

memorandum

date March 12, 2021

to Mukta Patil, Langan

cc Maria Lorca, Langan

from Liz Hill, ESA

subject Comments and Recommendations on the 2019 Annual Progress Report for the Evapotranspirative Cover for the Altamont Landfill and Resource Recovery Facility

ESA reviewed the 2019 Annual Progress Report, Evapotranspirative Cover (ET) Cover (Geosyntec, 2020) with the ET Cover Work Plan and the ET Cover Construction Quality Assurance (CQA) Report. Please see below for our comments and question:

Comments

1. ESA recommends the timing of the percent cover or percent bare cover estimate based on field observations and aerial imagery to occur in February to April, May at the latest. In the 2019 Progress Report (report), Section 2.2.2 documents percent bare cover was estimated from an aerial photo taken of the ET Cover site in June 2019 and ground photos of the vegetation taken by Geosyntec in August. The Work Plan allows “percent cover (or the converse, percent bare area) will be assessed by visual field sampling or via aerial photography”. Completing the assessment in the spring would provide a more accurate estimate of the plant cover that is present.
2. ESA recommends the report describe the potential presence of invasive plant species and potential presence of plant species included in the Pacific Coast Seed mix (page 102 of the CQA) applied to the ET Cover. The report points to the lack of vegetation cover as a primary factor in the infiltration depth at all four monitoring locations exceeding the depth of the ET Cover: “infiltration could be attributable to low vegetation density and roots in the cover not yet reaching maturity. Deeper and denser plant roots are expected to increase transpiration and decrease liquid flux through the cover.” As such, the report attributes the success of the ET Cover is partially dependent on the plant species present; therefore, a more thorough examination of plant species could help in evaluating the ET Cover performance.
3. ESA recommends the monitor to take photos along the edge of the lower perimeter at regular intervals to document plant growth.

4. ESA agrees with Geosyntec's recommendations in the report, although since monitoring occurred in 2019, some of those recommendations may have already been addressed. As a reminder, the RWQCB Condition of Approval #5 requires the Discharger to provide written notification within 7 days of any changes made to the area in close vicinity to the sensor nests that may change the through-flow rate monitored by the sensor nests. ESA is not certain if the following Geosyntec's recommendations from the report are activities that would change the monitored through-flow rate.
- For areas of sparse vegetation, noted in Figure 2, soils should be scarified and the areas re-hydroseeded. These areas should continue to be carefully monitored to verify vegetation is established. [Consistent with Work Plan sections 2.7 Soil Amendment and Vegetation and 5.2 Vegetation Maintenance.]
 - The area along the bench, just outside the ET cover footprint, be regraded to promote the drainage of runoff coming from the ET Cover. [Consistent with Work Plan section 5.1 ET Cover Drainage System]
 - Test pitting for root depth should be expanded to measure crack depth if significant cracks are observed in the future. [Consistent with Work Plan section 5.1 ET Cover Drainage System]
 - Install a stormwater sampling location at the outlet of Ditch-2 along the top deck (i.e., southern end) to test for VOCs. Stormwater samples should be collected during the next monitoring period (2020), provided enough flow exists along the ditch to have the opportunity for a sample to be collected. [Consistent with RWQCB Conditions of Approval #8]

Question

1. Do PDF pages 69-76 display the through-flow rate of the nests? RWQCB Conditions of Approval Condition #4 requires this measurement to be quantified and reported, although I'm not certain if it's intended for this to be reported annually during the four monitoring years or at the end of the monitoring period.

Overall, we would recommend the annual reports be developed more expeditiously. By doing so, any remedial action or maintenance recommended could be addressed before they become outdated, more costly, and/or more challenging.