

County of Santa Clara

Department of Planning and Development
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January 22, 2020

Erika Guerra
Environmental and Land Management Director
Lehigh Southwest Cement Company
24001 Stevens Creek Blvd
Cupertino, CA 95014

FILE NUMBER: PLN17-2250
SUBJECT: Grading Approval for Permanente Creek Restoration Project
SITE LOCATION: 24001 Stevens Creek Boulevard, Cupertino
DATE RECEIVED: November 21, 2019

Dear Erika Guerra:

The purpose of this letter is to inform you that the Grading Approval application, as described below under Section I, resubmitted by Lehigh Southwest Cement Company ("Lehigh") on November 21, 2019 was deemed complete on December 20, 2019. The Department of Planning and development (Department) is in the process of finalizing a scope of work for the required Environmental Impact Report (EIR), and anticipates a kick-off meeting in the coming weeks.

Section II of this complete letter states concerns related to the project design, as identified by other regional and state regulatory agencies, that may affect the Department's ability to make the grading findings necessary to approve the project. The Department recommends these comments be addressed early in the environmental review process as they may affect the EIR analysis.

Section III identifies additional reports and documents that are required in order for the Department to commence environmental review of the project pursuant to the California Environmental Quality Act ("CEQA"). The EIR associated with the Grading Approval application will evaluate the entirety of the Permanente Creek Restoration Project.

I. Project Description

On November 2, 2017, Lehigh submitted a Grading Approval for Lehigh's proposed Permanente Creek Restoration Project ("PCR"), which includes habitat and creek restoration of certain segments of Permanente Creek previously impacted by historic mining activities. The Grading Approval would cover areas of the PCR that fall outside of the existing Reclamation Plan for Lehigh Permanente Quarry ("Quarry"), approved by the Santa Clara County ("County") Board of Supervisors on June 26, 2012. The PCR also includes areas within the Reclamation Plan boundary for the Lehigh Quarry.

The Department determined that the November 2, 2017 application was incomplete on March 5, 2018, after mutually agreed to extensions of the Permit Streamlining Act timelines. Lehigh provided additional information through subsequent resubmittals; these resubmittals were also deemed incomplete by the County. Lehigh, on November 21, 2019, provided the following documents in response to County's incomplete letters:

- Technical Memorandum prepared by Golder Associates Inc., dated October 31, 2019
- Permanente Creek Restoration Plan 90% Level Submittal Design Basis Technical Memorandum, prepared by Waterways Consulting Inc., dated October 31, 2019
- Permanente Creek Restoration Plan Grading Plan 90% Design, prepared by Waterways Consulting Inc., dated October 31, 2019

II. Areas of Concern/Other Comments

The Department recommends the following issues be resolved early in the EIR preparation process as they may affect the project design and description, as well as the resulting analysis in the EIR.

California Department of Fish and Wildlife (CDFW)

Please contact Kristin Garrison – 707-944-5534 / Kristin.Garrison@wildlife.ca.gov for information regarding the following item(s).

The Department's March 5, 2018 incomplete letter included Comment No. 24 from CDFW requesting that Lehigh provide geotechnical inputs to better understand bed, bank, and adjacent slopes. Lehigh's November 15, 2018 response letter included geotechnical memoranda prepared by Golder Associates that relied on field engineering. As stated in the County's February 14, 2019 incomplete letter, Comment No. 24 is meant to solicit additional geologic and geotechnical data to reduce the uncertainties in the channel gradient design envelope and provide an understanding of geological and geotechnical conditions throughout the project. The County's February 14, 2019 incomplete letter reiterated CDFW's request for a thorough engineering geologic and geotechnical report based on detailed engineering-geologic mapping, subsurface investigations, and analyses. Lehigh's August 7, 2019 response letter stated that Lehigh would provide a technical memorandum prepared by Golder Associates on October 31, 2019. However, the October 31, 2019 Technical Memorandum prepared by Golder Associates focuses on identifying project areas that require subsurface geotechnical exploration and does not provide thorough engineering geologic and geotechnical analysis as requested by CDFW and provided below.

The following comments were provided by CDFW, referencing the comments previously provided to Lehigh on February 14, 2019 (enclosed).

1. Comment No. 24 – Among other items, the response to this comment addresses construction of a channel in the Rock Pile area and issues related to removing a considerable amount of mining waste to re-establish the channel along its historic path. Golder's (October 31, 2019 memorandum) analysis shows that the historical channel of Permanente Creek once extended well beneath mining waste comprising the Rock Pile and adjacent areas (i.e., see Golder's Figure 9). Golder's cross section in their Figure 11 further illustrates this, and shows that the restored channel will be placed in a location of higher bedrock compared to the historical

path of the stream. The cross section appears to show the restored channel will be cut into bedrock.

However, this is inconsistent with the approach being proposed, which is to field engineer the channel no deeper than controlling bedrock conditions and not to excavate into bedrock. The proposed constructed channel will be shorter than the premining- disturbance channel, and the new channel will cross uncertain bedrock conditions. Both of these have the likely effect of imposing the steep longitudinal gradient that threatens the stability of the restored channel through this reach. Reasons given to not locate the channel along its historical path include: (1) a large amount of grading and removal of mining waste will be needed to access the historical pathway; and (2) there may be possible effects on mining infrastructure (i.e., the road at the top of the slope) because the slope will have to be flattened. Golder's recommended approach appears inconsistent with the amended consent decree, which states "Remove mining-related fill and sediments in the bed, banks and adjacent slopes" (emphasis added).

Also, Golder does not provide an analysis of the slope to demonstrate that there would be any effect on the mining infrastructure, because the Rock Pile does not appear to extend beneath the road. The Amended Consent Decree, page 12, states "Defendants shall also remove the existing aggregate rock pile and associated rock pile infrastructure, all culverts, riprap, and the road on top of the creek (concrete ramp), and set back the road to provide more room for a natural streambed and banks." Removal of the entire rock pile should be further analyzed.

2. Comment No. 24 – One of the points made in the original comment is that site-specific geotechnical and engineering geologic studies should be completed to support final design concepts, and it cautions against an overreliance on a field engineering approach. As Golder's (October 31, 2019) response indicates, field engineering is an important part of a construction project. However, the response further indicates that this is just a restoration project and that field engineering is all that is warranted. CDFW fully disagrees with this statement. This field engineering approach may threaten the success of critical parts of the restoration effort, such as the creek reach within the rock pile and material removal area. For example, the current plans anticipate removal of a portion of the rock pile, specifically removal of a portion of the toe slope. CDFW strongly advises that a thorough stability analysis be completed for the rock pile area given that it was dumped at the angle of repose and that the current restoration plan calls for partial removal of the pile's toe slope. CDFW does not recommend excavation into and removal of the toe of such a large, dumped slope without completing a study with stability analysis. A more thorough slope stability study should be conducted in critical areas, such as the rock pile.

San Francisco Bay Regional Water Quality Control Board

Please contact Brian Wines – 510-622-5680 / Brian.Wines@waterboards.ca.gov for information regarding the following item(s).

3. **Comments on the proposed "Observational Method" (Design-Build) proposal in the Technical Memorandum, Geologic and Geomorphic Assessment of Permanente Creek.**

Lehigh Hanson Permanente Quarry (Golder, October 31, 2019) and the Permanente Creek Restoration Plan, 90% Level Submittal, Design Basis Technical Memorandum (Waterways Consulting, Inc., October 31, 2019), Appendix C, Seismic Refraction Survey (Bedrock Analysis) (Norcal Geophysical Consultants, May 22, 2014).

In Sections 6.2.1 and 6.3.1 of the Technical Memorandum, Golder provides a rationale for not conducting additional field investigations into the depth of bedrock in the Material Removal Area and the Rock Pile Area prior to implementing the creek restoration project. Golder states that the existing data from borings and seismic studies are sufficient to develop design guidelines for field fitting the restoration design in response to the actual depth to bedrock in those two Areas. Conclusions about the sufficiency of existing data are based, in part, on boring logs from borings in the subject areas, which are provided in Appendix B to the Technical Memorandum, and a Seismic Refraction Survey conducted in 2014, which is included in Appendix C to the *Permanente Creek Restoration Plan, 90% Level Submittal, Design Basis Technical Memorandum*.

Based on the information we have reviewed to date, it appears that the *Permanente Creek Restoration Plan* includes restoring more natural grades to several reaches of Permanente Creek by excavating overburden/mining waste down to bedrock where possible, or native sediments when excavation to bedrock is not feasible. Geotechnical assessments have included drilling about 10 soil borings and performing a seismic refraction analysis to identify bedrock depths. In addition, significant geotechnical information derived from other site projects, aerial photos, and historical topographic maps were combined to produce restoration designs. Because it is infeasible to completely map channel bedrock to develop 100% restoration designs, 90% designs have been developed with respect to the most probable bedrock depths, based on the currently available information. Golder recommends that the *Permanente Creek Restoration Plan* be implemented using the “Observational Method” (also called Design-Build); data gaps are to be filled by observations during project implementation, and the restoration design is to be modified in the field, during construction. In general, Water Board staff consider this to be a reasonable approach to implementing the *Permanente Creek Restoration Plan*. However, we believe that the following conditions should be incorporated into the implementation of the Observational Method during creek restoration.

- i. Design-Build field decisions must be made by an on-site licensed geologist or engineer (someone who is not just qualified, but can be held accountable);
- ii. Probable alternative design options should be proposed and approved prior to construction. We recommend that the design team develop a Design-Build protocol that demonstrates the alternatives that may be employed to address all project objectives and concerns. We encourage the design team to develop a flow chart of potential problems, factors to consider, and acceptable options to resolve problems encountered during construction.

As an example of situations in which a flow chart would be valuable, information provided on page 17 of the Technical Memorandum outlines the potential problem of not encountering bedrock where it was anticipated. Since overburden/mining waste must be excavated, the design team must develop protocols to identify if the sediment at grade

and below it is native material or overburden/mining waste. The flow chart for this scenario and single objective might look something like this:

- i. State the potential problem encountered (soil at grade instead of bedrock);
- ii. List the factors that must be considered to meet project objectives and concerns (i.e., the necessity of distinguishing between native material and waste to determine when materials must be excavated and removed);
- iii. List the protocol for making that determination (e.g., soil borings, the minimum number of borings per area to be characterized, the chemical or physical characterizations necessary to distinguish native material from waste materials); and then
- iv. List the appropriate options for achieving restoration project objectives, based on results of the characterization protocols (e.g., native materials may be left in place, while overburden/waste materials must be tested for CAM17 metals or excavated to bedrock and backfilled with a specific source of clean material).

Such decision flow paths with protocols and options should be created for every potential problem that could reasonably be encountered as a consequence of the existing data gaps. The protocols and options should address attaining all of the restoration project's objectives (e.g., removal of waste/overburden from the creek, ensuring bank stability, providing riparian habitat along restored channel reaches).

4. Protocols are necessary to differentiate between native soils and overburden/mining wastes.

The Technical Memorandum does not outline how the project design team will differentiate between native soils and overburden/mining waste. Developing a protocol to make this distinction is critical to ensuring that overburden/mining wastes are removed from the creek, which is a key element to the restoration project and necessary for the protection of wildlife. Distinguishing between native materials and wastes by visual observation may be difficult, since the overburden materials derive from the same geologic units as the native materials and the size distribution of both materials are similar, according to descriptions of these materials in section 3.2, *Surficial Geologic Units*, of the Technical Memorandum.

5. Please compare the geotechnical recommendations for rock and fill/soil slopes in the reclamation plans and the creek restoration plans.

The reclamation plans appear to require that overburden slopes have a slope no steeper than 3:1. However, the creek restoration plan appears to allow some areas to have slopes of 2:1 (e.g., pages 4 – 5 of the Technical Memorandum). Please confirm that acceptable slopes for overburden in the reclamation plans and in the creek restoration plan are consistent.

6. Please clarify the nature of materials in the channel west of Reach 18.

The project documents state that the areas west of Reach 18 are depositional, and that the channel is a “jammed conveyance” adjacent to the Yeager Yard slope. However, the Yeager Yard slope is eroding and sliding. In addition, the overburden materials lack cohesion and are not compacted and, therefore, erosion of other West Materials Storage Area (WMSA) slopes

is highly likely. Due to the inputs to the creek channel from the Yeager Yard slope and WMSA slopes, we are not yet comfortable with the Technical Memorandum's assertion that the area west of Reach 18 only receives native soils from the south. Please develop and implement a protocol for assessing the actual source(s) of materials in areas of the creek channel that are said to be depositional in the Technical Memorandum.

7. Please develop guidelines for silt fencing in coordination with the U.S. Fish and Wildlife Service (USFWS).

Text in Section 2.4.5, of the Permanente Creek Restoration Plan, 90% Level Submittal, Design Basis Technical Memorandum (Waterways Consulting, Inc., October 31, 2019) states:

“Silt fence will be installed around staging areas and along the creek-side edge of the proposed floodplain bench excavation areas at the Channel Widening Area. Silt fence will be in place to trap mobilized sediment in case there is a rain event during construction. The silt fence will also act as a barrier to any loose material during floodplain bench excavation. Where substrate is too rocky to install silt fence, fiber rolls may be used instead.”

Please coordinate with USFWS staff in developing designs for silt fence installation around the work zone. In recent years, USFWS staff have noted situations in which silt fencing used as exclusion fencing has inadvertently resulted in mortalities of California red-legged frogs (CRLF). At a recent project downstream of the Lehigh Hanson quarry, CRLF were desiccated when silt fencing prevented them from reaching ponds. USFWS has also learned that CRLF will attempt to pass through silt fencing that they can see through, so mesh materials that are visually transparent to CRLF should not be used in silt fencing when CRLF may be present.

8. Please develop protocols for characterizing selenium levels in sediments in ponds.

Section 2.7.7 of the Permanente Creek Restoration Plan includes a discussion of removing sediment from Pond 13. “Fine sediment impounded within the pond will be removed so the material is not transported downstream after the restoration project is implemented. The limits and thickness of accumulated sediment have not been surveyed. Accumulated fine sediment occurring below elevation 805.0 will be removed. Removal of fine sediment will occur until alluvial material (i.e., gravel/cobble) or bedrock are encountered.” Selenium levels up to 20 mg/kg have been measured in sediments in Pond 13. Based on toxicity data for amphibians and the bioavailability of selenium in sediment, concentrations greater than 4 mg/kg of selenium may be deleterious to CRLF and other wildlife. Prior to excavating sediments from Pond 13, a sampling and analysis plan for selenium in sediments in Pond 13 should be developed and submitted to the County and resource agencies for review. In addition, the project design team should develop a protocol for appropriate disposal of selenium-containing soils and sediments as a function of selenium concentrations and on the likely bioavailability of selenium under the various disposal options for the sediment.

9. Please develop designs that allow for the continued operation of Final Treatment System (FTS) - Upper

Section 2.7.9 of the Permanente Creek Restoration Plan discusses restoration implementation at the Material Removal Area (Reaches 17 & 18, Sheets C23-C26). A footnote in this section states: “An alternative concept design to that shown on Sheets C23 and C24 has been prepared should the regulatory agencies and Lehigh conclude that the FTS-Upper should stay in place to treat water generated from the site. The alternative concept is presented on Figures 4 and 5, which are attached to the Updated Response to March 5, 2018 County of Santa Clara, Department of Planning and Development, Grading Application Incomplete Letter, dated November 15, 2018.”

In order to ensure sufficient dry season flows in the restored creek channel, the design team should assume that FTS-Upper should stay in place and implement the restoration design option that allows for the continued long-term operation of FTS-Upper, until creek flow capture by the quarry pit has been remediated.

Santa Clara County Land Development and Engineering Division

Please contact Chris Freitas – 408-299-5732 / Chris.Freitas@pln.sccgov.org for information regarding the following item(s).

10. The County has jurisdiction of all proposed work outside the Reclamation Plan Area under the County Grading and Drainage Ordinance, while work inside the Reclamation Plan Area (RPA) is governed by the Surface Mining and Reclamation Act (SMARA). Accordingly, the Grading Approval and subsequent Grading Permit from the County of Santa Clara will only provide authorization for grading work outside of the RPA. The project plans currently show grading work both inside and outside the Reclamation Plan Area, and therefore the exact scope and limits of work subject to the County Grading and Drainage Ordinance is unclear. Please provide a separate set of plans associated with the Grading Approval that shows only the grading work and grading quantities occurring outside of the Reclamation Plan Area. Along this jurisdictional breakout, please include the following information:

A. Please provide earthwork calculations and quantities on the proposed grading plans within the area subject to the County's Grading and Drainage Ordinance.

B. Please provide the following Grading Ordinance required elements of a Preliminary Grading Plan:

- 1) The complete site boundaries and locations of any easements and rights-of-way traversing and adjacent to the property, appropriately labeled and dimensioned.
- 2) The locations of any existing and proposed roads, buildings, wells, pipelines, watercourses, private sewage disposal systems, and other structures, facilities, and features on the site and the locations of any improvements on adjacent land within twenty-five (25) feet of the proposed work (e.g. septic systems, pipelines, wells, retaining walls, etc.).
- 3) Location of known landslides, fault zones, liquefaction zones and other soil or geologic hazard areas.

- 4) Location of cut, fill, and daylight and slope transition lines for all the proposed grading work and limits of the work.
- 5) Boundaries of any floodplain or floodway areas within the Federal Emergency Management Agency's Flood Hazard Zones and any existing and/or proposed flood control facilities.

C. Please clearly identify all roads maintained and not maintained by the County with right-of-way width and recording information.

D. Based on the topography provided, the proposed grading may impair drainage flows. Please provide a Drainage Plan that demonstrates the following items:

- 1) The proposed improvements will not cause problems to the nearby properties;
- 2) The proposed development is not subject to significant damage from the one percent flood.

E. Please include all applicable easements affecting the parcel(s) with benefactors and recording information on the site plan.

F. Please show the location of floodplain, floodway, with all known Base Flood Elevations on plan in the project area. Please provide a Federal Emergency Management Agency (FEMA) approved Conditional Letter of Map Revision for the work in the floodplain and floodway.

G. This project is located within the San Francisco Bay Watershed, and may include ten thousand square feet or more of new or replacement impervious area. The preliminary grading plan shall include storm water treatment complying with the 2001 NPDES Permit Standards, Section C3, in its design. Please provide the North County Stormwater Questionnaire linked below:

https://www.sccgov.org/sites/dpd/DocsForms/Documents/Stormwater_CWP_Questionnaire_NC.pdf

III. CEQA Review

The following actions and additional information related to CEQA review are required before the County can complete the environmental review process and render a decision:

Provide a Consolidated Permanente Creek Restoration Plan

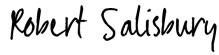
1. Please submit a consolidated Permanente Creek Restoration Plan that includes all information and final technical reports submitted to the County. The Permanente Creek Restoration Plan was submitted to the County as separate files and does not constitute a complete description of the proposed PCR. The supplemental material submitted to the County on the November 2, 2017, August 23, 2018, November 15, 2018, August 7, 2019,

and November 21, 2019, should be incorporated into a single consolidated Permanente Creek Restoration Plan that the County can use for preparation of the CEQA document.

2. Additional data needs will be provided to the applicant once EIR preparation is underway. Once this information has been submitted, provided it is adequate, the County will complete its environmental review and render its decision on the Grading Approval.

If you have any additional questions regarding this application, please call me at robert.salisbury@pln.sccgov.org / (408) 299-5785.

Sincerely,

DocuSigned by:

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Robert Salisbury
Senior Planner

cc: Jacqueline R. Onciano, Director, Department of Planning & Development
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Paul Fry, Engineering and Geology Unit Manager, Division of Mine Reclamation
Roger Lee, Acting Public Works Director, City of Cupertino