



SIP

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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

May 8, 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 Highlands Drive – SW Tracts T and V
- Property Address: Intersection of Campus Park Drive NE and Campus Highlands Drive NE
- Facility/Site No.: 3945
- Cleanup Site ID: 12285
- VCP Project No.: SW1348

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 a two-lane, asphalt-paved roadway with landscape areas and two storm water facilities, which was affected by the Site and addressed by your cleanup.

No tax parcel number has been assigned to this area by Thurston County; however **Enclosure A** includes a legal description of the Property and details of the Property as currently known to Ecology.

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) City of Lacey, As-built Grading Plans for Campus Highlands Drive - Project No. 12-048, dated January 22, 2014.
- 2) Landau Associates, No Further Action Request Report - Campus Highlands Drive - Meridian Campus Development, dated November 26, 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 Highlands Drive 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 4.6 acres.

No samples were taken from Campus Highlands Drive during the March 2005 characterization of the Meridian Campus Development.

- 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 from the Property. Stockpiled soils were stored on the Campus Highlands North Division 2 property, along with soils from that property and Campus Peak. 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: Landau Associates also took samples from the top 6 inches of soil after grading. Sampling was done in accordance with the 2005 Sampling

and Analysis Plan for Meridian Campus. Three-point composite samples were taken from 11 locations along Campus Highlands Drive. The three samples in each composite came from 10 square foot areas. Five more composite samples were taken from each of the two storm water facilities, for a total of 21 confirmational samples. The following results showed no further cleanup actions were needed:

- Arsenic levels ranging from non-detect to 4.7 mg/kg.
- Lead levels ranging from 2.2 to 6.5 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.

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3. **State is immune from liability.**

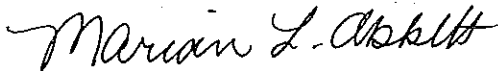
The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

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 (#SW1348).

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 SW1348 Campus Highlands Drive

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 Meridian Campus – Campus Highlands Drive
Figure 2: Meridian Campus Master Plan
Figure 3: Campus Highlands Drive Lot Map
Table 1: Stockpile Sample Results – Campus Highlands Drive
Table 2: Soil Confirmation Sample Results – Campus Highlands Drive

By certified mail: (7012 2210 0002 6581 2021)

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

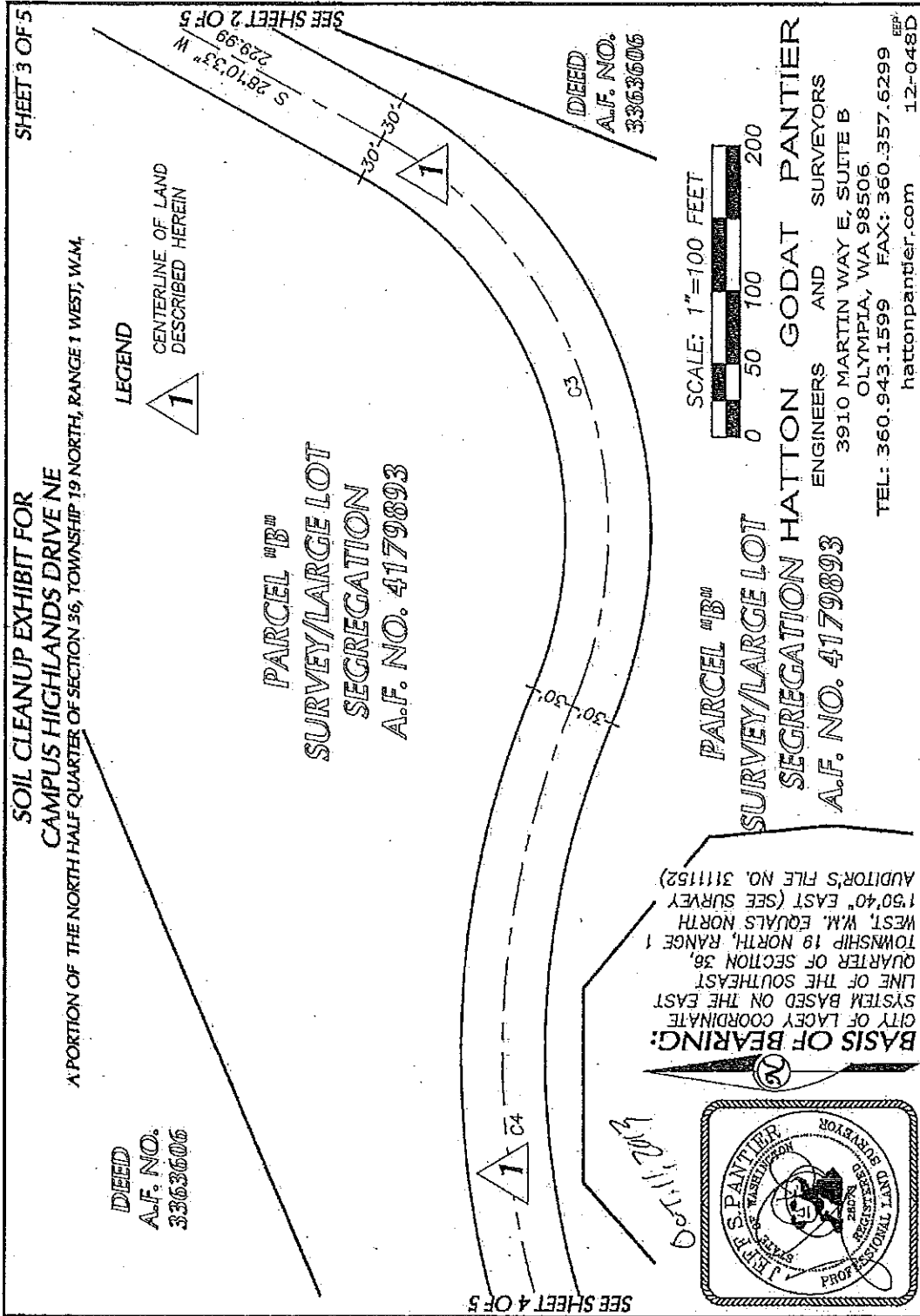
Enclosure A
Legal Description of the Property

DESCRIPTION PREPARED
FOR
STATEWIDE MORTGAGE SERVICES

SUBJECT: CAMPUS HIGHLANDS DRIVE NE SOIL CLEANUP.

THAT PORTION OF PARCEL "B" OF SURVEY FOR LARGE LOT SEGREGATION RECORDED NOVEMBER 4, 2010 UNDER AUDITOR'S FILE NO. 4179893, RECORDS OF THURSTON COUNTY, WASHINGTON AND OF TRACT "E" OF THE PLAT OF CAMPUS HIGHLANDS NORTH DIVISION 1, AS RECORDED APRIL 29, 2013, UNDER AUDITOR'S FILE NO 4332914, RECORDS OF SAID COUNTY, BEING A PART OF THE NORTH HALF OF SECTION 36, TOWNSHIP 19 NORTH, RANGE 1 WEST W.M., LYING WITHIN A STRIP OF LAND, 60.00 FEET IN WIDTH; THE CENTERLINE OF WHICH IS DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTH LINE OF SAID SECTION 36, A DISTANCE OF 1514.05 FEET NORTH 88° 17' 48" WEST OF THE NORTHEAST CORNER THEREOF; THENCE SOUTH 01° 42' 12" WEST 60.97 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 305.00 FEET; THENCE SOUTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 64° 48' 35" AN ARC LENGTH OF 345.00 FEET; THENCE SOUTH 66° 30' 48" WEST 66.68 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 300.00 FEET; THENCE SOUTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 38° 20' 14" AN ARC LENGTH OF 200.73 FEET; THENCE SOUTH 28° 10' 33" WEST 229.99 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 305.00 FEET; THENCE WESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 85° 10' 17" AN ARC LENGTH OF 453.39 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS OF 600.00 FEET; THENCE SOUTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 56° 08' 03" AN ARC LENGTH OF 587.84 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 455.00 FEET; THENCE SOUTHERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 51° 39' 20" AN ARC LENGTH OF 410.21 FEET; THENCE SOUTH 05° 33' 28" WEST 197.75 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 455.00 FEET; THENCE SOUTHERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 29° 22' 14" AN ARC LENGTH OF 233.24 FEET; THENCE SOUTH 23° 48' 47" EAST 322.60 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 410.00 FEET; THENCE SOUTHERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 17° 35' 26" AN ARC LENGTH OF 125.88 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 500.00 FEET; THENCE SOUTHERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 01° 58' 36" AN ARC LENGTH OF 17.25 FEET TO THE NORTHERLY TERMINUS OF CAMPUS HIGHLANDS DRIVE NE, AS DEDICATED TO THE CITY OF LAGEY BY THE PLAT OF CAMPUS HIGHLANDS NORTH DIVISION 1, AS RECORDED APRIL 29, 2013, UNDER AUDITOR'S FILE NO. 4332914, RECORDS OF SAID COUNTY AND THE TERMINUS OF THIS DESCRIBED CENTERLINE. THE SIDELINES OF SAID STRIP SHALL BE PROLONGED OR SHORTENED TO TERMINATE AT THE NORTH LINE OF SAID PLAT AND AT THE SOUTHERLY RIGHT OF WAY LINE OF 46TH AVENUE NE.



**SOIL CLEANUP EXHIBIT FOR
 CAMPUS HIGHLANDS DRIVE NE**
 A PORTION OF THE NORTH HALF QUARTER OF SECTION 36, TOWNSHIP 19 NORTH, RANGE 1 WEST, W.M.

SHEET 4 OF 5

**DEED
 A.F. NO.
 3363606**

SEE SHEET 3 OF 5

**PARCEL "A"
 BLA NO.
 BLA100013LA
 A.F. NO. 4189919**

TRACT "E"

LINE TABLE

NO.	BEARING	DISTANCE
L1	N 01°42'12" E	30.00
L2	S 01°42'12" W	30.97
L3	S 66°30'48" W	66.68

CURVE TABLE

NO	DELTA	RADIUS	LENGTH
C1	64°48'35"	305.00	345.00
C2	38°20'14"	300.00	200.73
C3	85°10'17"	305.00	453.39
C4	56°08'03"	600.00	587.84
C5	51°39'20"	455.00	410.21
C6	29°22'14"	455.00	233.24
C7	17°35'26"	410.00	125.88
C8	1°58'36"	500.00	17.25

**DEED
 A.F. NO.
 3363606**

**PARCEL "B"
 BLA NO.
 BLA100013LA
 A.F. NO. 4189919**

S 05°33'28" W
 197.75



LEGEND



CENTERLINE OF
 LAND DESCRIBED
 HEREIN

BASIS OF BEARING:
 CITY OF LACEY COORDINATE
 SYSTEM BASED ON THE EAST
 LINE OF THE SOUTHEAST
 QUARTER OF SECTION 36,
 TOWNSHIP 19 NORTH, RANGE 1
 WEST, W.M. EQUALS NORTH
 1°50'40" EAST (SEE SURVEY
 AUDITOR'S FILE NO. 3111152)

SCALE: 1" = 100 FEET



HATTON GODAT PANTIER

ENGINEERS AND SURVEYORS

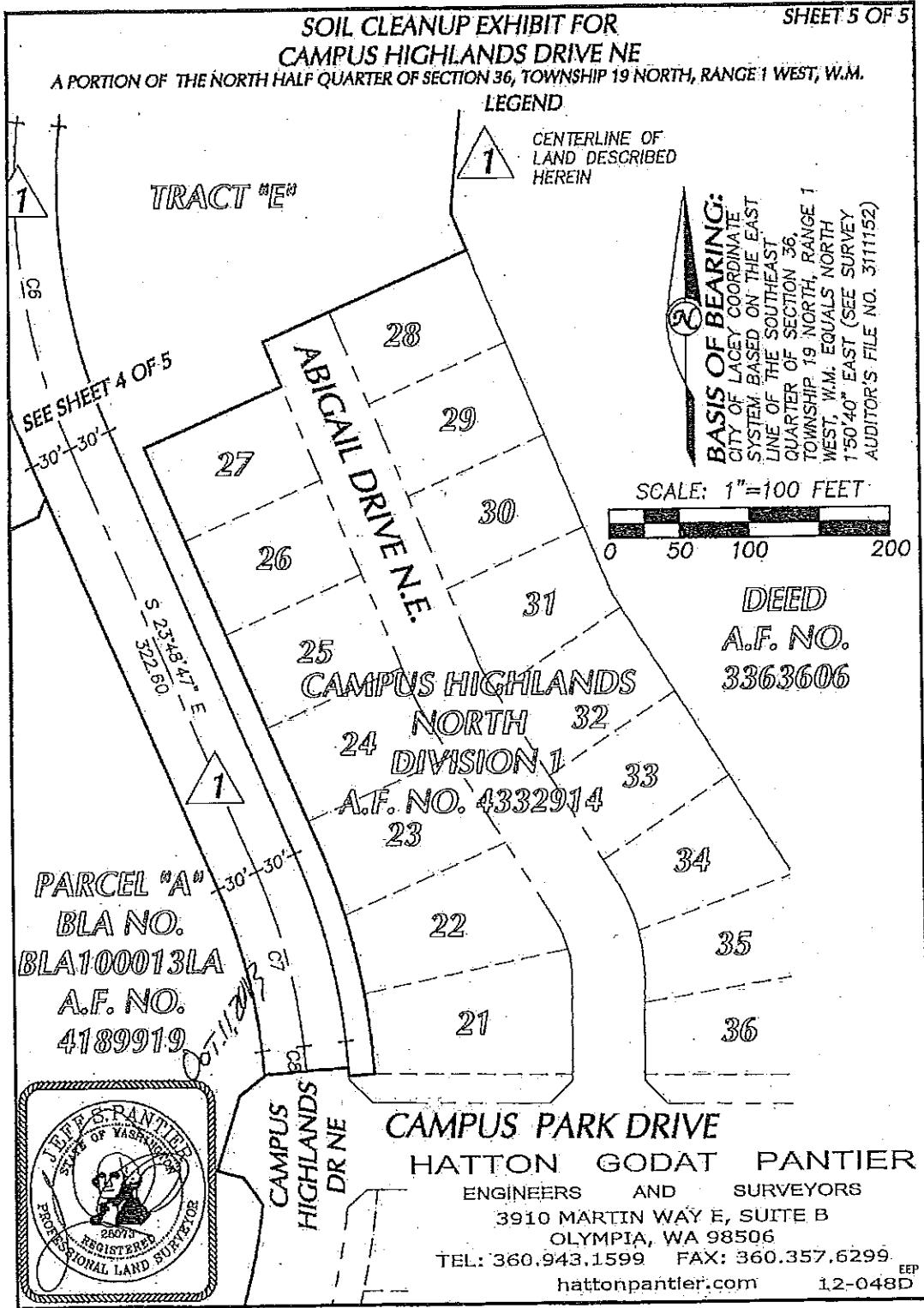
3910 MARTIN WAY E, SUITE B
 OLYMPIA, WA 98506

TEL: 360.943.1599 FAX: 360.357.6299

hattonpantier.com

EEP
 12-048D

SEE SHEET 5 OF 5



Property Description

From the No Further Action Request Report for Campus Highlands Drive:

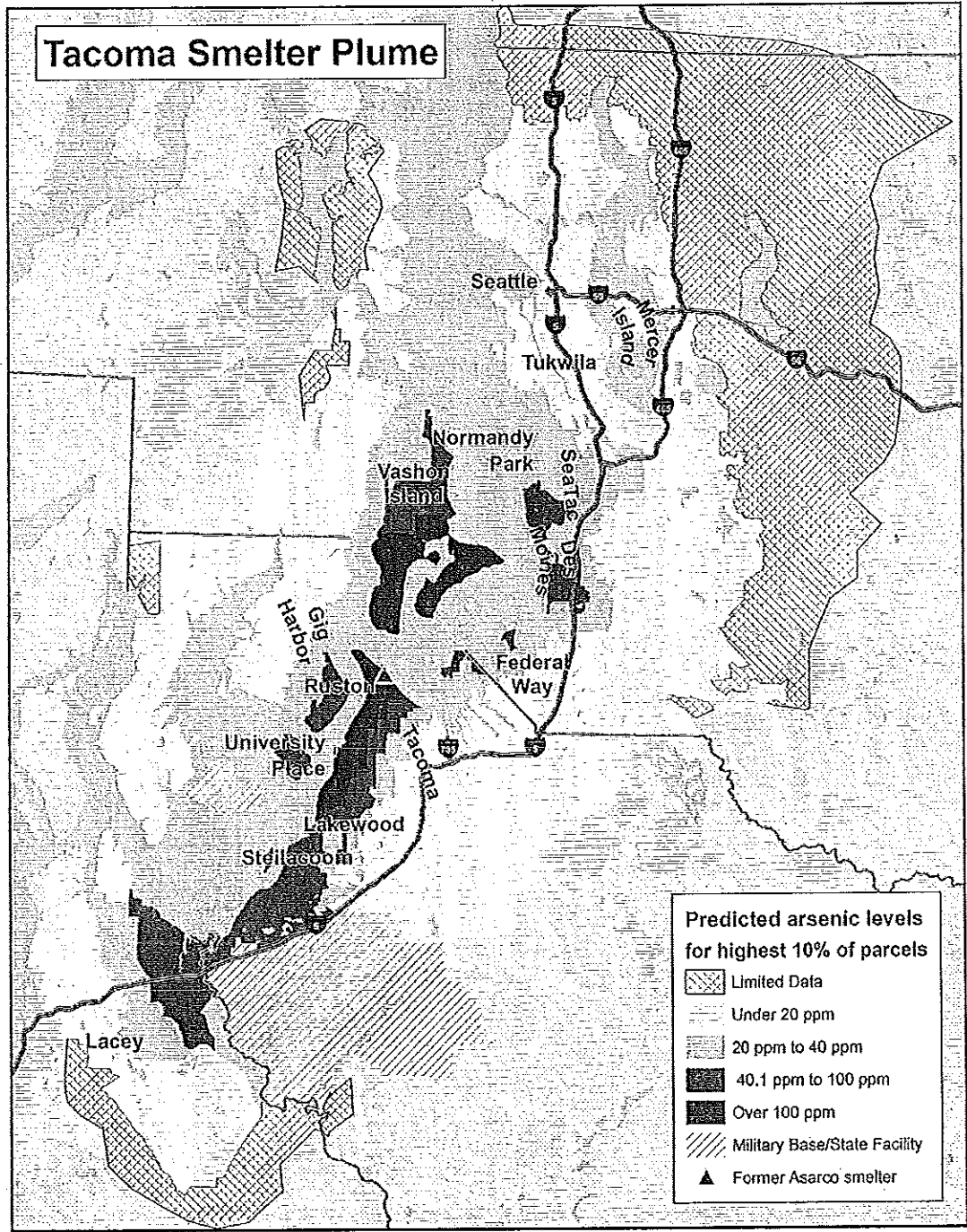
Campus Highlands Drive (Property) is a tract within the Meridian Campus Development in Lacey Washington. The Property (4.6 acres) is located in northwest and northeast quarters of Section 36, Township 19 North, Range 1 West in Lacey, Washington. It consists of a 50-60 feet wide and 3,300 feet long roadway, landscape areas, and two storm water facilities.

The Property is in an upland area with mildly undulating topography west of the Nisqually Delta. The elevation of the land ranges from around 220 to 275 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



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

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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

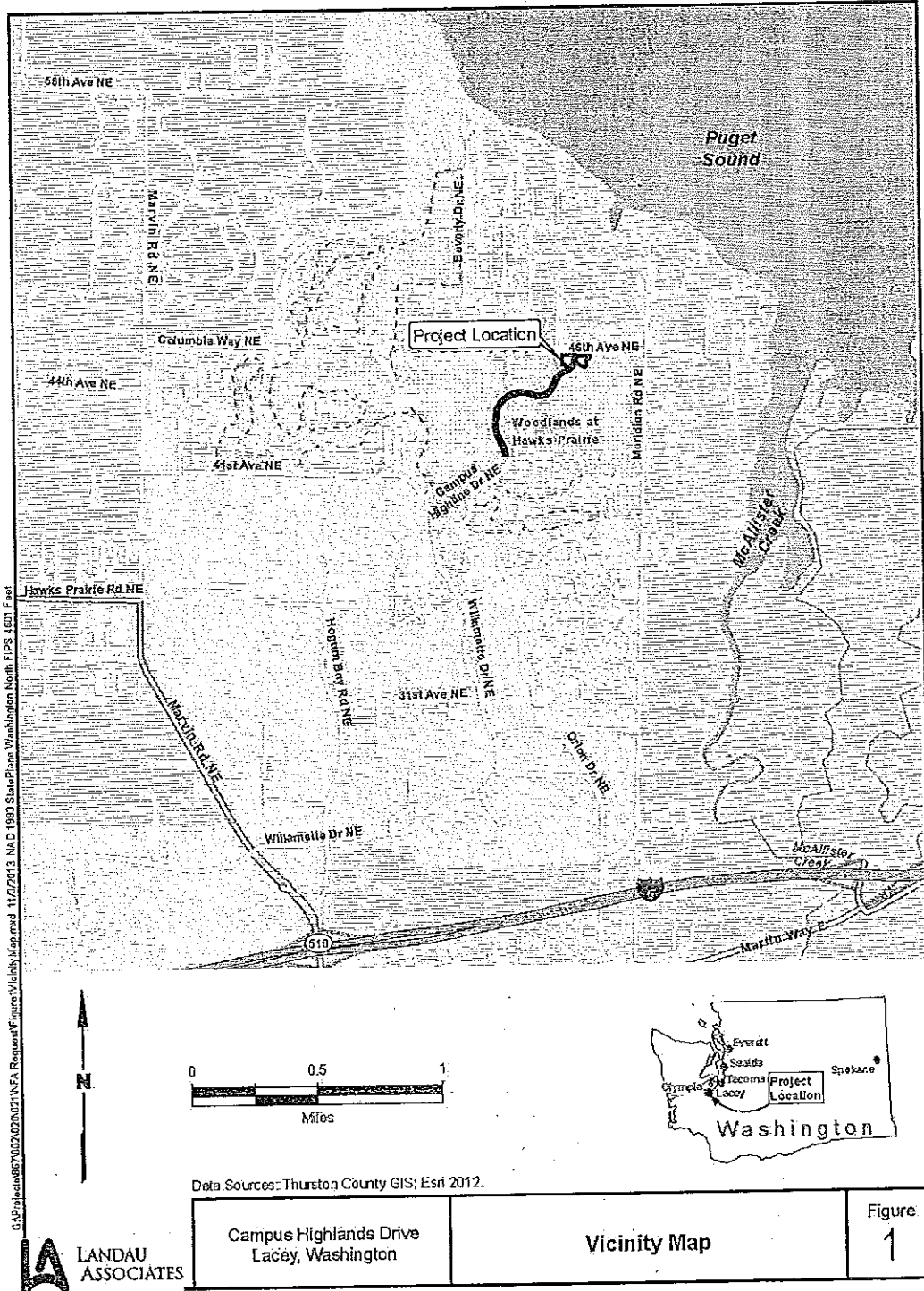
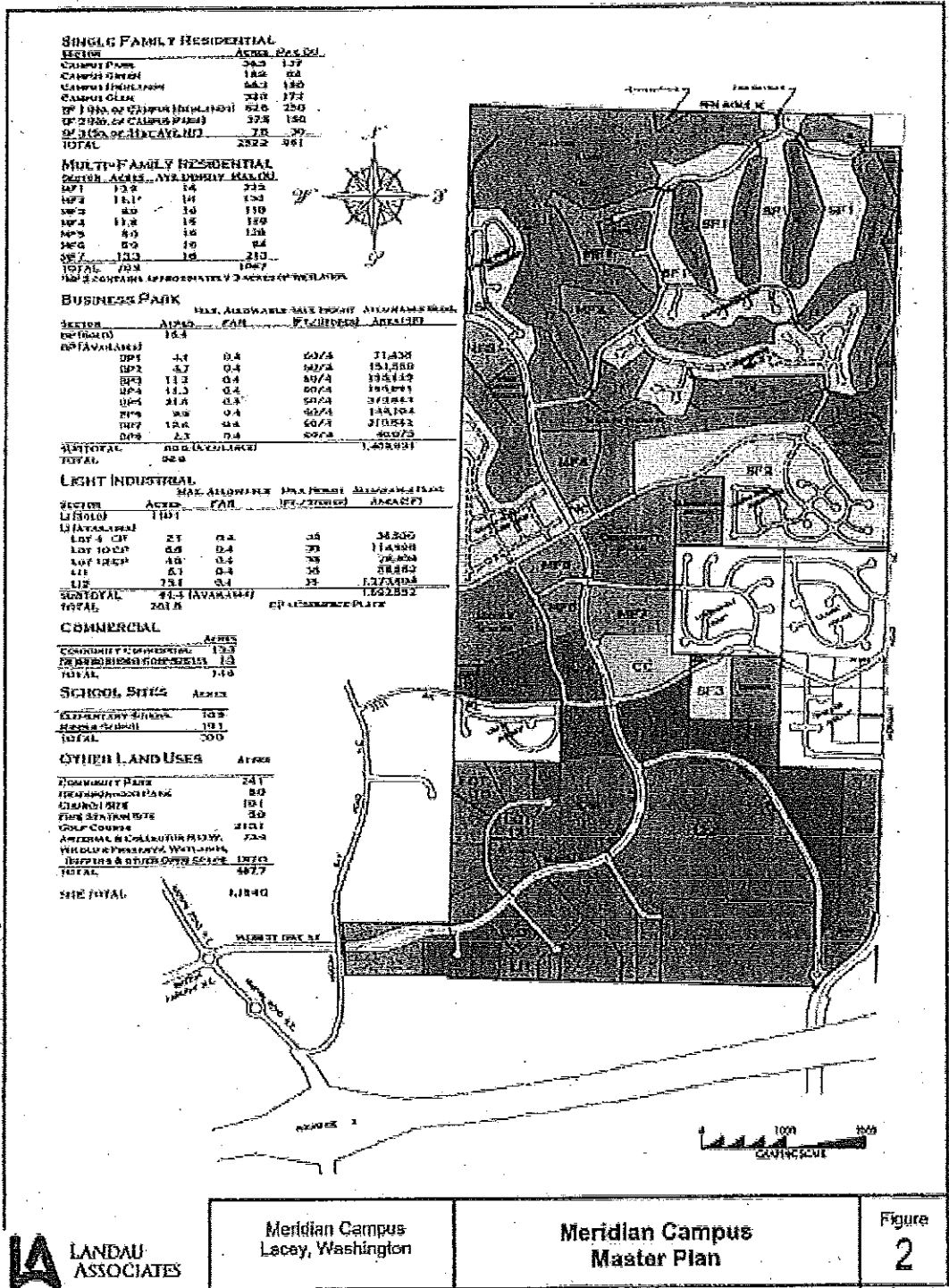


Figure 2. Meridian Campus Master Plan



62701 12/21/13 PROJECT: Meridian Campus Master Plan 2 Master Plan



Meridian Campus
 Lacey, Washington

Meridian Campus
 Master Plan

Figure
 2

Figure 3. Lot Map

TABLE 1
SOIL STOCKPILE SAMPLE RESULTS
CAMPUS HIGHLANDS DRIVE
LACEY, WASHINGTON

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

mg/kg = milligrams per kilogram

TABLE 2
FINAL SOIL CONFIRMATION SAMPLE RESULTS
CAMPUS HIGHLANDS DRIVE
LACEY, WASHINGTON

Sample ID	Lab ID	Sample date	Arsenic (mg/kg)	Lead (mg/kg)
CHD-01cn-6	580-40224-9	9/10/2013	2.8	3.1
CHD-02cn-6	580-40224-10	9/10/2013	3.1	3.8
CHD-03cn-6	580-40224-8	9/10/2013	2.9	3
CHD-04cn-6	580-40224-5	9/10/2013	3.9	4.8
CHD-05cn-6	580-40224-7	9/10/2013	3.8	4.5
CHD-06cn-6	580-40224-6	9/10/2013	3.5	3.7
CHD-07cn-6	580-40224-3	9/10/2013	2.7	2.9
CHD-08cn-6	580-40224-2	9/10/2013	<2.7	2.4
CHD-09cn-6	580-40224-4	9/10/2013	2.9	3.1
CHD-10cn-6	580-40224-1	9/10/2013	<2.9	2.7
CHD-11cn-6	580-40224-18	9/10/2013	4.7	6.5

Samples Collected from Tract T Stormwater Facility Located in Campus Highlands Drive

CHDtt-01cn-6	580-40224-16	9/10/2013	2.9	3.4
CHDtt-02cn-6	580-40224-17	9/10/2013	4.4	6.4
CHDtt-03cn-6	580-40224-15	9/10/2013	<2.8	2.5
CHDtt-04cn-6	580-40224-19	9/10/2013	4.5	5.4
CHDtt-05cn-6	580-40224-21	9/10/2013	3.8	4.8

Samples Collected from Tract V Stormwater Facility Located in Campus Highlands Drive

CHDtv-01cn-6	580-40224-14	9/10/2013	<2.9	3.1
CHDtv-02cn-6	580-40224-12	9/10/2013	<2.7	2.4
CHDtv-03cn-6	580-40224-11	9/10/2013	<2.8	2.2
CHDtv-04cn-6	580-40224-20	9/10/2013	<2.7	2.4
CHDtv-05cn-6	580-40224-13	9/10/2013	3.2	2.5

MTCM Method A Cleanup Level: 20 250
 Unrestricted Use:

mg/kg = milligrams per kilogram