Notes and Photographs from 2018 Annual SMARA Inspection Conducted on 8-09-2018

by

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The 2018 annual SMARA inspection of Lehigh Quarry was conducted for 4.5 hours on August 9, 2018. In attendance were the following persons (affiliation indicated):

James Baker (County Planning)
Christopher Hoem (County Planning)
Steve Beams (County LDE)
Tressa Jackson (Lehigh)
Manjunath Shivalingappa (Lehigh)
Erika Guerra (Lehigh)
Talia Flagan (Lehigh)

The numbers on the map above correspond with the nine areas within the mining boundary of the 2012 approved Reclamation Plan Amendment:

1. North Quarry (main pit)
2. West Materials Storage Area (WMSA)
3. East Materials Storage Area (EMSA)
4. Crusher/conveyor
5. Surge Pile

6. Rock Plant
7. South Quarry Exploration Area
8. Permanente Creek Restoration Area (PCRA)
9. Buffer Areas that surround active mining areas.

The mine was active during the 2018 inspection. The following paragraphs describe County inspectors' observations in each of the areas [with **PHOTOs** and captions that describe what we observed].

1. North Quarry (Main Pit)

The highwalls on the north, east, and south are essentially complete (excavated benches); while the southern side of the pit is still being actively mined (blasting and loading). Extraction of limestone was on-going in the main pit. Overburden materials were being hauled to the rock plant area to be sold. Material from Yeager Yard was used to begin the lowest portion of the backfill of the north side of the main pit. (Yeager Yard is located between WMSA and Permanente Creek.) [See **PHOTO #1** and **PHOTO #2**.]

2. WMSA

No new material was being placed in the West Materials Storage Area (WMSA). The northeast-facing slopes of the WMSA have well-established vegetation (grasses and same shrubs). [See **PHOTO #3** and **PHOTO #4**.] Topsoil and organics are stored and covered in the central portion of the WMSA. [See **PHOTOS #5A and #5B**.] The south slope of WMSA was observed. [See **PHOTO #6**.] (Most of the material stored in the WMSA will be moved and placed as backfill into the main quarry pit. Topsoil will be used for plantings.)

3. EMSA

BMPs have been placed on the slopes (wattles) and along the benches (rock check dams and silt fences). [See **PHOTO #7**.] Surface drainage is directed into Pond 30 which is rock-lined with non-limestone rock. [See **PHOTO #8**.] Water no longer discharges from Pond 30 into Permanente Creek. Instead, it is captured in a vault and pumped to the upper treatment system near the main pit. [See **PHOTOS #9A and #9B**.]

4. Crusher/Conveyor

The crusher was constructed in 2013 against a 70-foot high retaining wall. Drainage from around the crusher is directed into a sump which overflowed due to a power failure in 2014. As a result, an erosion gulley formed on the steep slope west of the crusher. The operator has had the gully lined with jute netting and several silt fences. [See **PHOTO #10**.] Eroded material accumulated at the toe of the slope and extended into the eastern side of Pond 13. [See **PHOTO #11**.] The operator had a soil-nail wall installed in the head of the erosion gully located downhill of the sump. The crusher and conveyor will be removed prior to final reclamation. The tunnel through which the conveyor travels will be filled and sealed prior to closure. Wildlife protection procedures (outlined in the RPA and COAs) must be followed when the tunnel is backfilled. A half-pipe exists downstream of Pond 13 for the continuance of Permanente Creek. [See **PHOTO #12**.] The Permanente Creek Restoration Project proposes removal of the half-pipe.

5. Surge Pile

The surge pile is approximately the same size as last year. [See **PHOTO #13**.] Sediment that erodes from the surge pile is detained in ponds. Next to the Surge Pile are slopes above Pond 13. [See **PHOTO #14**.] During the Permanente Creek Restoration Project, the surge pile will be removed, and the underlying creek channel will be restored once the project is approved.

6. Rock Plant

The rock plant did not appear to be operating during the inspection. There are numerous stock piles and equipment in the rock plant area. Runoff from the rock plant is directed into Pond 17. [See **PHOTO #15** and **PHOTO #16**.]

A new haul road at the rock plant was illegally graded. See the attached Notice of Violation, dated August 17, 2018 for photos and further details.

7. South Quarry Exploration Area

Located southwest of Permanente Creek, the area was disturbed by excavation of drilling pad and associated roads in order to evaluate the mineral resources in that area. However, the quarry operator withdrew the application to expand the mine into that area and has allowed the natural vegetation to become reestablished there. During the past several years, the growth of grasses and brush appears to have mitigated the previous ground disturbances. A ground survey will be needed to confirm the adequacy of the revegetation to meet the performance standard in the RPA prior to the County granting reclamation closure of the area.

8. Permanente Creek Restoration Area (PCRA)

Plans for restoration of Permanente Creek adjacent to the mine are still in review by several regulatory agencies. Once the plans have been approved, the FACE will need to be revised to reflect the costs of implementing the "construction" described in the plan. For now, the County considers the area to be in compliance with SMARA pending the outcome of agency reviews.

9. Buffer Areas

The undisturbed areas around the active mine are intended to protect the quarry from encroachments by other land uses and to protect nearby land uses from adverse effects of the mining. At the time of our inspection, the Buffer Areas appeared undisturbed and providing the buffer effect intended, except in the case of the new haul road by the rock plant.

VIOLATIONS

Several SMARA violations were noted during the 2018 inspection. Refer to the attached Notice of Violation for further details.

OTHER OBSERVATIONS

The Quarry is taking actions to comply with the requirements of the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) with regard to water quality and discharge permits. The Upper Treatment System is operational at and above Pond 4A. Treated water from the Upper Treatment System is blended in a Blending Tank and then discharged into Permanente Creek. [See **PHOTO #17,**

PHOTO #18, and PHOTO #19.] This treatment system includes a biological reactor, augmented with a reverse osmosis system, and ultra-filtration to treat water before being discharged into Permanente Creek. According to monthly water quality reports submitted to the SFBRWQCB, the selenium concentrations in discharged water meet water quality standards.

Large check dams and non-limestone water bars were observed along the WMSA road. [See **PHOTO #20 and PHOTO #21**.]

CONCLUSIONS

County staff observed that all activities and changes made ***within*** the approved Reclamation Plan Area during the last year are consistent with the Reclamation Plan. However, the County of Santa Clara has found that the Permanente (Lehigh) Quarry is currently not in compliance with the provisions of SMARA due to the grading of an illegal haul road ***outside*** the Reclamation Plan Boundary. Consequently, a Notice of Violation was issued on August 17, 2018. A Stipulated Order to Comply will be executed to correct the violations.

PHOTO #1 – North Quarry Main Pit (looking southwest)

PHOTO #2 – North Quarry Main Pit (looking northeast)

PHOTO #3 – WMSA (looking north)

PHOTO #4 – WMSA (looking northwest)

PHOTO #5A – Topsoil Stockpile

PHOTO #5B – Topsoil Stockpile (near)

PHOTO #6 – WMSA South Slope (looking southeast)

PHOTO #7 – Southern slopes of EMSA (looking north)

PHOTO #8 – Eastern slopes of EMSA, west of Pond 30 (looking west)

PHOTO #9A – Vault and pump at Pond 30

PHOTO #9B – Pond 30 (looking south)

PHOTO #10 – Debris track below crusher sump

PHOTO #11 – Pond 13

PHOTO #12 – Half-pipe for outflow of Pond 13

PHOTO #13 – Surge Pile looking east

PHOTO #14 – Slopes above Pond 13

PHOTO #15 – In-flow to Pond 17 and failing sheet pile wall

PHOTO #16 – Pond 17 is now lined

PHOTO #17 – Pond 4A and Upper Treatment System

PHOTO #18 – Pond 4A and Blending Tank, looking east

PHOTO #19 – Pond 1250, to the southwest of the North Quarry Main Pit

PHOTO #20 – Water bars and check dams on the WMSA road

PHOTO #21 – Check dam along WMSA road