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Washington Department of Ecology
Toxics Cleanup Program
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008-5452

Attention: Ms. Tamara Welty, LG, LHG

Subject: Groundwater Monitoring and
Response to Opinion Letter Comments
12th & Yesler Redevelopment Property
Seattle, Washington

Dear Ms. Welty:
As you are aware, ***Whitman Environmental Sciences (WES)***, has been conducting investigation and remedial action planning for the above referenced property. Attached are groundwater monitoring reports for the 2nd and 3rd Quarters of 2020. The 2nd Quarter report is revised to correct the data presentation in Figure 3 and remove the discussion of background arsenic concentrations that was part of the prior version. The 3rd Quarter report discusses sampling conducted in September 2020 and a calculation of a natural background concentration for arsenic. The 3rd Quarter monitoring constitutes our first round of testing under the April 6, 2020 Compliance Monitoring Plan (CMP).

I have reviewed the September 15, 2020 opinion letter you prepared regarding our prior submittals and the status of the site. The following responses reference the numbered comments in your letter.

1. & 2. Arsenic has been detected in groundwater at concentrations that exceed the standard MTCA Method A groundwater cleanup level of 5 ug/l. As you noted, we have the option of calculating a site-specific natural background concentration. The enclosed 3rd Quarter groundwater monitoring report includes a calculation of this natural background concentration based on a combination of site data and publicly available results of similar sampling in the surrounding area. The selected sites all represent the same or similar geologic conditions and are in the area of the site, limited to the Capitol Hill area of Seattle. Samples were screened to only represent groundwater that has been demonstrated to be upgradient or cross-gradient from any releases, and showing no impacts for the analyzed parameters.

   Background concentrations of total and dissolved arsenic were calculated using Ecology's MTCAStat spreadsheet to determine the 90th percentile and 4 X the 50th percentile values. The lower of the values were selected as proposed site specific background concentrations for both total and dissolved arsenic. The calculated natural background concentrations are:

   Total arsenic: 54.3 ug/l
   Dissolved arsenic: 19.7 ug/l

Both are based on 4 X the 50th percentile, as values that are lower than the calculated 90th percentile. We propose to use these arsenic values as site specific background concentrations for future compliance monitoring. Dissolved arsenic will be the most restrictive criteria, while the measurement of total arsenic can allow for some minor turbidity to remain in the samples without exceeding background levels.

Because some current measured concentrations exceed these background values, total and dissolved arsenic will be added as parameters that will be monitored in all wells under the CMP. Depending on the results of future testing, arsenic in groundwater may need to be part of the anticipated restrictive covenant in order to receive a Property-Specific No Further Action opinion in the future.

3. A revised version of the 2nd Quarter Groundwater Monitoring report is attached to this letter, correcting the data shown in Figure 3.

   Figure 2 demonstrates the groundwater contours interpolated from water level elevations measured in the 20 monitoring wells on and around the site. The calculated contours are not based on an interpretation of topographic contours. As with any groundwater interpretation the only points where groundwater elevations are known are the monitoring wells where reference elevations are known. Except at these reference points, the groundwater elevation at any other point on the site is inferred or estimated.

Responses to your comments about the April 2020 Independent Remedial Action Plan are below:

1. Engineering controls are in place for the chlorinated solvent plume, by injection of a volume of activated carbon and zero-valent iron sufficient to manage the contaminant load that could be anticipated to enter the property from the upgradient area beneath the King County Records & Elections Storage Building. In addition, there will be access to the area along the boundary between the property and the King County building for future injections, if monitoring demonstrates that break-through could occur.

   An environmental covenant as an institutional control is an expected part of the Property-specific determination that No Further Action will be required.

2. This comment is consistent with our CMP and our understanding of the regulatory process.

3. The redevelopment plan for this property will remove all of the petroleum contaminated soil and perched groundwater zones (and monitoring wells) throughout the western part of the site. Following this, there will no longer be perched zones to monitor. One monitoring well (MW-13) will remain to the south of the excavated area. It is in a downgradient location and can be used as a post-remediation monitoring point.

4. Monitoring wells MW-12, MW-15 and the newly installed well MW-16 are already included in the CMP. See Table 4 of the plan. The Independent Remedial Action Plan and CMP both indicate that wells in the area of the contaminated groundwater plume will be replaced if damaged or destroyed by construction. Some wells may need to be moved if they

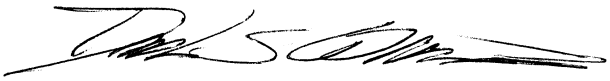
interfere with footings or utilities, but will be replaced at the most suitable locations near the original monitoring points.

5. Two indoor air sampling locations are proposed in the CMP, but the information will be supplemented by comparing groundwater monitoring results with groundwater screening levels. Groundwater monitoring wells are already in place that will be exterior to the building and adjacent to the King County building, including MW-1, MW-5, GEO B-7 and GEO B-9. No deep soil gas probes are anticipated.

6. A sub-slab vapor barrier and ventilation system is already planned as part of the protective systems of the building. Vented soil gas can be sampled to evaluate whether or not it contains elevated VOCs in lieu of soil gas probes. However, soil gas and groundwater screening levels will only be considered supplemental data. Actual indoor air measurements will be the basis for any decisions regarding further actions to mitigate indoor air quality, if necessary.

Whitman Environmental Sciences has been pleased to have the opportunity to be of service in this matter. If you have any questions regarding the information contained in these reports, or if you need anything further to help with your review, please feel free to contact me.

Respectfully submitted,
Whitman Environmental Sciences



Daniel S. Whitman, L.G.
Principal

Attachments:
Revised 2nd Quarter 2020 Groundwater Monitoring Report
3rd Quarter 2020 Groundwater Monitoring Results