



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Southwest Region Office
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May 13, 2025

Nicholas Efthimiadis
Mercy Housing Northwest
6930 Martin Luther King Jr Way S
Seattle, WA 98118
nicolas.efthimiadis@mercyhousing.org

Re: No Further Action Likely opinion for the following contaminated Property associated with the Asarco Tacoma Smelter Site

Site name: Mary's Place Burien
Site address: 12845 Ambaum Blvd SW, Burien, WA 98146
Facility/Site ID: 100003776
Cleanup Site ID: 17231
VCP Project ID: NW3430

Dear Nicholas Efthimiadis:

On April 8, 2025, the [Washington State Department of Ecology](https://ecology.wa.gov)¹ (Ecology) received your request for an opinion regarding the sufficiency of your independent cleanup of the Property associated with the Asarco Tacoma Smelter Site (Asarco Site) under the [Voluntary Cleanup Program](#)² (VCP).

This letter provides our opinion and analysis. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), chapter [70A.305](#) RCW.³

¹ <https://ecology.wa.gov>

² <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program>

³ <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305>

Opinion

Upon completion of your planned cleanup, Ecology has determined no further remedial action is likely necessary at the Property to clean up contamination associated with the Asarco Site. However, further remedial action is still needed elsewhere at the Asarco Site to clean up contamination.

For this opinion, it's important to distinguish between a "Site" and a "Property" under MTCA. A "Site" is defined by the area where a hazardous substance released to the environment has come to be located – the extent of contamination. A "Property" is simply the tax parcel(s) of real property that comprise a facility. Property boundaries are based on associated legal description information. As such, a site can affect multiple real property parcels, and a real property parcel can be part of multiple sites. A site can also be wholly contained within the real property parcel(s) comprising a Property.

Ecology bases this opinion on an analysis of whether the remedial action meets the substantive requirements of MTCA and its implementing regulations specified in chapter 70A.305 RCW and chapter [173-340](https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340) WAC⁴ (collectively called "MTCA").

Property identification

This opinion applies to only the Property described here and consists of the following real property parcel in King County.

- 7835800100

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

Property and Asarco Site description

This opinion applies to only the Property described in this section. The Asarco Site is defined by the nature and extent of contamination associated with the following release.

- Arsenic in soil.

⁴ <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340>

Enclosure B includes the Asarco Site description, and Asarco Site diagram, as currently known to Ecology.

Ecology has no information indicating other sites affect any portion of the Property.

Basis for the opinion

Ecology bases this opinion on the following documents.

- PBS, *Remedial Action Work Plan for Tacoma Smelter Plume Impacts*, April 21, 2025.
- PBS, *Limited Soil Assessment for Arsenic and Lead*, February 26, 2025.

You can request these documents by filing a [records request](#).⁵ For help making a request, contact the Public Records Officer at recordsofficer@ecy.wa.gov or call (360) 407-6040. Before making a request, check if the documents are available on the [Mary's Place Burien Webpage](#).⁶

This opinion is void if anything in the documents is materially false or misleading.

⁵ <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>

⁶ <https://apps.ecology.wa.gov/cleanupsearch/site/17231>

Analysis of the cleanup

Ecology has determined, upon completion of your planned cleanup, no further remedial action will likely be necessary on the Property to clean up contamination associated with the Asarco Site, although further cleanup action still may be needed elsewhere at the Asarco Site. Ecology bases this conclusion on the following analysis.

Characterizing the Property

Ecology has determined your Property characterization appears to be sufficient for setting cleanup standards for the Site and selecting a cleanup action for the Property.

The Mary's Place Burien property (Property) is located west of Interstate 5 and west of State Route 509 in Burien, Washington. The 4.3-acre property is situated on the corner of Southwest 130th Street and Ambaum Boulevard Southwest (Figure 1).

Currently, the Property is improved with a 23,000 square foot structure with a basement, associated parking lots, driveways, and areas of vegetation and trees. The Property is bounded to the north and east by residential and retail properties, and to the south and west by residential properties.

For more information about the Property, refer to Enclosure A.

The planned development includes demolition of the existing structure, and construction of two new structures on the Property. The new construction includes a shelter to serve families, and a new affordable housing development. A short plat process will separate the current Property into three distinct legal parcels. The existing structure will be demolished to allow for construction of the new buildings. The Mary's Place Shelter will be developed on the new westernmost parcel, and the Mercy Housing Burien Family Housing project will be developed on the new middle parcel. No development is currently planned for the new easternmost parcel. Mercy Housing Northwest contracted PBS to characterize the Property for Tacoma Smelter Plume contamination.

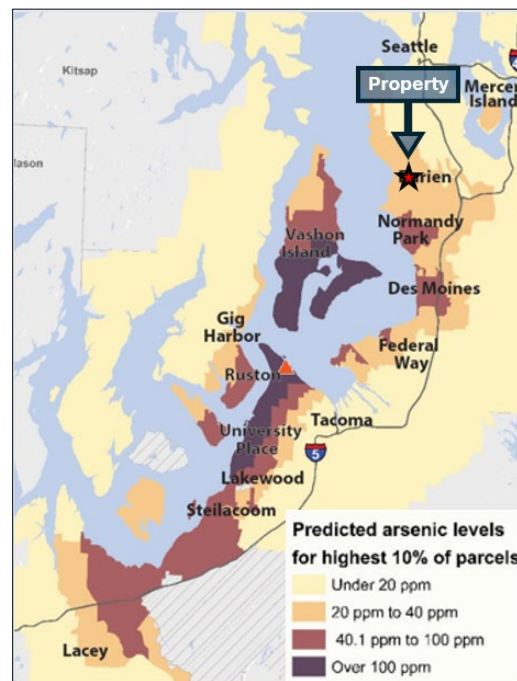


Figure 1. Vicinity Map

On January 20, 2025, PBS performed soil characterization sampling at the site to determine the levels of arsenic and lead in the shallow soil. Soil characterization was conducted in accordance with Ecology's [Tacoma Smelter Plume Model Remedies Guidance](#).⁷

The 4.3- acre property was sampled as one decision unit. On January 20, 2025, PBS collected a total of 38 discrete soil samples from 30 locations across the Property. Thirty soil samples were collected from 0 to 6 inches below ground surface (bgs), and eight samples were collected from 6 to 12 inches bgs. Five composite duff samples were also collected from the wooded areas on the western portion of the Property (Figure 2).

Results of Sampling

At 0 to 6 inches below ground surface (bgs), arsenic exceeded the MTCA Method A cleanup level of 20 milligrams per kilogram (mg/kg) in five samples. One of those samples (at SS-2) also exceeded the maximum allowable concentration for a single soil sample, or twice the cleanup level for arsenic (40 mg/kg). The arsenic concentrations ranged from 2.6 mg/kg to 48 mg/kg. The average arsenic concentration was 12.5 mg/kg. One of the samples exceeded the MTCA Method A cleanup level of 250 mg/kg for lead. None of the samples exceeded twice the cleanup level for lead (500 mg/kg). Lead concentrations ranged from 5.3 mg/kg to 280 mg/kg. The average lead concentration was 43.2 mg/kg.

At 6 to 12 inches bgs, arsenic exceeded the MTCA Method A cleanup level of 20 mg/kg in one sample, but did not exceed the maximum allowable concentration for a single soil sample, or twice the cleanup level for arsenic (40 mg/kg). The arsenic concentrations ranged from 2.1 mg/kg to 21 mg/kg. The average arsenic concentration was 11.9 mg/kg. None of the samples exceeded the MTCA Method A cleanup level of 250 mg/kg for lead. Lead concentrations ranged from 3.7 mg/kg to 44 mg/kg. The average lead concentration was 27.2 mg/kg (Table 1).

The composite duff samples were below the MTCA Method A cleanup level of 20 mg/kg for arsenic and 250 mg/kg for lead.

See Enclosure C for Soil and Duff Characterization Results.

⁷ <https://apps.ecology.wa.gov/publications/SummaryPages/1909101.html>

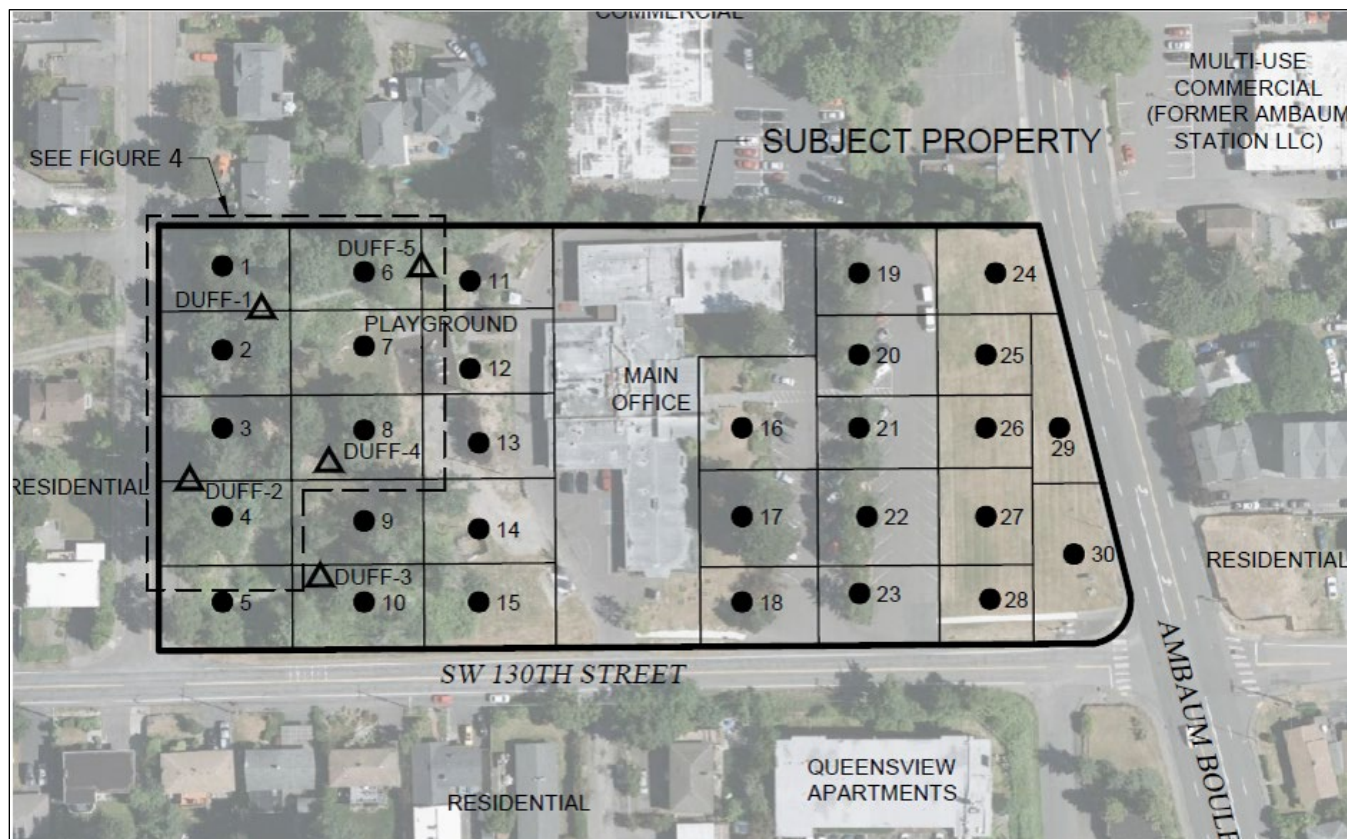


Figure 2. Approximate soil sample locations

Table 1. Summary of Property characterization soil sampling

Sample Date	Depth (inches)	Arsenic Minimum (mg/kg)	Arsenic Maximum (mg/kg)	Arsenic Average (mg/kg)	Lead Minimum (mg/kg)	Lead Maximum (mg/kg)	Lead Average (mg/kg)
1/20/2025	0-6 soil	2.7	48	12.5	5.2	280	43.2
1/20/2025	6-12 soil	2.4	21	11.9	3.7	44	27.2
1/20/2025	Surface duff	<1	2.1	--	<2	6.9	--
MTCA Cleanup			40	20		500	250

Bold values represent concentrations above the MTCA Method A Cleanup level; **bold red** values represent concentrations twice the MTCA Method A cleanup level for unrestricted land use.

To identify the extent of contamination around location SS-2, additional samples were collected from this area on January 30, 2025. Two samples were collected from the original SS-2 boring location to identify the depth of contamination. One from 6 to 12 inches bgs, and one from 12 to 18 inches bgs. Analytical results did not indicate arsenic concentrations above MTCA Method A cleanup levels in the deeper samples. Samples were also collected and analyzed to determine

the lateral extent of the elevated level of arsenic at SS-2. These borings were placed approximately five and ten feet from the original SS-2 to the north, south, east, and west (Figure 3). Soil samples were collected from 0 to 6 inches bgs, 6 to 12 inches bgs, and 12 to 18 inches bgs. Analytical results did not indicate arsenic concentrations above MTCA Method A cleanup levels in any of the soil samples collected at five feet to the north, east, south or west of SS-2 (Table 2). Therefore, the soil samples collected at a 10-foot radius were not analyzed.



Figure 3. Approximate locations of additional sampling near location SS-2

Table 2. Summary of additional soil sampling near location SS-2

Sample Date	Depth (inches)	Arsenic Minimum (mg/kg)	Arsenic Maximum (mg/kg)	Arsenic Average (mg/kg)
1/30/2025	0-6 soil	10	19	13.5
1/30/2025	6-12 soil	5.8	13	9.1
1/20/2025	12-18 soil	4.6	4.6	4.6
MTCA Cleanup			40	20

Setting cleanup standards for the Asarco Site

Cleanup standards include cleanup levels, points of compliance, and other requirements. Asarco Site cleanup levels applied to the Property meet the substantive requirements of MTCA. Other requirements also apply to the cleanup action based on the type of action or location of the Site and Property.

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 that the soil and duff cleanup levels are protective of human health and the environment for properties within the Asarco Tacoma Smelter Site are the following:

- Average arsenic detected in the soil is less than 20 mg/kg.
- Average lead detected in the soil is less than 250 mg/kg.
- Duff composite sample is less than 20 mg/kg for arsenic.
- Duff composite sample is less than 250 mg/kg for lead.
- No single soil sample has arsenic above 40 mg/kg.
- No single soil sample has lead above 500 mg/kg.

Selecting the cleanup action

Ecology has determined the cleanup action you selected for the Property will likely meet the cleanup standards discussed in the "Setting cleanup standards for the Asarco Site" subsection. Your planned cleanup meets minimum cleanup requirements and likely won't exacerbate conditions or preclude reasonable cleanup alternatives elsewhere at the Asarco Site.

Ecology proposed four model remedies in the IAP:

- Excavation and removal.
- Mixing.
- Capping in place.
- Consolidation and capping.

The Property developer, Mercy Housing Northwest (MHNW) decided to use mixing in the Remedial Action Area.

Implementing the cleanup action

The planned Property cleanup actions will likely meet minimum requirements and should not make conditions worse or limit other reasonable cleanup alternatives elsewhere at the Asarco Site. However, additional cleanup will still be needed at other areas of the Asarco Site after your planned cleanup is completed. This cleanup is an interim action for the overall Asarco Site cleanup.

The Property was sampled as one Decision Unit. The average arsenic concentration for the Property was 12.5 mg/kg at the 0 to 6 inch depth and 11.9 mg/kg at the 6 to 12 inch depth. However, six of the soil samples from the western part of the property have arsenic results over 20 mg/kg, and one of those samples, at location SS-2, was 48 mg/kg. The sample locations with arsenic over 20 mg/kg are SS-2, SS-3, SS-4, SS-6, SS-7, and SS-8. These samples were collected from the least developed, wooded portion of the Property. MHNW has included all areas with arsenic results over 20 mg/kg in the Remedial Action Area (Figure 4).

MHNW plans to mix the soil in the Remedial Action Area to a depth of 12 inches.

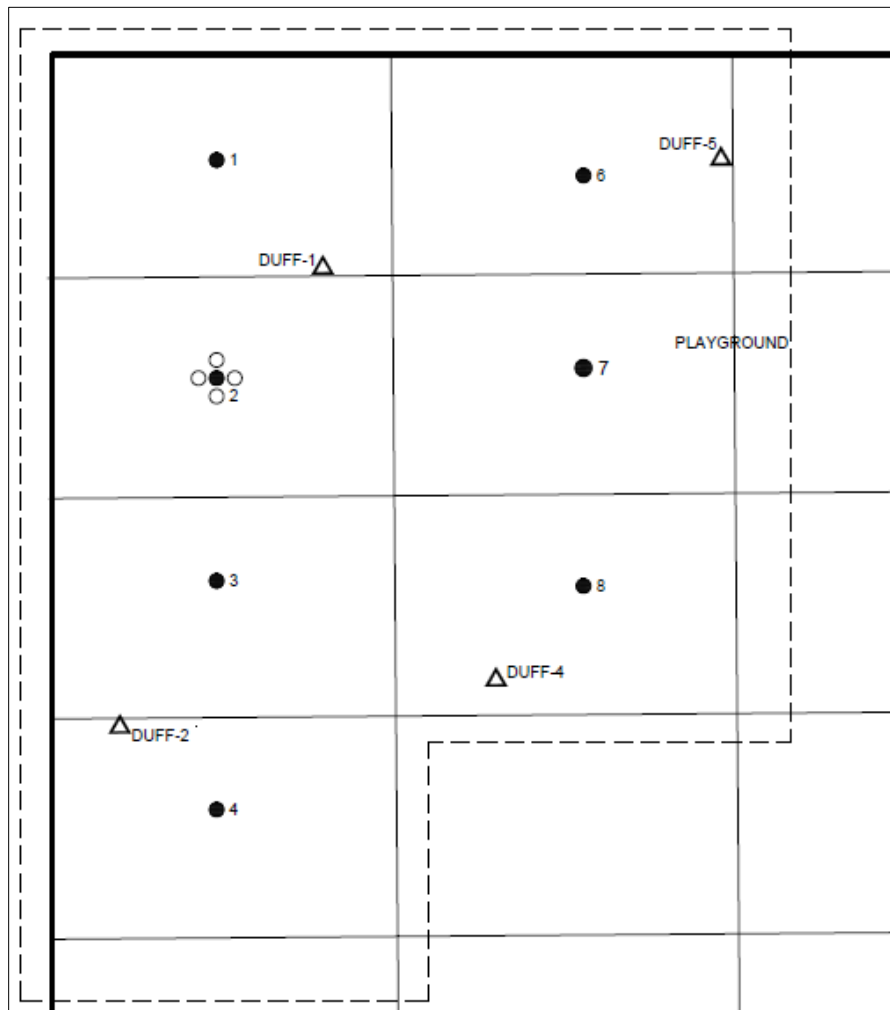


Figure 4. Remedial Action Area

Soil Mixing

During site development, soil mixing will be completed in the Remedial Action Area using conventional earthwork equipment, including excavators, backhoe loaders, and/or bulldozers.

The mixing techniques used will be determined by the contractor. Mixing techniques may include mixing in place or piling soil into rows or stockpiles and spreading back out, resulting in a uniformly mixed backfill. Mixing will be completed in accordance with Ecology's Tacoma Smelter Plume Model Remedies Guidance.

Compliance Sampling

For mixed areas, at each sample location, a sample should be collected at six-inch intervals from the entire mixed depth profile. If soil is mixed to a depth of 12 inches, at each sample location, a sample should be collected at 0 to 6 inches bgs, and 6 to 12 inches bgs. Confirmational sample results should show that the mixing has successfully remediated soil to below the applicable cleanup levels. If average arsenic results are above 20 mg/kg at any of the sampled depth intervals, or if any single sample is above 40 mg/kg for arsenic, additional mixing should occur, until the soil in this area has been successfully remediated. All final confirmational soil samples should be analyzed at a lab.

Following soil mixing operations, compliance soil samples will be collected from a minimum of 13 sample locations from the Remedial Action Area. At each sample location, a soil sample will be collected at six-inch intervals throughout the entire mixed depth. Each discrete sample will be analyzed for total arsenic. In accordance with Ecology's Tacoma Smelter Plume Model Remedies Guidance, MHNW anticipates collecting confirmational samples from 13 sample locations.

Environmental Information Management Database

In accordance with WAC 173-340-840(5) and [Ecology Toxics Cleanup Program Policy 840](#)⁸ (Data Submittal Requirements), data generated for Independent Remedial Actions will need to be confirmed as uploaded, accepted, and approved in Ecology's Environmental Information Management (EIM) database prior to issuing a no further action (NFA) determination. For additional information regarding electronic format requirements, see the website <http://www.ecy.wa.gov/eim>.

Be advised that according to the policy, any reports containing sampling data that are submitted for Ecology review are considered incomplete until the electronic data has been entered. Please ensure that data generated during on-site activities is submitted pursuant to this policy.

Data must be submitted to Ecology in this format for Ecology to issue an NFA determination. Please be sure to submit all soil data collected to date, as well as any future data, in this format.

⁸ <https://apps.ecology.wa.gov/publications/SummaryPages/1609050.html>

Cleanup of the Asarco Site as a Whole

Ecology has determined your planned Property cleanup will likely meet cleanup standards of the Asarco Site. While your proposed cleanup may constitute the final action for the Property, it will constitute only an “interim action” for the Asarco Site as a whole.

Limitations of the opinion

Opinion doesn't 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 Site. This opinion doesn't resolve or alter a person's liability to the state or 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 [70A.305.040](#)(4).⁹

Opinion doesn't constitute a determination of substantial equivalence

To recover remedial action costs from other liable persons under MTCA, one must demonstrate the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. See RCW [70A.305.080](#)¹⁰ and WAC [173-340-545](#).¹¹

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 [70A.305.170](#)(6).¹²

⁹ <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.040>

¹⁰ <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.080>

¹¹ <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-545>

¹² <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.170>

Contact us for more information

Thank you for choosing to clean up your Property under the VCP. After addressing our comments, you may request another review of your cleanup activities. If you have any questions about this opinion, please contact me at 360-999-9593 or diana.ison@ecy.wa.gov.

Sincerely,



Diana Ison

Southwest Region Office, Toxics Cleanup Program

DI / at

Encl: A — Property description

B — Asarco Site description, history, and diagrams

C — Soil and Duff Characterization Results

cc: Colin Morgan-Cross, Project Planning Partners/Mary's Place,

doug@projectplanningpartners.com

Nasrin Bastami, PBS Engineering and Environmental LLC, nasrin.bastami@pbsusa.com

David Johanson, City of Burien, davidj@burienwa.gov

Marian Abbett, PE, Ecology, marian.abbett@ecy.wa.gov

Tim Mullin, LHG, Ecology, tim.mullin@ecy.wa.gov

Ecology project file

Enclosure A

Property description

Legal Property Description

King County Parcel 783580-0100:

SMITHS V HUGO 5-ACRE TRS LESS CO RDS & VAC POR ST

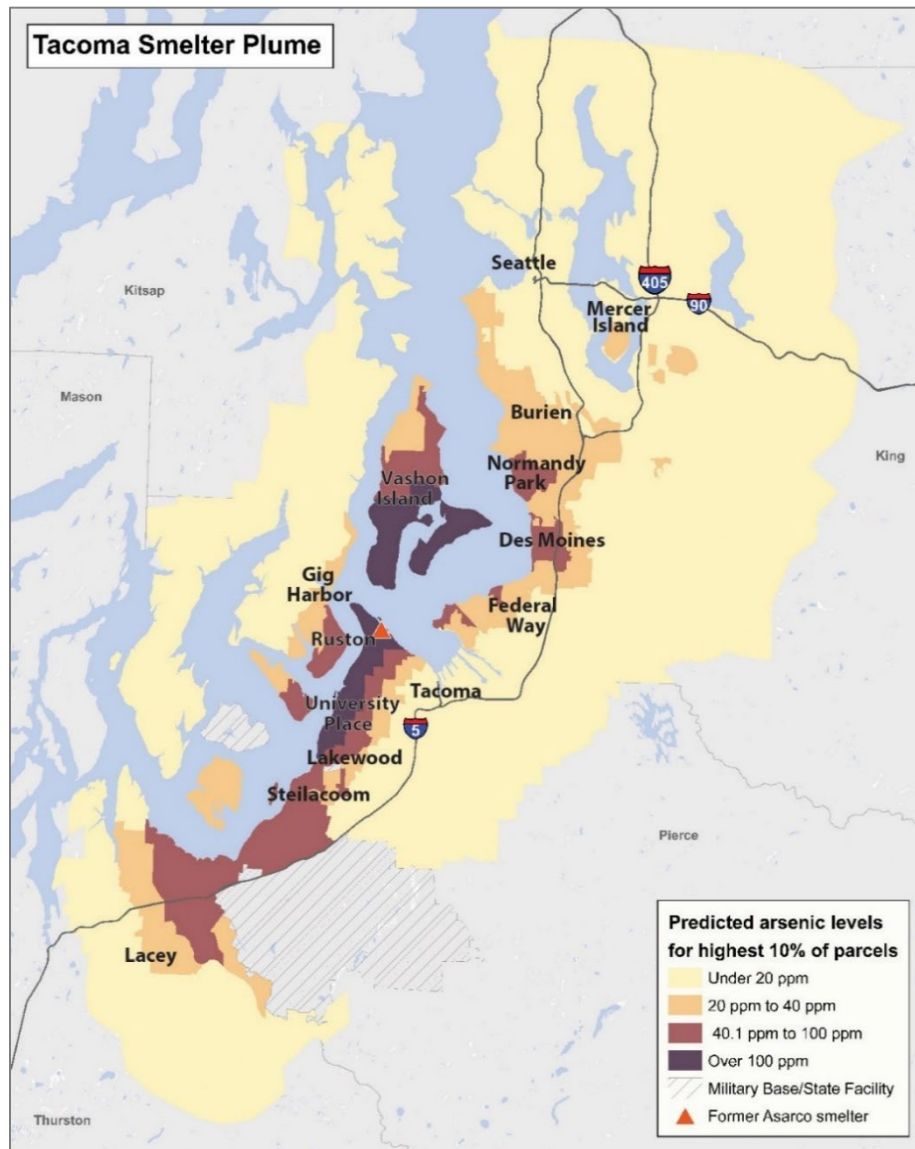
General Property Description

The property is currently improved with a 23,000 square-foot building with a basement, along with associated parking lots, driveways and areas of vegetation and trees. The Property is bounded to the north and east by residential and retail properties, and on the south and west by residential properties.

Enclosure B

Site description, history, and diagrams

Asarco Tacoma Smelter Site Description



An interactive color map can be found at: <https://dirtalert.info/>

For almost 100 years, the Asarco Company operated a copper smelter in Tacoma. 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. Elevated levels of contamination are found as far south as the Nisqually Ridge and as far north as Seattle (West Seattle). Additionally, elevated levels of contamination are found as far west as the Kitsap Peninsula and as far east as Kent and Bellevue. Arsenic, lead, cadmium, and other heavy metals are still in the soil as a result of this pollution. The area has elevated levels of arsenic, lead, and cadmium in the soil due to air emissions from the Asarco smelter.

Enclosure C

Soil and Duff Characterization Results

Soil and Duff Characterization Results

Sample ID	Sample Date	Sample Depth (inches)	Arsenic (mg/kg)	Lead (mg/kg)
SS-1:0.5	1/20/2025	0-6	12	26
SS-2:0.5	1/20/2025	0-6	48	82
SS-2:1	1/30/2025	6-12	20	39
SS-2:1.5	1/30/2025	0-6	4.6	--
SS2N1:0.5	1/30/2025	0-6	10	--
SS2N1:1.0	1/30/2025	6-12	5.8	--
SS2E1:0.5	1/30/2025	0-6	12	--
SS2E1:1.0	1/30/2025	6-12	9.2	--
SS2S1:0.5	1/30/2025	0-6	13	--
SS2S1:1.0	1/30/2025	6-12	8.4	--
SS2W1:0.5	1/30/2025	0-6	19	--
SS2W1:1.0	1/30/2025	6-12	13	--
SS-3:0.5	1/20/2025	0-6	40	70
SS-4:0.5	1/20/2025	0-6	31	97
SS-4:1	1/20/2025	6-12	19	44
SS-5:0.5	1/20/2025	0-6	15	30
SS-6:0.5	1/20/2025	0-6	30	120
SS-7:0.5	1/20/2025	0-6	37	100
SS-8:0.5	1/20/2025	0-6	20	50
SS-8:1	1/20/2025	6-12	21	42
SS-9:0.5	1/20/2025	0-6	2.7	5.2
SS-10:0.5	1/20/2025	0-6	2.8	8.9
SS-11:0.5	1/20/2025	0-6	11	25
SS-12:0.5	1/20/2025	0-6	12	31
SS-12:1	1/20/2025	6-12	16	33
SS-13:0.5	1/20/2025	0-6	5.8	14
SS-14:0.5	1/20/2025	0-6	3.8	6.6
SS-15:0.5	1/20/2025	0-6	4.6	12
SS-16:0.5	1/20/2025	0-6	12	28
SS-16:1	1/20/2025	6-12	9.4	19
SS-17:0.5	1/20/2025	0-6	10	27
SS-18:0.5	1/20/2025	0-6	5.6	14
SS-19:0.5	1/20/2025	0-6	9.5	26
SS-20:0.5	1/20/2025	0-6	2.9	280
SS-20:1	1/20/2025	6-12	2.1	19
SS-21:0.5	1/20/2025	0-6	2.6	5.3
SS-22:0.5	1/20/2025	0-6	3.3	10
SS-23:0.5	1/20/2025	0-6	8.3	16
SS-24:0.5	1/20/2025	0-6	6.1	35

Sample ID	Sample Date	Sample Depth (inches)	Arsenic (mg/kg)	Lead (mg/kg)
SS-24:1	1/20/2025	6-12	5	18
SS-25:0.5	1/20/2025	0-6	9.2	37
SS-26:0.5	1/20/2025	0-6	6.4	24
SS-27:0.5	1/20/2025	0-6	8	32
SS-28:0.5	1/20/2025	0-6	4.8	19
SS-28:1	1/20/2025	6-12	2.4	3.7
SS-29:0.5	1/20/2025	0-6	5.3	39
SS-30:0.5	1/20/2025	0-6	4.9	25
Duff	1/20/2025	surface	<2	3.9
Duff	1/20/2025	surface	<1	1.3
Duff	1/20/2025	surface	<2	<2
Duff	1/20/2025	surface	2.1	5.7
Duff	1/20/2025	surface	<2	6.9

Bold values represent concentrations above the MTCA Method A Cleanup level; **bold red** values represent concentrations twice the MTCA Method A cleanup level for unrestricted land use.