



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

September 12, 2018

Mr. Ronald Santos
Leidos, Inc.
18939 120th Ave NE, Ste 112
Bothell, WA 98011

Re: Conceptual Site Model Report Review Comments:

- Site Name: Unocal Bulk Plant 0046
- Address: 217 E. Steuben Street, Bingen
- Facility/Site No.: 61834259
- Cleanup Site ID No.: 6383
- VCP No.: CE0480

Dear Mr. Santos:

Thank you for submitting your report titled "*Conceptual Site Model, 76 Products Facility No. 380439*" for review by the Washington State Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing an Independent Remedial Action under the Model Toxics Control Act (MTCA).

Based on Washington Administrative Code (WAC) 173-340-515, which outlines Independent Remedial Actions, Ecology has reviewed the report for the above-referenced Site submitted by Leidos, dated August 13, 2018, and offer the following comments:

Work under the Voluntary Cleanup Program (VCP). The Site was enrolled within the VCP on January 2, 2018. The submitted report reviews and summarizes work conducted during previous investigations. No new field investigations or work plans were presented and remaining data gaps were not detailed.

Ecology expects continual progress toward cleanup to be made for Sites under the VCP. In Ecology's experience, the amount of time that has passed since the Site was enrolled in the VCP should have been sufficient to have submitted a work plan and performed additional field investigations. Please consider applying sufficient resources to move the Site more expeditious to cleanup.

Potential Receptors and Exposure Pathways. In response to the potential receptors and exposure pathways discussed within the report, Ecology offers the following clarifications:

Site Setting. The Site is located across the Steuben Street from residential units to the north. Therefore, cleanup based on unrestricted land use would be anticipated to be required for the Site.



Groundwater Drinking Water Pathway. Unless it is demonstrated otherwise based on the criteria in WAC 173-340-720(2), all groundwater must be considered a potential potable drinking water supply. Therefore, for contaminated groundwater, the drinking water pathway must be considered potentially complete at this time.

Surface Water Pathway. A mapped surface water body is located to the southeast of the Site, directly downgradient of the Site both with respect to runoff and groundwater flow. This surface water body is shown within the National Hydrography Data Set and in Google Maps. This water body not visible on aerial photographs since it is within a highly vegetated corridor. The surface water pathway, including aquatic and terrestrial ecological receptors, must be considered potentially complete at this time.

Vapor Intrusion Pathway. This pathway was eliminated from further consideration within the report. Ecology does not concur with this conclusion unless it is supported with a more rigorous data presentation, including discussion of specific soil and groundwater data.

Next Steps. A work plan that identifies data gaps and proposes activities to fill them would be an appropriate next step. Some of the evident data gaps identified by Ecology include:

Extent of soil contamination. Since contamination has been found above cleanup levels in soil samples all along the southern property boundary, further characterization to the south is needed to define the extent of soil contamination.

With respect to soil contamination on the former Unocal property, it is difficult to assess the soil data given the extensive amount of sampling that has been done both before and after excavation activities. It would be very helpful to generate a map showing soil sampling locations and depths for all samples representing post-removal soil conditions. Figure 2 from the Conceptual Site Model report presents soil sample locations with Method A cleanup level exceedances. It would be appropriate if this figure also include post-removal sampling locations and depths below cleanup levels to allow assessment of data coverage.

Extent of groundwater contamination. Topographic data at the Site (e.g. GoogleEarth digital elevation model data) shows a drainage feature running to the southeast within the Site. Therefore, one important data gap for the Site is therefore groundwater quality at the southeast property corner. This location is downgradient with respect to runoff and expected groundwater flow given the relationship of groundwater to topography in the Bingen area.

Site Hydrogeology. Groundwater at the Site may occur both within overburden and within weathered or fractured basalt. Successful characterization of lithologies and groundwater within the basalt has reportedly occurred using sonic drilling at the Wilson Oil II Site located immediately west of the Site across Maple street. Ecology has not yet received the report for this work.

It would be appropriate to have current groundwater sampling results and potentiometric surface data from the existing monitoring wells.

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The Site hydrogeological setting has some complexities that may not be addressed sufficiently by the existing five monitoring wells. Note that historical water level elevations (see below Table) indicate highly variable groundwater elevations. However, the monitoring wells were also highly variable in screened intervals. It appears that localized perching and drainage may play a role in the occurrence of groundwater at the Site. Further characterization of the Site hydrogeology appears to be warranted prior to being able to conclude that the existing monitoring well coverage is sufficient.

Well	Top of Screen (ft)	Bottom of Screen (ft)	Completion Depth to Water (ft bgs)	Water Level Elevation (5/17/90)
MW-1	3	7.7	5.90	93.91
MW-2	6	13.1	8.28	93.51
MW-3	5	25	11.60	88.58
MW-4	3	14.8	14.15	84.54
MW-5	10	25	Dry	--

Ecology looks forward to receipt of your work plan detailing planned activities to address data gaps at the Site. Please contact me at (509) 454-7835 if you have any questions or would like clarification of any portion of this letter.

Sincerely,



Frank P. Winslow
Site Manager
Toxics Cleanup Program
Central Regional Office

cc:

Site File

