STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

December 27, 2021

Marisa Kaffenberger, P.E.
Senior Engineer
Stantec Consulting Services, Inc.
2321 Club Meridian Drive, Suite E
Okemos, MI 48864

Re: Groundwater Remedy Phase I As-Built and Documentation Report

- **Site Name:** Bee Jay Scales
- **Site Address:** 116 N. 1st Street, Sunnyside
- **Facility/Site ID No.** 504
- **Cleanup Site ID No:** 3641

Dear Marisa Kaffenberger,

The Washington State Department of Ecology (Ecology) has reviewed your submittal, Groundwater Remedy Phase I As-Built and Documentation Report and has the following comments:

General Comments

Discuss the implications of placing monitoring wells immediately adjacent to injection wells for the purposes of this pilot study. It is Ecology's opinion that the high volumes of injected treatment skew concentrations of contaminants from these closely placed monitoring wells, and diluting the actual contaminant concentration.

4.1.3 Soil Arsenic, Iron and Manganese Analytical Results and Discussion

Please discuss the potential short-term risks and benefits of the treatment as the site cycles through oxidation and reduction phases, including the potential risks of co-precipitation of Fe and Mn adding As to the system while adsorbing NH_4. How long are the short-term effects predicted to persist in the aquifer?

How will the treatment have the flexibility to adjust to the short-term changes in oxidation and reduction states over the life of the treatment? Are there any additional amendments that may reduce the migration potential of ammonia?

4.1.6 Soil Sulfate Analytical Results and Discussion

Please describe an alternate plan if the EISB cannot maintain reducing conditions that do not fall below sulfate reduction, including how you would regulate TOC consumption.

4.5.4 Tracer Test Discussion-Solute Dilution Ratios

Instead of excluding OW-2 from the analysis, Ecology suggests that including results from OW-2 may be more representative of the wide range of horizontal conductivity throughout the site. Please discuss the advantages/disadvantages of including data from OW-2 in the tracer study analysis and how it may affect the estimate of site-wide porosity of 0.25.

4.7.4 Model Conclusions

Please describe your plans to enhance the degradation of 1,2-DCP in order to meet the remediation timeframe.

5.4 Injection Well Horizontal Spacing Optimization

Based on many factors, including costs, you have chosen 20-foot well spacing as the proposed full-scale injection configuration. Please describe the optimal well spacing based on the radius of influence of the EISB treatment only, disregarding operating costs and focusing on restoration time frame only.

Tables

Table 4-Please provide an additional row in this table for total injection volume and total mass injected.

Table 19-This table indicates that the dilution effect is dominant. Please discuss how monitoring daughter products of IHS will more clearly define the degradation processes in the subsurface.

Table 22-The remedy for the Bee Jay Scales site will be primarily based on the reduction of contaminant concentrations within an appropriate restoration time frame rather than costs.

Figures

Figure 3-Please provide a discussion of how existing utilities may provide preferential pathways for both EISB injections and contaminant transport.

Please provide a figure of radius of influence based on EISB treatment and tracer injections for each well. In addition, please provide a figure of the current plume boundaries based on the EISB injections.

Please send final copies (electronic and paper) to our office.

Regards,

Mary Monahan
Site Manager
Toxics Cleanup Program
Central Regional Office

By certified mail: 7014 3490 0001 5526 6612