
San Francisco Bay Regional Water Quality Control Board

October 1, 2019
Place ID 2020435 (LW)

Lehigh Southwest Cement Company
and Hanson Permanente Cement Inc.
Attn: Erika Guerra
24001 Stevens Creek Blvd.
Cupertino, CA 95014
(Sent via email to
Erika.Guerra@LehighHanson.com)

Subject: Recognition of Completion of 2019 Preliminary Closure Plans for the Permanente Quarry and Cement Plant (Lehigh), Cupertino, Santa Clara County

Dear Ms. Guerra:

We have reviewed the Preliminary Closure Plans (the 2019 Plan) submitted June 30, 2019, to comply with Provision 4 of Waste Discharge Requirements, Order No. R2-2018-0028 (WDRs). As you are aware, the WDRs require several technical reports to ensure reclamation will be protective of surface and groundwater quality. Provision 5 of the WDRs requires final designs, while Provision 4 is intended to assist planning efforts, requiring you keep Water Board staff informed of designs during development, so we can provide guidance and monitor preparations, including to ensure that appropriate data is collected to demonstrate adequate protection of water quality. These Preliminary Closure Plans are therefore to be updated every two years until reclamation is complete, after which we will require post-closure monitoring and maintenance.

We find the 2019 Plan acceptable for the current stage of designs which are currently in flux, given you have submitted an application to Santa Clara County Department of Planning and Development to amend the 2012 Reclamation Plan. This letter therefore recognizes completion of the 2019 requirement per the WDRs and provides comments and requirements for the next biennial update due June 30, 2021.

Comments for 2021 Update

1. Waste characterization for EMSA and WMSA: We concur with the proposed approach to evaluate potential water quality impacts from materials in the EMSA and WSMA and concur with the initial analysis performed thus far of known overburden wastes, in both weathered and unweathered states. However, the dataset is fairly limited. Please be aware that:
 - a. Further characterization will be necessary as reclamation/closure nears or, potentially, if reclamation plans change.

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- b. Further investigations are necessary to understand why leaching data does not adequately align with seep data; for example, nickel and zinc are elevated in seeps, but not in leaching tests. Conversely, cobalt and antimony have been elevated in leaching tests, but not in seeps. This is a particular concern given our understanding that the cause of toxicity in the Permanente Creek has not yet been identified.
2. EMSA and WMSA Waste Pile Cover/Cap: The current proposal is to cover the EMSA and WMSA with 6 inches (12 inches on ridges) of a mixture of on-site greenstone and topsoil, amended as necessary to encourage vegetation growth. The 2019 Plan suggests a low-permeability layer is not needed because infiltration is not a concern as demonstrated by the lack of contamination in groundwater. However, this may not be accurate and is insufficient justification because it does not consider surface water impacts from seeps.

We concur evidence collected thus far indicates there is not widespread contamination of groundwater at the site, however investigations are ongoing. In particular, we are concerned about periodically elevated selenium in two WMSA groundwater monitoring wells near Permanente Creek. As part of the Evaluation Monitoring Program required by the WDRs, you are currently investigating whether the source is local (near the two wells) or a result of infiltration through the WMSA followed by groundwater transport to the two monitoring wells.

Furthermore, the potential impact on surface water from infiltration needs to be considered (note that Provision 4 of the WDRs requires Lehigh to demonstrate reclamation plans will be protective of water quality; which includes both surface and groundwater). As you are aware, several seeps on site caused by infiltration have been measured with elevated concentrations of selenium (up to 65 ug/L) and other metal(loid)s may also be a concern. Currently, these seep waters are treated prior to discharge to creeks, however the 2019 Plan indicates that water from these seeps will be directed to surface water without treatment post-reclamation. This suggests that a low-permeability cover for the EMSA and WMSA may be necessary.

3. Post-Reclamation changes to groundwater levels: Please confirm and demonstrate that wastes in the EMSA and WMSA will not be impacted by rising groundwater levels from quarry floor elevation changes, particularly head reversal between the pit and Permanente Creek.
4. Quarry Pit Monitoring - Please include preliminary plans for a groundwater well monitoring network downgradient of the reclaimed Quarry Pit.
5. Selenium leaching - Please include citations and site-specific support for the conclusion that sulfide oxidation is the cause of selenium leaching.

In addition, we noted in the Application to Amend the Reclamation Plan a plan to mine a new quarry in the Rock Plant Reserve area, across Permanente Creek from the Rock Plant. We understand this is a proposal (not final plans) and therefore it does not yet need to be covered in the 2019 Preliminary Closure Plans. However, please be aware that a new quarry would constitute creation of a new Waste Management Unit (WMU). The Title 27 and the WDR

specifies multiple requirements for the creation of new WMUs.

Conclusion

We consider the 2019 requirement for Provision 4 complete and look forward to reviewing the 2021 update with these comments addressed. Please feel free to contact Lindsay Whalin of my staff at lwhalin@waterboards.ca.gov or (510) 622-2363 should you have questions.

Sincerely,

Lisa Horowitz McCann
Assistant Executive Officer

CC:

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Water Board's Lehigh Permanente Quarry and Cement Plant Lyris Mailing List