

MEMORANDUM | January 19, 2023

TO Kevin Dana and David Lacey, Oregon Department of Environmental Quality (DEQ)

FROM Peter Shanahan, HydroAnalysis LLC (HALLC); Jennifer Hart and Gail Fricano, Industrial Economics, Inc. (IEc)

SUBJECT Five Tribe review of “Groundwater Pathway Source Control Evaluation, Crawford Street South Site,” dated December 16, 2022

This memorandum, submitted on behalf of the Five Tribes,¹ reviews the *Groundwater Pathway Source Control Evaluation, Crawford Street South Site* prepared by GeoEngineers on behalf of the Crawford Street Corporation (GeoEngineers 2022a).

GENERAL COMMENTS

1. While many organic constituents were detected at the site, those detections are sporadic, at low levels, and fairly typical for an urban environment. GeoEngineers (2022a) uses a weight-of-evidence approach to conclude that groundwater at this site does not pose an unacceptable risk to the Willamette River. With one exception discussed in Comment #2, we find this conclusion reasonable.
2. Concentrations of metals are elevated at well MW-2, which is located in the area containing residual black sand. This appears likely to be foundry sand, a material once used commonly for fill. Foundry sand is typically high in metals, which is consistent with the elevated concentrations of cadmium, copper, lead, and zinc reported in soil samples from the vicinity by GeoEngineers (2022b). The contaminated black sands have clearly affected groundwater, as shown by the elevated concentrations in groundwater samples from MW-2. GeoEngineers (2022a, Figure 3) shows MW-2 located upgradient of most of the black sand deposits, suggesting there could be higher concentrations downgradient. As a protective measure, we recommend excavation and removal of the residual black sand from the site.
3. On page 8, it is stated that apparent groundwater mounding on the eastern and western areas of the riverbank “appears to limit the amount of groundwater flux from the Site to the river.” We find this improbable and if the language is retained, further justification is needed.

¹ The five tribes are the Confederated Tribes of the Grand Ronde Community of Oregon, the Nez Perce Tribe, the Confederated Tribes of Siletz Indians, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Warm Springs Reservation of Oregon.

REFERENCES

- GeoEngineers. 2022a. Groundwater Pathway Source Control Evaluation, Crawford Street South Site, DEQ ECSI Site No. 2363, Portland, Oregon. GeoEngineers, Portland, Oregon. December 16, 2022.
- GeoEngineers. 2022b. Basis of Design Report, Riverbank Source Control Measure, Crawford Street South Site, Portland, Oregon. GeoEngineers, Portland, Oregon. June 10, 2022.