



Oregon

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October 21, 2019

via electronic delivery

Gregory Murphy, P.E.
Ross Island Sand & Gravel
4315 SE McLoughlin Blvd.
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Re: 2019 Annual Monitoring and Maintenance Report
Ross Island Sand & Gravel Company
ECSI# 2409

Greg:

DEQ reviewed the 2019 Annual Monitoring and Maintenance Report (2019 AMMR) prepared by the Ross Island Sand & Gravel (RISG) Company dated September 16, 2019 for the RISG facility located on Hartack Island. The 2019 AMMR presents the results for monitoring and maintenance of remedial action areas at the site that were performed at the facility between July 1, 2018 and June 30, 2019. Results are provided in accordance with the Long Term Maintenance and Monitoring Contingency Plan (LTMMCP) provided in Attachment B of the Consent Order (DEQ No. LQVC-NWR-11-01). DEQ finds that RISG has generally met the requirements of the Consent Order during this period with the following comments:

1. General

Each year, annual monitoring reports are submitted to DSL in spring, and annual monitoring and maintenance reports are submitted to DEQ in fall. DEQ understands that RISG hopes to streamline the review process for these two documents. We recognize that these documents have overlapping interest by both agencies and agrees with consolidating the reports to reduce agency review time. DEQ looks forward to future discussions with RISG and DSL to develop a mutually-agreeable approach to meeting the objectives of both agencies within a single document.

2. Section 2.2 Site History

This section states that RISG anticipates importing and processing aggregate on Hardtack Island for the foreseeable future. Based on communications between DEQ and RISG held on July 29, 2019, DEQ expects that the Site History will be revised in future monitoring reports to accurately reflect future plans for the facility.

3. Section 5.2 Upland

This section states that RISG met with DEQ to conduct a ROD review and site inspection. The ROD review is a separate evaluation that is being conducted by DEQ and will result in a Five-Year Review report that will be provided to RISG prior to finalizing.

4. Section 5.2.1 Remedial Action Area B

As discussed during the site inspection on July 29, 2019, cautionary signs around Area B are posted in areas considered by RISG as being potentially accessible to trespassers or site workers due to openings in the vegetation. The report should be revised to identify whether signs are

posted along the entire Area B perimeter and if not, identify those areas without signage and the supporting rationale.

5. Section 5.2.2 Remedial Action Areas A2-1 and A2-3

Biofilter bags are used for temporary applications and have a typical effective lifespan of 2-3 months, particularly when exposed to sunlight as the bags will degrade. Generally, they should be replaced when sediment accumulates to 1/3 the barrier height. The inspection forms only note that bags are present, but not their condition. Future inspections should identify the condition of the biofilter bags, and they should be replaced as necessary. DEQ also requests information on when the bags were these last replaced.

DEQ's 2014 letter, included as Appendix C, requests that the AMMR include photos taken during rainfall events to document that the berms and other runoff controls are effective. There do not appear to be any photos provided during a rain event. Please include photos for each rainfall monitoring event as part of the next AMMR.

6. Section 5.2.3 Remedial Action Area A2-2

This section explains that no monitoring occurred on Monday October 8, 2019, but does not identify when it was observed that the rainfall reading was updated to indicate that rainfall had exceeded 0.5 inches in 24 hrs. Please clarify. DEQ recognizes that the rainfall readings are often updated to reflect revised rainfall totals; however, these readings should be reviewed periodically to ensure that monitoring events are not missed.

7. Section 5.3.1 Sediment Cap Thickness

RISG placed "additional fill material" (KFJ Sand) in the northeast section of the sediment cap that was less than 3 feet of thickness as shown in Figure 4 of the 2018 AMMR. DEQ would like to see a table accounting for repairs completed by RISG and submitted with each AMMR Report. Please include date of repair, location of repair, type and source of fill material, approximate volume of material placed, and any accompanying field notes/documentation, including any coordinates or soundings used to confirm proper placement. This will provide an accounting record of repairs completed year-to-year. The 2019 cap maintenance completed in August 2019 and the underwater buttress placement (as described in Section 5.3.2) would also be recorded in the table.

This section also states that an analysis was performed that determined that only two small areas would need maintenance; however, there is little information on how this analysis is performed or what criteria were used. Please provide further explanation in the AMMR consistent with the repair criteria provided in Section 7.3.2 of the LTMMCP.

Although the 2019 maintenance event occurred after the annual reporting period and is therefore included in the 2019 AMMR, we suggest including a reference to this maintenance event in the 2020 AMMR for completeness.

8. Section 5.3.2 Annual Bathymetric Comparison

When comparing year-to-year changes in the subsurface profile of fill changes (Figure 5), DEQ agrees with the RISG conclusion that the quality of the data are not consistent. The 2019 data portray a very large amount of fill placed into the lagoon compared with 2018 subsurface data, which is in contrary to RISG records. The fill comparisons going back to 2014, also appear to be inaccurate. DEQ also generally agrees with RISG that the structured elevation changes, or waves, shown on Figure 5 suggest a systematic error. RISG provides a number of opinions and reasons for the inaccuracies shown in the annual bathymetric comparison; however, there is little data or

information provided for DEQ to verify these conclusions. DEQ requests that RISG submit a hydrographic survey report from the surveyor that includes the survey methods, accuracy standards, and raw survey data along with an assessment of potential modifications to the survey methodology (such as increasing the transect spacing) that could improve the comparability of future survey results.

RISG also references the survey standards in USACE hydrographic EM 1110-1003 table D-5 to support the elevation changes noted in Figure 5. DEQ notes that the referenced table includes older accuracy standards from 2002 that have since been superseded. Table 3-1 of the manual includes the current standards, which specify that the typical repeatability of the survey results is 0.3 ft with a standard deviation of +/- 0.5 ft for inland projects with depths <15 ft. The other standards are based on coastal projects which account for factors such as large swells, tides, and other conditions which are more typical of large-scale USACE navigation projects and may not be directly applicable to Ross Island Lagoon. Regardless, the reference to the USACE manual does not account for losses observed at Ross Island which are >5 ft.

9. Section 5.3.3 Slope Stability

It appears progress has been made to reduce slopes year-over-year. Please continue to address slopes greater than 2:1 as it reduces the risk for CAD cell exposure. DEQ would like to ensure that slopes will be moving towards a maximum 3H:1V ratio. Table 1 shows that steeper slopes are decreasing year-to-year other than between 2017 to 2018, where there was an increase in slopes between 2H:1V and 3H:1V. Please explain why there was a total slope increase from 2017 to 2018.

10. Section 5.3.4 Area E –pH Monitoring

DEQ agrees that RISG will resume pH monitoring in April 2020.

11. Section 6 Summary

DEQ requests to participate in the next annual monitoring event.

12. Figures

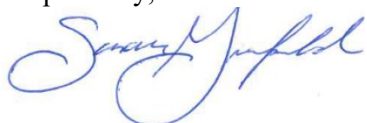
In order to meet the objectives of the remedial cap in Area D/E, a minimum 3-foot sediment cap is required to be maintained. To demonstrate that this objective is being met, please include a new figure or update Figure 4 to show cap thickness contours. It would also be helpful to include the CAD cell locations on the figure.

13. Christenson Shipyard.

As discussed with Craig Jacobs over the phone, DEQ is still waiting for additional information on fill material obtained from the Christenson Shipyard. The latest fill data provided did not meet the appropriate laboratory method detection limits for the Ross Island screening criteria.

Please contact me at (503) 229-5245 or greenfield.sarah@deq.state.or.us if you have questions or comments.

Respectfully,



Sarah Greenfield, P.E.
Project Manager/Engineer
NWR Cleanup Section

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