



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

May 5, 2014

Mr. Rob Rice
Rob Rice Homes
1868 State Avenue NE
Olympia, WA 98506

Re: No Further Action at a Property associated with the Asarco Tacoma Smelter Site:

- Name: Meridian Campus – Campus Peak
- Property Address: Intersection of Campus Park Drive NE and Campus Highlands Drive NE, Parcel #11936210100
- Facility/Site No.: 16971
- Cleanup Site ID: 12284
- VCP Project No.: SW1347

Dear Mr. Rice:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of a Property associated with the Asarco Tacoma Smelter Site (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issues Presented and Opinion

1. Is further remedial action necessary at the Property to clean up contamination associated with the Site?

NO. Ecology has determined that no further remedial action is necessary at the Property to clean up contamination associated with the Site.

2. Is further remedial action still necessary elsewhere at the Site?

YES. Ecology has determined that further remedial action is still necessary elsewhere at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.



Description of the Property and the Site

This opinion applies only to the Property and the Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below.

1. Description of the Property.

The Property includes the following tax parcel in Thurston County, which was affected by the Site and will be addressed by your cleanup:

- #11936210100

Enclosure A includes a legal description of the Property and details of the Property as currently known to Ecology.

In the future, these parcels will be divided into smaller residential lots with different parcel numbers and addresses. This opinion letter covers all future lots created from parcel number 11936210100.

2. Description of the Site.

The Site is defined by the nature and extent of contamination associated with the following releases:

- Arsenic into the Soil.
- Lead into the Soil.

Those releases have affected more than one parcel of real property, including the parcel identified above.

Enclosure B includes a detailed description and diagram of the Site, as currently known to Ecology.

3. Identification of Other Sites that may affect the Property.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the Property is affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

- 1) Landau Associates, No Further Action Request Report - Campus Peak - Meridian Campus Development, dated November 26, 2013.
- 2) City of Lacey, Approved Grading Plans for Campus Peak, dated August 21, 2013.
- 3) Landau Associates, Cleanup Action Plan and Site Characterization Meridian Campus Development, dated June 16, 2005.
- 4) Landau Associates, Draft Sampling and Analysis Plan Meridian Campus Development, dated February 4, 2005.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

1. Cleanup of the Property located within the Site.

Ecology has concluded that **no further remedial action** is necessary at the Property to clean up contamination associated with the Site. That conclusion is based on the following analysis:

a. Characterization of the Site.

The Site is described in **Enclosure B**.

For almost 100 years, the Asarco Company operated a copper smelter in Tacoma, Washington. Air pollution from the smelter settled on the surface soil over a vast region -- more than 1,000 square miles of the Puget Sound basin. Arsenic, lead, and other heavy metals are still in the soil as a result of this pollution. Ecology has found elevated levels of arsenic and lead as far south as Lacey and as far north as Seattle (West Seattle), and as far west as the Kitsap Peninsula and as far east as Kent and Bellevue.

Campus Peak is part of the 1,540-acre Meridian Campus Development in Lacey, Washington. See Enclosure A and Figures 1, 2, 3, and 4 for more information about the Property. The Property is approximately 13.38 acres.

Four of a total of 50 samples were taken from Campus Peak during the March 2005 characterization of the Meridian Campus Development. Arsenic levels ranged from 5.5 to 18 mg/kg and lead ranged from 7 to 33 mg/kg. All levels from Campus Peak were below MTCA Method A cleanup levels. Of the 50 total samples from throughout Meridian Campus, 18 were above cleanup levels for arsenic.

b. Establishment of cleanup standards for the Site.

Ecology has determined the cleanup levels and points of compliance established for the Site meet the substantive requirements of MTCA.

As part of the Interim Action Plan for the Asarco Tacoma Smelter Site (June 2012) (IAP), Ecology completed a terrestrial ecological evaluation for properties with only Tacoma Smelter Plume contamination. Ecology determined the MTCA Method A cleanup levels for both arsenic and lead were protective of both human health and the environment. The MTCA Method A cleanup levels for soil are as follows:

- Arsenic is 20 mg/kg.
- Lead is 250 mg/kg.

The IAP determined the following cleanup levels were protective of human health and the environment for properties within the Asarco Tacoma Smelter Site:

- Average arsenic concentration detected in the soil less than 20 mg/kg.
- Average lead concentration detected in the soil less than 250 mg/kg.

OR

- No single soil sample has arsenic concentration above 40 mg/kg.
- No single soil sample has lead concentration above 500 mg/kg.

c. Selection of cleanup for the Property.

In June of 2005 Landau Associates developed a cleanup action plan for the entire Meridian Campus Development. The cleanup action plan described soil mixing done through development grading activities as a way to remediate Tacoma

Smelter Plume contamination. Ecology issued an opinion letter for the cleanup action plan in 2006. This letter described the number of compliance samples that should be collected to obtain a No Further Action letter.

Ecology has determined the cleanup selected for the Property meets the substantive requirements of MTCA and the IAP. The cleanup meets the minimum cleanup requirements and does not exacerbate conditions or preclude reasonable cleanup alternatives elsewhere at the Site.

d. Cleanup of the Property.

Ecology has determined the cleanup you performed meets the applicable Site cleanup standards within the Property.

The contractor scraped, mixed, and stockpiled the upper soil layer at Campus Peak. Stockpiled soils were stored on the Campus Highlands North Division 2 property, along with soils from that property and Campus Highlands Drive. The single stockpile is 500 feet long by 230 feet wide by 5-8 feet high, with a total volume around 30,000 cubic yards.

Stockpile sampling: Landau Associates sampled the stockpiled soils in accordance with the 2005 Sampling and Analysis Plan for Meridian Campus. The stockpile was visually divided into 30 sections in a grid. Four discrete samples were taken from each grid section, from 2-18 inches in depth, and then composited. The following results showed that the stockpiled soils could be used as topsoil in other areas of the Meridian Campus development:

- Arsenic levels ranging from 7.7 to 13 mg/kg.
- Lead levels from ranging from 11 to 17 mg/kg.

Final confirmational sampling: In September, 2013, Landau Associates took samples from the top six inches of soil after grading, in accordance with the 2005 Sampling and Analysis Plan for Meridian Campus. Three-point composite samples were taken from 11 locations within Campus Peak. The three samples in each composite came from 10 square foot areas. These were areas that might become yards, parks, and open space, and that provided adequate coverage of the tract. The following results showed no further cleanup actions were needed:

- Arsenic levels ranging from non-detect to 7.3 mg/kg.
- Lead levels ranging from 1.7 to 8 mg/kg.

2. Cleanup of the Site as a whole.

Ecology has concluded that **further remedial action** under MTCA is still necessary elsewhere at the Site. In other words, while your cleanup constitutes the final action for the Property, it is only an **"interim action"** for the Site as a whole.

Listing of the Site

Based on this opinion, Ecology will update the status of remedial action at the Site on our database of hazardous waste sites. However, because further remedial action is still necessary elsewhere at the Asarco Tacoma Smelter Site, we will not remove the Site from our lists of hazardous waste sites. Furthermore, the Property will remain listed as part of the Site because the cleanup of the Property does not change the boundaries of the Site.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Property. This opinion **does not**:

- Change the boundaries of the Site.
- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you proposed will be substantially equivalent. Courts make that determination. See RCW 70.105D.080 and WAC 173-340-545.

Mr. Rob Rice
May 5, 2014
Page 7

3. State is immune from liability.

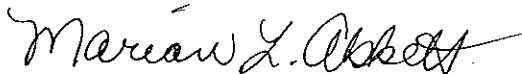
The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up your Property under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#SW1345).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at 360-407-6257 or by e-mail at Marian.Abbett@ecy.wa.gov.

Sincerely,



Marian L. Abbett
SWRO Toxics Cleanup Program

MLA/ksc:NFA Meridan Campus Peak SW1347

Enclosures: Enclosure A: Legal Description, addresses, and general description of the Property
 Enclosure B: Site description of Asarco Tacoma Smelter Site
 Figure 1: Vicinity Map of Meridan Campus – Campus Peak
 Figure 2: Meridan Campus Master Plan
 Figure 3: Campus Peak Lot Map
 Table 1: Stockpile Sample Results – Campus Peak
 Table 2: Soil Confirmation Sample Results – Campus Peak

By certified mail: (7012 2210 0002 6581 3608)

cc: Christine Kimmel; Landau Associates, Inc.
 Rick Walk; City of Lacey Community Development
 Gerald Tousley; Thurston County Public Health
 Scott Rose – Ecology
 Dolores Mitchell – Ecology w/o enclosures

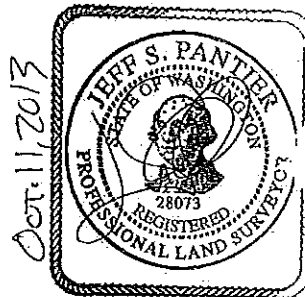
Mr. Rob Rice
May 5, 2014
Page 8

Enclosure A
Legal Description of the Property

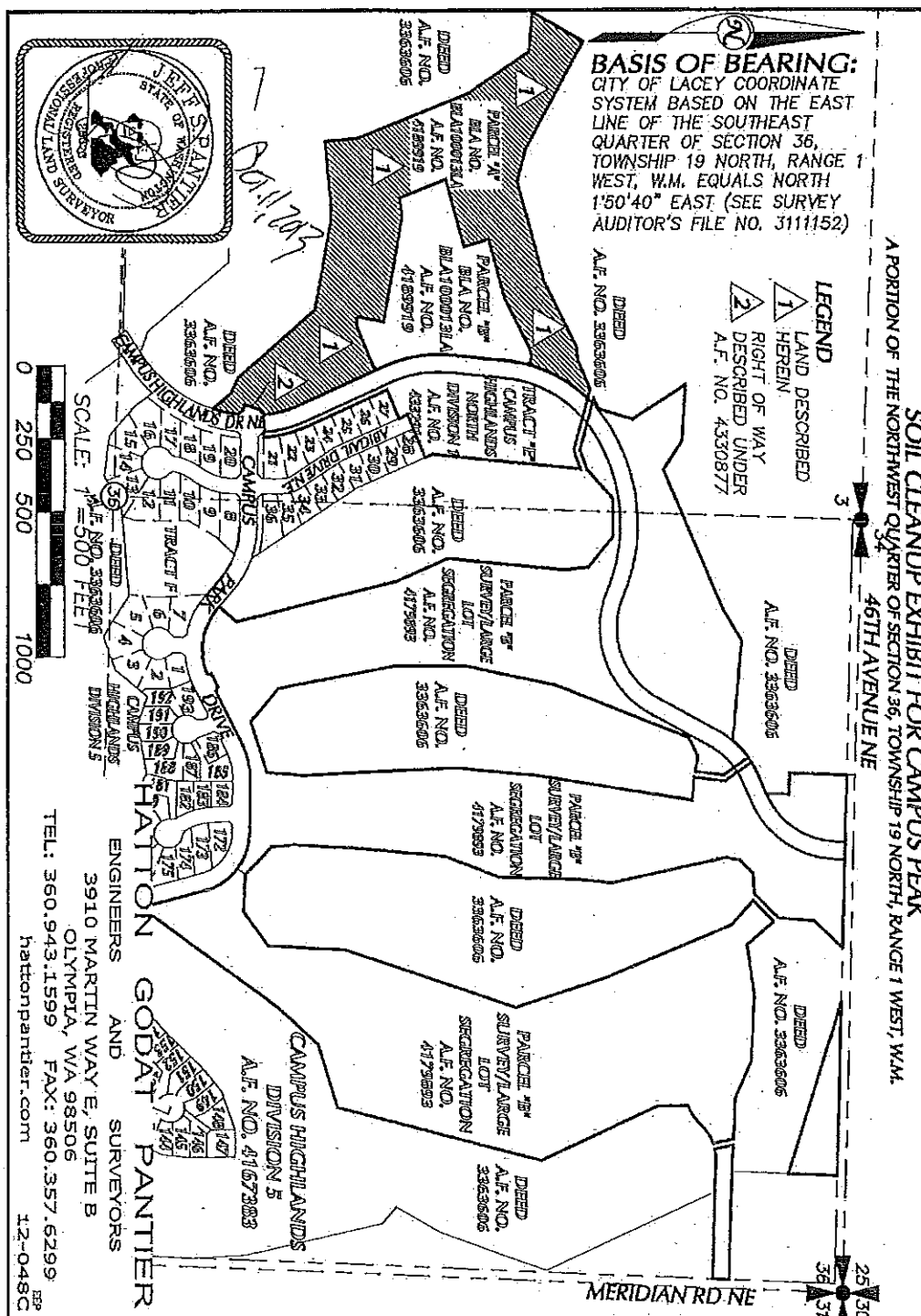
DESCRIPTION PREPARED
FOR
EVERGREEN HEIGHTS, LLC

SUBJECT: CAMPUS PEAK SOIL CLEANUP,

PARCEL "A" OF BOUNDARY LINE ADJUSTMENT NO. BLA-100013 LA, AS
RECORDED DECEMBER 30, 2010 UNDER AUDITOR'S FILE NO. 4189919,
RECORDS OF THURSTON COUNTY, WASHINGTON BEING A PORTION OF THE
NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 19 NORTH, RANGE 1 WEST
W.M., EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF
LACEY BY INSTRUMENT RECORDED APRIL 18, 2013 UNDER AUDITOR'S FILE NO.
4330877, RECORDS OF SAID COUNTY.



Mr. Rob Rice
May 5, 2014
Page 9



Mr. Rob Rice
May 5, 2014
Page 10

Property Description

From the No Further Action Request Report for Campus Peak:

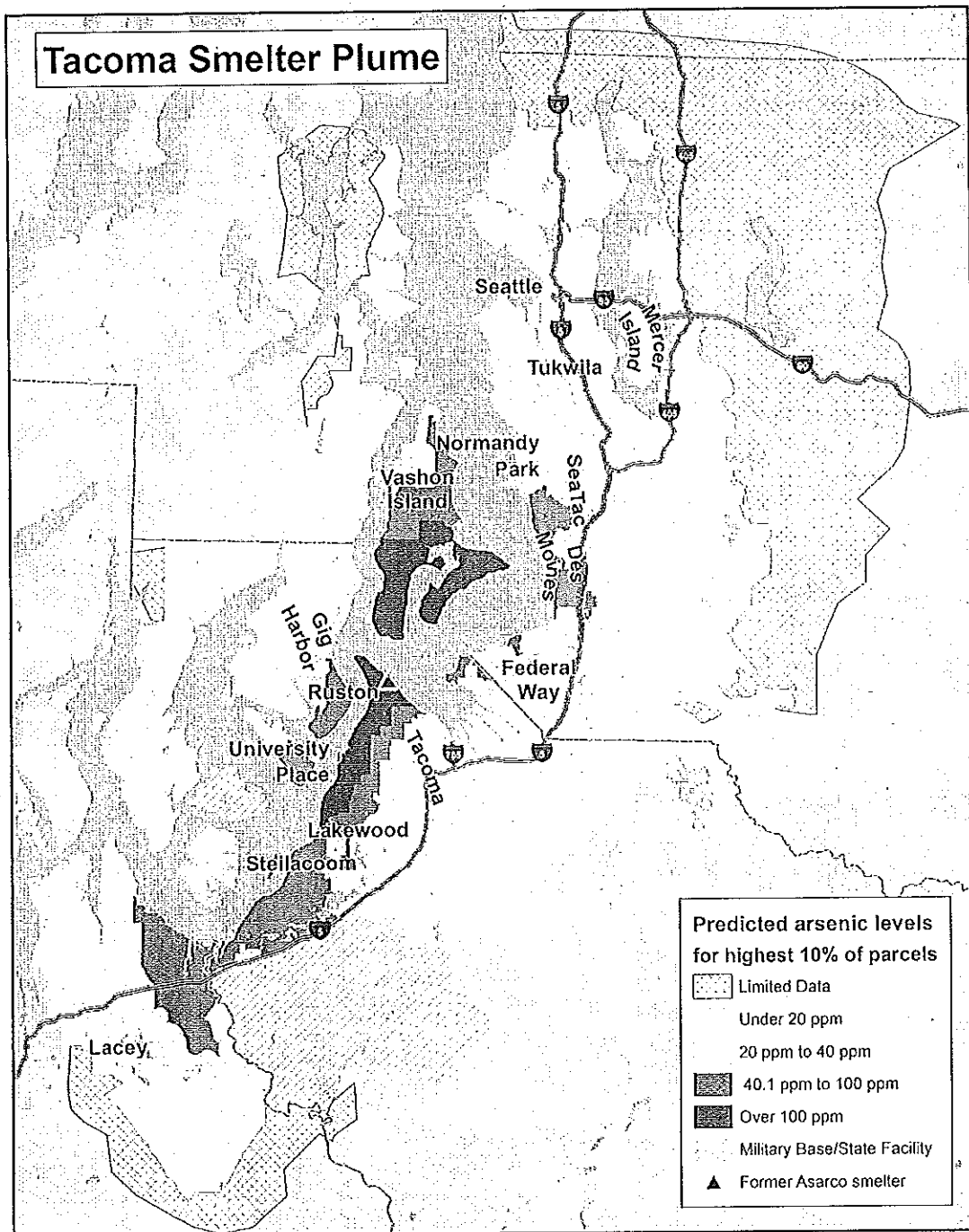
Campus Peak (Property) (parcel #11936210100) is a tract within the Meridian Campus Development in Lacey Washington. The 13.38 acre Property is located the northwest quarter of Section 36, Township 19 North, Range 1 West in Lacey, Washington. It consists of a tract of land slated for residential housing development.

The Property is in an upland area with mildly undulating topography west of the Nisqually Delta. The elevation of the land ranges from around 230 to 270 feet (ft), mean sea level (MSL). The upland area is underlain by recessional outwash deposits and glacial till. The upper soil layer was mapped as Alderwood gravelly sandy loam that is up to 40-inches thick overlying glacial till.

The uppermost aquifer beneath the Meridian Campus Development is the Qva aquifer. The elevation of the Qva aquifer beneath the Meridian Campus Development was estimated to be between elevations 125 ft, MSL and 150 ft, MSL -- over 100 ft below the ground surface.

Enclosure B

Asarco Tacoma Smelter Site



Mr. Rob Rice
May 5, 2014
Page 12

An interactive color map can be found at <https://fortress.wa.gov/ecy/smeltersearch/>

For almost 100 years the Asarco Company operated a copper smelter in Tacoma, Washington. Air pollution from the smelter settled on the surface soil over a vast region -- more than 1,000 square miles of the Puget Sound basin. Arsenic, lead, and other heavy metals are still in the soil as a result of this pollution. Ecology has found elevated levels of arsenic and lead as far south as Lacey and as far north as Seattle (West Seattle), and as far west as the Kitsap Peninsula and as far east as Kent and Bellevue.

Figure 1. Vicinity Map

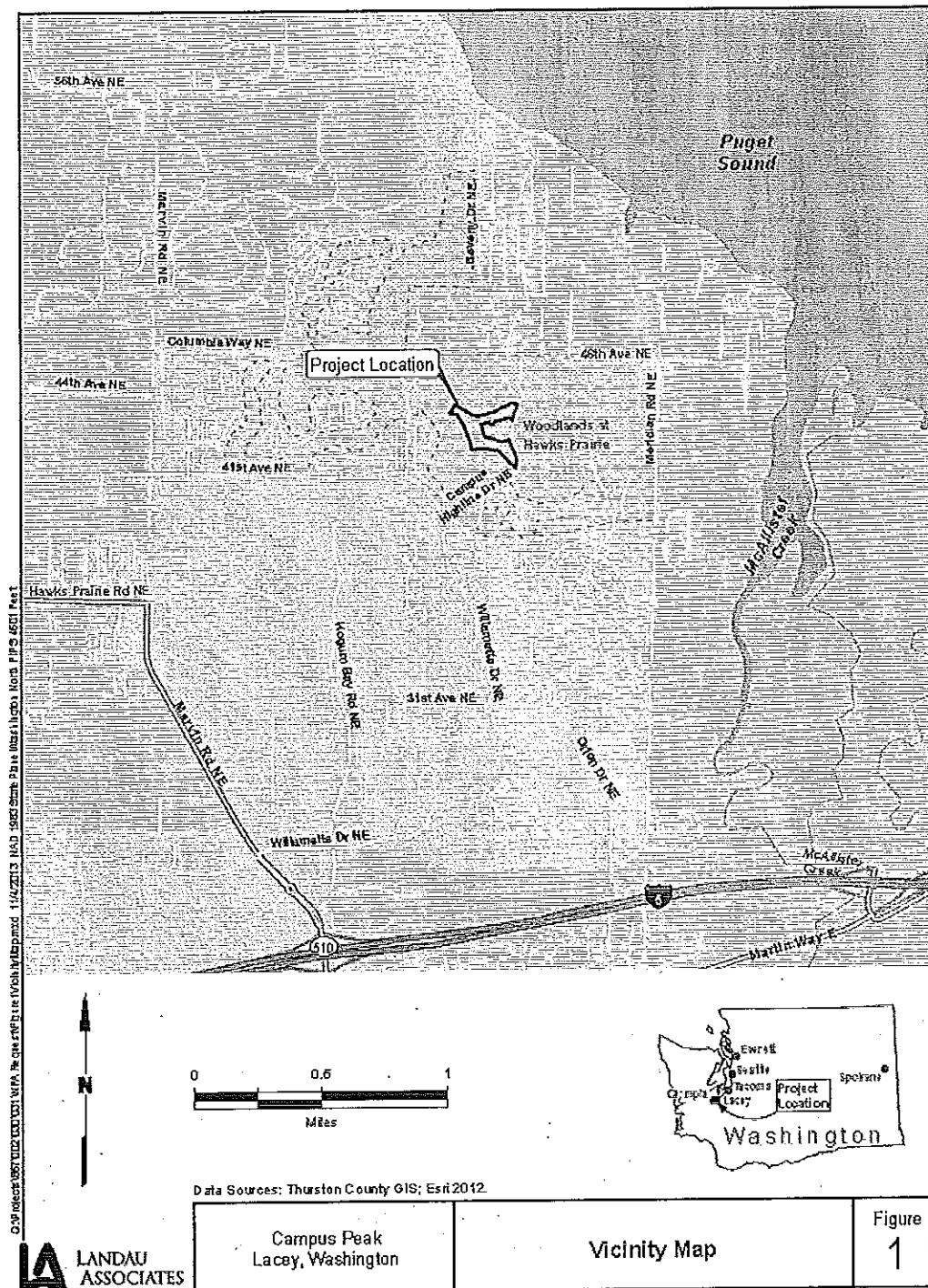


Figure 2. Meridian Campus Master Plan

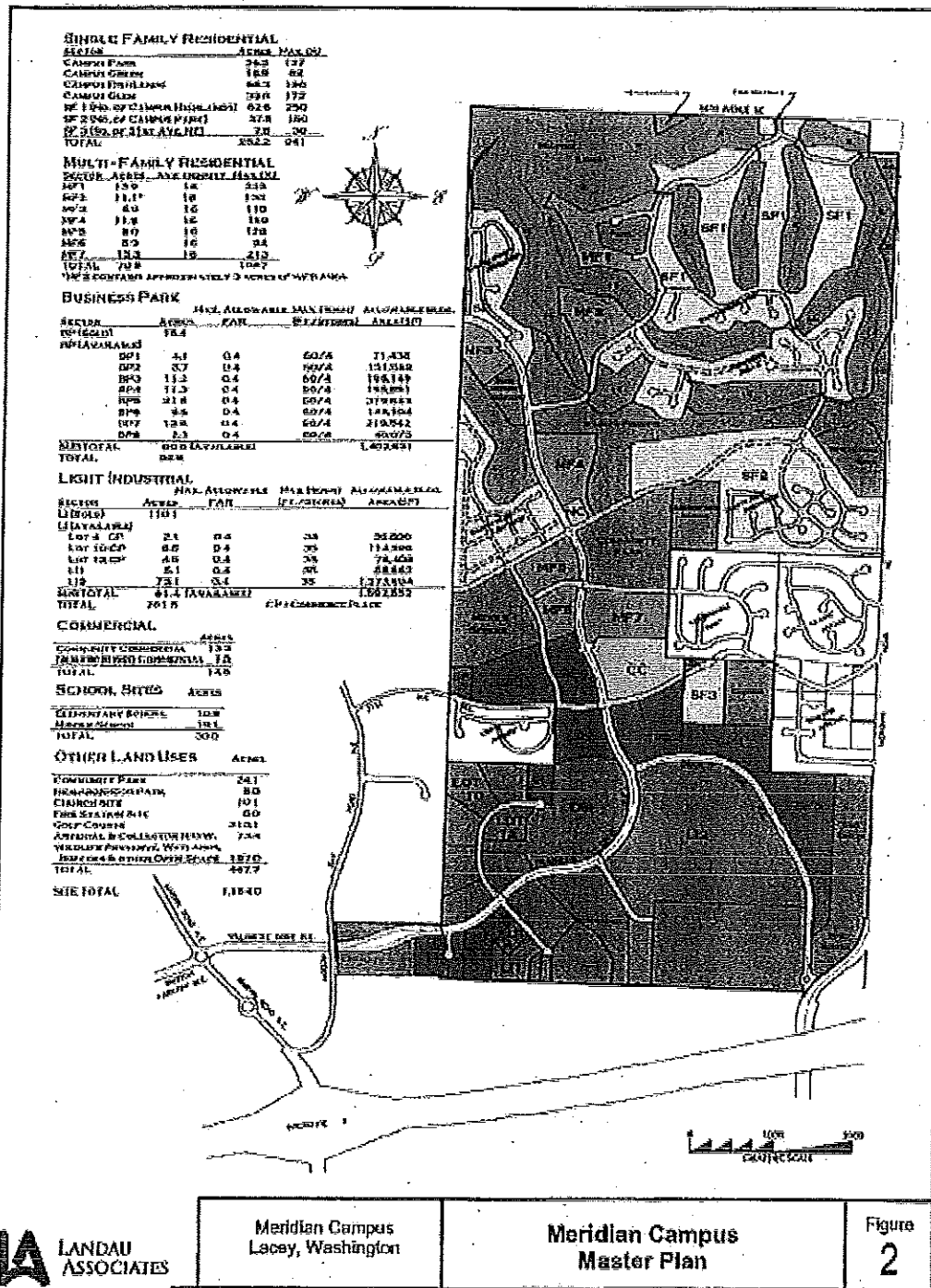


Figure 3. Lot Map

Page 15

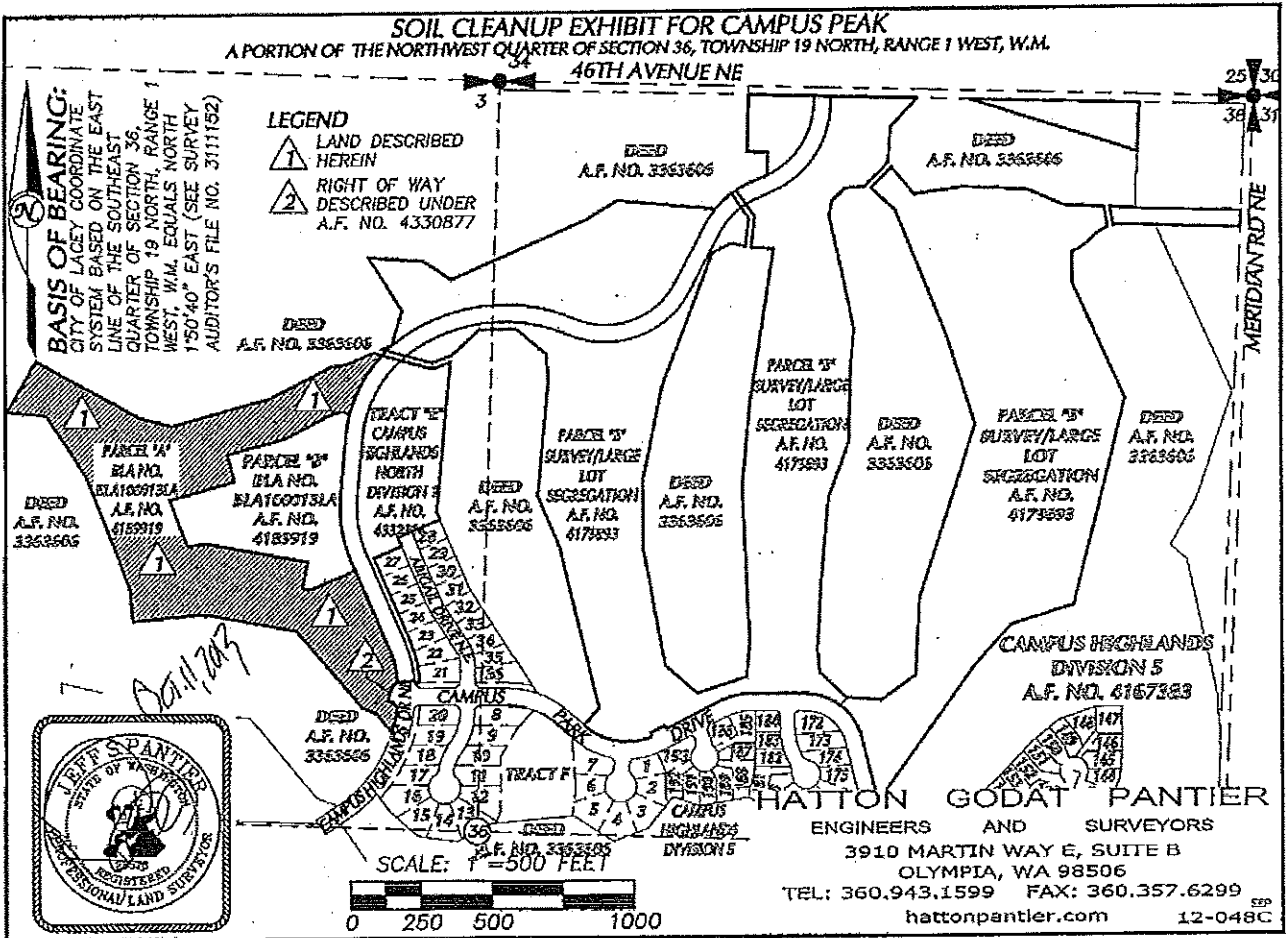


TABLE 1
SOIL STOCKPILE SAMPLE RESULTS
CAMPUS PEAK
LACEY, WASHINGTON

Sample ID	Lab ID	Sample Date	Artenic (mg/kg)	Lead (mg/kg)
SP-01-COMP	680-38367-27	5/7/2013	9.1	12
SP-02-COMP	680-38367-29	5/7/2013	8.6	12
SP-03-COMP	680-38367-25	5/7/2013	9.6	13
SP-04-COMP	680-38367-26	5/7/2013	8.9	13
SP-05-COMP	680-38367-24	5/7/2013	9.8	14
SP-06-COMP	680-38367-30	5/7/2013	13	13
SP-07-COMP	680-38367-23	5/7/2013	11	16
SP-08-COMP	680-38367-22	5/7/2013	11	16
SP-09-COMP	680-38367-21	5/7/2013	9.9	15
SP-10-COMP	680-38367-20	5/7/2013	10	15
SP-11-COMP	680-38367-18	5/7/2013	9.7	14
SP-12-COMP	680-38367-19	5/7/2013	9.5	14
SP-13-COMP	680-38367-16	5/7/2013	10	15
SP-14-COMP	680-38367-17	5/7/2013	9	12
SP-15-COMP	680-38367-15	5/7/2013	8.9	13
SP-16-COMP	680-38367-14	5/7/2013	9.2	13
SP-17-COMP	680-38367-13	5/7/2013	8.2	11
SP-18-COMP	680-38367-12	5/7/2013	8.6	13
SP-19-COMP	680-38367-11	5/7/2013	7.7	11
SP-20-COMP	680-38367-10	5/7/2013	12	15
SP-21-COMP	680-38367-8	5/7/2013	10	15
SP-22-COMP	680-38367-9	5/7/2013	9.9	14
SP-23-COMP	680-38367-6	5/7/2013	10	15
SP-24-COMP	680-38367-7	5/7/2013	10	14
SP-25-COMP	680-38367-4	5/7/2013	11	17
SP-26-COMP	680-38367-5	5/7/2013	10	15
SP-27-COMP	680-38367-2	5/7/2013	11	16
SP-28-COMP	680-38367-3	5/7/2013	8.6	12
SP-29-COMP	680-38367-1	5/7/2013	11	15
SP-30-COMP	680-38367-28	5/7/2013	9.8	14

MTCA Method A Cleanup Level:
Unrestricted Use

20 250

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

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

MTCA Method A Cleanup Level: 20 250
Unrestricted Use

mg/kg = milligrams per kilogram