



Oregon

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March 31, 2023

via electronic delivery

Bob Wyatt
Northwest Natural Gas Company
220 NW 2nd Avenue
Portland, OR 97209

Re: Revised Year 2 Long-Term Monitoring Report
Portland Gas Manufacturing site
ECSI# 1138

Dear Mr. Wyatt,

DEQ reviewed the *Year 2 Monitoring Report: PGM Long-Term Monitoring and Maintenance (Year 2 Monitoring Report)* for the Portland Gas Manufacturing site prepared by Anchor QEA on behalf of NW Natural (NWN) and dated March 2, 2023. The Report was revised in response to DEQ comments dated February 1, 2023 and documents monitoring activities conducted in accordance with the *Long-Term Monitoring and Maintenance Plan, Year 2 Addendum (Year 2 Addendum)* dated June 22, 2022. The Year 2 Addendum included modifications to the Year 2 monitoring program outlined in the *Long-Term Monitoring and Maintenance Plan (LTMMP, Appendix F of the DEQ-approved Revised Final Design Report, Version 4 dated March 2, 2020)* due to erosion observed during the Year 1 (2021) bathymetry survey.

DEQ appreciates that NWN has agreed to conduct a contingency bathymetric survey in Year 3 (2023) to support the ongoing evaluation of erosion and movement of cover materials and river sediment observed in the Year 1 and Year 2 monitoring events. The survey results will be used to determine whether erosion continues to be observed and to identify any follow-up actions that may be required to ensure that the remedy remains protective. The Year 2 Monitoring Report presents some recommendations on how to interpret results of the Year 3 survey for determining whether significant erosion has occurred. DEQ disagrees with the proposed criteria as detailed in our specific comments below. NWN and DEQ developed performance criteria for each remedial technology as outlined in Table F-1 of the LTMMP along with appropriate contingency actions should the assessment criteria not be met (Figure F-8). The bathymetric survey data are to be evaluated site-wide, by SDU, and on the 10-foot by 10-foot or 3-foot by 3-foot grid spacing established for the post-construction acceptance survey to evaluate whether sediment surface elevations are stable or increasing when compared to previous survey results. The PGM remedy design and associated performance criteria assumed that the project area is net depositional and did not envision erosion occurring year after year. Therefore, DEQ does not consider ongoing erosion to be allowable or acceptable. DEQ suggests meeting to discuss a mutually acceptable approach for applying the LTMMP performance criteria prior to submittal of a revised Year 2 Monitoring Report.

Specific Comments

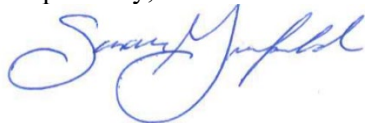
1. Section 6 Recommendations. DEQ has the following comments on this section.
 - a. The recommendations indicate that areas of significant erosion will be defined as areas covering at least 1,000 square feet consistent with the area represented by a 3-point

composite surface sediment sample. In accordance with the LTMMP, each 3-point composite sample is “composited from three replicate samples spaced approximately 25 feet apart in a triangular pattern around the central location.” Therefore, the area represented by each 3-point composite sample is approximately 270 square feet. The basis for assuming that 3-point composite samples are representative of a 1,000 square foot area appears unsupported and largely overestimated. In addition, SDU D is approximately 3600 square feet and DEQ disagrees that erosion of nearly 1/3 of the EMNR cover in SDU D is acceptable. DEQ suggests that 500 square feet may be a more suitable threshold for determining whether areas of erosion are significant and actionable.

- b. DEQ agrees that that the minimum placement specifications from the design documents should be used as the basis for identifying areas of significant erosion in in the GAC-amended and EMNR cover areas (SDUs A, B2, C3, D and F1). Whether an area is a new or existing area of erosion, elevation losses in the covered areas should be evaluated according to the spatial scales provided in Table F-1 of the LTMMP and in accordance with the contingency flow chart provided in Figure F-8. Acknowledging the reasonable accuracy of multibeam survey equipment and the expectation that cover materials may mix with underlying sediment, DEQ would consider erosion significant if Year 3 elevations are 6 inches or lower than the design placement elevations (i.e. 50% of the design 1 ft placement thickness) across an area of 500 square feet or greater. This criterion is generally consistent with the performance criteria for cover layers at other DEQ cleanup sites.
- c. The recommendations allow for up to 1 foot of scour to occur over a 1,000 square foot area in an MNR area. This is wholly inconsistent with the PGM natural recovery model prediction for the design evaluations which identified MNR areas B1 and F2 as net depositional. DEQ continues to expect MNR areas to exhibit stable or increasing sediment accumulation, with sediment concentrations below the applicable cleanup levels. MNR areas with at least 6 inches of elevation loss across an area of 500 square feet or greater when compared to the initial (Year 0) post-construction riverbed elevations should be evaluated in accordance with the LTMMP performance criteria to identify appropriate contingency actions in consultation with DEQ.

If you have questions or comments, please don't hesitate to contact me at (503) 229-5245 or sarah.greenfield@deq.oregon.gov.

Respectfully,



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NWR Cleanup Section

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