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STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**

Southwest Region Office

PO Box 47775 • Olympia, WA 98504-7775 • 360-407-6300

September 1, 2023

Reserve Silica Corporation  
c/o Doug Steding  
Northwest Resource Law PLLC  
71 Columbia St, Suite 325  
Seattle, WA 98104  
[dsteding@nwresource.com](mailto:dsteding@nwresource.com)

**Re: Comments on Former Asarco Soil Nature & Extent Investigation, Reserve Silica Inert Waste Landfill, Ravensdale, Washington (Aspect Consulting)**

Dear Doug Steding:

The Washington State Department of Ecology (Ecology) received your August 29, 2023, letter regarding Permit Compliance Inspection Report for WAG503029. The letter welcomes comments from Ecology on the independent cleanup action under Washington's Model Toxics Control Act (MTCA) associated with the inappropriate placement of contaminated soil at the Reserve Silica property. Exhibit C of the letter includes a work plan prepared by Aspect Consulting for the investigation of the nature and extent of the arsenic and lead contaminated soil.

Ecology appreciates the timely response by Reserve Silica in addressing the contaminated soil issue. In accordance with WAC 173-340-310, Ecology's Toxics Cleanup Program will be conducting an initial investigation of the potential release of hazardous substances associated with the placement of arsenic and lead contaminated soil from an Asarco impacted property at the Reserve Silica property. Any investigation and remediation completed by Reserve Silica will be included in our Initial Investigation Report. If the remediation meets the substantive requirements of MTCA, then the likely conclusion of our initial investigation will be no further action. If there are significant delays in the investigation and remediation of the contaminated soil, then the release at the Reserve Silica property will be documented on the Confirmed and Suspected Contaminated Sites List (CSCSL). At that time, you should consider entering Ecology's Voluntary Cleanup Program (VCP). For more information about the VCP and the cleanup process, please visit our [VCP webpage](#).<sup>1</sup>

In addition, contaminated fill is not allowed under the sand and gravel general permit (SGGP) issued by Ecology's Water Quality Program, as well as the reclamation permit under King

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<sup>1</sup> <https://ecology.wa.gov/spills-cleanup/contamination-cleanup/voluntary-cleanup-program>

County Department of Local Services. Reserve Silica may be subject to enforcement under the SGGP in the event of an unreasonable delay.

At this time, Ecology is providing informal advice and assistance on your independent remedial action by reviewing the work plan prepared by Aspect Consulting. This letter provides comments from Ecology’s Toxics Cleanup Program and Solid Waste Management Program. We are providing these comments under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW. Our advice or assistance is advisory only and is not binding on Ecology.

**Site Location Clarification**

The Asarco-contaminated soils were not disposed in the Inert Waste Landfill, as indicated the attached 8/29/2023 letter from Douglas Steding that includes the 8/15/2023 Claim to the Superior Court of Washington for King County and the 8/22/2023 soil investigation work plan. Public Health – Seattle & King County (PHSKC, the jurisdictional health department) issues two landfill permits to Reserve Silica Corporation, including an Inert Waste Active Landfill permit (regulated under WAC 173-350-410 and King County Board of Health (BOH) Code Title 10) and a Post-Closure Maintenance Permit for two closed cement kiln dust (CKD) landfills that are regulated under WAC 173-304, King County BOH Code Title 10, and subject to a MTCA agreed order (Cleanup Site ID (CSID) 4728).

Reserve Silica Inc. owns the following adjoining parcels at 26000 and 28131 Black Diamond Ravensdale Road SE, Ravensdale, WA 98051 (see attached report figures and <https://gismaps.kingcounty.gov/iMap/>).

Parcel No.	Description	Comments
362206-9138	Lot 6, northwest parcel, irregular shape	Contains the closed CKD landfills (the Dale Strip Pit and the Lower Disposal Area).  Contains source areas of Reserve Silica Reclamation Site (CSID 4728, Agreed Order) and McVeas Trucking Diesel Spill (CSID 15166, No Further Action).
012106-9011	Lot 5, center parcel	Contains the inert waste landfill areas.
012106-9010	Lot 2, eastern parcel	Timber harvested circa July 2021.  Contains the Asarco-contaminated soils.
362206-9065	Lot 1, northeastern parcel	Timber harvested circa July 2021.
012106-9012	Lot 4, western boundary	
012106-9002	Lot 3, southernmost parcel	
352206-	North of Ravensdale-	Contains Reserve Silica Plant Site (CSID 15125).

9018	Black Diamond Road SE	
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Based on Google Earth Imagery, Parcel Nos. 012106-9010 and 362206-9065 were forested in June 2021, deforested in July 2022, and the reclamation area containing the Asarco-contaminated soils (approximately at 47°20'38.37" N, 121°59'10.66" W) is shown in the April 2023 image. The attached Quitclaim Deed (Timber Rights Only) for all seven parcels referenced above is dated August 3, 2021; Weyerhaeuser Company is the GRANTOR and Reserve Silica Corporation is the GRANTEE.

### **Work Schedule and Coordination**

We understand that Aspect Consulting plans to conduct the soil investigation work between September 6-8. We appreciate Reserve Silica suggesting a meeting with Ecology after data collection and analysis in late September to discuss their plans to remediate the Asarco-contaminated soil site. We would like clarification on when the remedial action work will likely be performed, and how the site will be controlled in the interim; e.g., restricted reclamation work, stormwater and erosion controls, and potential sheeting and other source controls to mitigate infiltration through the contaminated soils.

In addition, for transparent communication, we request that Reserve Silica communicate with Holcim (US) Inc. and their consultant, Golder Associates, for the purpose of completing the Remedial Investigation Report for the Reserve Silica Reclamation Site (CSID 4728). Under oversight of Ecology's Solid Waste Management Program, Golder Associates has completed the remedial investigation field activities and is drafting the Remedial Investigation report. Ideally, the Agency Draft Remedial Investigation Report for the Reclamation Site will be submitted by December 2023 and Ecology will host a public comment period in the spring 2024. The Reclamation Site public comment period may overlap with the independent cleanup action at the Asarco-contaminated soil site, and we will want clear messaging and communication.

### **Nature of Soil Contamination**

There is no soil data from the 33 truckloads placed at the Reserve Silica property. We can piece together the possible contamination levels in the soil based on data collected at the original property on Commercial St in Ruston (property ID HF02). The Environmental Protection Agency (EPA) and Ecology recently sampled the newly exposed surface soil at the Commercial St property for arsenic and lead and ran Toxicity Characteristic Leaching Procedure (TCLP) on four of the highest contaminated samples. These four samples had arsenic ranging from 350 to 1700 ppm, and lead ranging from 580 to 2600 ppm. The highest contaminated soils were in an area where smokestack bricks were also present in the ground. Three of the four samples failed TCLP for lead, with results ranging from 6.5 to 22 mg/L. I have included these results for your information. Based on these results, some of the soil placed at Reserve Silica designates as Resource Conservation and Recovery Act (RCRA) hazardous waste and state dangerous waste.

### **Vertical Extent of Soil Contamination**

It is important to determine the full vertical extent of the soil contamination. The work plan states, “we understand between 10 and 20 feet of clean soil from other sources was placed on top of the soil from the former Asarco facility.” However, no data is included in the work plan to confirm that the soil is clean nor the depth of the clean soil. Soil sampling with the XRF should start at ground surface rather than at a depth of 10 feet below ground surface (bgs). This will confirm the depth of the clean soil layer and if the arsenic and lead concentrations are below the MTCA cleanup levels of 20 parts per million (ppm) and 250 ppm, respectively. The data will be useful for remediation design. This clean soil layer can be removed, stockpiled separately from the contaminated soil, and re-used when re-filling the excavated area.

The work plan does not provide information on the possible depth or thickness of the contaminated soil layer. Ecology recommends the depth of the borings go to “native soil.” If contamination is present at the native soil horizon, then continue to 2-feet below the deepest location where concentrations of arsenic or lead are measured above the MTCA Method A cleanup levels.

### **Lateral Extent of Soil Contamination**

Figure 1 shows 18 proposed boring locations. In the south and west, the outer borings appear to be some distance (> 100 feet) from the “subject area” boundary. We recognize the boundary is likely arbitrary, but the borings are significantly interior of the “subject area.” What are the plans for adding borings in the field to determine the lateral extent of the contaminated soil? The lateral extent will be fully defined when there is a ring of borings that are clean around the subject area.

### **Laboratory Analysis**

TCLP should be run on those samples with highest arsenic or lead contamination. Please be sure to include the TCLP threshold concentrations in the Soil Investigation Report (i.e., arsenic 5 mg/L and lead 5 mg/L).

We look forward to reviewing the Soil Investigation Report. If you have any questions about these comments, please contact me by phone at 360-489-4569 or by e-mail at [marian.abbett@ecy.wa.gov](mailto:marian.abbett@ecy.wa.gov).

Sincerely,



Marian L. Abbett, PE  
Unit Supervisor  
Toxics Cleanup Program  
Southwest Region Office

Enclosures: 2021.08.03\_Quite Claim Deed for Timber\_Weyerhaeuser to Reserve Silica.pdf  
CSID 15125\_RI Report Fig\_2017.11.14.pdf  
CSID 4728\_RI Workplan\_Fig 2-1\_2022.07.22.pdf  
HF02 sampling map.pdf  
HF02 Soil sample results.pdf  
HF02 TCLP.pdf

cc by email:

Reserve Silica Corporation: Vice President Marisa Floyd, [mlfloyd@swcp.com](mailto:mlfloyd@swcp.com), Owner Frank Melfi Jr., [melfif@swcp.com](mailto:melfif@swcp.com), General Manager Fred White, [fwhite@seanet.com](mailto:fwhite@seanet.com)  
Carla Brock, Aspect Consulting, LLC, [cbrock@aspectconsulting.com](mailto:cbrock@aspectconsulting.com)  
Kristine Koch, EPA Cleanup Section #3, [Koch.kristine@epa.gov](mailto:Koch.kristine@epa.gov)  
Monika Kannadaguli, Ecology, Water Quality Program, [mkan461@ecy.wa.gov](mailto:mkan461@ecy.wa.gov)  
Jay Fennell, Ecology, Water Quality Program, [jfen461@ecy.wa.gov](mailto:jfen461@ecy.wa.gov)  
Chris Martin, Ecology, Water Quality Program, [cmar461@ecy.wa.gov](mailto:cmar461@ecy.wa.gov)  
Donna Kirkman, Ecology, Toxics Cleanup Program, [dmus461@ecy.wa.gov](mailto:dmus461@ecy.wa.gov)  
Diana Ison, Ecology, Toxics Cleanup Program, [diso461@ecy.wa.gov](mailto:diso461@ecy.wa.gov)  
Dawn Maurer, Ecology, Solid Waste Management Program, [dmaw461@ecy.wa.gov](mailto:dmaw461@ecy.wa.gov)  
Alan Noell, Ecology, Solid Waste Management Program, [anoe461@ecy.wa.gov](mailto:anoe461@ecy.wa.gov)  
Tim O'Connor, Ecology, Solid Waste Management Program, [tioc461@ecy.wa.gov](mailto:tioc461@ecy.wa.gov)  
Steven Williams, Ecology, Solid Waste Management Program, [stwi461@ecy.wa.gov](mailto:stwi461@ecy.wa.gov)  
Yolanda Pon, King County, DPH/EHD, [yolanda.pon@kingcounty.gov](mailto:yolanda.pon@kingcounty.gov)  
Jeromeo Cruz, King County, DPH/EHD, [jercruz@kingcounty.gov](mailto:jercruz@kingcounty.gov)  
Warren Clauss, King County, DLS [wclauss@kingcounty.gov](mailto:wclauss@kingcounty.gov)  
Teddy Taddese, King County, DLS, [teddy.taddese@kingcounty.gov](mailto:teddy.taddese@kingcounty.gov)  
Jeri Breazeal, King County, DLS, [jeri.breazeal@kingcounty.gov](mailto:jeri.breazeal@kingcounty.gov)  
Tom Campbell, King County, DLS, [tcampbell@kingcounty.gov](mailto:tcampbell@kingcounty.gov)  
Mark Rowe, King County, DLS, [mrowe@kingcounty.gov](mailto:mrowe@kingcounty.gov)

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When recorded, return to:  
Reserve Silica Corporation  
28131 Ravensdale Black Diamond Road  
Ravensdale, Washington 98051-8212

Fidelity National Title Major Accounts-21000784-SC

**QUITCLAIM DEED**

**(Timber Rights Only)**

**REFERENCE NOS:** 8907070396, 9008210784, 960508094

**GRANTOR:** WEYERHAEUSER COMPANY, a Washington corporation

**GRANTEE:** RESERVE SILICA CORPORATION, a Washington corporation

**COUNTY:** KING

**ABBREVIATED LEGAL:** Lots 16- LLS No EMSC 17-0007 rec 20170913900010 and Ptn  
SW 36-22 6, Ptn SE 35-22-6 and Ptn NE 2-21-6, King County

**TAX PARCEL NO's.:** 352206-9018, 362206-9138, 362206-9065, 012106-9010, 012106-9011,  
012106-9012 and 012106-9002

## QUITCLAIM DEED

### (Timber Rights Only)

This Quitclaim Deed (Timber Rights Only) is made as of August 3<sup>rd</sup>, 2021 (the "Effective Date") WEYERHAEUSER COMPANY, a Washington corporation ("Grantor"), with and address of 220 Occidental Avenue South, Seattle, Washington 98104 in favor of RESERVE SILICA CORPORATION, a Washington corporation, whose address is 28131 Ravensdale Black Diamond Road, Ravensdale, Washington 98051-8212 ("Grantee").

### RECITALS

WHEREAS, in that certain Fee Conveyance recorded in the Official Records of King County, Washington on July 7, 1989 under recording number 8907070396, as amended on August 13, 1990 under recording number 9008210784, as further amended on May 8, 1996 under recording number 960508094 (collectively, the "Fee Conveyance"), PCTC Inc., a Delaware corporation (formerly known as Plum Creek Timber Company, Inc. and BN Timberlands, Inc.), conveyed to Meridian Minerals Company, a Montana corporation, certain real property in King County, Washington, more particularly described therein (the "Overall Property"); and

WHEREAS PCTC Inc. reserved in the Fee Conveyance the exclusive right to cut, remove and appropriate all timber then growing on the Overall Property (collectively, the "Timber"); and

WHEREAS PCTC Inc. also reserved in the Fee Conveyance, all rights of ingress and egress for the purpose of harvesting and raising the Timber and all water, water rights and ditch rights in existence on the date of the Fee Conveyance used or intended to be used for the harvesting and raising of the Timber (the "Ancillary Rights" and together with the Timber, collectively, the "Timber Rights"). The Timber Rights were reserved subject to certain covenants and limitations set forth in the Fee Conveyance; and

WHEREAS Grantee desires to obtain the Timber Rights which are subject to the Overall Property which is set forth on Exhibit A attached hereto and incorporated herein (the "Property").

### AGREEMENT

NOW, THEREFORE, for good and valuable consideration, Grantor conveys, quitclaims and releases to Grantee all of Grantor's right, title and interest, if any, in the Timber Rights located on the Property.

*[signature page follows]*





**EXHIBIT "A"**  
Legal Description

ALL STANDING AND/OR GROWING TIMBER AS RESERVED BY THE DEED DATED JUNE 8, 1989, RECORDED JULY 7, 1989 AS RECORDING NUMBER 8907070396 FROM PCTC, INC., A DELAWARE CORPORATION (FORMERLY KNOWN AS PLUM CREEK TIMBER COMPANY, INC. AND BN TIMBER-LANDS, INC.) TO MERIDIAN MINERALS COMPANY, A MONTANA CORPORATION AND AS AMENDED BY DOCUMENT NUMBERS 9008210784 AND 9605080094 LOCATED ON THE FOLLOWING DESCRIBED LAND:

PARCEL A:

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 22 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON;

TOGETHER WITH THE SOUTHEAST QUARTER OF SECTION 35, TOWNSHIP 22 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON;

TOGETHER WITH THE NORTHEAST QUARTER OF SECTION 2, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

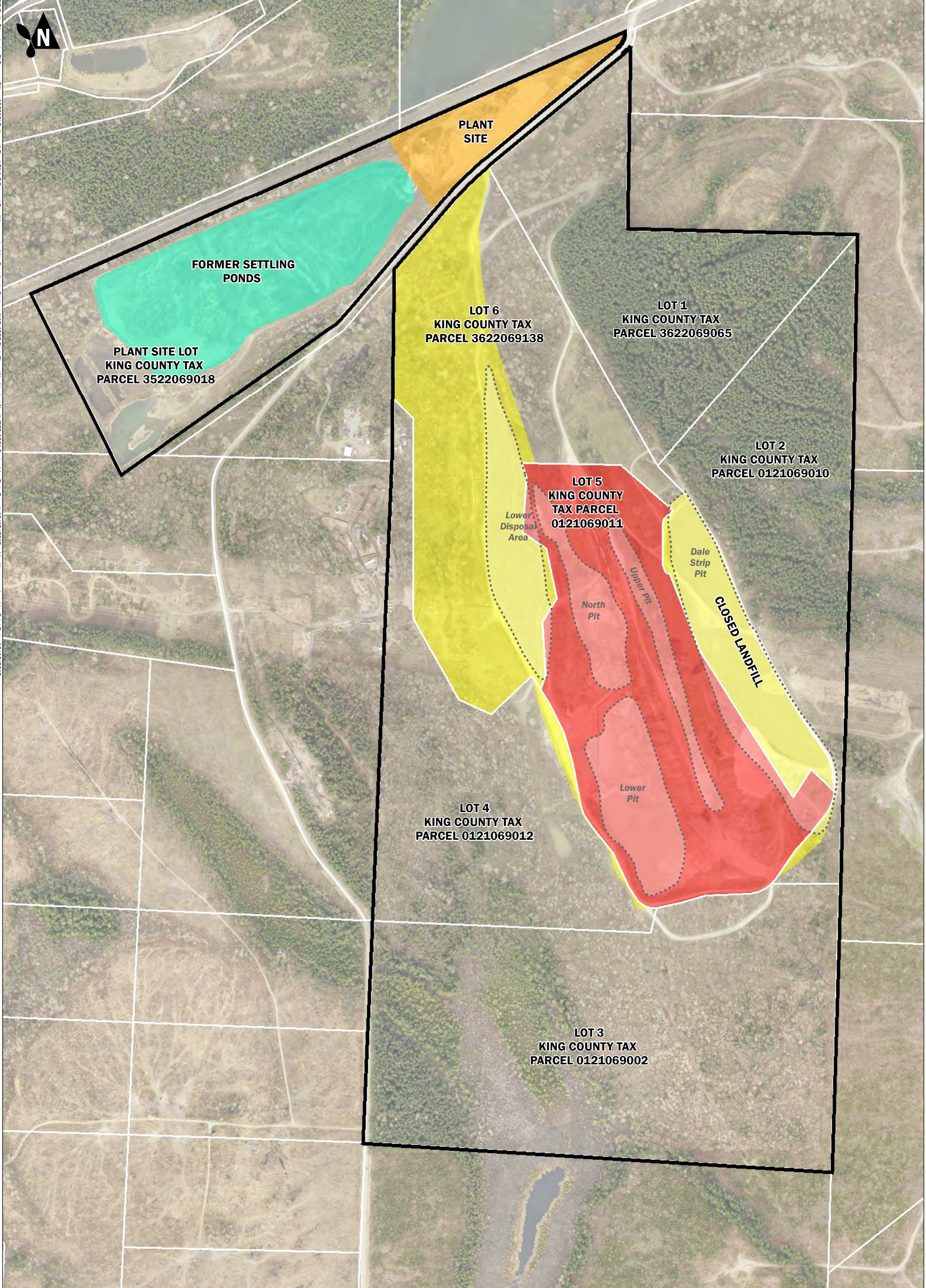
BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 2;  
THENCE SOUTH 89°58'48" ALONG THE NORTH LINE THEREOF 1,387.73 FEET TO THE TRUE POINT OF BEGINNING;  
THENCE SOUTH 53°28'09" WEST 221.78 FEET;  
THENCE NORTH 28°01'51" WEST 1,133.38 FEET TO THE SOUTHEASTERLY MARGIN OF BURLINGTON NORTHERN RAILROAD RIGHT OF WAY;  
THENCE NORTH 64°52'09" EAST ALONG SAID MARGIN 3,650.15 FEET TO THE NORTHWESTERLY MARGIN OF BLACK DIAMOND-RAVENSDALE ROAD AND A POINT ON A CURVE, THE CENTER OF WHICH BEARS NORTH 73°16'09" WEST 205.00 FEET;  
THENCE SOUTHERLY ALONG SAID MARGIN ALONG SAID CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 32°19'11", AN ARC DISTANCE OF 115.64 FEET;  
THENCE CONTINUING ALONG SAID MARGIN THE FOLLOWING COURSES AND DISTANCES;  
THENCE SOUTH 49°03'02" WEST 958.88 FEET TO A POINT OF CURVE;  
THENCE SOUTHERLY ON SAID CURVE TO LEFT, THROUGH A CENTRAL ANGLE OF 09°26'24", AN ARC DISTANCE OF 319.64 FEET;  
THENCE SOUTH 39°36'39" WEST 952.81 FEET TO A POINT WHICH BEARS NORTH 53°28'09" EAST FROM THE TRUE POINT OF BEGINNING;  
THENCE SOUTH 53°28'09" WEST 1,259.76 FEET TO THE TRUE POINT OF BEGINNING.








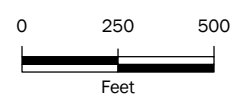
PARCEL B:


LOTS 1 THROUGH 6, INCLUSIVE OF LARGE LOT SEGREGATION NO. EMSC 17-0007 RECORDED UNDER RECORDING NUMBER 20170913900010, RECORDS OF KING COUNTY, WASHINGTON.



GIS Path: \\projects\_8\ReserveSilica\_160315\Delivered\Final\N1\2\_Current\_Conditions.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 10/19/2017 | User: rpeppin | Print Date: 10/19/2017



	Closed Landfill/Easement Area		Historical Coal and/or Sand Mine Pit Extent
	Inert Waste Landfill		Property
	Plant Site		Tax Parcel
	Former Settling Ponds	 0      250      500 Feet	

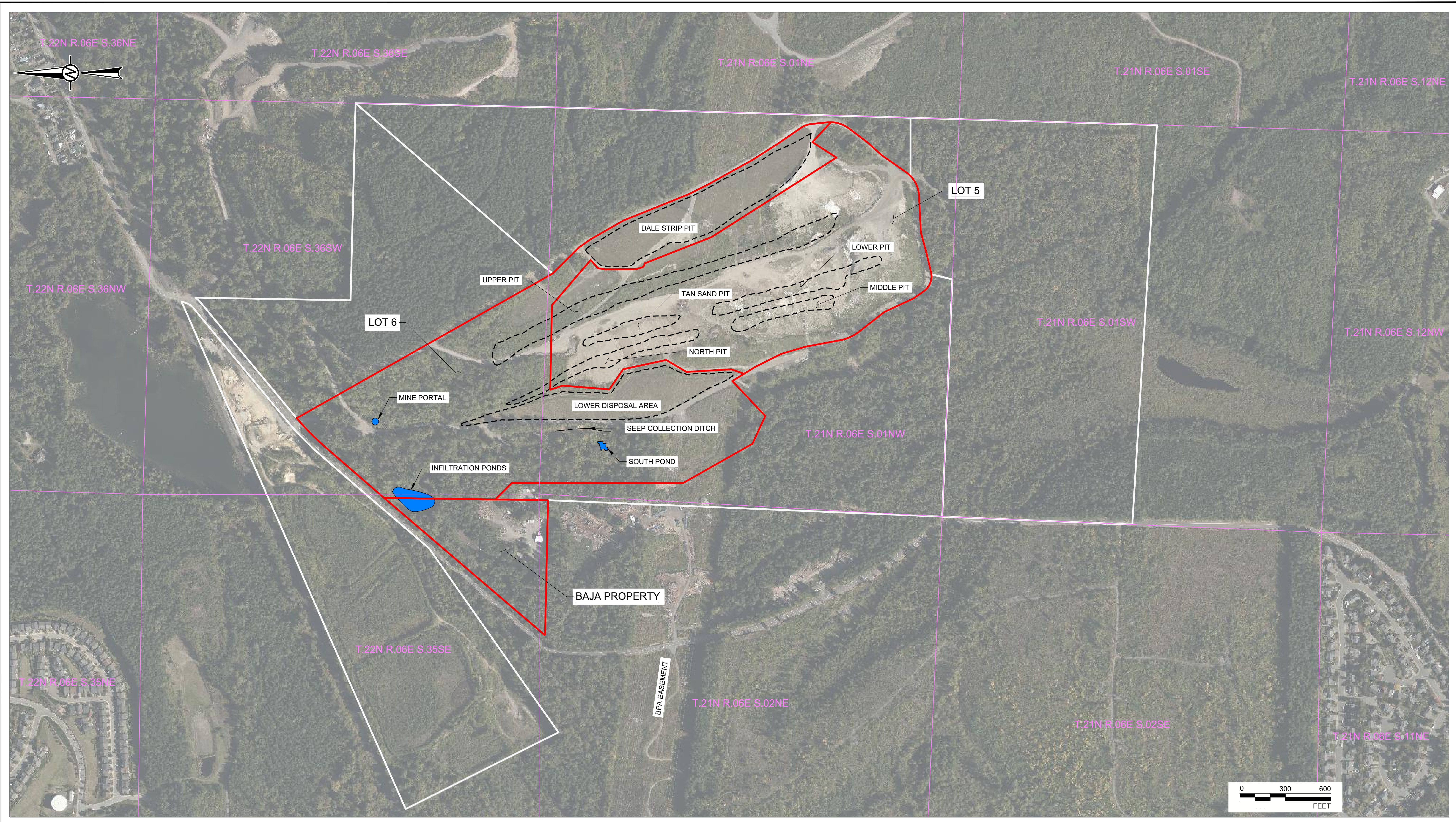
<b>Current Conditions</b> Remedial Investigation Report Reserve Silica Ravensdale, Washington		
	OCT-2017	BY: CEB / RAP
	PROJECT NO. 160315	REVISED BY: ---
		FIGURE NO. <b>1-2</b>



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Path: \\vancouver.golder.com\golder\geomatics\HOLCIM\Revised\152030402\_RI\_2019\004\_RI\_Tasks\_2021\02\_PRODUCTION\DWG | File Name: 152030402\_RI\_2019\004\_RI\_Tasks\_2021\02\_PRODUCTION\DWG | Last Edited By: nicholasen Date: 2021-06-17 Time: 1:50:55 PM | Printed By: nicholasen Date: 2021-06-17 Time: 1:50:06 PM



**LEGEND**

- PRELIMINARY SITE EXTENTS
- PARCEL BOUNDARIES (WHITE)
- - - - HISTORICAL COAL AND/OR SAND MINE PIT EXTENTS (APPROXIMATE)
- TOWNSHIP, RANGE, SECTION, AND QUARTER BOUNDARIES

CLIENT  
HOLCIM

PROJECT  
RI WORK PLAN 2021  
RAVENSDALE, WA

CONSULTANT	YYYY-MM-DD	2021-06-17
DESIGNED	JX	
PREPARED	REDMOND	
REVIEWED	JX	
APPROVED	GZ	

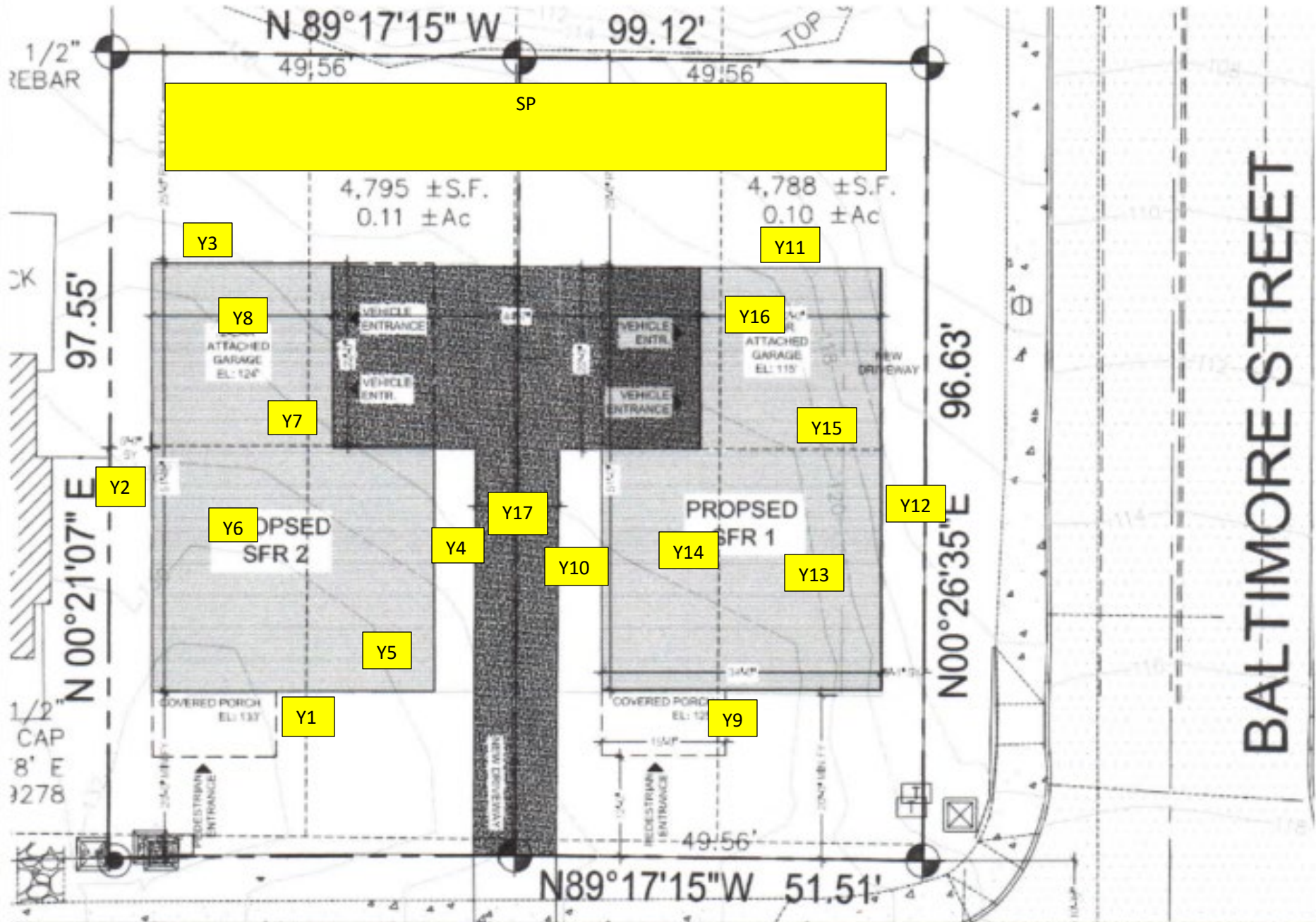
TITLE  
**SITE OVERVIEW MAP**

PROJECT NO.	PHASE	REV.	FIGURE
152030402	004	0	2-1

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANS/D



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# Sample Results

Property ID TSPPEPAHF02

Property Owner:

Site Address: 5301 N Commercial

Parcel: 400205001

City: Tacoma

Area Y1 Ground Cover: None

Location: 0-6" sample - outside of south wall of west foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y1-1-4	Arsenic	3.2	8/2/2023
27-HF02-Y1-1-4	Lead	2.6	8/2/2023

Area Y1 Ground Cover: None

Location: 0-6" sample - outside of west wall of east foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y10-1-4	Arsenic	340	8/2/2023
27-HF02-Y10-1-4	Lead	580	8/2/2023

Area Y1 Ground Cover: None

Location: 0-6" sample - outside of north wall of east foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y11-1-4	Arsenic	130	8/2/2023
27-HF02-Y11-1-4	Lead	200	8/2/2023

Area Y1 Ground Cover: None

Location: 0-6" sample - outside of east wall of east foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y12-1-4	Arsenic	320	8/2/2023
27-HF02-Y12-1-4	Lead	5000	8/2/2023

# Sample Results

Property ID TSPPEPAHF02

Property Owner:

Site Address: 5301 N Commercial

Parcel: 400205001

City: Tacoma

Area Y1 Ground Cover: None

Location: 0-6" sample - east section of east  
\*home\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y13-1-4	Arsenic	350	8/2/2023
27-HF02-Y13-1-4	Lead	580	8/2/2023

Area Y1 Ground Cover: None

Location: 0-6" sample - west section of  
east \*home\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y14-1-4	Arsenic	130	8/2/2023
27-HF02-Y14-1-4	Lead	130	8/2/2023

Area Y1 Ground Cover: None

Location: 0-6" sample - SE section of east  
\*garage\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y15-1-4	Arsenic	530	8/2/2023
27-HF02-Y15-1-4	Lead	1400	8/2/2023

Area Y1 Ground Cover: None

Location: 0-6" sample - NW section of east  
\*garage\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y16-1-4	Arsenic	1700	8/2/2023
27-HF02-Y16-1-4	Lead	2600	8/2/2023

# Sample Results

Property ID TSPPEPAHF02

Property Owner:

Site Address: 5301 N Commercial

Parcel: 400205001

City: Tacoma

Area Y1 Ground Cover: None

Location: 0-6" sample - middle of driveway between foundations

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y17-1-4	Arsenic	240	8/2/2023
27-HF02-Y17-1-4	Lead	340	8/2/2023

Area Y2 Ground Cover: None

Location: 0-6" sample - outside of west wall of west foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y2-1-4	Arsenic	24	8/2/2023
27-HF02-Y2-1-4	Lead	15	8/2/2023

Area Y3 Ground Cover: None

Location: 0-6" sample - outside of north wall of west foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y3-1-4	Arsenic	580	8/2/2023
27-HF02-Y3-1-4	Lead	650	8/2/2023

Area Y4 Ground Cover: None

Location: 0-6" sample - outside of east wall of west foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y4-1-4	Arsenic	41	8/2/2023
27-HF02-Y4-1-4	Lead	40	8/2/2023

# Sample Results

Property ID TSPPEPAHF02

Property Owner:

Site Address: 5301 N Commercial

Parcel: 400205001

City: Tacoma

Area Y5 Ground Cover: None

Location: 0-6" sample - SE section of west  
\*home\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y5-1-4	Arsenic	3.2	8/2/2023
27-HF02-Y5-1-4	Lead	3.1	8/2/2023

Area Y6 Ground Cover: None

Location: 0-6" sample - NW section of  
west \*home\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y6-1-4	Arsenic	3.5	8/2/2023
27-HF02-Y6-1-4	Lead	3.1	8/2/2023

Area Y7 Ground Cover: None

Location: 0-6" sample - SE section of west  
\*garage\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y7-1-4	Arsenic	5.3	8/2/2023
27-HF02-Y7-1-4	Lead	3.7	8/2/2023

Area Y8 Ground Cover: None

Location: 0-6" sample - NW section of  
west \*garage\* foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y8-1-4	Arsenic	40	8/2/2023
27-HF02-Y8-1-4	Lead	16	8/2/2023

# Sample Results

Property ID TSPPEPAHF02

Property Owner:

Site Address: 5301 N Commercial

Parcel: 400205001

City: Tacoma

Area Y9 Ground Cover: None

Location: 0-6" sample - outside of south wall of east foundation

SAMPLE ID	ANALYTE	RESULT*	Sample Date
Sample Depth: 0-6 inches			
27-HF02-Y9-1-4	Arsenic	96	8/2/2023
27-HF02-Y9-1-4	Lead	100	8/2/2023

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14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

August 31, 2023

Chris Matter  
Tacoma-Pierce County Health Department  
3629 South "D" Street  
Tacoma, WA 98418-6813

Re: Analytical Data for Yard Program - Task 3  
Laboratory Reference No. 2308-071B

Dear Chris:

Enclosed are the analytical results and associated quality control data for samples submitted on August 4, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 31, 2023  
Samples Submitted: August 4, 2023  
Laboratory Reference: 2308-071B  
Project: Yard Program - Task 3

### Case Narrative

Samples were collected on August 2, 2023 and received by the laboratory on August 4, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### TCLP Metals EPA 1311/6010D Analysis

Due to a limited amount of sample, less than the required 100g was tumbled for TCLP analysis. The amount of sample used was: (75 g).

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.





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**TCLP METALS  
 EPA 1311/6010D**

Matrix: TCLP Extract  
 Units: mg/L (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>27-HF02-Y3-1-4</b>					
Laboratory ID:	08-071-03					
Arsenic	<b>0.96</b>	0.40	EPA 6010D	8-30-23	8-30-23	

<b>Client ID:</b>	<b>27-HF02-Y12-1-4</b>					
Laboratory ID:	08-071-13					
Lead	<b>6.5</b>	0.20	EPA 6010D	8-30-23	8-30-23	

<b>Client ID:</b>	<b>27-HF02-Y15-1-4</b>					
Laboratory ID:	08-071-16					
Arsenic	<b>0.81</b>	0.40	EPA 6010D	8-30-23	8-30-23	
Lead	<b>22</b>	0.20	EPA 6010D	8-30-23	8-30-23	

<b>Client ID:</b>	<b>27-HF02-Y16-1-4</b>					
Laboratory ID:	08-071-17					
Arsenic	<b>2.5</b>	0.40	EPA 6010D	8-30-23	8-30-23	
Lead	<b>18</b>	0.20	EPA 6010D	8-30-23	8-30-23	



Date of Report: August 31, 2023  
 Samples Submitted: August 4, 2023  
 Laboratory Reference: 2308-071B  
 Project: Yard Program - Task 3

**TCLP METALS  
 EPA 1311/6010D  
 QUALITY CONTROL**

Matrix: TCLP Extract  
 Units: mg/L (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0830TM1					
Arsenic	<b>ND</b>	0.40	EPA 6010D	8-30-23	8-30-23	
Lead	<b>ND</b>	0.20	EPA 6010D	8-30-23	8-30-23	

<b>Analyte</b>	<b>Result</b>	<b>Spike Level</b>	<b>Source Result</b>	<b>Percent Recovery</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>DUPLICATE</b>								
Laboratory ID:	08-071-13							
	<b>ORIG</b>	<b>DUP</b>						
Arsenic	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	20
Lead	<b>6.46</b>	<b>6.43</b>	NA	NA	NA	NA	1	20

**MATRIX SPIKES**

Laboratory ID:	08-071-13									
	<b>MS</b>	<b>MSD</b>	<b>MS</b>	<b>MSD</b>		<b>MS</b>	<b>MSD</b>			
Arsenic	<b>4.06</b>	<b>4.08</b>	4.00	4.00	ND	<b>102</b>	<b>102</b>	75-125	1	20
Lead	<b>16.1</b>	<b>15.9</b>	10.0	10.0	6.46	<b>96</b>	<b>94</b>	75-125	1	20





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**Monsite Environmental Inc.**  
 Analytical Laboratory Testing Services  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • www.monsite-env.com

# Chain of Custody

Turnaround Request  
 (in working days)  
 (Check One)

Laboratory Number: **08-071**

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Date Sampled Time Sampled Matrix

Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )	
NWTPH-Gx	
NWTPH-Dx (SG Clean-up <input type="checkbox"/> )	
Volatiles 8260	
Halogenated Volatiles 8260	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270/SIM (with low-level PAHs)	
PAHs 8270/SIM (low-level)	
PCBs 8082	
Organochlorine Pesticides 8081	
Organophosphorus Pesticides 8270/SIM	
Chlorinated Acid Herbicides 8151	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664	
Arsenic	X
Lead	X
TCLP ARSENIC	
TCLP LEAD	
% Moisture	X

Lab ID	Sample Identification
1	27-HF02-Y1-1-4
2	27-HF02-Y2-1-4
3	27-HF02-Y3-1-4
4	27-HF02-Y4-1-4
5	27-HF02-Y5-1-4
6	27-HF02-Y5-1-5
7	27-HF02-Y6-1-4
8	27-HF02-Y7-1-4
9	27-HF02-Y8-1-4
10	27-HF02-Y9-1-4

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished	Signature: <i>Christine Mathis</i>	Company: TPCHD	Date: 8/4/23	Time: 1030 AM	Comments/Special Instructions: (X) Added 8/23/23. DB (574)
Received	Signature: <i>Van</i>	Company: <i>SPDH</i>	Date: 8/2/23	Time: 1030	
Relinquished	Signature: <i>Van</i>	Company: <i>SPDH</i>	Date: 8/4/23	Time: 1300	
Received	Signature: <i>Nickolas R. Spino</i>	Company: <i>OSE</i>	Date: 8/4/23	Time: 1300	
Relinquished					
Received					
Relinquished					
Received/Date		Reviewed/Date			Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
					Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>





# Sample/Cooler Receipt and Acceptance Checklist

Client: TPCH

Client Project Name/Number: Task 3 - EPA

OnSite Project Number: 08-071

Initiated by: NB

Date Initiated: 8/4/23

## 1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	<u>N/A</u>	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	<u>N/A</u>	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	<u>N/A</u>	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	Yes	<u>No</u>	N/A	1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	Yes	<u>No</u>	N/A	Temperature: <u>23.3</u>
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	<u>N/A</u>		
1.7 How were the samples delivered?	Client	<u>Courier</u>	UPS/FedEx	OSE Pickup Other

## 2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	<u>Yes</u>	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	<u>Yes</u>	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	<u>Yes</u>	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	<u>Yes</u>	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	<u>Yes</u>	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	<u>No</u>		1 2 3 4

## 3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	<u>No</u>		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	<u>No</u>		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	<u>Yes</u>	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	<u>N/A</u>	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	<u>N/A</u>	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	<u>Yes</u>	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	<u>No</u>		1 2 3 4
3.8 Was method 5035A used?	Yes	No	<u>N/A</u>	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		<u>N/A</u>	1 2 3 4

### Explain any discrepancies:


1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed