



Oregon

Kate Brown, Governor

Department of Environmental Quality

Northwest Region

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August 30, 2022

sent via Email

Jason Hegdahl
Cascade Corporation
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Deborah Taege
The Boeing Company
Environment, Health & Safety - Environmental Remediation
Bldg. 10-20, MC 9U4-26
800 N 6th Street
Renton, WA 98055-1409

RE: Annual Performance Report for 1 Jan. – 31 Dec. 2021. East Multnomah County, Troutdale Sandstone Aquifer Remedy. ECSI #1479

Dear Mr. Hegdahl and Ms. Taege,

The Oregon Department of Environmental Quality (DEQ) has reviewed the Annual Performance Report for calendar year 2021, for the East Multnomah County, Troutdale Sandstone Aquifer Remedy. The report is dated May 6, 2022 and was received at DEQ on June 9, 2022. This report was prepared on your behalf by Geosyntec Consultants, Inc., Landau Associates, Inc. and SS Papadopoulos and Associates, Inc. DEQ approves the document and the following project changes as recommended in report Sections 6.2 and 6.3. DEQ will follow up with you on the proposed zone closures for Remedy Zones B and D.

DEQ approves the following changes to project remediation systems:

The project Central Treatment System continues to operate and maintain hydraulic control of the dissolved VOC plume. DEQ approves the recommendation to continue operation of extraction wells EW-2 and EW-14. Pilot shutdown of wells EW-1 and EW-23, as previously approved by DEQ, will continue through 2022. Continued groundwater monitoring at EW-1 and EW-23 will be conducted to evaluate if resumed pumping is needed, per the Remedy Well Network Criteria.

The Central Treatment System also houses the Soil Vapor Extraction (SVE) system. The SVE system removes Volatile Organic Compound (VOC) mass from unsaturated soils previously accessed from six original vapor extraction wells. Based on SVE baseline testing of six additional vapor/groundwater monitoring wells (VMW-I through VMW-N) installed in 2020, two wells VMW-J2 and VMW-K, were connected to the SVE system in March 2022. DEQ approves the continued operation of the SVE in 2022 to remove soil vapors using eight vapor extraction wells.

DEQ approves the following monitoring program and schedule modifications:

Decrease monitoring frequency for groundwater elevation and groundwater quality monitoring for Remedy Zone B wells BOP-13(ds), BOP-13(dg), BOP-31(ds), and BOP-31(dg), from quarterly to semi-annually. VOC concentrations in these four wells have been below EPA Drinking Water Maximum Contaminant Levels (MCLs) and stable since 2015. These four wells are located near the Remedy Zone B

mound area and provide information on hydraulic capture and potential changes in VOC concentrations. The monitoring data from these four wells is stable enough that quarterly monitoring is unnecessary.

Decrease groundwater quality monitoring frequency at Lower TSA well BOP-20(dg) from annual to biennial. The well is in Remedy Zone B, far from the leading edge of the current dissolved VOC plume, with several monitoring wells located between BOP-20(dg) and the plume. TCE concentrations have not been detected above laboratory reporting limits since 2016; therefore, annual sampling is no longer necessary. This well has been selected to provide data during extended Portland Water Bureau pumping events of the CSSWF and will continue to be monitored for that purpose.

Reduce groundwater quality monitoring frequency from quarterly to semi-annually at Lower TSA extraction well EW-12. This well is now used for monitoring only. Water level gauging will continue to be performed semi-annually. Trichloroethylene (TCE) concentrations in EW-12 have been below the MCL since 2013 and stable between 1 and 2 µg/L since 2016. Quarterly groundwater sampling is no longer necessary. This Zone C well is located on the Boeing and Dermody property line.

Conduct water quality monitoring at former extraction well EW-11 in August 2022. This well was inaccessible for biennial sampling in August 2021.

Decommission former extraction well EW-16 that is now used for monitoring. TCE concentrations at EW-16 have been below the MCL since February 2013, and below the method reporting limit (0.5 µg/L) since February 2018, with one exception of 0.77 µg/L detected in November 2018. EW-16 was placed into pilot shutdown mode in November 2014 and converted to monitoring status in October 2017.

Please feel free to call me with questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'K. Thiessen', with a stylized, flowing script.

Kenneth Thiessen RG/CEG
Northwest Region Cleanup Section

cc: Cindy Bartlett, R.G. Geosyntec Consultants
Evelyn Ives, P.E. Landau Associates
Charles Andrews, Ph. D., S.S. Papadopoulos & Assoc., Inc.
Dan Hafley, RG, DEQ NW Region
Jack Dahl, PE, Portland Water Bureau
ECSI #1479