSOIL FROM THROUGHOUT THE PROJECT AREA.
7. CONTRACTOR SHALL DEVELOP, MAINTAIN AND IMPLEMENT AT ALL TIMES A HEALTH AND SAFETY PLAN FOR ITS WORKERS AND OPERATORS. ELEMENTS OF THE PLAN SHALL, AT A MINIMUM, INCLUDE:
   a. DUST CONTROL METHODS TO PREVENT ANY VISIBLE DUST FROM LEAVING THE PROJECT WORK LIMITS.
   b. WORKER EDUCATION AND SAFETY MEANS AND PROCESSES.
   c. PROCEDURES AND FACILITIES FOR PERSONAL HYGIENE.
   d. DESCRIPTION OF AREAS APPLICABLE TO THE HEALTH AND SAFETY PLAN.

Timeline for Tree Protection Activity

1. If trees are retained, then add the tree protection fence locations, fence detail, and 'timeline for tree protection activity' to the grading plan and label one copy as the 'tree protection plan'. This should be submitted to the City of Lacey for approval and the approved tree protection plan should be part of the construction drawings to insure that contractors understand the tree protection areas and requirements.
2. Stake the clearing limits and flag the tree protection fence locations heavily.
3. Contact WFCI to evaluate all trees within the tree tracts and back of selected lots. WFCI will make additional tree planting recommendations for the tree tracts at this time.
4. **Conduct a pre-job conference with WFCI prior to the start of clearing.**
5. Complete the logging and clearing. Hazard trees should be removed from the tree protection areas at this time.
6. Install tree protection fences. Maintain fences throughout construction. WFCI should be contacted to inspect the fences prior to the start of grading.
7. Construct project.
8. Plant street and other replacement trees during the appropriate season of planting (October 15 through December 1 and March 1 through April 15).
9. If street or other trees are planted prior to lot construction, then these trees need to be watered in the summer months and protected with tree protection fencing during construction on the lot.

MAINTENANCE OF EROSION CONTROL FACILITIES:

IN GENERAL, ALL BMP'S SHALL BE CHECKED WEEKLY AND AFTER A SIGNIFICANT RAINFALL (MORE THAN APPROXIMATELY 0.5 INCHES IN 24 HOURS). THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR.

1. SEDIMENT BASINS SHALL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 1-1/2-FEET FROM THE TOP OF THE RISER PIPE.
2. GRAVEL AROUND THE RISER PIPE SHALL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WOULD RESTRICT DRAINAGE. IF THE GRAVEL BECOMES CLOGGED WITH SILT, IT SHALL BE REPLACED.
3. DIVERSION DIKES AND SWALES SHALL BE CHECKED FOR BLOCKAGE AND DAMAGE ON A REGULAR BASIS. WATER SHALL MOVE FREELY BEHIND DIKES AND IN SWALES AT ALL TIMES.
4. PIPE SLOPE DRAINS SHALL BE CHECKED FOR STABILITY. NO UNDERMINING OF THE PIPE SHALL BE ALLOWED.
5. FILTER FENCE SHALL BE CHECKED REGULARLY FOR UNDERMINING AND SEDIMENT BUILDUP. SEDIMENT SHALL BE REMOVED ONCE IT REACHES A DEPTH OF 1-FOOT.
6. EROSION CONTROL BLANKETS SHALL BE CHECKED FOR STABILITY. BLANKETS SHALL BE HELD IN PLACE AND HAVE GOOD CONTACT WITH THE FILL SLOPE AT ALL TIMES.
7. ALL SEEDED AND SODDED AREAS, ESPECIALLY FILL SLOPES, SHALL BE CHECKED REGULARLY TO MAKE SURE VEGETATIVE COVERAGE IS COMPLETE. AREAS SHALL BE RESEEDED AND FERTILIZED AS NEEDED.
8. TRACKING OF MUD OFF-SITE WILL NOT BE ALLOWED. IF EXCESSIVE MUD IS TRACKED OFF SITE, IT SHALL BE CLEANED WITH A STREET SWEEPER. FURTHER TRACKING SHALL THEN BE PREVENTED BY WASHING TRUCK TIRES OR SWEEPING CONTINUOUSLY.

EROSION CONTROL SEEDING NOTES: BMP C120

1. SEED MIXTURE SHALL BE THAT SPECIFIED IN TABLE 4.1 OF BMP C120 AND SHALL BE APPLIED AT THE RATE OF 120 POUNDS PER ACRE.
2. SEED BEDS PLANTED BETWEEN MAY 1 AND OCTOBER 31 WILL REQUIRE IRRIGATION AND OTHER MAINTENANCE AS NECESSARY TO FOSTER AND PROTECT THE ROOT STRUCTURE.
3. FOR SEED BEDS PLANTED BETWEEN OCTOBER 31 AND APRIL 30, ARMORING OF THE SEED BED WILL BE NECESSARY (E.G., GEOTEXTILES,JUTE MAT, CLEAR PLASTIC COVERING).
4. BEFORE SEEDING, INSTALL NEEDED SURFACE RUNOFF CONTROL MEASURES SUCH AS GRADIENT TERRACES, INTERCEPTOR DIKES, SWALES, LEVEL SPREADERS AND SEDIMENT BASINS.
5. THE SEEDBED SHALL BE FIRM WITH A FAIRLY FINE SURFACE, FOLLOWING SURFACE ROUGHENING. PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPE.
6. FERTILIZERS ARE TO BE USED ACCORDING TO SUPPLIERS RECOMMENDATIONS. AMOUNTS USED SHOULD BE MINIMIZED, ESPECIALLY ADJACENT TO WATER BODIES AND WETLANDS.

MULCH NOTES: BMP C121

1. MULCH MATERIALS USED SHALL BE HAY OR STRAW, AND SHALL BE APPLIED AT THE RATE OF 2 - 3 TONS / ACRE OR OTHER WOOD FIBER CELLULOX MATERIAL TO BE APPLIED AT THE RATE OF APPROXIMATELY 100 TONS / ACRE.
2. MULCHES SHALL BE APPLIED IN ALL AREAS WITH EXPOSED SOILS.
3. MULCHING SHALL BE USED IMMEDIATELY AFTER SEEDING OR IN AREAS WHICH CANNOT BE SEEDED BECAUSE OF THE SEASON.
4. ALL AREAS NEEDING MULCH SHALL BE COVERED BY NOVEMBER 1.

FILL AREA STABILIZATION:

1. ALL FILL AREA SLOPES SHALL BE ROUGHENED USING ONE OF THE METHODS FROM BMP C130 AS FILL IS BEING PLACED.
2. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED PER THE NOTES AND DETAILS IN THIS PLAN SET AND PER BMP'S C120 AND C121.
3. IN NO CASE SHALL DISTURBED SOILS REMAIN UNSTABIIZED AND UNWORKED FOR MORE THAN 7 DAYS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30) OR MORE THAN 2 DAYS DURING THE WET SEASON (OCTOBER 1 TO APRIL 30)

GENERAL EROSION CONTROL NOTES:

1. A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) IS REQUIRED FOR ALL CONSTRUCTION PROJECTS. THE NAMED PERSON OR FIRM SHALL BE ON-SITE OR ON-CALL AT ALL TIMES. FOR THIS SITE, THE PERSON / FIRM IS ROB RICE, ROB RICE HOMES AND THEIR OFFICE TELEPHONE NUMBER IS (360) 754-7010.
2. APPROVAL OF THIS EROSION / SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICATION CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION LANDSCAPING IS ESTABLISHED.
4. THE CLEARING LIMIT BOUNDARIES SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE SURFACE WATER, GROUND WATER , OR DISCHARGE STANDARDS.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
7. THE ESC FACILITIES ON ACTIVE SITES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR--AND MAINTAINED, REPAIRED, OR AUGMENTED AS NECESSARY--TO ENSURE THEIR CONTINUED FUNCTIONING.
8. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED MONTHLY, OR WITHIN 48 HOURS FOLLOWING A MAJOR STORM EVEN, BY THE APPLICANT/CONTRACTOR--AND MAINTAINED, REPAIRED, OR AUGMENTED AS NECESSARY -TO ENSURE THEIR CONTINUED FUNCTIONING.
9. STORM INLETS OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEARED PRRIOR TO PROJECT COMPLETION AND ACCEPTANCE. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER OFFSITE WITHOUT TREATMENT.
10. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF THE CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
11. ROADS SHALL BE CLEANED THOROUGHLY AS NEEDED TO PROTECT DOWNSTREAM WATER RESOURCES OR STORMWATER INFRASTRUCTURE. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR PICKUP SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
12. FROM OCTOBER 15 THROUGH APRIL 1, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. FROM APRIL 2 TO OCTOBER 14, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. LINEAR CONSTRUCTION ACTIVITIES, SUCH AS RIGHT OF WAY AND EASEMENT CLEARING, ROADWAY DEVELOPMENT, PIPELINE, AND TRENCHING FOR UTILITIES, SHALL COMPLY WITH THESE REQUIREMENTS. THESE STABILIZATION REQUIREMENTS APPLY TO ALL SOILS ON SITE, WHEATHER AT FINAL GRADE OR NOT. THE LOCAL PERMITTING AUTHORITY MAY ADJUST THESE TIME LIMITS IF IT CAN BE SHOWN THAT A DEVELOPMENT SITE'S EROSION OR RUNOFF POTENTIAL JUSTIFIES A DIFFERENT STANDARD.
13. FROM OCTOBER 15 THROUGH APRIL 1, CLEARING, GRADING AND OTHER SOIL-DISTURBING ACTIVITIES SHALL ONLY BE PERMITTED IF SHOWN TO THE SATISFACTION OF THE LOCAL PERMITTING AUTHORITY THAT THE TRANSPORT OF SEDIMENT FROM THE CONSTRUCTION SITE TO RECEIVING WATER WILL BE PREVENTED.
14. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT-TRAPPING MEASURES.
15. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. WOODY DEBRIS MAY BE CHOPPED AND SPREAD ON SITE.
16. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OF SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF MUST BE CONDUCTED USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. REPORT ALL SPILLS TO 911.
17. WATER FROM MOST DEWATERING OPERATION SHALL BE DISCHARGED INTO A SEDIMENT TRAP OR POND. CLEAN, NON-TURBID WATER MAY BE DISCHARGED TO STATED SURFACE WATERS, PROVIDED THE DISCHARGE DOES NOT CAUSE EROSION OR FLOODING. HIGHLY TURBID OR CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION, CLAMSHELL DIGGING, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM SHALL BE HANDLED SEPARATELY FROM STORMWATER AND PROPERLY DISPOSED.

CONSTRUCTION SEQUENCE:

1. CONSTRUCTION ON THIS SITE WILL BE LIMITED TO THOSE ACTIVITIES ASSOCIATED WITH FILLING AND GRADING AND AS SHOWN ON THESE PLANS. ANY MODIFICATIONS OR ADDITIONS TO THESE PLANS MUST BE SUBMITTED TO THE PROJECT ENGINEER AND THE CITY OF LACEY FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTING THOSE CHANGES.
2. ONCE GRADING HAS COMMENCED ON THE SITE, WORK SHALL CONTINUE AT A REASONABLE PACE UNTIL THE SPECIFIED CONTOUR ELEVATIONS FOR THE FINISHED GRADE HAVE BEEN MET AND THE SITE HAS BEEN ADAQUATELY STABILIZED. FILL/IMPORT QUANTITIES SHALL NOT EXCEED THOSE THAT ARE NECESSARY TO MEET THE FINISHED GRADE CONTOUR ELEVATIONS IN CONJUNCTION WITH THE IDENTIFIED COMPACTION REQUIREMENTS.
3. PRIOR TO ANY CLEARING, GRADING OR FILLING ACTIVITY ON THE PROPOSED SITE, CONSTRUCTION CLEARING LIMITS FENCING, FILTER FABRIC FENCING, TREE PROTECTION FENCING, INLET SEDIMENT PROTECTION, AND A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SHOWN ON THESE PLANS AND PER THE BMP'S AS PROVIDED IN THE CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (CSWPPP).
4. WHEN THE EROSION CONTROL MEASURES IN STEP 3 HAVE BEEN INSTALLED, THE CONTRACTOR SHALL CALL FOR AN INSPECTION BY THE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL), THE CITY OF LACEY AND THE PROJECT ENGINEER.
5. CLEAR AND GRUB AREAS TO BE FILLED PER THE CUT/FILL NOTES IN THESE PLANS.
6. BEGIN GRADING OPERATIONS FOLLOWING THE SPECIFICATIONS INCLUDED IN THESE PLANS. ALL FILL MATERIAL SHALL COMPACTED AND TESTED AS IT IS PLACED. AT NO TIME SHALL ANY MATERIAL BE BROUGHT TO THE SITE AND LEFT UNWORKED FOR LONGER THAN 7 DAYS.
7. IN NO CASE SHALL EXPOSED OR DISTURBED SOILS REMAIN EXPOSED, UNWORKED, OR UNSTABILIZED FOR MORE THAN 2 DAYS DURING THE WET SEASON (OCTOBER 1 TO APRIL 30) OR MORE THAN 7 DAYS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30). ALL FILL SLOPES SHALL BE ROUGHENED USING ONE OF THE METHODS FROM BMP C130 AS FILL IS PLACED. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED PER THE NOTES AND DETAILS IN THIS PLANSET, THE CSWPPP FOR THE PROJECT, AND BMPS C120 & C121. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF DEEMED NECESSARY DUE TO WEATHER FORECAST. THESE STABILIZATION REQUIREMENTS APPLY TO ALL EXPOSED, DISTURBED, UNWORKED, OR UNSTABILIZED SOILS ON SITE, WHETHER AT FINAL GRADE OR NOT. THE CITY OF LACEY MAY ADJUST THESE TIME LIMITS IF IT CAN BE SHOWN THAT THE SITE'S EROSION AND/OR RUNOFF POTENTIAL JUSTIFIES A DIFFERENT STANDARD.
8. THE CONTRACTOR SHALL MONITOR, REPAIR, MODIFY AND/OR ENHANCE ALL APPLICABLE EROSION CONTROL FACILITIES AS DICTATED BY SITE CONDITIONS OR AS DIRECTED BY THE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL), THE CITY OF LACEY, THE PROJECT ENGINEER, OTHER AUTHORIZED PERSONNEL, OR AS REQUIRED IN THE "SITE MANAGEMENT PLAN".

GEOTECHNICAL SPECIFICATIONS:

1. ALL EMBANKMENT MATERIAL SHALL CONFORM TO SECTION 9-03.14(1) GRAVEL BORROW OF THE WSDOT STANDARD SPECIFICATIONS.
2. EMBANKMENT MATERIAL SHALL BE PLACED AND COMPACTED TO 95% OF THE MAXIMUM DENSITY PER WSDOT/APWA STANDARDS 2-03.3(14)0.
3. EMBANKMENTS FOR ROADWAYS, BUILDINGS, ETC, SHALL BE PLACED PER WSDOT STANDARD SPECIFICATIONS METHOD C.
4. AREAS TO BE FILLED SHALL BE CLEARED AND GRUBBED PRIOR TO PLACING ANY FILL MATERIAL.
5. A GEOTECHNICAL FIRM CAPABLE OF SUCH WORK SHALL SUPERVISE ALL FILL PLACEMENT AND SUBMIT INSPECTION AND COMPACTION REPORTS TO THE PROJECT ENGINEER.
6. NO FILL SHALL BE PLACED DURING PERIODS OF UNFAVORABLE WEATHER OR WHILE THE FILL IS FROZEN OR THAWING.
7. WHEN THE WORK IS STOPPED BY RAIN, PLACEMENT OF FILL SHALL NOT RESUME UNTIL THE GEOTECHNICAL FIRM DETERMINES THAT THE MOISTURE CONTENT IS SUITABLE FOR COMPACTIVE EFFORT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REWORKING OF ANY FILL THAT HAS SOFTENED OR HAS LESS THAN THE REQUIRED COMPACTION.
9. ALL DISTURBED SOILS SHALL BE SEEDED, MULCHED OR OTHERWISE PROTECTED FROM SHEET WASHING AS SOON AS POSSIBLE FOLLOWING GRADING.
10. ALL DISTURBED AREAS SHALL BE SEEDED OR SODDED UPON COMPLETION OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT COMPLETE COVERAGE OF THE DISTURBED AREAS IS PROVIDED AND THAT GROWTH OF THE VEGETATION IS ESTABLISHED. SEE ADDITIONAL REQUIREMENTS FOR EROSION CONTROL SHEET 2.

CUT / FILL NOTES:

A. THE GROUND SURFACE FOR THE PLANNED FILL AREAS SHALL BE PREPARED TO RECEIVE FILL BY REMOVING ALL TREES, BRUSH, LANDSCAPING DEBRIS AND OTHER DELETERIOUS MATERIAL.

B. EXISTING SOILS IN FILL AREA SHALL BE EXAMINED BY SOILS ENGINEER/GEOLOGIST RETAINED FOR PROJECT.

C. TOP SOIL AND ANY OTHER SOILS THAT CAN NOT/WILL NOT MEET COMPACTION REQUIREMENTS ESTABLISHED BY THE CITY OF LACEY AND AS SHOWN IN THESE PLANS SHALL BE REMOVED PRIOR TO THE COMMENCEMENT OF FILL OPERATIONS.

D. EXISTING SOILS IN FILL AREAS SHALL BE COMPACTED FOLLOWING THE RECOMMENDATIONS OF THE GEOLOGIST/SOILS ENGINEER.

E. THE GEOLOGIST RETAINED FOR THE PROJECT SHOULD BE INVOLVED IN PLANNING THE EXTENT OF EXISTING SOILS TO BE REMOVED, THE LOCATION AND THICKNESS OF FILL PLACEMENT, OBSERVING PLACEMENT AND COMPACTION OF FILL SOILS AND IN VERIFYING COMPACTION REQUIREMENTS HAVE BEEN MET.

NOTE: THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

LACEY

THIS DRAWING DOES NOT REPRESENT A RECORD DOCUMENT, UNLESS CERTIFIED BY HATTON GODAT PANTIER.

ANY ALTERATIONS TO THE DESIGN SHOWN HEREON MUST BE REVIEWED AND APPROVED BY HATTON GODAT PANTIER.

DESIGNED BY: RBW
DRAWN BY: BSM
CHECKED BY: SDH
DATE: APRIL 2013
SCALE: H N/A
V N/A

STEVEN D. HANNAH — 24193 — REGISTERED PROFESSIONAL ENGINEER

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

REVISIONS: DATE:

MERIDIAN CAMPUS
CAMPUS ESTATES - DIVISION 2, LACEY, WA
ENGINEERED GRADING PERMIT #6
TESC & GRADING NOTES
PORTIONS OF SECTION 36, TOWNSHIP 19 N, RANGE 1 W, W.M.

AGENCY NO. 10-180
SHEET: 4 OF 4
E:/dgn/12-000/12-048/12-048A2
INDEX: 12-048A2-ec.dwg
JOB: 12-048A2

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: 580-40574-1
Client Project/Site: Campus Estates
Revision: 1

For:
Landau & Associates, Inc.
130 Second Ave South
Edmonds, Washington 98020

Attn: Mrs. Chris Kimmel

Kristine D. Allen

Authorized for release by:
10/10/2013 7:17:18 AM
Kristine Allen, Project Manager I
kristine.allen@testamericainc.com

Designee for

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

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

TestAmerica Job ID: 580-40574-1

Job ID: 580-40574-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative

Receipt

The samples were received on 9/30/2013 2:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 5.5º C.

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 Estates

TestAmerica Job ID: 580-40574-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-40574-1	CF-SP-01-Comp	Solid	09/30/13 09:42	09/30/13 14:30
580-40574-2	CF-SP-02-Comp	Solid	09/30/13 09:47	09/30/13 14:30
580-40574-3	CF-SP-03-Comp	Solid	09/30/13 09:53	09/30/13 14:30
580-40574-4	CF-SP-04-Comp	Solid	09/30/13 10:00	09/30/13 14:30
580-40574-5	CF-SP-05-Comp	Solid	09/30/13 10:05	09/30/13 14:30
580-40574-6	CF-SP-06-Comp	Solid	09/30/13 10:10	09/30/13 14:30
580-40574-7	CF-SP-07-Comp	Solid	09/30/13 10:15	09/30/13 14:30
580-40574-8	CF-SP-08-Comp	Solid	09/30/13 10:20	09/30/13 14:30
580-40574-9	CF-SP-09-Comp	Solid	09/30/13 10:25	09/30/13 14:30
580-40574-10	CF-SP-10-Comp	Solid	09/30/13 10:28	09/30/13 14:30
580-40574-11	CF-SP-11-Comp	Solid	09/30/13 10:32	09/30/13 14:30
580-40574-12	CF-SP-12-Comp	Solid	09/30/13 10:37	09/30/13 14:30
580-40574-13	CF-SP-13-Comp	Solid	09/30/13 10:55	09/30/13 14:30
580-40574-14	CF-SP-14-Comp	Solid	09/30/13 11:00	09/30/13 14:30
580-40574-15	CF-SP-15-Comp	Solid	09/30/13 11:05	09/30/13 14:30
580-40574-16	CF-SP-16-Comp	Solid	09/30/13 11:10	09/30/13 14:30
580-40574-17	CF-SP-17-Comp	Solid	09/30/13 11:08	09/30/13 14:30
580-40574-18	CF-SP-18-Comp	Solid	09/30/13 11:13	09/30/13 14:30
580-40574-19	CF-SP-19-Comp	Solid	09/30/13 11:17	09/30/13 14:30
580-40574-20	CF-SP-20-Comp	Solid	09/30/13 11:22	09/30/13 14:30

LANDAU ASSOCIATES

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

Chain-of-Custody Record 40574

Date 9/30/13
Page 1 of 2

Project Name Campus Estates Project No. 867002.040.041
Project Location/Event Campus Estates pivision I, Lacey, WA
Sampler's Name Sierra Mott / Noah Nequette
Project Contact Chris Kimmel
Send Results To Anne Halvorsen, Chris Kimmel, Jessica Stone

Turnaround Time
☐ Standard
☒ ~~48~~ hr.
24 TAT

	Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: PB	AS	Observations/Comments
-1	CEdiv1-SP-01-comp	9/30/13	942	Soil	1	X	X	
-2	CEdiv2-SP-02-comp		947			X	X	
-3	CEdiv1-SP-03-comp		953			X	X	
-4	CEdiv1-SP-04-comp		1000			X	X	
-5	CEdiv1-SP-05-comp		1005			X	X	
-6	CEdiv1-SP-06-comp		1010			X	X	
-7	CEdiv1-SP-07-comp		1015			X	X	
-8	CEdiv1-SP-08-comp		1020			X	X	
-9	CEdiv1-SP-09-comp		1025			X	X	
-10	CEdiv1-SP-10-comp		1028			X	X	
-11	CEdiv1-SP-11-comp		1032			X	X	
-12	CEdiv1-SP-12-comp		1037			X	X	
-13	CEdiv1-SP-13-comp		1055			X	X	
-14	CEdiv1-SP-14-comp		1100			X	X	
-15	CEdiv1-SP-15-comp		1105			X	X	
-16	CEdiv1-SP-16-comp		1110			X	X	
-17	CEdiv1-SP-17-comp		1108			X	X	
-18	CEdiv1-SP-18-comp		1113			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

Lg Blu/whi wet/other
IR = 5.5 / 5.3 w/o

Special Shipment/Handling or Storage Requirements: on ice

Method of Shipment: drop off

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: Tom Blankinship	Signature:	Signature:
Printed Name: Sierra Mott	Printed Name: Blankinship	Printed Name:	Printed Name:
Company: Landau Associates	Company: TA-Sea	Company:	Company:
Date: 9/30/13 Time: 1430	Date: 9/30/13 Time: 1430	Date: Time:	Date: Time:

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

580-40574 Chain of Custody

Rev 8/09

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10/10/2013

LANDAU ASSOCIATES

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

Chain-of-Custody Record 40574

Date 9/30/13
Page 2 of 2

Project Name Campus Estates Project No. 867002.040.041
Project Location/Event Campus Estates Division I, Lacey, WA
Sampler's Name Sierra Mott / Noah Nequette
Project Contact Chris Kimmel
Send Results To Anne Halvorsen, Chris Kimmel, Jessica Stone

Turnaround Time
☐ Standard
☒ ~~24~~ hr.
24 TAT

	Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: PB	AS	Observations/Comments
-19	CEdiv1-SP-19-comp	9/30/13	1117	soil	1	X	X	
-20	CEdiv1-SP-20-comp	9/30/13	1122	soil	1	X	X	

Testing Parameters / 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 _____

Special Shipment/Handling or Storage Requirements: on ice

Method of Shipment: drop off

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: Tom Hunt	Signature:	Signature:
Printed Name: Sierra Mott	Printed Name:	Printed Name:	Printed Name:
Company: Landau Associates	Company: TA-Sea	Company:	Company:
Date: 9/30/13 Time: 1430	Date: 9/30/13 Time: 1430	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative Rev 8/09

10/10/2013

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-40574-1

Login Number: 40574

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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	

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-40574-1

Login Number: 40574
List Number: 1
Creator: Svabik-Seror, Philip M

List Source: TestAmerica Portland
List Creation: 10/01/13 10:41 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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?	False	Received project as a subcontract.
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.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-01-Comp
Date Collected: 09/30/13 09:42
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-1
Matrix: Solid
Percent Solids: 69.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.69		mg/Kg	☼	10/01/13 11:22	10/01/13 18:05	10
Lead	14		0.69		mg/Kg	☼	10/01/13 11:22	10/01/13 18:05	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30		0.010		%			10/01/13 12:48	1
Percent Solids	70		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-02-Comp
Date Collected: 09/30/13 09:47
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-2
Matrix: Solid
Percent Solids: 71.9

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.69		mg/Kg	☼	10/01/13 11:22	10/01/13 18:14	10
Lead	16		0.69		mg/Kg	☼	10/01/13 11:22	10/01/13 18:14	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010		%			10/01/13 12:48	1
Percent Solids	72		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-03-Comp — **Lab Sample ID: 580-40574-3**
Date Collected: 09/30/13 09:53 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 78.6**

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		0.63		mg/Kg	☼	10/01/13 11:22	10/01/13 18:17	10
Lead	14		0.63		mg/Kg	☼	10/01/13 11:22	10/01/13 18:17	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		0.010		%			10/01/13 12:48	1
Percent Solids	79		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-04-Comp
Date Collected: 09/30/13 10:00
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-4
Matrix: Solid
Percent Solids: 74.1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.0		0.67		mg/Kg	☼	10/01/13 11:22	10/01/13 18:31	10
Lead	15		0.67		mg/Kg	☼	10/01/13 11:22	10/01/13 18:31	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		0.010		%			10/01/13 12:48	1
Percent Solids	74		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-05-Comp
Date Collected: 09/30/13 10:05
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-5
Matrix: Solid
Percent Solids: 70.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 18:34	10
Lead	16		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 18:34	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	29		0.010		%			10/01/13 12:48	1
Percent Solids	71		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-06-Comp
Date Collected: 09/30/13 10:10
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-6
Matrix: Solid
Percent Solids: 66.2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.73		mg/Kg	☼	10/01/13 11:22	10/01/13 18:37	10
Lead	16		0.73		mg/Kg	☼	10/01/13 11:22	10/01/13 18:37	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	34		0.010		%			10/01/13 12:48	1
Percent Solids	66		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-07-Comp
Date Collected: 09/30/13 10:15
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-7
Matrix: Solid
Percent Solids: 68.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.72		mg/Kg	☼	10/01/13 11:22	10/01/13 18:41	10
Lead	14		0.72		mg/Kg	☼	10/01/13 11:22	10/01/13 18:41	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31		0.010		%			10/01/13 12:48	1
Percent Solids	69		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-08-Comp — **Lab Sample ID: 580-40574-8**
Date Collected: 09/30/13 10:20 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 71.7**

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.67		mg/Kg	☼	10/01/13 11:22	10/01/13 18:44	10
Lead	15		0.67		mg/Kg	☼	10/01/13 11:22	10/01/13 18:44	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010		%			10/01/13 12:48	1
Percent Solids	72		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-09-Comp
Date Collected: 09/30/13 10:25
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-9
Matrix: Solid
Percent Solids: 70.6

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		0.69		mg/Kg	☼	10/01/13 11:22	10/01/13 18:47	10
Lead	15		0.69		mg/Kg	☼	10/01/13 11:22	10/01/13 18:47	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	29		0.010		%			10/01/13 12:48	1
Percent Solids	71		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-10-Comp — **Lab Sample ID: 580-40574-10**
Date Collected: 09/30/13 10:28 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 67.0**

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		0.72		mg/Kg	☼	10/01/13 11:22	10/01/13 18:50	10
Lead	14		0.72		mg/Kg	☼	10/01/13 11:22	10/01/13 18:50	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	33		0.010		%			10/01/13 12:48	1
Percent Solids	67		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-11-Comp
Date Collected: 09/30/13 10:32
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-11
Matrix: Solid
Percent Solids: 72.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15		0.68		mg/Kg	☼	10/01/13 11:22	10/01/13 18:54	10
Lead	14		0.68		mg/Kg	☼	10/01/13 11:22	10/01/13 18:54	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010		%			10/01/13 12:48	1
Percent Solids	72		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-12-Comp
Date Collected: 09/30/13 10:37
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-12
Matrix: Solid
Percent Solids: 64.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.75		mg/Kg	☼	10/01/13 11:22	10/01/13 19:08	10
Lead	16		0.75		mg/Kg	☼	10/01/13 11:22	10/01/13 19:08	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	36		0.010		%			10/01/13 12:48	1
Percent Solids	64		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-13-Comp — **Lab Sample ID: 580-40574-13**
Date Collected: 09/30/13 10:55 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 70.0**

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 19:11	10
Lead	14		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 19:11	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30		0.010		%			10/01/13 12:48	1
Percent Solids	70		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-14-Comp
Date Collected: 09/30/13 11:00
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-14
Matrix: Solid
Percent Solids: 69.1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.2		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 19:14	10
Lead	12		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 19:14	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31		0.010		%			10/01/13 12:48	1
Percent Solids	69		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-15-Comp
Date Collected: 09/30/13 11:05
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-15
Matrix: Solid
Percent Solids: 74.3

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.6		0.66		mg/Kg	☼	10/01/13 11:22	10/01/13 19:17	10
Lead	11		0.66		mg/Kg	☼	10/01/13 11:22	10/01/13 19:17	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		0.010		%			10/01/13 12:48	1
Percent Solids	74		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-16-Comp
Date Collected: 09/30/13 11:10
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-16
Matrix: Solid
Percent Solids: 73.1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.4		0.66		mg/Kg	☼	10/01/13 11:22	10/01/13 19:21	10
Lead	12		0.66		mg/Kg	☼	10/01/13 11:22	10/01/13 19:21	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		0.010		%			10/01/13 12:48	1
Percent Solids	73		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-17-Comp — **Lab Sample ID: 580-40574-17**
Date Collected: 09/30/13 11:08 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 71.4**

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.5		0.67		mg/Kg	☼	10/01/13 11:22	10/01/13 19:24	10
Lead	11		0.67		mg/Kg	☼	10/01/13 11:22	10/01/13 19:24	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	29		0.010		%			10/01/13 12:48	1
Percent Solids	71		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-18-Comp
Date Collected: 09/30/13 11:13
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-18
Matrix: Solid
Percent Solids: 72.0

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.5		0.68		mg/Kg	☼	10/01/13 11:22	10/01/13 19:27	10
Lead	11		0.68		mg/Kg	☼	10/01/13 11:22	10/01/13 19:27	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010		%			10/01/13 12:48	1
Percent Solids	72		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-19-Comp
Date Collected: 09/30/13 11:17
Date Received: 09/30/13 14:30

Lab Sample ID: 580-40574-19
Matrix: Solid
Percent Solids: 67.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		0.72		mg/Kg	☼	10/01/13 11:22	10/01/13 19:30	10
Lead	15		0.72		mg/Kg	☼	10/01/13 11:22	10/01/13 19:30	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	32		0.010		%			10/01/13 12:48	1
Percent Solids	68		0.010		%			10/01/13 12:48	1

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-20-Comp — **Lab Sample ID: 580-40574-20**

Date Collected: 09/30/13 11:22 — **Matrix: Solid**

Date Received: 09/30/13 14:30 — **Percent Solids: 70.3**

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.7		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 19:34	10
Lead	13		0.70		mg/Kg	☼	10/01/13 11:22	10/01/13 19:34	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30		0.010		%			10/01/13 12:48	1
Percent Solids	70		0.010		%			10/01/13 12:48	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 250-20669/1-A
Matrix: Solid
Analysis Batch: 20708

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.49		mg/Kg		10/01/13 11:22	10/01/13 17:55	10
Lead	ND		0.49		mg/Kg		10/01/13 11:22	10/01/13 17:55	10

Lab Sample ID: LCS 250-20669/2-A
Matrix: Solid
Analysis Batch: 20708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20669

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49.1	50.7		mg/Kg		103	80 - 120
Lead	49.1	50.3		mg/Kg		102	80 - 120

Lab Sample ID: 580-40574-1 MS
Matrix: Solid
Analysis Batch: 20708

Client Sample ID: CF-SP-01-Comp
Prep Type: Total/NA
Prep Batch: 20669

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	11		71.7	83.4		mg/Kg	☼	101	75 - 125
Lead	14		71.7	87.8		mg/Kg	☼	103	75 - 125

Lab Sample ID: 580-40574-1 MSD
Matrix: Solid
Analysis Batch: 20708

Client Sample ID: CF-SP-01-Comp
Prep Type: Total/NA
Prep Batch: 20669

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	11		69.7	80.4		mg/Kg	☼	100	75 - 125	4	40
Lead	14		69.7	86.1		mg/Kg	☼	103	75 - 125	2	40

Method: D2216-80 - Percent Dry Weight (Solids) per ASTM D2216-80

Lab Sample ID: 580-40574-1 DU
Matrix: Solid
Analysis Batch: 20680

Client Sample ID: CF-SP-01-Comp
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	30		30		%		3	20
Percent Solids	70		70		%		1	20

Lab Chronicle

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-01-Comp
Lab Sample ID: 580-40574-1
Date Collected: 09/30/13 09:42
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 69.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:05	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-02-Comp
Lab Sample ID: 580-40574-2
Date Collected: 09/30/13 09:47
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 71.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:14	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-03-Comp
Lab Sample ID: 580-40574-3
Date Collected: 09/30/13 09:53
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 78.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:17	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-04-Comp
Lab Sample ID: 580-40574-4
Date Collected: 09/30/13 10:00
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 74.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:31	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-05-Comp
Lab Sample ID: 580-40574-5
Date Collected: 09/30/13 10:05
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 70.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:34	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Lab Chronicle

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-06-Comp — Lab Sample ID: 580-40574-6

Date Collected: 09/30/13 10:10 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 66.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:37	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-07-Comp — Lab Sample ID: 580-40574-7

Date Collected: 09/30/13 10:15 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 68.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:41	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-08-Comp — Lab Sample ID: 580-40574-8

Date Collected: 09/30/13 10:20 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 71.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:44	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-09-Comp — Lab Sample ID: 580-40574-9

Date Collected: 09/30/13 10:25 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 70.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:47	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-10-Comp — Lab Sample ID: 580-40574-10

Date Collected: 09/30/13 10:28 — **Matrix: Solid**
Date Received: 09/30/13 14:30 — **Percent Solids: 67.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:50	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-11-Comp

Lab Sample ID: 580-40574-11

Date Collected: 09/30/13 10:32

Matrix: Solid

Date Received: 09/30/13 14:30

Percent Solids: 72.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 18:54	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-12-Comp

Lab Sample ID: 580-40574-12

Date Collected: 09/30/13 10:37

Matrix: Solid

Date Received: 09/30/13 14:30

Percent Solids: 64.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:08	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-13-Comp

Lab Sample ID: 580-40574-13

Date Collected: 09/30/13 10:55

Matrix: Solid

Date Received: 09/30/13 14:30

Percent Solids: 70.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:11	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-14-Comp

Lab Sample ID: 580-40574-14

Date Collected: 09/30/13 11:00

Matrix: Solid

Date Received: 09/30/13 14:30

Percent Solids: 69.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:14	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-15-Comp

Lab Sample ID: 580-40574-15

Date Collected: 09/30/13 11:05

Matrix: Solid

Date Received: 09/30/13 14:30

Percent Solids: 74.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:17	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Lab Chronicle

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

TestAmerica Job ID: 580-40574-1

Client Sample ID: CF-SP-16-Comp

Lab Sample ID: 580-40574-16

Date Collected: 09/30/13 11:10
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 73.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:21	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-17-Comp

Lab Sample ID: 580-40574-17

Date Collected: 09/30/13 11:08
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 71.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:24	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-18-Comp

Lab Sample ID: 580-40574-18

Date Collected: 09/30/13 11:13
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 72.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:27	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-19-Comp

Lab Sample ID: 580-40574-19

Date Collected: 09/30/13 11:17
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 67.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:30	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Client Sample ID: CF-SP-20-Comp

Lab Sample ID: 580-40574-20

Date Collected: 09/30/13 11:22
Matrix: Solid
Date Received: 09/30/13 14:30
Percent Solids: 70.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			20669	10/01/13 11:22	TNL	TAL PRT
Total/NA	Analysis	6020		10	20708	10/01/13 19:34	LQN	TAL PRT
Total/NA	Analysis	D2216-80		1	20680	10/01/13 12:48	TNL	TAL PRT

Laboratory References:

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

Certification Summary

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

TestAmerica Job ID: 580-40574-1

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

Laboratory: TestAmerica Portland

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-012	12-26-13
California	State Program	9	2597	09-30-13 *
Oregon	NELAP	10	OR100021	01-09-14
USDA	Federal		P330-11-00092	02-17-14
Washington	State Program	10	C586	06-23-14

* Expired certification is currently pending renewal and is considered valid.

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: 580-42083-1
Client Project/Site: Campus Fairways Confirmation Sampling

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

Attn: Jessica Stone

Kristine D. Allen

Authorized for release by:
1/29/2014 3:53:40 PM
Kristine Allen, Manager of Project Management
(253)922-2310
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 Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Job ID: 580-42083-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 1/27/2014 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 4.2º C.

Metals - 6010B

The RPD for arsenic in the duplicate analysis was outside advisory QC limits due to analyte concentration near the reporting limit.

No other 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 Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-42083-1	CF-66cn-6	Solid	01/27/14 08:58	01/27/14 15:20
580-42083-2	CF-65cn-6	Solid	01/27/14 09:05	01/27/14 15:20
580-42083-3	CF-64cn-6	Solid	01/27/14 09:10	01/27/14 15:20
580-42083-4	CF-63cn-6	Solid	01/27/14 09:15	01/27/14 15:20
580-42083-5	CF-62cn-6	Solid	01/27/14 09:20	01/27/14 15:20
580-42083-6	CF-61cn-6	Solid	01/27/14 09:25	01/27/14 15:20
580-42083-7	CF-60cn-6	Solid	01/27/14 09:32	01/27/14 15:20
580-42083-8	CF-59cn-6	Solid	01/27/14 09:37	01/27/14 15:20
580-42083-9	CF-08cn-6	Solid	01/27/14 09:45	01/27/14 15:20
580-42083-10	CF-07cn-6	Solid	01/27/14 09:51	01/27/14 15:20
580-42083-11	CF-06cn-6	Solid	01/27/14 09:57	01/27/14 15:20
580-42083-12	CF-05cn-6	Solid	01/27/14 10:03	01/27/14 15:20
580-42083-13	CF-04cn-6	Solid	01/27/14 10:08	01/27/14 15:20
580-42083-14	CF-02cn-6	Solid	01/27/14 10:12	01/27/14 15:20
580-42083-15	CF-01cn-6	Solid	01/27/14 10:17	01/27/14 15:20
580-42083-16	CF-36cn-6	Solid	01/27/14 10:40	01/27/14 15:20
580-42083-17	CF-37cn-6	Solid	01/27/14 10:45	01/27/14 15:20
580-42083-18	CF-38cn-6	Solid	01/27/14 10:50	01/27/14 15:20
580-42083-19	CF-39cn-6	Solid	01/27/14 10:55	01/27/14 15:20
580-42083-20	CF-40cn-6	Solid	01/27/14 11:00	01/27/14 15:20
580-42083-21	CF-41cn-6	Solid	01/27/14 11:05	01/27/14 15:20
580-42083-22	CF-42cn-6	Solid	01/27/14 11:10	01/27/14 15:20
580-42083-23	CF-34cn-6	Solid	01/27/14 11:15	01/27/14 15:20
580-42083-24	CF-35cn-6	Solid	01/27/14 11:20	01/27/14 15:20
580-42083-25	CF-33cn-6	Solid	01/27/14 11:25	01/27/14 15:20
580-42083-26	CF-32cn-6	Solid	01/27/14 11:30	01/27/14 15:20
580-42083-27	CF-30cn-6	Solid	01/27/14 11:35	01/27/14 15:20
580-42083-28	CF-29cn-6	Solid	01/27/14 11:40	01/27/14 15:20
580-42083-29	CF-28cn-6	Solid	01/27/14 11:46	01/27/14 15:20
580-42083-30	CF-26cn-6	Solid	01/27/14 12:20	01/27/14 15:20
580-42083-31	CF-25cn-6	Solid	01/27/14 12:25	01/27/14 15:20
580-42083-32	CF-24cn-6	Solid	01/27/14 12:30	01/27/14 15:20
580-42083-33	CF-23cn-6	Solid	01/27/14 12:35	01/27/14 15:20
580-42083-34	CF-22cn-6	Solid	01/27/14 12:40	01/27/14 15:20
580-42083-35	CF-21cn-6	Solid	01/27/14 12:45	01/27/14 15:20
580-42083-36	CF-20cn-6	Solid	01/27/14 12:50	01/27/14 15:20
580-42083-37	CF-09cn-6	Solid	01/27/14 13:10	01/27/14 15:20
580-42083-38	CF-10cn-6	Solid	01/27/14 13:15	01/27/14 15:20
580-42083-39	CF-11cn-6	Solid	01/27/14 13:20	01/27/14 15:20
580-42083-40	CF-12cn-6	Solid	01/27/14 13:26	01/27/14 15:20
580-42083-41	CF-13cn-6	Solid	01/27/14 13:31	01/27/14 15:20
580-42083-42	CF-14cn-6	Solid	01/27/14 13:35	01/27/14 15:20
580-42083-43	CF-15cn-6	Solid	01/27/14 13:39	01/27/14 15:20
580-42083-44	CF-16cn-6	Solid	01/27/14 13:43	01/27/14 15:20
580-42083-45	CF-17cn-6	Solid	01/27/14 13:48	01/27/14 15:20
580-42083-46	CF-18cn-6	Solid	01/27/14 13:52	01/27/14 15:20
580-42083-47	CF-19cn-6	Solid	01/27/14 13:57	01/27/14 15:20
580-42083-48	CF-31cn-6	Solid	01/27/14 14:07	01/27/14 15:20
580-42083-49	CF-27cn-6	Solid	01/27/14 14:12	01/27/14 15:20

42083

Date 1/27/14

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LANDAU ASSOCIATES

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

Chain-of-Custody Record

Project Name Campus Fairways Confirmation Sampling Project No. 367002.040.002

Project Location/Event Lacey, WA

Sampler's Name Sierra Mott, Noah Nemmette

Project Contact Chris Kimmel, Jessica Stone

Send Results To C. Kimmel, J. Stone, S. Mott, A. Halvorsen

Turnaround Time
☐ Standard
☒ 48 hr

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: DX NWTPH	Observations/Comments
CF-66cn-6	1/27/14	858	Soil	1	X	
CF-65cn-6		905			X	
CF-64cn-6		910			X	
CF-63cn-6		915			X	
CF-62cn-6		920			X	
CF-61cn-6		925			X	
CF-60cn-6		932			X	
CF-59cn-6		937			X	
CF-08cn-6		945			X	
CF-07cn-6		951			X	
CF-06cn-6		957			X	
CF-05cn-6		1003			X	
CF-04cn-6		1008			X	
CF-02cn-6		1012			X	
CF-01cn-6		1017			X	
CF-36cn-6		1040			X	
CF-37cn-6		1045			X	
CF-38cn-6		1050			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 A2 4.2 4.1
LG RED WH
PCE NONE
W/O LAB COURIER

Special Shipment/Handling or Storage Requirements Cooler on ice

Method of Shipment dropoff

Relinquished by	Received by	Relinquished by	Received by
Signature Sierra Mott	Signature Cathy Gamble	Signature	
Printed Name Sierra Mott	Printed Name Cathy Gamble	Printed Name	
Company LAI	Company TA Sea	Company	
Date 1/27/14 Time 1520	Date 1/27/14 Time 15:20	Date ____ Time ____	Date ____ Time ____

580-42083 Chain of Custody

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

Rev 8/09

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

Chain-of-Custody Record

Date 1/27/14
Page 2 of 3

Project Name Campus Fairways Confirmation Sampling Project No. 867002.040.042
Project Location/Event Lacey, WA
Sampler's Name Sierra Mott, Noah Nequette
Project Contact Chris Kimmel, Jessica Stone
Send Results To C. Kimmel, J. Stone, S. Mott, A. Halvorsen

Turnaround Time
☐ Standard
☐ Accelerated
~~X~~ 48 hr

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: PB	Testing Parameters: AS
CF-39cm-6	1/27/14	1055	soil	1	X	X
CF-40cm-6		1100			X	X
CF-41cm-6		1105			X	X
CF-42cm-6		1110			X	X
CF-34cm-6		1115			X	X
CF-35cm-6		1120			X	X
CF-33cm-6		1125			X	X
CF-32cm-6		1130			X	X
CF-30cm-6		1135			X	X
CF-29cm-6		1140			X	X
CF-28cm-6		1146			X	X
CF-26cm-6		1220			X	X
CF-25cm-6		1225			X	X
CF-24cm-6		1230			X	X
CF-23cm-6		1235			X	X
CF-22cm-6		1240			X	X
CF-21cm-6		1245			X	X
CF-20cm-6		1250			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 _____

Special Shipment/Handling or Storage Requirements: cooler on ice

Method of Shipment: drop off

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: Cathy Gamble	Signature:	Signature:
Printed Name: Sierra Mott	Printed Name: Cathy Gamble	Printed Name:	Printed Name:
Company: LAI	Company: TA - Sea	Company:	Company:
Date: 1/27/14 Time: 1520	Date: 1/27/14 Time: 15:20	Date: Time:	Date: Time:

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

Rev 8/09

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

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 1/27/14
Page 3 of 3

Project Name Camps Fairways Confirmation Sampling Project No. 360002.040.042
Project Location/Event Lacey, WA
Sampler's Name Sierra Mott, Noah Nequette
Project Contact Chris Kimmel, Jessica Stone
Send Results To C. Kimmel, J. Stone, S. Mott, A. Halvorsen

Turnaround Time
☐ Standard
☐ Accelerated
☒ 48 hr

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	PB	AS
CF-09cn-6	1/27/13	1310	Soil	1	X	X
CF-10cn-6		1315			X	X
CF-11cn-6		1320			X	X
CF-12cn-6		1326			X	X
CF-13cn-6		1331			X	X
CF-14cn-6		1335			X	X
CF-15cn-6		1339			X	X
CF-16cn-6		1343			X	X
CF-17cn-6		1348			X	X
CF-18cn-6		1352			X	X
CF-19cn-6		1357			X	X
CF-31cn-6		1407			X	X
CF-27cn-6		1412			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___ unc___
Cooler Dsc _____ @ Lab____
Wet/Packs Packing_____

Special Shipment/Handling or Storage Requirements Cooler on ice

Method of Shipment dropoff

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: Cathy Crandle	Signature:	Signature:
Printed Name: Sierra Mott	Printed Name: Cathy Crandle	Printed Name:	Printed Name:
Company: LAI	Company: LAI	Company:	Company:
Date: 1/27/14 Time: 1520	Date: 1/27/14 Time: 15:20	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: 580-42083-1

Login Number: 42083

List Source: TestAmerica Seattle

List Number: 1

Creator: McDaniel, Ronald T

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	Not present
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: CF-66cn-6
Date Collected: 01/27/14 08:58
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-1
Matrix: Solid
Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		2.5	mg/Kg	☼	01/27/14 16:24	01/28/14 12:32	1
Lead	2.8		1.2	mg/Kg	☼	01/27/14 16:24	01/28/14 12:32	1

Client Sample ID: CF-65cn-6
Date Collected: 01/27/14 09:05
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-2
Matrix: Solid
Percent Solids: 90.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.7		2.1	mg/Kg	☼	01/27/14 16:24	01/28/14 12:55	1
Lead	2.1		1.0	mg/Kg	☼	01/27/14 16:24	01/28/14 12:55	1

Client Sample ID: CF-64cn-6
Date Collected: 01/27/14 09:10
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-3
Matrix: Solid
Percent Solids: 92.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		2.6	mg/Kg	☼	01/27/14 16:24	01/28/14 12:59	1
Lead	2.4		1.3	mg/Kg	☼	01/27/14 16:24	01/28/14 12:59	1

Client Sample ID: CF-63cn-6
Date Collected: 01/27/14 09:15
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-4
Matrix: Solid
Percent Solids: 89.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		2.6	mg/Kg	☼	01/27/14 16:24	01/28/14 13:02	1
Lead	2.9		1.3	mg/Kg	☼	01/27/14 16:24	01/28/14 13:02	1

Client Sample ID: CF-62cn-6
Date Collected: 01/27/14 09:20
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-5
Matrix: Solid
Percent Solids: 94.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		2.4	mg/Kg	☼	01/27/14 16:24	01/28/14 13:05	1
Lead	1.7		1.2	mg/Kg	☼	01/27/14 16:24	01/28/14 13:05	1

Client Sample ID: CF-61cn-6
Date Collected: 01/27/14 09:25
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-6
Matrix: Solid
Percent Solids: 88.4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3		2.2	mg/Kg	☼	01/27/14 16:24	01/28/14 13:09	1
Lead	2.8		1.1	mg/Kg	☼	01/27/14 16:24	01/28/14 13:09	1

Client Sample ID: CF-60cn-6
Date Collected: 01/27/14 09:32
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-7
Matrix: Solid
Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.2		3.0	mg/Kg	☼	01/27/14 16:24	01/28/14 13:12	1
Lead	2.8		1.5	mg/Kg	☼	01/27/14 16:24	01/28/14 13:12	1

Client Sample ID: CF-59cn-6
Date Collected: 01/27/14 09:37
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-8
Matrix: Solid
Percent Solids: 87.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.2		2.0	mg/Kg	☼	01/27/14 16:24	01/28/14 13:15	1
Lead	3.1		0.98	mg/Kg	☼	01/27/14 16:24	01/28/14 13:15	1

Method: 6010B - Metals (ICP)

Client Sample ID: CF-08cn-6
Date Collected: 01/27/14 09:45
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-9
Matrix: Solid
Percent Solids: 86.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		3.0	mg/Kg	☼	01/27/14 16:24	01/28/14 13:19	1
Lead	4.5		1.5	mg/Kg	☼	01/27/14 16:24	01/28/14 13:19	1

Client Sample ID: CF-07cn-6
Date Collected: 01/27/14 09:51
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-10
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.7		2.5	mg/Kg	☼	01/27/14 16:24	01/28/14 13:22	1
Lead	3.6		1.2	mg/Kg	☼	01/27/14 16:24	01/28/14 13:22	1

Client Sample ID: CF-06cn-6
Date Collected: 01/27/14 09:57
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-11
Matrix: Solid
Percent Solids: 80.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		3.0	mg/Kg	☼	01/27/14 16:24	01/28/14 13:26	1
Lead	5.6		1.5	mg/Kg	☼	01/27/14 16:24	01/28/14 13:26	1

Client Sample ID: CF-05cn-6
Date Collected: 01/27/14 10:03
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-12
Matrix: Solid
Percent Solids: 86.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		2.6	mg/Kg	☼	01/27/14 16:24	01/28/14 13:35	1
Lead	3.7		1.3	mg/Kg	☼	01/27/14 16:24	01/28/14 13:35	1

Client Sample ID: CF-04cn-6
Date Collected: 01/27/14 10:08
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-13
Matrix: Solid
Percent Solids: 89.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		2.6	mg/Kg	☼	01/27/14 16:24	01/28/14 13:38	1
Lead	3.2		1.3	mg/Kg	☼	01/27/14 16:24	01/28/14 13:38	1

Client Sample ID: CF-02cn-6
Date Collected: 01/27/14 10:12
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-14
Matrix: Solid
Percent Solids: 86.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.5		2.4	mg/Kg	☼	01/27/14 16:24	01/28/14 13:41	1
Lead	5.4		1.2	mg/Kg	☼	01/27/14 16:24	01/28/14 13:41	1

Client Sample ID: CF-01cn-6
Date Collected: 01/27/14 10:17
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-15
Matrix: Solid
Percent Solids: 88.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		2.2	mg/Kg	☼	01/27/14 16:24	01/28/14 13:44	1
Lead	3.1		1.1	mg/Kg	☼	01/27/14 16:24	01/28/14 13:44	1

Client Sample ID: CF-36cn-6
Date Collected: 01/27/14 10:40
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-16
Matrix: Solid
Percent Solids: 92.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		2.2	mg/Kg	☼	01/27/14 16:24	01/28/14 13:48	1
Lead	2.2		1.1	mg/Kg	☼	01/27/14 16:24	01/28/14 13:48	1

Method: 6010B - Metals (ICP)

Client Sample ID: CF-37cn-6
Date Collected: 01/27/14 10:45
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-17
Matrix: Solid
Percent Solids: 94.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		2.7	mg/Kg	☼	01/27/14 16:24	01/28/14 13:51	1
Lead	1.9		1.3	mg/Kg	☼	01/27/14 16:24	01/28/14 13:51	1

Client Sample ID: CF-38cn-6
Date Collected: 01/27/14 10:50
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-18
Matrix: Solid
Percent Solids: 92.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.6	mg/Kg	☼	01/27/14 16:24	01/28/14 13:54	1
Lead	2.5		1.3	mg/Kg	☼	01/27/14 16:24	01/28/14 13:54	1

Client Sample ID: CF-39cn-6
Date Collected: 01/27/14 10:55
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-19
Matrix: Solid
Percent Solids: 93.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.6	mg/Kg	☼	01/27/14 17:32	01/28/14 17:24	1
Lead	2.1		1.3	mg/Kg	☼	01/27/14 17:32	01/28/14 17:24	1

Client Sample ID: CF-40cn-6
Date Collected: 01/27/14 11:00
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-20
Matrix: Solid
Percent Solids: 94.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.8	mg/Kg	☼	01/27/14 17:32	01/28/14 17:48	1
Lead	1.7		1.4	mg/Kg	☼	01/27/14 17:32	01/28/14 17:48	1

Client Sample ID: CF-41cn-6
Date Collected: 01/27/14 11:05
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-21
Matrix: Solid
Percent Solids: 94.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		1.9	mg/Kg	☼	01/27/14 17:32	01/28/14 17:51	1
Lead	1.7		0.97	mg/Kg	☼	01/27/14 17:32	01/28/14 17:51	1

Client Sample ID: CF-42cn-6
Date Collected: 01/27/14 11:10
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-22
Matrix: Solid
Percent Solids: 91.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6		2.6	mg/Kg	☼	01/27/14 17:32	01/28/14 17:55	1
Lead	2.7		1.3	mg/Kg	☼	01/27/14 17:32	01/28/14 17:55	1

Client Sample ID: CF-34cn-6
Date Collected: 01/27/14 11:15
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-23
Matrix: Solid
Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		2.3	mg/Kg	☼	01/27/14 17:32	01/28/14 17:58	1
Lead	2.3		1.2	mg/Kg	☼	01/27/14 17:32	01/28/14 17:58	1

Client Sample ID: CF-35cn-6
Date Collected: 01/27/14 11:20
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-24
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		2.4	mg/Kg	☼	01/27/14 17:32	01/28/14 18:01	1
Lead	2.4		1.2	mg/Kg	☼	01/27/14 17:32	01/28/14 18:01	1

Method: 6010B - Metals (ICP)

Client Sample ID: CF-33cn-6
Date Collected: 01/27/14 11:25
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-25
Matrix: Solid
Percent Solids: 92.4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		2.2	mg/Kg	☼	01/27/14 17:32	01/28/14 18:04	1
Lead	2.2		1.1	mg/Kg	☼	01/27/14 17:32	01/28/14 18:04	1

Client Sample ID: CF-32cn-6
Date Collected: 01/27/14 11:30
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-26
Matrix: Solid
Percent Solids: 90.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4		2.9	mg/Kg	☼	01/27/14 17:32	01/28/14 18:08	1
Lead	2.1		1.4	mg/Kg	☼	01/27/14 17:32	01/28/14 18:08	1

Client Sample ID: CF-30cn-6
Date Collected: 01/27/14 11:35
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-27
Matrix: Solid
Percent Solids: 89.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3		2.5	mg/Kg	☼	01/27/14 17:32	01/28/14 18:11	1
Lead	2.6		1.3	mg/Kg	☼	01/27/14 17:32	01/28/14 18:11	1

Client Sample ID: CF-29cn-6
Date Collected: 01/27/14 11:40
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-28
Matrix: Solid
Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6		3.0	mg/Kg	☼	01/27/14 17:32	01/28/14 18:14	1
Lead	3.2		1.5	mg/Kg	☼	01/27/14 17:32	01/28/14 18:14	1

Client Sample ID: CF-28cn-6
Date Collected: 01/27/14 11:46
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-29
Matrix: Solid
Percent Solids: 89.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.1		3.3	mg/Kg	☼	01/27/14 17:32	01/28/14 18:17	1
Lead	3.5		1.7	mg/Kg	☼	01/27/14 17:32	01/28/14 18:17	1

Client Sample ID: CF-26cn-6
Date Collected: 01/27/14 12:20
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-30
Matrix: Solid
Percent Solids: 95.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		2.4	mg/Kg	☼	01/27/14 17:32	01/28/14 18:26	1
Lead	2.2		1.2	mg/Kg	☼	01/27/14 17:32	01/28/14 18:26	1

Client Sample ID: CF-25cn-6
Date Collected: 01/27/14 12:25
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-31
Matrix: Solid
Percent Solids: 90.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.5	mg/Kg	☼	01/27/14 17:32	01/28/14 18:30	1
Lead	2.4		1.2	mg/Kg	☼	01/27/14 17:32	01/28/14 18:30	1

Client Sample ID: CF-24cn-6
Date Collected: 01/27/14 12:30
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-32
Matrix: Solid
Percent Solids: 91.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		2.7	mg/Kg	☼	01/27/14 17:32	01/28/14 18:33	1
Lead	2.8		1.4	mg/Kg	☼	01/27/14 17:32	01/28/14 18:33	1

Method: 6010B - Metals (ICP)

Client Sample ID: CF-23cn-6
Date Collected: 01/27/14 12:35
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-33
Matrix: Solid
Percent Solids: 94.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3		2.4	mg/Kg	☼	01/27/14 17:32	01/28/14 18:36	1
Lead	2.1		1.2	mg/Kg	☼	01/27/14 17:32	01/28/14 18:36	1

Client Sample ID: CF-22cn-6
Date Collected: 01/27/14 12:40
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-34
Matrix: Solid
Percent Solids: 93.4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.7		2.7	mg/Kg	☼	01/27/14 17:32	01/28/14 18:39	1
Lead	2.0		1.3	mg/Kg	☼	01/27/14 17:32	01/28/14 18:39	1

Client Sample ID: CF-21cn-6
Date Collected: 01/27/14 12:45
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-35
Matrix: Solid
Percent Solids: 92.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.3	mg/Kg	☼	01/27/14 17:32	01/28/14 18:43	1
Lead	2.2		1.1	mg/Kg	☼	01/27/14 17:32	01/28/14 18:43	1

Client Sample ID: CF-20cn-6
Date Collected: 01/27/14 12:50
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-36
Matrix: Solid
Percent Solids: 91.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.2		2.7	mg/Kg	☼	01/28/14 12:57	01/28/14 19:03	1
Lead	2.4		1.3	mg/Kg	☼	01/28/14 12:57	01/28/14 19:03	1

Client Sample ID: CF-09cn-6
Date Collected: 01/27/14 13:10
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-37
Matrix: Solid
Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		2.4	mg/Kg	☼	01/28/14 12:57	01/28/14 19:26	1
Lead	2.6		1.2	mg/Kg	☼	01/28/14 12:57	01/28/14 19:26	1

Client Sample ID: CF-10cn-6
Date Collected: 01/27/14 13:15
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-38
Matrix: Solid
Percent Solids: 81.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.2		3.7	mg/Kg	☼	01/28/14 12:57	01/28/14 19:29	1
Lead	8.8		1.8	mg/Kg	☼	01/28/14 12:57	01/28/14 19:29	1

Client Sample ID: CF-11cn-6
Date Collected: 01/27/14 13:20
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-39
Matrix: Solid
Percent Solids: 89.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.6	mg/Kg	☼	01/28/14 12:57	01/28/14 19:33	1
Lead	2.5		1.3	mg/Kg	☼	01/28/14 12:57	01/28/14 19:33	1

Client Sample ID: CF-12cn-6
Date Collected: 01/27/14 13:26
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-40
Matrix: Solid
Percent Solids: 94.4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		2.5	mg/Kg	☼	01/28/14 12:57	01/28/14 19:36	1
Lead	2.5		1.3	mg/Kg	☼	01/28/14 12:57	01/28/14 19:36	1

Method: 6010B - Metals (ICP)

Client Sample ID: CF-13cn-6
Date Collected: 01/27/14 13:31
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-41
Matrix: Solid
Percent Solids: 93.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		2.8	mg/Kg	☼	01/28/14 12:57	01/28/14 19:39	1
Lead	2.4		1.4	mg/Kg	☼	01/28/14 12:57	01/28/14 19:39	1

Client Sample ID: CF-14cn-6
Date Collected: 01/27/14 13:35
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-42
Matrix: Solid
Percent Solids: 83.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.5		2.6	mg/Kg	☼	01/28/14 12:57	01/28/14 19:42	1
Lead	5.7		1.3	mg/Kg	☼	01/28/14 12:57	01/28/14 19:42	1

Client Sample ID: CF-15cn-6
Date Collected: 01/27/14 13:39
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-43
Matrix: Solid
Percent Solids: 91.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		3.0	mg/Kg	☼	01/28/14 12:57	01/28/14 19:46	1
Lead	3.0		1.5	mg/Kg	☼	01/28/14 12:57	01/28/14 19:46	1

Client Sample ID: CF-16cn-6
Date Collected: 01/27/14 13:43
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-44
Matrix: Solid
Percent Solids: 87.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.9		3.3	mg/Kg	☼	01/28/14 12:57	01/28/14 19:49	1
Lead	3.9		1.7	mg/Kg	☼	01/28/14 12:57	01/28/14 19:49	1

Client Sample ID: CF-17cn-6
Date Collected: 01/27/14 13:48
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-45
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		2.5	mg/Kg	☼	01/28/14 12:57	01/28/14 19:52	1
Lead	1.9		1.3	mg/Kg	☼	01/28/14 12:57	01/28/14 19:52	1

Client Sample ID: CF-18cn-6
Date Collected: 01/27/14 13:52
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-46
Matrix: Solid
Percent Solids: 83.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.6		2.5	mg/Kg	☼	01/28/14 12:57	01/28/14 20:01	1
Lead	6.7		1.2	mg/Kg	☼	01/28/14 12:57	01/28/14 20:01	1

Client Sample ID: CF-19cn-6
Date Collected: 01/27/14 13:57
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-47
Matrix: Solid
Percent Solids: 91.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.1		2.7	mg/Kg	☼	01/28/14 12:57	01/28/14 20:05	1
Lead	3.6		1.4	mg/Kg	☼	01/28/14 12:57	01/28/14 20:05	1

Client Sample ID: CF-31cn-6
Date Collected: 01/27/14 14:07
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-48
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		3.0	mg/Kg	☼	01/28/14 12:57	01/28/14 20:09	1
Lead	3.0		1.5	mg/Kg	☼	01/28/14 12:57	01/28/14 20:09	1

Client: Landau & Associates, Inc.
Project/Site: Campus Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Method: 6010B - Metals (ICP)

Client Sample ID: CF-27cn-6
Date Collected: 01/27/14 14:12
Date Received: 01/27/14 15:20

Lab Sample ID: 580-42083-49
Matrix: Solid
Percent Solids: 85.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5		2.3	mg/Kg	☼	01/28/14 12:57	01/28/14 20:12	1
Lead	2.5		1.2	mg/Kg	☼	01/28/14 12:57	01/28/14 20:12	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-152724/22-A
Matrix: Solid
Analysis Batch: 152801

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152724

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	mg/Kg		01/27/14 16:24	01/28/14 12:20	1
Lead	ND		1.5	mg/Kg		01/27/14 16:24	01/28/14 12:20	1

Lab Sample ID: LCS 580-152724/23-A
Matrix: Solid
Analysis Batch: 152801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152724

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	183		mg/Kg		92	80 - 120
Lead	50.0	47.1		mg/Kg		94	80 - 120

Lab Sample ID: LCSD 580-152724/24-A
Matrix: Solid
Analysis Batch: 152801

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152724

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	186		mg/Kg		93	80 - 120	2	20
Lead	50.0	47.3		mg/Kg		95	80 - 120	1	20

Lab Sample ID: 580-42083-1 MS
Matrix: Solid
Analysis Batch: 152801

Client Sample ID: CF-66cn-6
Prep Type: Total/NA
Prep Batch: 152724

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.0		194	171		mg/Kg	☼	86	80 - 120
Lead	2.8		48.4	46.0		mg/Kg	☼	89	80 - 120

Lab Sample ID: 580-42083-1 MSD
Matrix: Solid
Analysis Batch: 152801

Client Sample ID: CF-66cn-6
Prep Type: Total/NA
Prep Batch: 152724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.0		168	150		mg/Kg	☼	87	80 - 120	13	20
Lead	2.8		41.9	40.3		mg/Kg	☼	89	80 - 120	13	20

Lab Sample ID: 580-42083-1 DU
Matrix: Solid
Analysis Batch: 152801

Client Sample ID: CF-66cn-6
Prep Type: Total/NA
Prep Batch: 152724

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	5.0		2.74		mg/Kg	☼	58	20
Lead	2.8		2.33		mg/Kg	☼	19	20

Lab Sample ID: MB 580-152729/21-A
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152729

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	mg/Kg		01/27/14 17:32	01/28/14 17:13	1

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

Lab Sample ID: MB 580-152729/21-A
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152729

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		1.5	mg/Kg		01/27/14 17:32	01/28/14 17:13	1

Lab Sample ID: LCS 580-152729/22-A
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	182		mg/Kg		91	80 - 120
Lead	50.0	45.6		mg/Kg		91	80 - 120

Lab Sample ID: LCSD 580-152729/23-A
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152729

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	183		mg/Kg		91	80 - 120	0	20
Lead	50.0	46.0		mg/Kg		92	80 - 120	1	20

Lab Sample ID: 580-42083-19 MS
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: CF-39cn-6
Prep Type: Total/NA
Prep Batch: 152729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.8		179	168		mg/Kg	☼	92	80 - 120
Lead	2.1		44.8	43.5		mg/Kg	☼	92	80 - 120

Lab Sample ID: 580-42083-19 MSD
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: CF-39cn-6
Prep Type: Total/NA
Prep Batch: 152729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	2.8		197	177		mg/Kg	☼	89	80 - 120	5	20
Lead	2.1		49.3	46.3		mg/Kg	☼	90	80 - 120	6	20

Lab Sample ID: 580-42083-19 DU
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: CF-39cn-6
Prep Type: Total/NA
Prep Batch: 152729

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	2.8		3.07		mg/Kg	☼	8	20
Lead	2.1		2.37		mg/Kg	☼	10	20

Lab Sample ID: MB 580-152784/18-A
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152784

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	mg/Kg		01/28/14 12:57	01/28/14 18:52	1
Lead	ND		1.5	mg/Kg		01/28/14 12:57	01/28/14 18:52	1

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

Lab Sample ID: LCS 580-152784/19-A
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152784

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	179		mg/Kg		89	80 - 120
Lead	50.0	45.9		mg/Kg		92	80 - 120

Lab Sample ID: LCSD 580-152784/20-A
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152784

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	183		mg/Kg		92	80 - 120	3	20
Lead	50.0	46.7		mg/Kg		93	80 - 120	2	20

Lab Sample ID: 580-42083-36 MS
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: CF-20cn-6
Prep Type: Total/NA
Prep Batch: 152784

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	3.2		184	168		mg/Kg	☼	90	80 - 120
Lead	2.4		46.0	43.8		mg/Kg	☼	90	80 - 120

Lab Sample ID: 580-42083-36 MSD
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: CF-20cn-6
Prep Type: Total/NA
Prep Batch: 152784

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	3.2		176	156		mg/Kg	☼	87	80 - 120	7	20
Lead	2.4		43.9	42.2		mg/Kg	☼	91	80 - 120	4	20

Lab Sample ID: 580-42083-36 DU
Matrix: Solid
Analysis Batch: 152860

Client Sample ID: CF-20cn-6
Prep Type: Total/NA
Prep Batch: 152784

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	3.2		3.33		mg/Kg	☼	5	20
Lead	2.4		2.53		mg/Kg	☼	6	20

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Campus Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Client Sample ID: CF-66cn-6

Lab Sample ID: 580-42083-1
Date Collected: 01/27/14 08:58
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 12:32	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-65cn-6

Lab Sample ID: 580-42083-2
Date Collected: 01/27/14 09:05
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 12:55	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-64cn-6

Lab Sample ID: 580-42083-3
Date Collected: 01/27/14 09:10
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 12:59	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-63cn-6

Lab Sample ID: 580-42083-4
Date Collected: 01/27/14 09:15
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:02	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-62cn-6

Lab Sample ID: 580-42083-5
Date Collected: 01/27/14 09:20
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:05	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Campus Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Client Sample ID: CF-61cn-6

Lab Sample ID: 580-42083-6
Date Collected: 01/27/14 09:25
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:09	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-60cn-6

Lab Sample ID: 580-42083-7
Date Collected: 01/27/14 09:32
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 89.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:12	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-59cn-6

Lab Sample ID: 580-42083-8
Date Collected: 01/27/14 09:37
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:15	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-08cn-6

Lab Sample ID: 580-42083-9
Date Collected: 01/27/14 09:45
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:19	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-07cn-6

Lab Sample ID: 580-42083-10
Date Collected: 01/27/14 09:51
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:22	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Campus Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Client Sample ID: CF-06cn-6

Lab Sample ID: 580-42083-11
Date Collected: 01/27/14 09:57
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 80.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:26	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-05cn-6

Lab Sample ID: 580-42083-12
Date Collected: 01/27/14 10:03
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:35	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-04cn-6

Lab Sample ID: 580-42083-13
Date Collected: 01/27/14 10:08
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:38	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-02cn-6

Lab Sample ID: 580-42083-14
Date Collected: 01/27/14 10:12
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:41	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-01cn-6

Lab Sample ID: 580-42083-15
Date Collected: 01/27/14 10:17
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 88.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:44	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-36cn-6

Lab Sample ID: 580-42083-16

Date Collected: 01/27/14 10:40

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:48	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-37cn-6

Lab Sample ID: 580-42083-17

Date Collected: 01/27/14 10:45

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:51	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-38cn-6

Lab Sample ID: 580-42083-18

Date Collected: 01/27/14 10:50

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152724	01/27/14 16:24	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152801	01/28/14 13:54	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-39cn-6

Lab Sample ID: 580-42083-19

Date Collected: 01/27/14 10:55

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 17:24	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:13	PAB	TAL SEA

Client Sample ID: CF-40cn-6

Lab Sample ID: 580-42083-20

Date Collected: 01/27/14 11:00

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 17:48	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client: Landau & Associates, Inc.
Project/Site: Campus Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Client Sample ID: CF-41cn-6

Lab Sample ID: 580-42083-21
Date Collected: 01/27/14 11:05
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 17:51	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-42cn-6

Lab Sample ID: 580-42083-22
Date Collected: 01/27/14 11:10
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 17:55	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-34cn-6

Lab Sample ID: 580-42083-23
Date Collected: 01/27/14 11:15
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 17:58	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-35cn-6

Lab Sample ID: 580-42083-24
Date Collected: 01/27/14 11:20
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:01	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-33cn-6

Lab Sample ID: 580-42083-25
Date Collected: 01/27/14 11:25
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:04	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-32cn-6

Lab Sample ID: 580-42083-26

Date Collected: 01/27/14 11:30
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:08	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-30cn-6

Lab Sample ID: 580-42083-27

Date Collected: 01/27/14 11:35
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 89.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:11	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-29cn-6

Lab Sample ID: 580-42083-28

Date Collected: 01/27/14 11:40
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:14	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-28cn-6

Lab Sample ID: 580-42083-29

Date Collected: 01/27/14 11:46
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:17	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-26cn-6

Lab Sample ID: 580-42083-30

Date Collected: 01/27/14 12:20
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:26	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-25cn-6

Lab Sample ID: 580-42083-31

Date Collected: 01/27/14 12:25

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:30	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-24cn-6

Lab Sample ID: 580-42083-32

Date Collected: 01/27/14 12:30

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:33	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-23cn-6

Lab Sample ID: 580-42083-33

Date Collected: 01/27/14 12:35

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:36	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-22cn-6

Lab Sample ID: 580-42083-34

Date Collected: 01/27/14 12:40

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:39	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-21cn-6

Lab Sample ID: 580-42083-35

Date Collected: 01/27/14 12:45

Matrix: Solid

Date Received: 01/27/14 15:20

Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152729	01/27/14 17:32	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 18:43	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-20cn-6

Lab Sample ID: 580-42083-36

Date Collected: 01/27/14 12:50
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:03	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-09cn-6

Lab Sample ID: 580-42083-37

Date Collected: 01/27/14 13:10
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:26	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-10cn-6

Lab Sample ID: 580-42083-38

Date Collected: 01/27/14 13:15
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:29	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-11cn-6

Lab Sample ID: 580-42083-39

Date Collected: 01/27/14 13:20
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:33	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-12cn-6

Lab Sample ID: 580-42083-40

Date Collected: 01/27/14 13:26
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:36	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-13cn-6

Lab Sample ID: 580-42083-41

Date Collected: 01/27/14 13:31
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:39	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-14cn-6

Lab Sample ID: 580-42083-42

Date Collected: 01/27/14 13:35
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:42	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-15cn-6

Lab Sample ID: 580-42083-43

Date Collected: 01/27/14 13:39
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:46	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-16cn-6

Lab Sample ID: 580-42083-44

Date Collected: 01/27/14 13:43
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:49	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-17cn-6

Lab Sample ID: 580-42083-45

Date Collected: 01/27/14 13:48
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 19:52	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Campus Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

Client Sample ID: CF-18cn-6

Lab Sample ID: 580-42083-46
Date Collected: 01/27/14 13:52
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 83.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 20:01	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-19cn-6

Lab Sample ID: 580-42083-47
Date Collected: 01/27/14 13:57
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 20:05	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-31cn-6

Lab Sample ID: 580-42083-48
Date Collected: 01/27/14 14:07
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 20:09	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	TAL SEA

Client Sample ID: CF-27cn-6

Lab Sample ID: 580-42083-49
Date Collected: 01/27/14 14:12
Matrix: Solid
Date Received: 01/27/14 15:20
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			152784	01/28/14 12:57	PAB	TAL SEA
Total/NA	Analysis	6010B		1	152860	01/28/14 20:12	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	152802	01/28/14 15:16	PAB	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 Fairways Confirmation Sampling

TestAmerica Job ID: 580-42083-1

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	11-06-14
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-14

* Expired certification is currently pending renewal and is considered valid.

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: 580-43246-1
Client Project/Site: Campus Fairways

For:
Landau & Associates, Inc.
130 Second Ave South
Edmonds, Washington 98020

Attn: Mrs. Chris Kimmel

Authorized for release by:
5/2/2014 2:54:32 PM

Melissa Armstrong, Project Manager II
(253)248-4975
melissa.armstrong@testamericainc.com

Table of Contents

Case Narrative

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

TestAmerica Job ID: 580-43246-1

Job ID: 580-43246-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 4/18/2014 9:04 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 8.2º C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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 Fairways

TestAmerica Job ID: 580-43246-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-43246-1	CF-54-cn-6	Solid	04/18/14 08:15	04/18/14 09:04
580-43246-2	CF-76-cn-6	Solid	04/18/14 08:30	04/18/14 09:04
580-43246-3	CF-TA-cn-6	Solid	04/18/14 08:53	04/18/14 09:04

LANDAU ASSOCIATES

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

Date 4/18/14
Page 1 of 1

Chain-of-Custody Record

Project Name Campus Fairways Project No. 867002.040.042
Project Location/Event Lacey, WA
Sampler's Name Sierra Mott
Project Contact Chris Kimmel
Send Results To C. Kimmel, J. Stone, A. Halvorsen

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: DB	Testing Parameters: AS	Observations/Comments
CF-SH-Cn-6	4/18/14	815	Soil	1	X	X	
CF-76-Cn-6	1	830	1	1	X	X	
CF-TA-Cn-6	1	853	1	1	X	X	

Testing Parameters / 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 _____

IR 8.2 8.4
MED RED WH
ICE BUBBLE
w/o CLIENT ID

580-43246 Chain of Custody

Special Shipment/Handling or Storage Requirements: On ice

Method of Shipment: drop off

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: [illegible]	Signature:	Signature: TM 4-18
Printed Name: Sierra Mott	Printed Name: R.T. McDaniel	Printed Name:	Printed Name:
Company: LAI	Company: LASEA	Company:	Company:
Date: 4/18/14 Time: 945	Date: 4-18-14 Time: 0945	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: 580-43246-1

Login Number: 43246

List Source: TestAmerica Seattle

List Number: 1

Creator: Balles, Racheal 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	
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	Thermal preservation not required.
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	

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

TestAmerica Job ID: 580-43246-1

Client Sample ID: CF-54-cn-6
Date Collected: 04/18/14 08:15
Date Received: 04/18/14 09:04

Lab Sample ID: 580-43246-1
Matrix: Solid
Percent Solids: 82.9

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.9		2.3		mg/Kg	☼	05/01/14 16:18	05/02/14 13:25	1
Lead	6.8		1.2		mg/Kg	☼	05/01/14 16:18	05/02/14 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83		0.10		%			04/24/14 12:15	1
Percent Moisture	17		0.10		%			04/24/14 12:15	1

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

TestAmerica Job ID: 580-43246-1

Client Sample ID: CF-76-cn-6
Date Collected: 04/18/14 08:30
Date Received: 04/18/14 09:04

Lab Sample ID: 580-43246-2
Matrix: Solid
Percent Solids: 72.5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.6		3.7		mg/Kg	☼	05/01/14 16:18	05/02/14 13:28	1
Lead	14		1.8		mg/Kg	☼	05/01/14 16:18	05/02/14 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	72		0.10		%			04/24/14 12:15	1
Percent Moisture	28		0.10		%			04/24/14 12:15	1

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

TestAmerica Job ID: 580-43246-1

Client Sample ID: CF-TA-cn-6
Date Collected: 04/18/14 08:53
Date Received: 04/18/14 09:04

Lab Sample ID: 580-43246-3
Matrix: Solid
Percent Solids: 67.9

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		4.1		mg/Kg	☼	05/01/14 16:18	05/02/14 13:31	1
Lead	19		2.0		mg/Kg	☼	05/01/14 16:18	05/02/14 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	68		0.10		%			04/24/14 12:15	1
Percent Moisture	32		0.10		%			04/24/14 12:15	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-158253/15-A
Matrix: Solid
Analysis Batch: 158315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 158253

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg		05/01/14 16:18	05/02/14 12:50	1
Lead	ND		1.5		mg/Kg		05/01/14 16:18	05/02/14 12:50	1

Lab Sample ID: LCS 580-158253/16-A
Matrix: Solid
Analysis Batch: 158315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 158253

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			200	192		mg/Kg		96	80 - 120		
Lead			50.0	50.4		mg/Kg		101	80 - 120		

Lab Sample ID: LCSD 580-158253/17-A
Matrix: Solid
Analysis Batch: 158315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 158253

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic			200	194		mg/Kg		97	80 - 120	2	20
Lead			50.0	52.0		mg/Kg		104	80 - 120	3	20

Lab Sample ID: LCSSRM 580-158253/18-A
Matrix: Solid
Analysis Batch: 158315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 158253

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			221	251		mg/Kg		113.5	71.3 - 129.1		
Lead			96.0	111		mg/Kg		115.4	70.9 - 128.2		

Method: D 2216 - Percent Moisture

Lab Sample ID: 580-43246-1 DU
Matrix: Solid
Analysis Batch: 157745

Client Sample ID: CF-54-cn-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	83			85		%				2	20
Percent Moisture	17			15		%				11	20

Lab Chronicle

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

TestAmerica Job ID: 580-43246-1

Client Sample ID: CF-54-cn-6

Lab Sample ID: 580-43246-1

Date Collected: 04/18/14 08:15
Matrix: Solid
Date Received: 04/18/14 09:04
Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			158253	05/01/14 16:18	PAB	TAL SEA
Total/NA	Analysis	6010B		1	158315	05/02/14 13:25	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	157745	04/24/14 12:15	JJP	TAL SEA

Client Sample ID: CF-76-cn-6

Lab Sample ID: 580-43246-2

Date Collected: 04/18/14 08:30
Matrix: Solid
Date Received: 04/18/14 09:04
Percent Solids: 72.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			158253	05/01/14 16:18	PAB	TAL SEA
Total/NA	Analysis	6010B		1	158315	05/02/14 13:28	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	157745	04/24/14 12:15	JJP	TAL SEA

Client Sample ID: CF-TA-cn-6

Lab Sample ID: 580-43246-3

Date Collected: 04/18/14 08:53
Matrix: Solid
Date Received: 04/18/14 09:04
Percent Solids: 67.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			158253	05/01/14 16:18	PAB	TAL SEA
Total/NA	Analysis	6010B		1	158315	05/02/14 13:31	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	157745	04/24/14 12:15	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 Fairways

TestAmerica Job ID: 580-43246-1

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	07-31-14 *
California	NELAP	9	01115CA	01-31-14 *
California	State Program	9	2901	01-31-15
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	11-06-14
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15

* Expired certification is currently pending renewal and is considered valid.

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: 580-40868-1
Client Project/Site: Stormwater Facility, Lacey WA

For:
Landau & Associates, Inc.
130 Second Ave South
Edmonds, Washington 98020

Attn: Mrs. Chris Kimmel

Kristine D. Allen

Authorized for release by:
10/23/2013 1:40:05 PM
Kristine Allen, Project Manager I
(253)922-2310
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: Stormwater Facility, Lacey WA

TestAmerica Job ID: 580-40868-1

Job ID: 580-40868-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 10/11/2013 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

The client e-mailed a revised COC changing the client sample IDs. The log in was changed to reflect the revised COC.

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: Stormwater Facility, Lacey WA

TestAmerica Job ID: 580-40868-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-40868-1	CHdiv2-12cn-6	Solid	10/10/13 13:50	10/11/13 08:00
580-40868-2	CHdiv2-13cn-6	Solid	10/10/13 13:35	10/11/13 08:00

LANDAU ASSOCIATES

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

Chain-of-Custody Record

~~40859~~

Date 10/10/13
Page 1 of 1

Project Name Campus Fairways Project No. 867002.040.041
Project Location/Event Stormwater Facility, Lacey, WA
Sampler's Name Sierra Mott
Project Contact Chris Kimmel
Send Results To Chris Kimmel, Jess Stone, Anne Halvorsen

Turnaround Time
☒ Standard
☐ Accelerated
☐ ______

40868

Sample I.D.	Date	Time	Matrix	No. of Containers	Pb	As										
CF-03cn-6	10/10/13	1350	Soil	1	X	X										
CF-04cn-6	10/10/13	1335	Soil	1	X	X										

Testing Parameters

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 ______

client drop Med Red/wh wet/none
A1 TB= 2.8/2.8 w/o

580-40868 Chain of Custody

Special Shipment/Handling or Storage Requirements: ice

Method of Shipment: drop off

Relinquished by	Received by	Relinquished by	Received by
Signature: Sierra Mott	Signature: [signature]	Signature	Signature
Printed Name: Sierra Mott	Printed Name: RT McDaniel	Printed Name	Printed Name
Company: Landau Associates	Company: TAI SEA	Company	Company
Date 10/11/13 Time 0800	Date 10-11-13 Time 0800	Date Time	Date Time

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

Rev 8/09

Revised 10/17/13 MG

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

LANDAU ASSOCIATES

Chain-of-Custody Record

~~40859~~

Date 10/10/13
Page 1 of 1

Project Name Campus Fairways Project No. 967002.040.041
Project Location/Event Stormwater Facility, Lacey, WA
Sampler's Name Sierra Mott
Project Contact Chris Kimmel
Send Results To Chris Kimmel, Jess Stone, Anne Halvorsen

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

40868

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: RD	Testing Parameters: A13
CF-03cm-6	10/10/13	1350	Soil	1	X	X
CF-04cm-6	10/10/13	1335	Soil	1	X	X
chdiv 2-13cm-6						

chdiv 2-12cm-6

OK 10/17/13 MG

580-40868 Chain of Custody

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 _____

client drop Med Rec'd w/4 wet/none
A1 TB = 2.8/2.8 w/c

Special Shipment/Handling or Storage Requirements ice

Method of Shipment drop off

Relinquished by	Received by	Relinquished by	Received by
Signature Sierra Mott	Signature [illegible]	Signature	Signature
Printed Name Sierra Mott	Printed Name [illegible]	Printed Name	Printed Name
Company Landau Associates	Company TAI SEA	Company	Company
Date 10/11/13 Time 0800	Date 10-11-13 Time 0800	Date ____ Time ____	Date ____ Time ____

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

Rev 6/09

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-40868-1

Login Number: 40868

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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	

Client: Landau & Associates, Inc.
Project/Site: Stormwater Facility, Lacey WA

TestAmerica Job ID: 580-40868-1

Client Sample ID: CHdiv2-12cn-6
Date Collected: 10/10/13 13:50
Date Received: 10/11/13 08:00

Lab Sample ID: 580-40868-1
Matrix: Solid
Percent Solids: 95.0

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.8		mg/Kg	☼	10/18/13 14:48	10/21/13 15:14	1
Lead	**1.8**		1.4		mg/Kg	☼	10/18/13 14:48	10/21/13 15:14	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**95**		0.10		%			10/17/13 08:26	1
Percent Moisture	**5.0**		0.10		%			10/17/13 08:26	1

Client: Landau & Associates, Inc.
Project/Site: Stormwater Facility, Lacey WA

TestAmerica Job ID: 580-40868-1

Client Sample ID: CHdiv2-13cn-6
Date Collected: 10/10/13 13:35
Date Received: 10/11/13 08:00

Lab Sample ID: 580-40868-2
Matrix: Solid
Percent Solids: 94.4

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.8		mg/Kg	☼	10/18/13 14:48	10/21/13 15:17	1
Lead	**2.0**		1.4		mg/Kg	☼	10/18/13 14:48	10/21/13 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**94**		0.10		%			10/17/13 08:26	1
Percent Moisture	**5.6**		0.10		%			10/17/13 08:26	1

Client: Landau & Associates, Inc.
Project/Site: Stormwater Facility, Lacey WA

TestAmerica Job ID: 580-40868-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-147561/21-A
Matrix: Solid
Analysis Batch: 147690

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 147561

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg		10/18/13 14:48	10/21/13 13:39	1
Lead	ND		1.5		mg/Kg		10/18/13 14:48	10/21/13 13:39	1

Lab Sample ID: LCS 580-147561/22-A
Matrix: Solid
Analysis Batch: 147690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 147561

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	188		mg/Kg		94	80 - 120
Lead	50.0	48.9		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 580-147561/23-A
Matrix: Solid
Analysis Batch: 147690

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 147561

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	189		mg/Kg		95	80 - 120	1	20
Lead	50.0	49.4		mg/Kg		99	80 - 120	1	20

Lab Sample ID: LCSSRM 580-147561/24-A
Matrix: Solid
Analysis Batch: 147690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 147561

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	237	234		mg/Kg		98.8	71.3 - 129.1
Lead	103	101		mg/Kg		97.8	70.9 - 128.2

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Stormwater Facility, Lacey WA

TestAmerica Job ID: 580-40868-1

Client Sample ID: CHdiv2-12cn-6

Lab Sample ID: 580-40868-1

Date Collected: 10/10/13 13:50
Matrix: Solid
Date Received: 10/11/13 08:00
Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			147561	10/18/13 14:48	PAB	TAL SEA
Total/NA	Analysis	6010B		1	147690	10/21/13 15:14	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	147414	10/17/13 08:26	RMB	TAL SEA

Client Sample ID: CHdiv2-13cn-6

Lab Sample ID: 580-40868-2

Date Collected: 10/10/13 13:35
Matrix: Solid
Date Received: 10/11/13 08:00
Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			147561	10/18/13 14:48	PAB	TAL SEA
Total/NA	Analysis	6010B		1	147690	10/21/13 15:17	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	147414	10/17/13 08:26	RMB	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: Stormwater Facility, Lacey WA

TestAmerica Job ID: 580-40868-1

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