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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
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July 2, 2025

Clay Krauss
Tacoma Community College
6501 South 19th Street
Tacoma, Washington, 98466

Re: Tacoma Community College Center for Innovative Learning and Engagement– Tacoma Smelter Plume - After Cleanup Comments

Dear Clay Krauss**:**

Thank you for the opportunity to provide comments on the cleanup action conducted for this project. The project site is located on a portion of the Tacoma Community College (TCC) property. TCC is located at 6501 South 19th Street, in Tacoma, Washington and includes one 150.67-acre Pierce County Tax Parcel (Parcel Number 0220023007). This property is also enrolled in Ecology's Voluntary Cleanup Program, as VCP No. SW1834.

The property is located in an area predicted to have arsenic and lead in the soil because of the air emissions from the old Asarco Smelter in Ruston, Washington (Figure 1). Ecology appreciates the opportunity to review and comment on the completed soil remediation of the contaminated soil within the current project site.

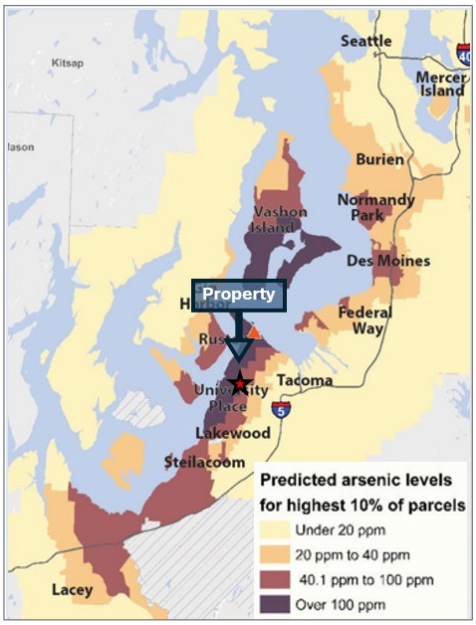

Figure 1. Vicinity Map

The project site includes approximately 2.69-acres of the 150.67-acre TCC parcel and will be redeveloped with the new Center for Innovative Learning and Engagement (CILE) building. The new CILE building will be constructed within the footprint of the former Building 10, which is planned for demolition. Other project site improvements include demolition of Building F1, installation of utilities, landscaping, and pavements. The Washington State Department of Ecology (Ecology) recommended soil sampling on the

property to evaluate the levels of arsenic and lead in the soil prior to project commencement. Ecology also recommended soil remediation if arsenic or lead are found at concentrations above the Model Toxics Control Act (MTCA) Method A cleanup levels.

As part of the planned redevelopment, GeoEngineers, Inc. (GeoEngineers) completed soil sampling at the project site in June and July, 2023.

The approximately 2.69 acre project site was sampled as three decision units (DUs). On June 23, and July 3, 2023, a total of 50 samples were collected from 36 locations from all three DUs. Thirty-six samples were collected from 0 to 6 inches below ground surface (bgs) and 14 samples were collected from 6 to 12 inches bgs. Soil samples were collected according to the recommended guidance for soil sampling in the Department of Ecology's Tacoma Smelter Plume Model Remedies Guidance[1].

Figure 2. Project Site sampled as three Decision Units.

[1] https://apps.ecology.wa.gov/publications/SummaryPages/1909101.html

The soil samples were submitted to OnSite Environmental Inc., in Redmond, Washington for an analysis of arsenic and lead concentrations with an Environmental Protection Agency (EPA) Method 6010D. A report with the results of soil sampling was submitted to Ecology[1]. See Table 1.

Table 1. Summary of Initial Soil Sampling from Project Site – June 23 and July 3, 2023

Sample Depth (inches)	Arsenic mg/kg (EPA 6010D)			Lead mg/kg (EPA 6010D)		
	Minimum	**Maximum**	**Average**	**Minimum**	**Maximum**	**Average**
0-6 (soil)	10U	**120**	9.8	6.3U	66	17.2
6-12 (soil)	10U	**54**	8.8	5.1U	27	10.7
MTCA Levels		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.

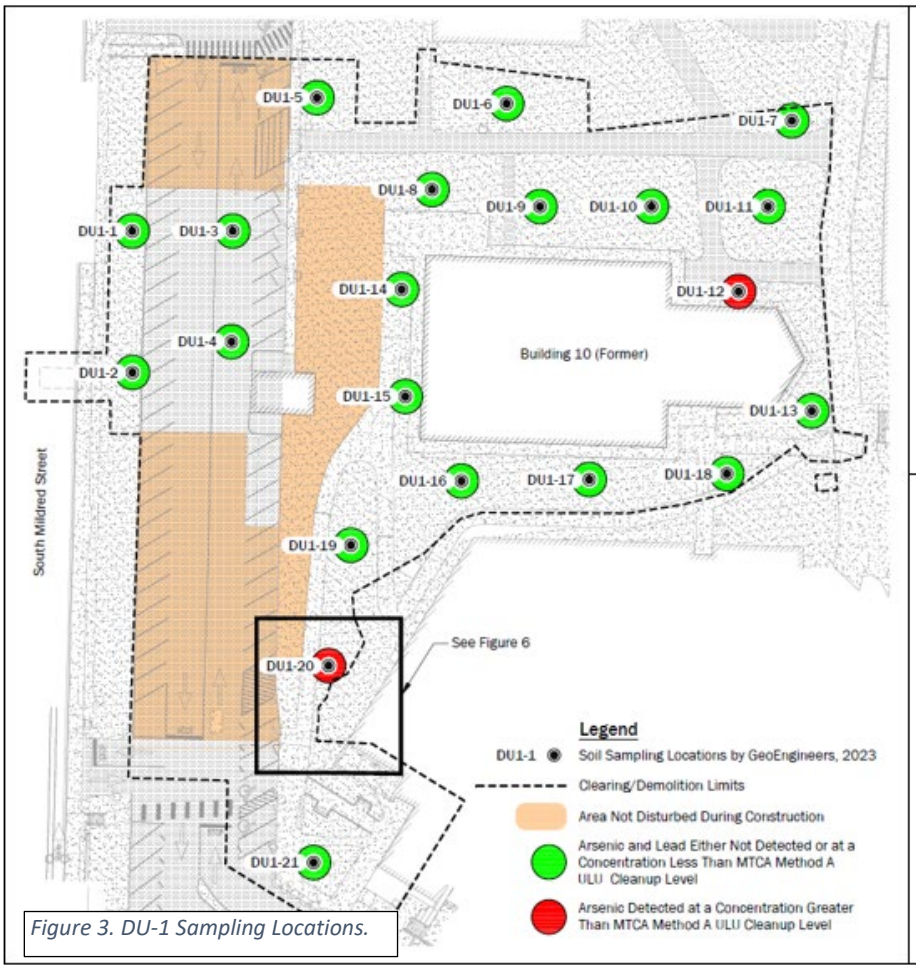

Figure 3. DU-1 Sampling Locations.

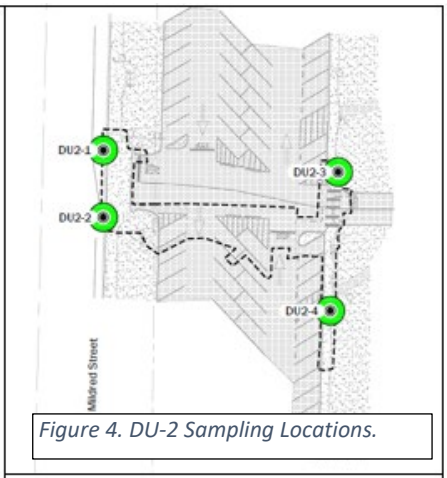

Figure 4. DU-2 Sampling Locations.

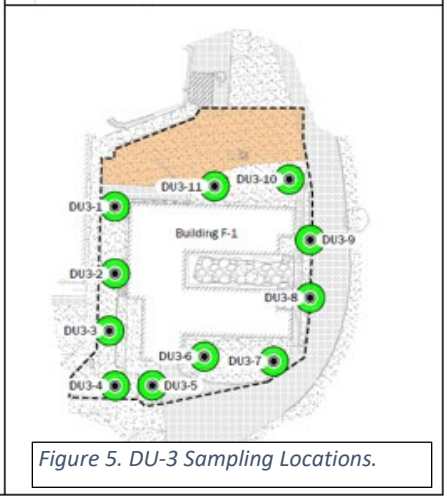

Figure 5. DU-3 Sampling Locations.

[1] GeoEngineers, Inc., *Cleanup Action Plan - Tacoma Community College Center for Innovative Learning and Engagement Tacoma, Washington*, February 9, 2024.

Samples collected from the project site from 0 to 6 inches bgs: Arsenic exceeded the Model Toxics Control Act (MTCA) Method A cleanup level of 20 milligrams per kilogram (mg/kg) in two of the 36 samples collected at this depth. One sample (at location DU1-20) 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 10U mg/kg to 120 mg/kg. The average arsenic concentration was 9.8 mg/kg. None of the samples exceeded the MTCA Method A cleanup level of 250 mg/kg for lead. Lead concentrations ranged from 6.3U mg/kg to 66 mg/kg. The average lead concentration was 17.2 mg/kg.

Samples collected from the project site from 6 to 12 inches bgs: One of the 14 samples collected at this depth (at location DU1-20) exceeded the MTCA Method A cleanup level of 20 mg/kg for arsenic, and 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 10U mg/kg to 54 mg/kg. The average arsenic concentration was 8.8 mg/kg. None of the samples exceeded the MTCA Method A cleanup level of 250 mg/kg for lead. Lead concentrations ranged from 5.1U mg/kg to 27 mg/kg. The average lead concentration was 10.7 mg/kg.

On July 17, 2023, an additional nine follow-up samples were collected and analyzed from five locations to further document arsenic contamination found in one original sample location (DU1-20). The analytical results from these nine follow-up samples indicate that arsenic was not detected at concentrations greater than the laboratory reporting limits at a distance of 10 feet from the original sample location (DU1-20) in any of the four directions sampled, nor in the sample collected from 12 to 18 inches bgs at original location DU1-20. Ecology reviewed all the soil sampling results and concluded that soils with elevated arsenic are present and limited to a small portion of the project site.

Under the Tacoma Smelter Plume Model Remedies Guidance, if arsenic or lead levels are elevated on a property, then Ecology recommends cleanup. Under the Tacoma Smelter Plume Model Remedies Guidance, “elevated” means:

- Average arsenic > 20 parts per million (ppm) or average lead > 250 ppm; or
- Maximum (any one sample) arsenic > 40 ppm or maximum lead > 500 ppm.

From the project site, results indicate **one of the original sample locations exceeded 40 ppm for arsenic**, at soil sample location DU1-20 (120 mg/kg at 0 to 6 inches bgs, and 54 mg/kg at 6 to 12 inches bgs). The sampling results show average arsenic and average lead are below the elevated criteria outlined in the Tacoma Smelter Plume Model Remedies Guidance document, except for approximately 100 square feet centered around sample location DU1-20. Remediation is recommended to remove arsenic contamination from the area around DU1-20 (Figure 3).

At sample location DU1-12, arsenic result was 24 mg/kg. While this result is above MTCA Method A cleanup level, it is not considered elevated according to the Tacoma Smelter Plume Model Remedies Guidance since the average arsenic for this decision unit is less than 20 mg/kg. Therefore, the remainder of DU-1 does not need remediation. However, it is anticipated that during site grading, soil mixing with cleaner, deeper soils will occur, which will further reduce the concentrations of arsenic.

No elevated samples were identified in DU-2 (Figure 4) or DU-3 (Figure 5).

In February 2024, GeoEngineers developed a Cleanup Action Plan (CAP) for the TCC CILE building project. The Tacoma Smelter Plume Model Remedies Guidance identifies two permanent cleanup remedies: 1) mixing and 2) excavation and removal. TCC decided to excavate and remove the contaminated soil from an area surrounding sample location DU1-20.

In August 2024, Ecology had the opportunity to comment on the Tacoma Community College (TCC) Center for Innovative Learning and Engagement (CILE) building remediation project.

The soil cleanup at the TCC CILE building project site was completed on October 4, 2024. Confirmational soil sampling was conducted to confirm that arsenic and lead concentrations were below MTCA Method A cleanup levels for unrestricted land use (Figure 6). The cleanup activities and the results of the confirmational sampling are summarized in a cleanup report prepared by GeoEngineers[1].

The permanent remedy completed on the Property included the following actions:

- Soil was excavated from the Remedial Area surrounding sample location DU1-20, with approximate dimensions of 10 feet by 10 feet, to a depth of 18 inches bgs.

- The excavated soil was placed directly in the bed of a truck and a single load was transported under manifest for permitted disposal at the LRI Landfill facility in Graham, Washington. The Waste Disposal Authorization (WDA 2831) was received from the Tacoma-Pierce County Health Department on September 19, 2024.

- Compliance soil samples were collected for chemical analysis from four locations within the base of the completed excavation to evaluate and document the arsenic concentrations in the soil at a depth of 18 inches bgs following remedial action.

- Analytical results indicate that the remedy of excavation and removal for off-site disposal was effective in removing arsenic-contaminated soil within Remedial Area DU1-20 to comply with regulatory cleanup levels.

[1] GeoEngineers, *Cleanup Action Report – Tacoma Community College, Center for Innovative Learning and Engagement, Tacoma, Washington,* April 30, 2025.

Table 2. Compliance Sample Results

Sample Location	Sample ID	Depth (inches)	Date	Arsenic mg/kg (EPA Method 6010D)
DU1-20-SW	TCC-DU1-20-SW-1.5	18	10/4/2024	12
DU1-20-SE	TCC-DU1-20-SE-1.5	18	10/4/2024	12 U
DU1-20-NW	TCC-DU1-20-NW-1.5	18	10/4/2024	12 U
DU1-20-NE	TCC-DU1-20-NE-1.5	18	10/4/2024	12 U
MTCA Method A Cleanup Level for Unrestricted Land Use				20

U = Analyte not detected at concentration greater than the listed laboratory reporting limit.

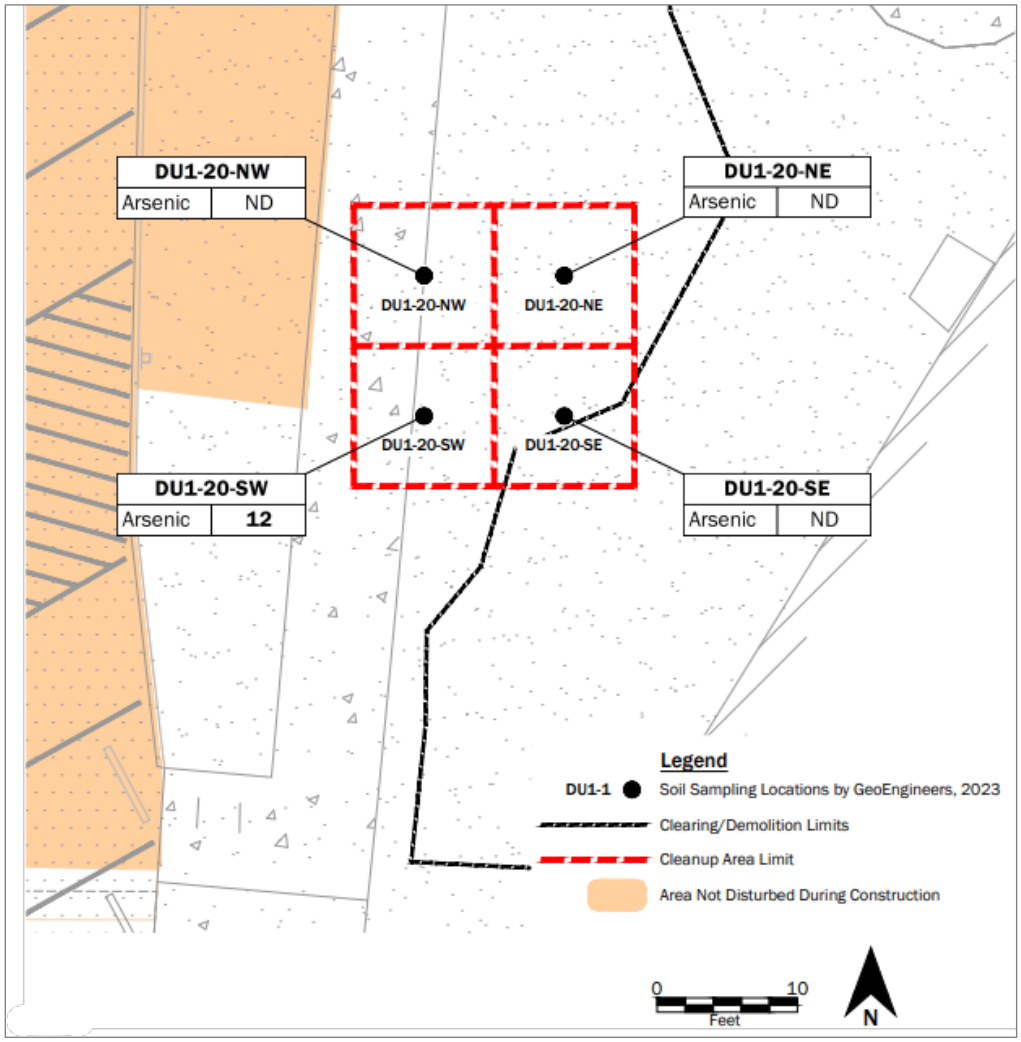

Figure 6. Locations of Compliance Sampling in the DU1-20 Remedial Area

Based on the review of the soil sampling and the completed remediation method, Ecology acknowledges the remediation of arsenic contaminated soil in the DU1-20 Remediation Area at the TCC campus.

For this remediation project, a No Further Action letter can not be issued at this time because only a portion of the entire TCC property has been sampled and remediated. See Figure 2 for the location of this sampling and remediation project. The remainder of the property, approximately 148 acres, is operating as an active college campus. At this time, we have no record of sampling or remedial action that has taken place on the remaining 148 acres, or 98% of the property. Ecology can not issue No Further Action letters for a partial property cleanup. This letter is intended to acknowledge the remediation of Tacoma Smelter Plume contaminated soil on a portion of the TCC campus.

Please note, this is **neither** an Opinion Letter **nor** a "No Further Action" (NFA) determination for the Property. This letter is intended to provide technical assistance comments on the remediation of the project site, based on the information provided by GeoEngineers.

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 letter. See RCW 70A.305.170(6).

Thank you for asking for our review of the recent cleanup in the DU1-20 Remedial Action area. If you have any questions, please contact me at 360-999-9593 or diana.ison@ecy.wa.gov.

Sincerely,

Diana Ison
Technical Assistance Coordinator
Toxics Cleanup Program
Southwest Region Office
Washington State Department of Ecology

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