Lehigh Hanson
HEIDELBERGCEMENT Group

May 1, 2017

Mr. Marty Hartzell
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Re: Former Lehigh Calaveras Cement Operation, San Andreas, CA
Draft Waste Discharge Requirement and Attachments - Comments

Mr. Hartzell:

Thank you for the opportunity to comment on the Draft Waste Discharge Requirement (WDR) for the former Lehigh Calaveras Cement plant site in San Andreas, California (Lehigh). The WDR, among other items, addresses two existing Cement Kiln Dust (CKD) waste units created by the former Calaveras Cement Plant. Following are Lehigh's comments on the Draft WDR. Lehigh appreciates the productive dialogue with Regional Water Quality Control Board (RWQCB) staff that has occurred in the recent past while addressing this site.

Ownership Comments

1. The property subject to this WDR is owned by Calaveras Cement Company (indicated on land deeds) and its successor, Lehigh Southwest Cement Company. Please change all ownership references in all associated documents to reflect this.

Unit Closure Comments

1. Prohibition of Introducing Collected Leachate into the Quarry Pit Lake (Discharge Prohibition A.5.)– Since the closure of CKD 1, leachate collected in the associated Leachate Collection and Removal System (LCRS) has been pumped to the large Quarry Pit Lake. The water quality of the lake has also been monitored during this period and has shown no measureable changes as a result of the introduced leachate. The Draft WDR would prohibit this pumping from CKD ,1 and ultimately from CKD 3 as well, after CKD 3's closure with a supplementary LCRS constructed. This prohibition was first communicated to Lehigh in the Draft WDR thirty (30) days ago and represents a leachate management change that will be considerably difficult to address. RWQCB Staff (Staff) have indicated that possible options include a) storage, b) treatment, c) offsite disposal, and d) continuance of pumping into the Quarry lake that would also require a groundwater monitoring network to assess any possible impacts. Lehigh may also develop other potential options, but, evaluating the feasibility of this change in leachate management, designing appropriate equipment, procurement, construction, installation, and any associated permitting that may be required, cannot reasonably be completed in 40 days, i.e., prior to the approval of the WDR tentatively scheduled for hearing in June 2017. Thus, Lehigh requests that the feasibility of the required change in leachate management for both CKD 1 and CKD 3 be developed during the design engineering effort for CKD 3 closure (see below), and become part of that project schedule, which includes report submittal, RWQCB approval, and ultimate construction by December 31, 2018. However, a change in the current practice to address the

proposed required change in leachate management recently communicated, cannot be accurately determined at this time and could extend the final compliance date. This cannot be fully determined until study has been applied to the issue.

2. Determination of Appropriate Seismic Event for CKD 3 Closure Design - The Draft WDR indicated that the CKD 3 closure design consider seismic loading conditions but was not specific to the required design event. This design criterion has the potential to significantly impact the final cover grading, and therefore, it needs to be clarified prior to initiating the closure design.
3. Submittal of Design Plans for CKD 3 Closure and Leachate Management – As discussed above, the design of the CKD 3 closure approach will rely on key factors that have just recently been communicated to Lehigh or are still being determined. Also, it is possible that further factors may change or be introduced prior to adoption of the WDR by the Central Valley Board, tentatively scheduled for June 2017. Thus, Lehigh cannot fully define and implement all of the design factors until WDR approval and completion of discussion with Staff. Also discussed above, the recently communicated required leachate management change must be evaluated and designed as part of the overall closure. Thus, Lehigh requests that the submittal date for the design plans for CKD 3 closure and leachate management be submitted 180 days after the date of approval by the Regional Board. Lehigh also proposes to provide Staff with two interim design update reports at 60 and 120 days after approval.

Project Background Comments

1. Page 3 paragraph 7.c. – Water pumped from the CKD 1 LCRS had been measured as essentially zero through November 2016 after changes and improvements had been made to the CKD 1 LCRS during Summer 2016. Between mid-December 2016 and mid-March 2017, approximately 300,000 gallons of water per month had been pumped.
2. Page 5 paragraph 11 – CKD 3 contains an estimated 430,000 cubic yards of CKD (not 850,000 to 1,000,000 cubic yards)
3. Page 6 paragraph 15 – The CKD in both CKD 1 and 3 units has been in place for many decades and has been hydrated during that period. Hydration drives the chemical reaction to “harden” cement into concrete and thus the CKD now resembles concrete more than cement. This makes the material less chemically reactive.
4. Page 6 paragraph 18 – CKD 3 has been closed for a period exceeding 10 years with grading and a soil cover to prevent direct exposure and erosion of the CKD. Stormwater BMPs have been maintained as well to minimize surface water impacts.
5. Page 8 paragraph 23 –The Quarry Pit Lake is located in a limestone quarry and contains water that has been in continuous contact with exposed limestone on the pit walls and floor. Limestone influenced waters typically exhibit a circum-neutral to alkaline pH and slightly elevated Total Dissolved Solids (“TDS”) and electrical conductivity“(EC”) levels due to the calcium carbonate nature of the rock. This water quality is unlikely to have adverse environmental impacts because the water quality of the Quarry Pit Lake are demonstrative of the natural contact of water with native, in-place limestone.
6. Page 10 paragraph 38 – The groundwater downgradient of CKD 3 exists in two chemically different aquifers. A shallow aquifer, approximately 20 feet deep and apparently ending just downgradient from MW-8, shows influence from CKD 3. A

deeper aquifer below approximately 20 feet and apparently extending down the CKD 3 valley shows no sign of impact from CKD 3 as evidenced from a discrete groundwater sample result.

Closure / Post Closure requirements

1. Page 13 paragraph 49 – As discussed above, development of CKD closure design plans are significantly affected by factors communicated to Lehigh after March 31, 2017, some not yet resolved, and potentially others introduced prior to Board approval of the WDR. Lehigh requests this information be added to paragraph 49, or, the statement that design plans were due March 31, 2017 be removed.
2. Page 13 paragraph 50 – It has not yet been determined that a vegetative soil layer will be incorporated into the closure. Title 27 allows the alternative of *not* including a *vegetative* soil cover.
3. Page 13 paragraph 54 – Lehigh believes that "CKD 2" should be replaced with "CKD 3"
4. Page 16 paragraph A.4. – Lehigh understand from Staff that introduction of leachate into the Quarry Pit Lake may be allowed if an appropriate groundwater monitoring network is installed. Lehigh requests that this paragraph reflect that possibility.
5. Page 17 paragraphs C.4. and C.6. – As discussed above, Lehigh has requested to develop an appropriate leachate management approach for both CKD 1 and CKD 3 to be submitted 180 days after Board approval of this WDR. The potential management approach is not limited to the options in these paragraphs (C.4 and C.6 of the Draft WDR). Lehigh requests that these paragraphs be removed.
6. Page 17 paragraph D.6. – Excessively oversizing pumps to collect more than twice the maximum rate expected results in poor pump performance and premature failure (rapid on-off cycles). Accordingly, the RWQCB generally specifies for landfills that the pump be sized such that the leachate collected does not exceed 85% of the pump capacity. We request that the language be revised to say "the LCRS extraction system will be designed so that it can remove twice the anticipated leachate volume" instead of the "pump." We can achieve this system capacity by adding a second extraction point in which a second pump could be added if needed.
7. Page 18 paragraph F – Lehigh requests that an alternate Financial Assurance Mechanism be allowed such as a surety performance bond issued by a top rated U.S. surety bond company. Lehigh routinely secures many such bonds for mining reclamation financial assurances in California and North America. These bond mechanisms are accepted by the State of California for SMARA Financial Assurance obligations.
8. Page 21 paragraph 10.A. – As discussed above, Lehigh requests that the due date in this paragraph be revised to "180 days after approval of this WDR by the Regional Board"

Monitoring and Reporting Program Comments

1. Page 2 paragraph 1 – Lehigh requests that purge water from groundwater well sampling be discharged to the ground adjacent to the well being sampled.
2. Page 6 paragraph 3 – Annual LCRS Testing – Lehigh believes that introduction of fresh water into the LCRS as a test for the system functionality for both CKD 1 and CKD 3 does not address the fundamental concern that the system equipment is working. Lehigh proposes to submit an alternative inspection/testing approach with the CKD 3 design

plans and leachate management approach as discussed above. This alternative approach will have the goals of regularly assessing the proper function of an LCRS, identifying any deficiencies, correcting any deficiencies, and reporting this information.

3. Page 7 paragraph 4.B. – Lehigh has previously submitted an analysis that the Quarry Pit Lake available storage volume easily accommodates additional runoff into it from the relatively small surrounding drainage area, and thus, the likelihood of this lake overflowing from a rain event is exceedingly small. Lehigh request that this requirement be removed.
4. Page 9 paragraph 1.h. – Lehigh requests that rainfall data may be acquired from a nearby, publicly available, National Weather Service weather station or similar. One is located approximately 2 miles north of the facility.
5. Page 9 paragraph 1.i. – Lehigh requests that this paragraph be corrected from the current “Error! Reference source not found” statement.
6. Page 11 paragraph C.1. – Lehigh requests this section be clarified to state the frequency of and submittal date for the Water Quality Protection Standard Report.
7. Page 13 paragraph 5 – Lehigh requests that a new point of compliance for CKD 3 be proposed in the design report. The point of compliance should be hydraulically downgradient of the waste management unit and MW-8 is located within CKD. After the limits of the WMU are established in the design report, Lehigh can propose a location for a new well to represent the point of compliance for CKD 3. MW-8 will then be removed.

Gregory Knapp

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