

August 28, 2023

Department of Ecology
Southwest Region Office
PO Box 4775
Olympia, Washington 98504

Attention: Mr. Joe Hunt

Re: **Summary of and comments on Ecology's June 12, 2023 "Further Action" Opinion Letter**
Former Roman Meal Property | 2101 South Tacoma Way Tacoma, Washington
VCP ID: SW1799; CS ID: 14707

Mr. Hunt:

ECI has received a copy of the opinion letter from Ecology dated June 12, 2023. We have reviewed the letter and acknowledge that Ecology is requesting additional work be performed at the Site. Below is a summary of what Ecology is requesting and our understanding of these the requests. Ecology has based their opinion on the ECI Remedial Investigation report dated December 30, 2022.

To summarize, the major issues that were identified by Ecology were:

- *Groundwater underlying the Property needs to be assessed to determine if groundwater has been impacted. Also, an Environmental Covenant would require groundwater monitoring to make sure that any contaminated soil remaining on the Property does not affect groundwater in the future, and*
- *Soil needs to be characterized to a depth of 15 feet below the ground surface (bgs). This is because the point of compliance for direct contact with soil is set at 15 feet.*

It is the opinion of ECI that this has been completed. Our assessment in the Fall of 2022 included the collection of samples to adequately categorize the varying layers of infill placed on the Property. Sample results determined the extent of impact associated with the Atlas Sand and native soil underlying the asphalt. Our understanding of the historical use of the property is that Atlas Sand was imported from the Atlas Foundry to level the northern portion of the Property. This area was then paved with asphalt.

Potential Contaminant Sources Areas

Ecology indicated that source areas for contamination at the Property include:

- *Two closed-in-place heating oil underground storage tanks (USTs; estimated 3,000 gallons each although Figure 4, Appendix A of the Remedial Investigation report showed 2,000 gallons) within the building interior;*
- *One 10,000-gallon diesel UST at the exterior of the building;*
- *Two 500-gallon gasoline USTs at the exterior of the building;*

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- *Historical use of fill material containing arsenic and lead potentially from slag or other smelting by-products from the former Tacoma Asarco Smelter and/or foundry sand from the Atlas Foundry that was historically located approximately 550 feet east of the Subject Property.*

ECI agrees with Ecology's determination of potential sources areas with the exception that we were unable to determine how Ecology determined that there was a 10,000-gallon diesel UST exterior of the building. The ECI report and the available previous investigation reports by others do not mention the presence of a 10,000-gallon UST. The only tanks on the exterior of the structure were reportedly the two 500-gallon gasoline tanks which were formerly located in the area of test pit 3 (TP3). To ECI's knowledge a 10,000-gallon diesel UST has never existed on the Property. We request that Ecology provide the source of this information.

Contaminants of Concern

Based on the source areas identified and the previous investigations conducted at the Site, Ecology identified the following contaminants of concern (COCs) for the Site in both soil and groundwater.

- Gasoline-range Organics (GRO),
- Diesel-range Organics (DRO),
- Oil-range Organics (ORO),
- Select VOCs associated with gasoline: Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX),
- Arsenic, and
- Lead.

ECI agrees with the COCs listed by Ecology with the exception for BTEX and GRO in soil. Soil Samples in previous investigations have not revealed the presence of BTEX or GRO in the soil, which included the investigation in the vicinity of the location of the two former 500-gallon gasoline tanks which the analytical results reported non-detect for GRO and BTEX (TP3).

While BTEX was present in interior air samples, it was not present in the sub-slab vapor samples and was thought to be from activities or materials within the building itself. ECI agrees that BTEX and GRO should be looked for in any groundwater samples collected from any groundwater monitoring wells at the Site during the first sampling event. However, ECI would recommend dropping BTEX and GRO as COCs if they are not found in the groundwater.

Cleanup Levels

In the ECI December 2022 Remedial Investigation Report, ECI indicated the MTCA "Soil Method A Cleanup Levels for Unrestricted Use" would be initially appropriate for Site and that concentrations below these levels would not require remediation. Ecology disagreed with the use of the MTCA "Soil Method A Cleanup Levels for Unrestricted Use" because the groundwater beneath the Site was not characterized and that MTCA soil cleanup levels protective of groundwater are appropriate.

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ECI would like to note that with the exception of chlorinated polycyclic aromatic hydrocarbons (cPAHs) and lead, the MTCA “Soil Method A Cleanup Levels for Unrestricted Use” are based on the protection of groundwater.

Points of Compliance

In the December 2022 Remedial Investigation Report, ECI proposed that the point of compliance for soil be based on protection of human exposure which is to a depth of 15 feet bgs as required by MTCA. Ecology did not agree with ECI’s proposed point of compliance and stated that the point of compliance should be for the protection of groundwater until it can be determined if groundwater is not present at the Site. They also said that ECI’s conditional point of compliance at 5 feet was not appropriate.

However, ECI did not indicate that a conditional point of compliance was at 5 feet bgs. We believe that Ecology is misinterpreting ECI’s report and may be inferring that since many of the soil samples collected at the Site were collected at a maximum depth of 4 to 8 feet bgs with a few deeper samples to a maximum depth of 20 feet bgs that we were using 5 feet bgs as a point of compliance.

Ecology is implying that additional sampling is required to a depth of at least 15 feet bgs to show that the soil is below the applicable cleanup levels to that depth. The purpose of establishing the 15-foot point of compliance is to show there is 15 feet of soil (surface to 15 feet bgs) that is below the applicable cleanup levels for the identified COCs. As this is not the case at this Site, further investigation to access subsurface conditions, other than those areas where COCs were identified in the deepest soil samples, is not warranted.

With the exception of two interior borings and one exterior boring, analytical results of samples collected at depths below 4 to 5 feet bgs did not reveal the presence of the COCs above the laboratory practical quantitation limits or were reported as being below the MTCA Method A Cleanup Levels.

Samples collected from two of the interior borings located adjacent to the closed-in-place USTs at a depth of 4 feet bgs revealed a concentration of total carcinogenic polycyclic aromatic hydrocarbons (cPAHs) a just above the MTCA Method A Cleanup level of 0.1 mg/kg at concentrations of 0.108 mg/kg and 0.163 mg/kg.

The cPAHs are considered localized because the remaining borings adjacent to the USTs did not detect the presence of DRO or ORO which would contain cPAHs. In addition, given the concentrations of cPAHs the affinity for cPAHs to adhere to soil and that the locations are covered by the building with a concrete floor, it is ECI’s opinion that migration of the cPAHs to the groundwater from these locations is unlikely.

One exterior boring revealed arsenic significantly above the MTCA Method a cleanup Level of 20 mg/kg at 485 mg/k at a depth of 5 feet bgs. However, samples collected from depths greater than 4 to 5 feet

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bgs in the remaining borings and test pits did not reveal the presence of the COCs above the MTCA Method A Cleanup Level.

With possibly the exception of the location of the exterior boring which contains soil above the Arsenic Method A Cleanup Level, it is ECI’s opinion that further soil sampling below 4 to 5 feet bgs is not necessary and that it has been shown that the soils below 4 to 5 feet bgs comply with the MTCA cleanup levels.

Environmental Covenant and Groundwater Monitoring

In the December 2022 Remedial Investigation Report, ECI recommended that the Site obtain a “No Further Action Determination with an environmental covenant from Ecology. The Ecology June 6, 2023 “Further Action” opinion letter indicates that before we can consider an environmental covenant as the remedial option for the Site, that a “Feasibility Study (FS)” with a “Disproportionate Cost Analysis (DCA)” may be needed depending on the results of additional Site investigations.

ECI agrees that an FS and DCA may be needed since it is a MTCA requirement for sites that are not strictly a petroleum contaminated site using one of Ecology’s Model Remedies.

Ecology also indicated that they would not consider an environmental covenant, until groundwater was characterized for all of the potential sources on the Property and that at least four consecutive quarters of groundwater monitoring results “from all network wells” were below the proposed cleanup levels throughout the Site are obtained. Ecology also indicated that groundwater monitoring is a requirement for environmental covenants when contaminated soil remains in place.

ECI agrees that Ecology requires groundwater monitoring as a condition in environmental covenants and that four consecutive quarters of analytical results below the MTCA cleanup levels is required. However, when Ecology states that they want the groundwater monitoring “*from all network wells*” and are requiring that groundwater be investigated for all potential sources on the Site, it is inferred that Ecology is implying that possibly 7 to 8 or more monitoring wells will be required for the Site.

ECI does not agree that the potential number of wells implied by Ecology are required. At this time, it is ECI’s opinion that 4 wells may be required. One well would be located along the western property boundary in an anticipated upgradient location and possibly 3 wells located along the anticipated downgradient eastern property boundary. The downgradient wells would be located adjacent to the location of the closed-in-place USTs, near the location at the northeast corner of the building where Geotech found petroleum contaminated soil and one located east of what is thought to be a former storm water vault. The purpose would be to show determine if contamination, if any, may be coming from offsite upgradient and to show that contamination, if any, from the Site is not migrating off-site. These wells would also be used as compliance wells for the groundwater monitoring requirement in an environmental covenant.

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Applicable Laws and Regulations

Ecology indicates that:

“In addition to establishing minimum requirements for cleanup standards, applicable local, state, and federal laws may also impose certain technical and procedural requirements for performing cleanup actions.”

ECI agrees with Ecology that MTCA requires that cleanup actions be consistent with applicable laws and regulations and that those applicable laws and regulations be identified and included in a remedial investigation report, feasibility study report, or corrective action plan. ECI will identify any applicable laws and regulations in a future report to Ecology.

Conclusions

Based on ECI’s review of the Ecology “Further Action” opinion letter, ECI agrees with a number of items that Ecology has stipulated within the Further Action letter. However, ECI disagrees on a couple of primary points which includes:

- The proposed number of groundwater monitoring wells to be installed at the Site.
- The request for soil samples to depth of 15 feet bgs. It is ECI’s, opinion that further soil sampling below 4 to 5 feet bgs is not necessary and that it has been shown that the soils below 4 to 5 feet bgs comply with the MTCA cleanup levels.
- ECI agrees with the COCs listed by Ecology with the exception for BTEX and GRO in soil. Soil samples in previous investigations have not revealed the presence of BTEX or GRO in the soil.
- ECI agrees that BTEX and GRO should be looked for in any groundwater samples collected from any groundwater monitoring wells at the Site during the first sampling event. ECI would recommend dropping BTEX and GRO as COCs if they are not found in the groundwater.

In addition, ECI would like Ecology to provide the information regarding the 10,000-gallon UST that they indicate is located at the exterior of the structure at the Site. The only exterior tanks ECI was able to locate historical evidence of were the two former 500-gallon gasoline tanks which were the focus of the investigation of test pit TP3.

ECI requests that a meeting with Ecology be scheduled to discuss the Site and the required actions that need to be undertaken to get closure at the Site.

Closing

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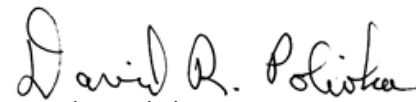
If there are any questions regarding this letter or any other matter, please do not hesitate to contact us.

Sincerely,

ECI | Environmental Consulting



Kaden J. Reed
Environmental Scientist



David R. Polivka, L.G., L.H.G.
Sr. Hydrogeologist