



USG Interiors Inc 99 Site Response to Comments

Today's Date: August 7, 2023

Cleanup Site ID: 3618
Facility ID: 84531356
Address: 7110 Pacific Hwy E, Milton
County: Pierce
Site webpage <https://apps.ecology.wa.gov/cleanupsearch/site/3618>
Public Comment Period: June 15 to July 17, 2023

Documents for review and comment

- Amendment 1 to Agreed Order DE 11099
- Revised Cleanup Action Plan (RCAP)
- State Environmental Policy Act (SEPA) Determination of Non-Significance

Background

The USG Interiors Inc 99 (aka USG Highway 99) site was used to dispose of waste products from the USG Interiors Tacoma plant. The plant used arsenic-contaminated slag from the Tacoma Smelter as a raw material for rock wool production. The waste was buried, and it is the source material for the arsenic contamination at the site.

In 1984 and 1985, 20,000 to 30,000 cubic yards of arsenic-contaminated waste was excavated and removed from the site. Sampling in 2006 showed arsenic contamination of soil and groundwater were above cleanup levels, requiring cleanup under the state's toxics cleanup law the Model Toxics Control Act (MTCA; see Figure 1).

After a comment period was held for review of AO 11099 and the original cleanup action plan, the AO was signed, and the plan was finalized in 2016. However, the revised plan is necessary because pilot testing of the original cleanup plan showed it would not reduce the arsenic in groundwater to the levels desired.

The revised cleanup plan focuses on removing arsenic from contaminated groundwater. The plan includes additional remediation of contaminated soil and groundwater, and a contingency plan for more groundwater cleanup, if necessary. Contaminated Hylebos Creek sediment will also be cleaned up. Long-term monitoring will be used to make sure contaminated groundwater is cleaned up successfully.

Some contamination will remain and be isolated at the properties, so an environmental covenant will be filed for the site. Among several restrictions, the covenant will protect effectiveness of the cleanup and limit land use. With an environmental covenant in place, we will review conditions at the site every five years.

During the comment period, we received one comment. We considered the comment and made no changes to the documents after the comment period. We will sign the amendment and finalize the Revised Cleanup Action Plan. After the engineering and design stage is completed, USG will do the cleanup work.

The comment outlined four concerns, and we responded to each concern separately below.

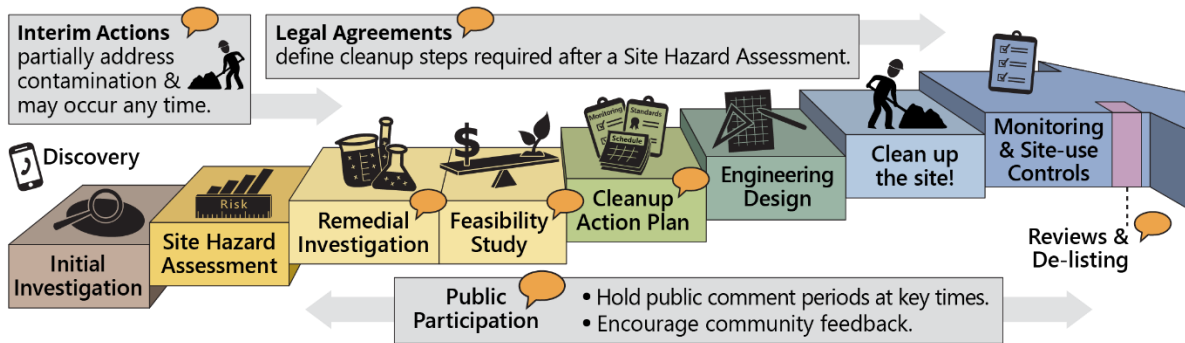


Figure 1. The Model Toxics Control Act (MTCA) is Washington’s cleanup law. There are several steps in the MTCA cleanup process. The comment bubbles indicate major milestones in the process when there is an opportunity for public comment.

You can follow the progress of cleanup at the [USG Interiors Inc 99 webpage](https://apps.ecology.wa.gov/cleanupsearch/site/3618).¹

Prepared by

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¹ <https://apps.ecology.wa.gov/cleanupsearch/site/3618>

Comment from Communities for a Healthy Bay



July 17, 2023

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Andrew Smith, Cleanup Project Manager
WA State Department of Ecology
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Via E-mail: Andrew.Smith@ecy.wa.gov

Re: Revised Cleanup Action Plan USG Highway 99 site

Dear Mr Smith:

Executive Director
Melissa Malott

Thank you for providing the opportunity to review and comment on the Core Remediation Area Amendment 1 to the existing agreed order for the USG Interiors Inc 99 Site Cleanup.

Board of Directors
Johannes Ariens
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Alan Varsik

Communities for a Healthy Bay (CHB) is a 32-year-old organization whose mission is to represent and engage people in the cleanup, restoration, and protection of Commencement Bay, its surrounding waters and natural habitat. We are a 501(c)3 nonprofit providing practical, solutions-based environmental leadership in the Puget Sound area. We work side-by-side with residents, businesses, and government to prevent and mitigate pollution and to make our community healthier and more vibrant.

The proposed cleanup would address contamination left at the USG site from a cleanup carried out in 1984-86. USG used the site to dispose of waste from their rock wool manufacturing plant in Tacoma. Waste included ASARCO slag, baghouse dust and black and green needle-like crystalline material. Sampling by USG in 2006 showed that arsenic concentration of soil and groundwater were above cleanup levels, requiring cleanup under MTCA. As mentioned later in this comment letter, the characterization of only arsenic is inadequate.

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It has been 8 years since CHB provided comments on the proposed cleanup at USG Highway 99, and four years since we provided comments on the USG Puyallup River site. We had grave concerns about the preferred alternative on both cleanups, and made recommendations on physical removal of all the contaminants. That was Alternative 4 for the USG site along highway 99, as well as the contaminants in Hylebos Creek sediments. That didn't happen, and Ecology selected a much less protective alternative. The pilot project on the selected alternative was not success. Rather than reexamine all of the alternatives, Ecology has chosen to try another experiment, this time attempting to solidify the contaminated material in place with a cement based reagent. In the meanwhile arsenic has continued to contaminate the groundwater and Hylebos Creek, and under the new preferred alternative this will continue. While it is not clearly stated, it appears that there is no stabilization until at least 2029. It is highly likely that contaminant removal could be accomplished much more quickly.

CHB has also reviewed and commented on the USG Interiors Puyallup Site and recognizes that the materials disposed at both sites are largely the same. As mentioned in the 2019 letter we submitted, the likely contaminants at this site, based on other sites containing ASARCO slag, include arsenic, iron, calcium, and potentially significant concentrations of aluminum, antimony, barium, copper, lead, manganese, molybdenum, tin, titanium, and zinc, among other metals. There is no indication that the extent of these additional contaminants has been investigated. Many of these contaminants are regulated by MTCA, and there is no way to know if the site is in violation of the MTCA standards beyond arsenic contamination. **Consequently, CHB requests that the investigation into the nature and extent of contamination at the site include the aforementioned contaminants as a part of this amendment. At a minimum, the concentrations of these contaminants should be included in all pre- interim- and post cleanup sampling plans.**

We are pleased to see the WSDOT plan to remove and properly dispose of contaminated soils in the P429 Plus area. The core remediation area should be managed in the same way, with contaminated materials sent for off site disposal at the appropriate landfill or hazardous waste facility, depending on the concentration of arsenic.

Please contact CHB if you have any questions regarding my comments.

Sincerely,

Melissa Malott



Executive Director, Citizens for a Healthy Bay
mmalott@healthybay.org, (253) 383-2429

Commenter's Concerns and Response from Ecology

Commenter's concern: Characterization of only arsenic is inadequate. What about other metals like iron, calcium, and potentially other metals? Has the extent of these additional contaminants been investigated? An investigation into the nature and extent of these other contaminants should be a part of this amendment.

Ecology Response: Thank you for your comment.

The Highway 99 site and the Puyallup site were the USG-designated disposal sites for the Taylor Way site waste in the early 1970s. The remedial investigation for the USG Highway 99 site only focused on arsenic because of our experience with the USG Taylor Way site in Tacoma where the waste originated.

At the Taylor Way site, we analyzed for EPA's Resource Conservation and Recovery Act (RCRA) eight metals (aka the RCRA 8 metals) in soil. The metals that were commonly co-located with arsenic at the site at concentrations above MTCA regulatory levels were lead, antimony, copper, iron, and zinc. Besides being co-located with the other metals, arsenic was present at concentrations similar to the other metals. Arsenic is also of concern because of its higher

mobility from soil to groundwater. Based on this information, we are using arsenic as an indicator hazardous substance for the other metals.

In response to an earlier stated concern from Citizens for a Healthy Bay, Ecology requested USG analyze soil and groundwater from the area of highest arsenic concentration on the USG Hwy 99 site (MW-99-1) and test the media for the RCRA 8 metals in accordance with EPA Methods 6010D, 7471B and 7470A. Results indicated that arsenic, iron, and manganese were the only metals of concern at concentrations regulated under MTCA.

We think that contamination from any of the RCRA 8 metals would be addressed by the in-situ soil solidification technique being employed at the site because the technique prevents future leaching of metals into groundwater.

Commenter's concern and suggestion: The concentrations of these other metals should be included in all pre-, interim, and post-cleanup sampling plans.

Ecology Response: Results of testing soil and groundwater in the area of highest contamination should address the concern that there are other contaminants to consider, and so pre-, interim, and post-cleanup sampling is not necessary for the other metals.

Commenter's concern: Physical removal of all contaminants would be more protective. The core remediation area should be managed like WSDOT plans to remove contaminated soil in the P429 Plus area and dispose of it off-site.

Ecology Response: Bench- and pilot-scale studies of the effectiveness of in-situ soil solidification indicate that treating arsenic-impacted soil by mixing it with cement, bentonite clay, and iron is effective at preventing leaching of arsenic from contaminated soil. The treatability test results show that groundwater will flow around the soil-mixed monolith, and so groundwater does not contact the arsenic and leach it from the soil.

Following the in-situ soil solidification treatment, the groundwater will be monitored to determine the effectiveness of the treatment on the groundwater over time. If it is determined that the arsenic concentrations in the groundwater are not reducing in a reasonable restoration time frame, then contingency treatment of groundwater will be employed.

To increase protection of water from arsenic contamination, a clay liner will be placed along the banks and bottom of the excavations of the P429 property and the adjacent Hylebos Creek. The clay liner will reduce the flow of groundwater from the core remediation area, protecting Hylebos Creek from contamination.

When considering alternative ways to clean up sites, an alternative is often selected based on the highest total environmental benefit, if the alternative with a higher cost does not proportionately increase the benefit. To meet unrestricted land-use requirements, the disproportionate cost analysis showed that removing all arsenic-contaminated soil would cost greater than four times more than in-situ soil solidification, while full soil removal would not proportionately increase the environmental benefit.

Commenter's concern: Appears soil stabilization will not be done until at least 2029.

Ecology Response: The anticipated schedule for doing the in-situ soil solidification in the core remediation area is fall/winter of 2023/2024. The P429 area and Hylebos Creek excavation is planned for summer 2024.