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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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June 10, 2021

Michael Swartz, Capital Projects Director
Federal Way Public Schools
33330 8th Ave S
Federal Way, WA 98003
mswartz@fwps.org

Re: Opinion on the Proposed Cleanup of a Property associated with the Asarco Tacoma Smelter Site

- **Property Name:** Olympic View Elementary Federal Way
- **Property Address:** 2626 SW 327th St, Federal Way, King County, WA 98023
- **Facility/Site ID:** 77894
- **Cleanup Site ID:** 15410
- **VCP Project No.:** NW3305

Dear Michael Swartz:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of a Property associated with the Asarco Tacoma Smelter Site (Asarco Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA),[1] chapter 70A.305 Revised Code of Washington (RCW).[2]

Issues Presented and Opinion

Ecology has determined that no further remedial action will likely be necessary at the Property to clean up contamination associated with the Asarco Site.

Ecology has determined that further remedial action will likely still be necessary elsewhere at the Asarco Site, but no further remediation will be necessary for the Property.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, chapter 70A.305 RCW, and its implementing regulations, Washington Administrative Code (WAC) chapter 173-340[3] (collectively "substantive requirements of MTCA"). The analysis is provided below.

[1] https://apps.ecology.wa.gov/publications/SummaryPages/9406.html
[2] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305
[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

Description of the Property and the Asarco Site

This opinion applies only to the Property described below within the Asarco Site. 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 King County, which was affected by the Asarco Site and will be addressed by your cleanup:

- 1321039008 (9.42 acres)

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

2. Description of the Asarco Site

The Asarco 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 Asarco Site, as currently known to Ecology.

3. Identification of Other Sites that may affect the Property

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. PBS Engineering and Environmental (PBS), *Olympic View Elementary School – Supplemental Sampling for VCP and Work Plan Review 2626 SW 327th Street, Federal Way, Washington*, March 26, 2021

2. PBS, *Remedial Action Work Plan for Tacoma Smelter Plume Impact Olympic View Elementary School, 2626 SW 327th Street, Federal Way, Washington*, March 3, 2021.

3. PBS, *Supplemental Arsenic and Lead Soil Sampling Report 2626 SW 327th Street, Federal Way, Washington*, January 7, 2021.

4. PBS, *Olympic View Elementary School – Arsenic and Lead Soil Sampling Report*, September 16, 2020.

These documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Information on viewing these records can be found on Ecology's public records requests web page.[4] Some site documents may be available on Ecology's Cleanup Site Search web page[5].

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 Asarco Site.

Ecology has concluded that, upon completion of your proposed cleanup, **no further remedial action** will likely be necessary at the Property to clean up contamination associated with the Asarco Site. That conclusion is based on the following analysis:

a. Characterization of the Asarco Site.

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

Olympic View Elementary School property (Property) is located east of the Interstate 5 in a residential area of Federal Way, Washington (Figure 1). The Property is situated on one, 9.42-acre King County parcel. The Property is bordered to the west by Twin Lakes Golf and Country Club, to the south, east, and north by residential developments. Federal Way Public Schools (FWPS) plan to renovate the school and provide additional capacity for students and staff. FWPS plans to construct a new two-story building with a new parking lot, new ADA accessible sidewalks, new playgrounds, and grass playfields. All existing utilities will be relocated. Two acres of existing forested land to the north, west, and northeast will remain forested and undeveloped.

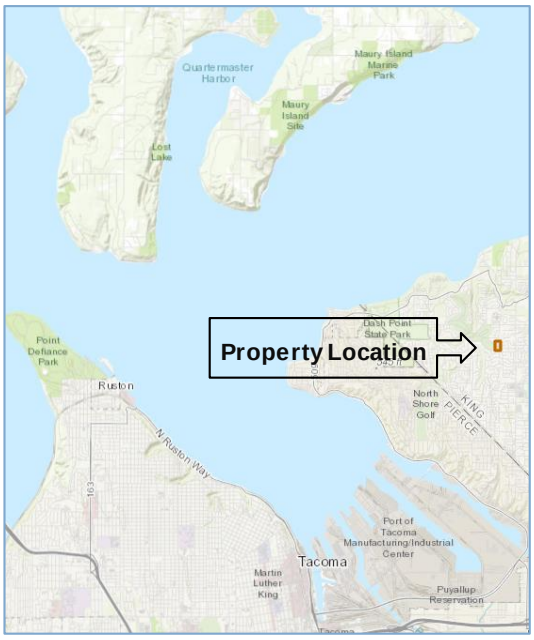

Figure 1. Vicinity map

[4] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests.
[5] https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=15410.

As part of the planned redevelopment, FWPS contracted PBS to characterize the Tacoma Smelter Plume (TSP) contamination on the Property. On September 1, 2020, PBS collected 55 discrete soil samples from 44 locations on the Property (Figure 2). They collected 44 soil samples from 0 to 6 inches below ground surface (bgs) and 11 soil samples from 6 to 12 inches bgs.

PBS did not sample areas outside of the proposed redevelopment areas, specifically the treed areas in the northern, northeastern, and western parts of the Property. PBS conducted characterization sampling in those areas on March 12, 2021, as requested by Ecology. PBS collected an additional 19 discrete soil samples—fifteen from 0 to 6 inches bgs and four from 6 to 12 inches bgs. PBS depicted those areas as Decision Unit 3 (Figure 2). Altogether, PBS collected 59 samples from 0 to 6 inches bgs and 15 samples from 6 to 12 inches bgs.

PBS submitted all the samples to Friedman & Bruya Inc. laboratory in Seattle, WA for arsenic and lead analysis with Environmental Protection Agency (EPA) Method 6020B.

Ecology sampled children play areas at the school in 2003 as part of the Soil Safety Program (SSP) with Ecology. Ecology collected eight samples from 0 to 2 inches bgs and eight samples from 2 to 6 inches bgs. Arsenic and lead concentrations were below their respective cleanup levels of 20 milligrams per kilogram (mg/kg) for arsenic and 250 mg/kg for lead. Ecology determined that no remedial actions were necessary in the play areas sampled.

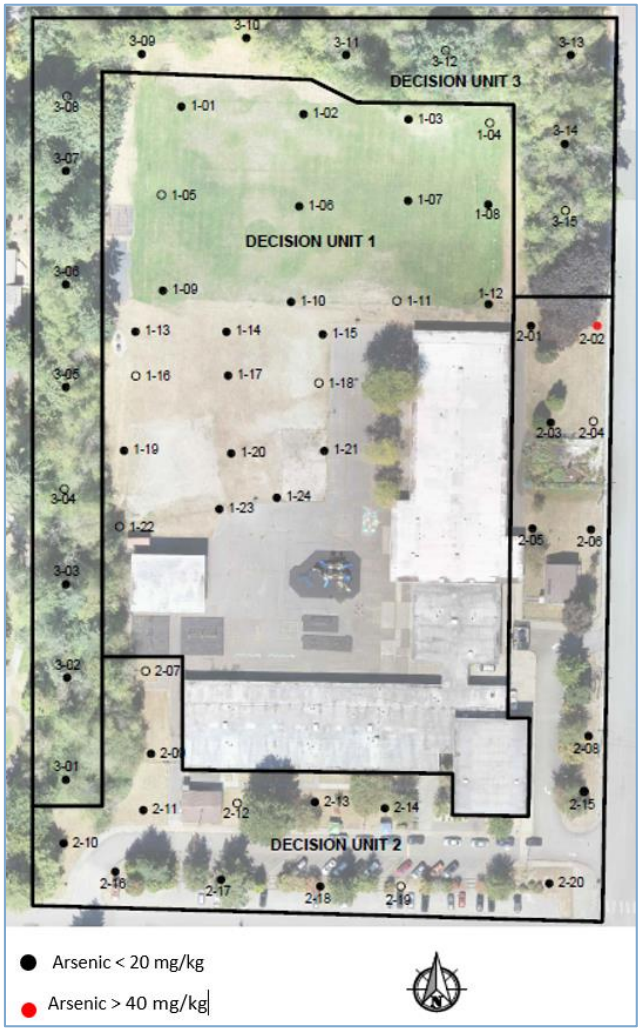

Figure 2. Approximate Locations of Soil Samples

Because the 2003 SSP did not adhere to the TSP Model Remedies Guidance, the results of the 2003 soil sampling were not used in calculating the average concentrations for arsenic and lead on the Property. PBS collected a sufficient number of soil samples to adequately characterize the TSP soil contamination on the Property. For more information about the SSP soil sampling, refer to Enclosure D.

Results of 2020 and 2021 Soil Sampling

Samples collected at 0 to 6 inches bgs: Arsenic exceeded the MTCA Method A cleanup level of 20 mg/kg in three samples with one exceeding the maximum allowable concentration for a single soil sample (40 mg/kg). Arsenic concentrations ranged from 1.81 mg/kg to 53.1 mg/kg. The average arsenic concentration was 7.56 mg/kg. None of the lead concentrations exceeded the MTCA Method A cleanup level of 250 mg/kg for lead. Lead concentrations ranged from 3.88 mg/kg to 231 mg/kg. The average lead concentration was 20.97 mg/kg (Table 1 and Enclosure C).

Samples collected at 6 to 12 inches bgs: One soil sample exceeded the MTCA Method A cleanup level of 20 mg/kg for arsenic, but it did not exceed the maximum allowable concentration of 40 mg/kg for a single soil sample for arsenic. The arsenic concentrations ranged from 2.34 mg/kg to 22.80 mg/kg. The average arsenic concentration was 5.3 mg/kg. None of the lead concentrations in this depth interval exceeded the cleanup level of 250 mg/kg for lead. Lead concentrations ranged from 2.52 mg/kg to 50.7 mg/kg. The average lead concentration was 11.89 mg/kg.

Table 1. Summary of the 2020 Characterization Sampling on the Property

	Arsenic (mg/kg)			Lead (mg/kg)		
Depth (inches)	Minimum	Maximum	Average	Minimum	Maximum	Average
0-6	1.81	**53.1**	7.56	3.88	231	20.97
6-12	2.34	**22.80**	5.3	2.52	50.7	11.89
MTCA Cleanup Level		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

In December 2020, PBS conducted supplemental soil sampling to delineate the vertical and horizontal extent of arsenic and lead concentrations in the one area that exceeded twice the cleanup level of 20 mg/kg for arsenic. PBS collected additional samples from 6 to 12 inches bgs, 12 to 18 inches bgs, and 18 to 24 inches bgs, below the sample that exceeded twice the cleanup level for arsenic (Sample 2-02). PBS also collected discrete samples 10 feet, 25 feet, and 50 feet north, south, and west of Sample 2-02 (Figure 3). They collected samples at three depth intervals: 0 to 6 inches bgs, 6 to 12 inches bgs, and 12 to 18 inches bgs.

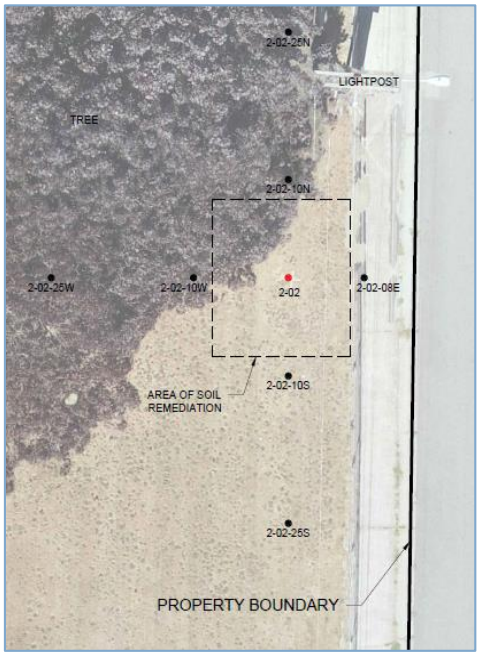

Figure 3. Supplemental Soil Sampling.

Samples collected 24 feet and 50 feet from Sample 2-02 and samples collected from 12 to 18 inches bgs were submitted to the laboratory on hold pending results of shallower and closer soil samples. If shallower or closer (to Sample 2-02) sample results exceeded cleanup levels, additional samples would have been analyzed. PBS submitted the samples to Friedman & Bruya Inc. laboratory in Seattle, Washington for arsenic and lead analysis with EPA Method 6020B.

None of the supplemental samples exceeded the cleanup level of 20 mg/kg for arsenic or the cleanup level of 250 mg/kg for lead (Table 2).

Table 2. Supplemental Soil Sampling

Sample No.	Sample Date	Sample Location	Sample Depth (inches)	Arsenic (mg/kg)	Lead (mg/kg)
2-02-10Na	12/20/2021	10 feet north of 2-02	0-6	3.60	6.78
2-02-25Na	12/20/2021	25 feet north of 2-02	0-6	5.76	235
2-02-10Wa	12/20/2021	10 feet west of 2-02	0-6	4.27	7.59
2-02-25Wa	12/20/2021	25 feet west of 2-02	0-6	4.59	7.56
2-02-10Sa	12/20/2021	10 feet south of 2-02	0-6	4.20	9.58
2-02-25Sa	12/20/2021	25 feet south of 2-02	0-6	3.76	8.58
2-02-08Ea	12/20/2021	8 feet east of 2-02	0-6	4.15	23.1
Average				4.3	42.6
2-02b	12/20/2021	6" below 2-02	6-12	4.43	6.54
2-02c	12/20/2021	12" below 2-02	12-18	5.38	7.36

b. Establishment of Cleanup Standards for the Asarco Site.

Ecology has determined the cleanup levels and points of compliance established for the Asarco Site will likely 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 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.

c. Selection of Cleanup for the Property.

Ecology has determined the cleanup you proposed for the Property will likely meet the substantive requirements of MTCA and the IAP. Your proposed cleanup meets the minimum cleanup requirements and will not 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.

FWPS decided to use mixing on the Property.

Property Cleanup: FWPS will conduct the soil cleanup at the Property in conjunction with its redevelopment. On March 3, 3021, on behalf of FWPS, PBS developed a Cleanup Action Plan (CAP). The CAP described the use of the selected model remedy—mixing as a way to remediate the TSP contamination on the Property. Ecology based this opinion letter on the information provided in this CAP.

The average arsenic concentration on the Property was below the cleanup level of 20 mg/kg. All lead concentrations were below the cleanup level of 250 mg/kg for lead. Only one location on the Property exceed the maximum allowable concentration for a single soil sample for arsenic (40 mg/kg), requiring remediation. Three soil samples exceeded the cleanup level of 20 mg/kg for arsenic in the forested areas, but they did not exceed the maximum allowable concentration of 40 mg/kg for a single soil sample. This forested area is isolated from the school grounds by a chain-link fence and is not accessible to students. No remedial action was needed the forested areas.

The contractor will mix the soil in place to a depth of at least 12 inches bgs in the area where arsenic exceeded twice the cleanup level (40 mg/kg). All the arsenic concentrations in the 6 to 12 inches bgs depth interval were below the cleanup level of 20 mg/kg for arsenic.

Confirmational Sampling: PBS will conduct confirmational sampling following soil mixing in the remedial area. They will divide the remedial area into an evenly spaced grid of four sample locations and collect confirmational soil samples at six-inch depth intervals throughout the mixing depth.

PBS will submit the samples to an analytical laboratory for an analysis of arsenic concentrations. All the lead concentrations were below the cleanup level 250 mg/kg; therefore, no analysis is needed for lead.

If the confirmational soil sampling and analysis shows the average arsenic exceeding 20 mg/kg or any single soil sample exceeding 40 mg/kg, the contractor will conduct additional soil mixing. PBS will conduct additional confirmational sampling and analysis as described above.

As a reminder, in accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840[6] (Data Submittal Requirements), data generated for Independent Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see Ecology's Environmental Information Management (EIM) website.

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 a No Further Action determination. Please be sure to submit all soil data collected to date, as well as any future data, in this format. Be advised that Ecology requires up to two weeks to process the data once it is received.

2. Cleanup of the Asarco Site as a Whole.

Ecology has concluded that **further remedial action** will still be necessary elsewhere within the ASARCO Site (Asarco Tacoma Smelter Site) upon completion of your proposed cleanup. In other words, 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.

[6] https://fortress.wa.gov/ecy/publications/SummaryPages/1609050.html.

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 Asarco 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 70A.305.040(4)[7].

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 performed is substantially equivalent. Courts make that determination.
See RCW 70A.305.080[8] and WAC 173-340-545.[9]

3. Opinion is Limited to Proposed Cleanup.

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Property upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the Voluntary Cleanup Program (VCP).

4. 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).[10]

[7] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.040
[8] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.080
[9] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-545
[10] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.170

Contact Information

Thank you for choosing to clean up your Property under the VCP. As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our: Voluntary Cleanup Program[11] website. If you have any questions about this opinion, please contact me at 360-407-7094 or eva.barber@ecy.wa.gov.

Sincerely,

Eva Barber
Technical Assistance Coordinator
Toxics Cleanup Program
Southwest Regional Office

EB/TM

Enclosures:
A – Legal Description and General Description of the Property
B – Site Description of the Asarco Tacoma Smelter Site
C – Results of the Soil Characterization Sampling on the Property
D – Results of Soil Safety Program Soil Sampling in Play Areas

cc by email: Mike Kwaske, Federal Way Public Schools, mkwaske@fwps.org
James Welles, PBS Engineering and Environmental, james.welles@pbsusa.com
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Nick Acklam, Ecology, nicholas.acklam@ecy.wa.gov
Ecology Site File

[11] http://www.ecy.wa.gov/vcp.

Enclosure A

Legal Description and General Description of the Property

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Legal Description of the Property

Parcel 1321039008: E520 FT OF N1/2 OF SE ¼ OF NW ¼ LESS N 150 FT & E520 OF N ½ OF SE ¼ OF NW ¼ LESS CO RD

General Description of the Property

Olympic View Elementary School is located off the Interstate 5 in a residential area of Federal Way, Washington. The Property is situated on one, 9.42-acre King County parcel. The Property is bordered to the west by Twin Lakes Golf and Country Club, to the south, east, and north by residential developments.

The Property lies within the Puget Lowland, an area characterized by Pleistocene-aged glacial stratigraphic sequences resulting from repeated advances of the Cordilleran ice sheet. These sequences consist of unconsolidated glacial, fluvial, and lacustrine sediments. Geophysical investigations have indicated that unconsolidated sediments in the Federal Way area range from 1,200 to 1,600 feet in thickness. The nearest bedrock exposures are to the south in the Puyallup Valley (ECI, 1991).

According to the Geologic Map of Poverty Bay 7.5' Quadrangle, King and Pierce counties, Washington, 1: 24,000 scale, the Property is underlain by Quaternary-aged Till – *compact diamict containing sub-rounded to well-rounded clasts in massive silt- or sand-rich matrix. Glacially transported and deposited. Generally, a few meters to a few tens of meters thick, forming undulatory surface* (USGS, 2004).

The Property is generally flat, while the greater area slopes to the northwest towards Poverty Bay of the greater Puget Sound. Based on a review of publicly available well logs, depth to groundwater beneath the Property is expected to be between 5 and 20 feet bgs. Shallow groundwater flow is predicted to follow surface topography, and flow generally to the northwest toward Poverty Bay.

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Enclosure B

Site Description of the Asarco Tacoma Smelter Site

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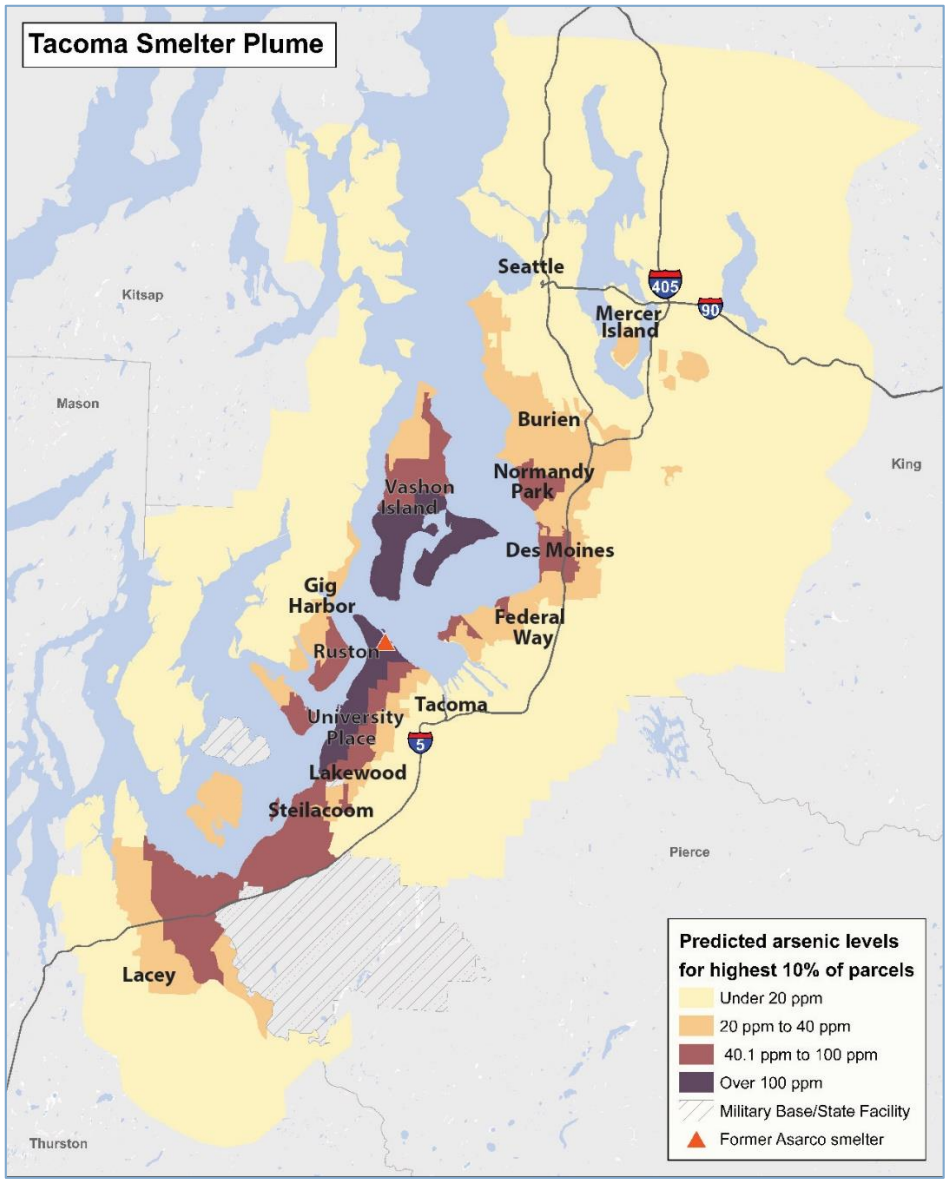
Asarco Tacoma Smelter Site



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.

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Enclosure C

Results of the Soil Characterization on the Property

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Results of the 2020 Soil Characterization on the Property

Sample No.	Sample Date	Sample Depth (inches)	Arsenic (mg/kg)	Lead (mg/kg)
1-10	9/1/2020	0-6	1.81	3.88
1-11b	9/1/2020	6-12	2.34	5.83
1-16b	9/1/2020	6-12	2.36	2.52
1-07	9/1/2020	0-6	2.90	7.76
1-04b	9/1/2020	6-12	3.07	8.54
1-19	9/1/2020	0-6	3.08	5.83
1-08	9/1/2020	0-6	3.14	7.18
1-04a	9/1/2020	0-6	3.33	7.03
2-07b	9/1/2020	6-12	3.34	9.05
1-20	9/1/2020	0-6	3.38	6.31
1-05b	9/1/2020	6-12	3.41	8.24
1-12	9/1/2020	0-6	3.51	9.88
2-07a	9/1/2020	0-6	3.51	10.2
1-22a	9/1/2020	0-6	3.62	7.16
1-16a	9/1/2020	0-6	3.75	6.47
2-08	9/1/2020	0-6	3.77	14.5
1-11a	9/1/2020	0-6	3.80	8.28
1.03	9/1/2020	0-6	3.81	13.4
1-09	9/1/2020	0-6	3.93	8.35
1-02	9/1/2020	0-6	3.95	9.98
1-22b	9/1/2020	6-12	4.03	6.34
2-19b	9/1/2020	6-12	4.06	27.2
2-01	9/1/2020	0-6	4.1	7.02
1-17	9/1/2020	0-6	4.14	7.03
2-06	9/1/2020	0-6	4.18	9.65
2-18	9/1/2020	0-6	4.27	16.3
1-01	9/1/2020	0-6	4.34	9.22
1-18b	9/1/2020	6-12	4.35	5.01
2-20	9/1/2020	0-6	4.37	18.9
2-19a	9/1/2020	0-6	4.53	46.8
2-15b	9/1/2020	6-12	4.54	12.7
2-15a	9/1/2020	0-6	4.81	11.5
1-05a	9/1/2020	0-6	5	8.63
1-06	9/1/2020	0-6	5	9.16
1-21	9/1/2020	0-6	5	231
1-13	9/1/2020	0-6	5.11	12.5
2-16	9/1/2020	0-6	5.20	17.3
2-04b	9/1/2020	6-12	5.25	10.20
2-04a	9/1/2020	0-6	5.35	9.59
1-15	9/1/2020	0-6	5.67	16.4

Sample No.	Sample Date	Sample Depth (inches)	Arsenic (mg/kg)	Lead (mg/kg)
1-14	9/1/2020	0-6	5.84	10.8
1-23	9/1/2020	0-6	6.18	62.1
2-05	9/1/2020	0-6	6.21	14.6
2-03	9/1/2020	0-6	6.33	9.37
2-17	9/1/2020	0-6	6.46	17.1
2-12b	9/1/2020	6-12	7.20	14.7
1-24	9/1/2020	0-6	7.22	43.6
2-11	9/1/2020	0-6	9.16	14.4
2-14	9/1/2020	0-6	9.38	26.6
2-09	9/1/2020	0-6	11.6	23.1
2-12a	9/1/2020	0-6	12.8	25.3
2-10	9/1/2020	0-6	13.4	23.5
1-18a	9/1/2020	0-6	16.0	27.9
2-13	9/1/2020	0-6	16.3	29.6
2-02	9/1/2020	0-6	**53.1**	84.1
3-08-12	3/12/2021	6-12	3.14	4.67
3-04-12	3/12/2021	6-12	3.53	4.82
3-04-06	3/12/2021	0-6	3.75	5.46
3-11-06	3/12/2021	0-6	4.04	6.01
3-08-06	3/12/2021	0-6	4.22	6.86
3-14-06	3/12/2021	0-6	4.37	6.01
3-13-06	3/12/2021	0-6	4.98	5.18
3-05-06	3/12/2021	0-6	5.39	6.78
3-06-06	3/12/2021	0-6	5.56	7.45
3-12-12	3/12/2021	6-12	6.10	7.90
3-01-06	3/12/2021	0-6	6.51	19.20
3-10-06	3/12/2021	0-6	7.22	20.80
3-09-06	3/12/2021	0-6	7.33	16.00
3-12-06	3/12/2021	0-6	8.76	9.50
3-03-06	3/12/2021	0-6	12.50	18.70
3-07-06	3/12/2021	0-6	17.70	10.70
3-15-06	3/12/2021	0-6	**21.30**	62.5
3-15-12	3/12/2021	6-12	**22.80**	50.70
3-02-06	3/12/2021	0-6	**30.20**	67

Values in **bold red** represent concentrations that are twice the MTCA Method A cleanup level for unrestricted land use.

Enclosure D

2003 Soil Safety Program Sampling in Play Areas

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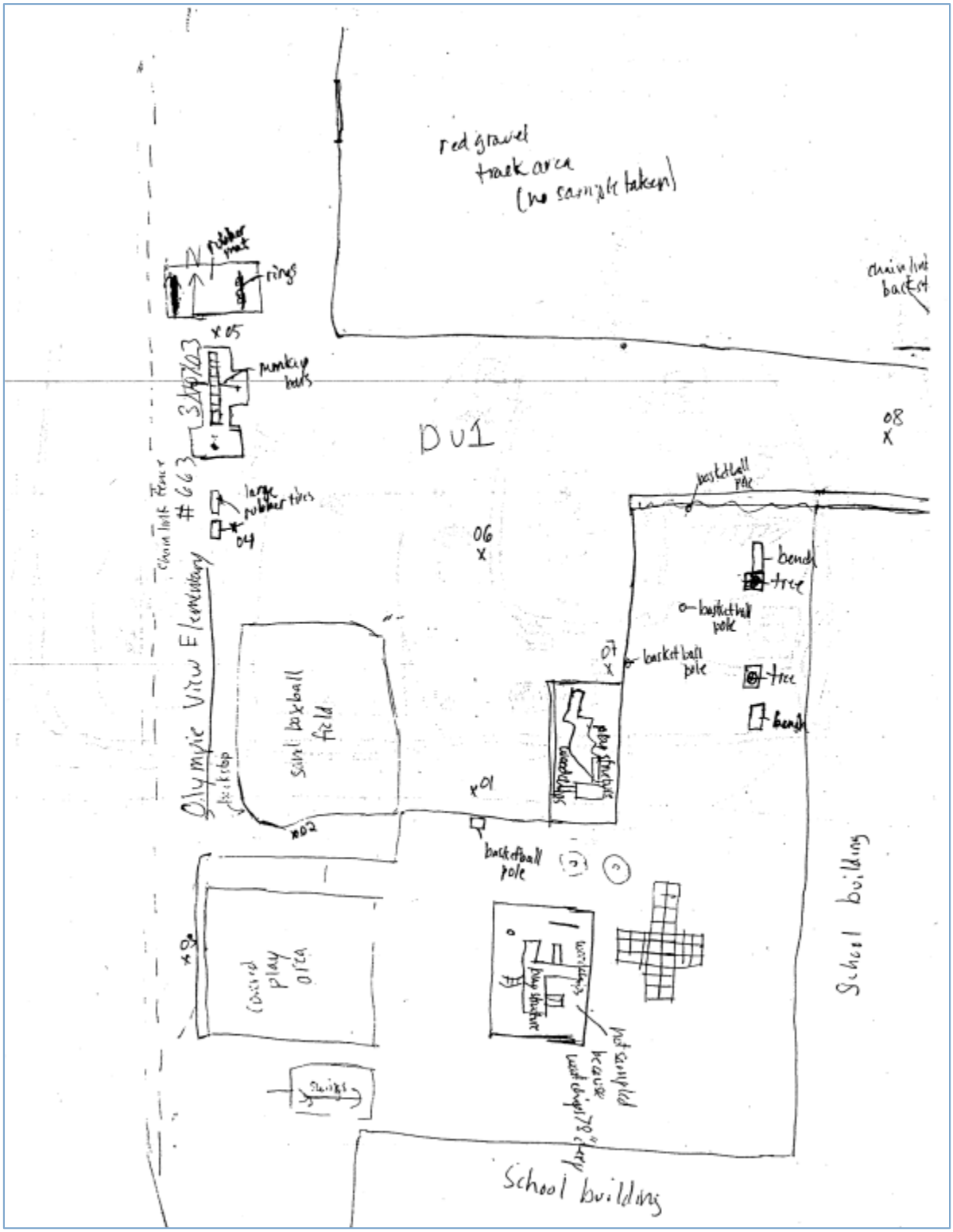
Soil Safety Program Soil Sampling in Play Areas



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663 Olympic View Elementary

Arsenic Results

	DU 1		DU 2		DU 3	
Boring	0-2	2-6	0-2	2-6	0-2	2-6
1	4.73	2.49				
2	4.56	3.99				
3	5.44	3.98				
4	3.78	7.07				
5	4.90	2.45				
6	4.94	2.54				
7	3.95	3.29				
8	3.62	3.64				
Average	4.49	3.68				
Max	5.44	7.07				

Lead Results

	DU 1		DU 2		DU 3	
Boring	0-2	2-6	0-2	2-6	0-2	2-6
1	16.80	4.55				
2	11.60	6.52				
3	26.80	13.00				
4	6.48	14.40				
5	10.20	3.59				
6	13.40	16.20				
7	12.80	6.41				
8	6.64	7.23				
Average	13.09	8.99				
Max	26.80	16.20				