

**PERMANENTE QUARRY  
SUPPLEMENTAL PROJECT DESCRIPTION (JULY 2011)**

**INTRODUCTION**

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The Permanente Quarry (“Quarry”) is a large surface mining operation located in an unincorporated section of the County of Santa Clara (“County”). The Quarry is one of the most significant sources of construction materials in the region. The principal product is high-quality limestone for cement manufacturing, and the Quarry also produces large quantities of aggregate products from other rock types. The Quarry is considered a legal nonconforming use, as mining commenced in 1903 and has been continuous since 1939. Lehigh Southwest Cement Company (“Lehigh”) operates the mining operation, and Hanson Permanente Cement, Inc. owns the underlying land.

The County approved the existing reclamation plan for the Quarry in March 1985. In May 2010, Lehigh applied to the County for a reclamation plan amendment and conditional use permit. The “Comprehensive RPA” project proposed to amend the existing reclamation plan to include all existing mining disturbance, and also to open new mining areas south of Permanente Creek. The Comprehensive RPA project would have broadened the existing reclamation plan to include a total of 1,105 acres.

Lehigh is at this time filing an amendment to the application that would reduce the project’s size and scope. There are three fundamental changes in comparison to the May 2010 application: (1) withdraw the proposal to open new mining areas south of the creek; (2) backfill the North Quarry using the existing overburden in the West Materials Storage Area (“WMSA”), instead of harvesting overburden from new mining areas; and (3) consolidate the East Materials Storage Area (“EMSA”) in this application rather than processing the reclamation plan amendment for that area separately.

This supplemental project description augments the May 2010 project description to provide an overview of the changes to the application, together with certain information regarding the scope, timing and phasing of the reclamation plan amendment (“Amendment”) in its updated form. More detailed technical information will be contained in the amended application filed with the Planning Department.

**AMENDED PROJECT OBJECTIVES**

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The Amendment describes the reclamation of a major limestone and aggregate quarry which has been operating for over 70 years. Reclamation is legally required under California’s Surface Mining and Reclamation Act (Pub. Resources Code, § 2710 et seq.) (“SMARA”). As articulated by SMARA, reclamation policy seeks to assure that:

- (a) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.

(b) The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.

(c) Residual hazards to the public health and safety are eliminated.

(Pub. Resources Code, § 2712.)

The Amendment, accordingly, provides for final reclamation, allows for continued mining production concurrently during reclamation work, and leaves in place those features and infrastructure as necessary to allow future mining of the remaining onsite mineral deposits. The project objectives are as follows:

- Maintain a local, reliable and economic source of Portland cement-grade limestone and construction aggregate to serve market demands in Santa Clara County, the San Francisco Bay Area and northern California.
- Continue operations at an existing limestone quarry that is uniquely situated to provide for regional needs and that lies in a State-classified MRZ-2 resource area meeting the requirements of SMARA and County Code Chapter 4.10.370.
- Reclaim existing mining disturbance to conform to the surrounding topography in contour and vegetation, to achieve long-term slope stability, and permit alternative post-mining uses.
- Apply reclamation standards under SMARA to areas disturbed by mining operations within Lehigh's property boundaries.
- Reclaim existing mining disturbance to avoid or eliminate residual hazards to public health and safety.

## **AMENDED PROJECT DESCRIPTION**

The amended project encompasses a significantly smaller area. The May 2010 application included 1,105 acres, covering existing mining operations and an area known as the South Quarry where mining operations would be extended. By removing the South Quarry and making other changes, Lehigh has reduced the size of the Amendment.

The table below lists the major Quarry areas and anticipated changes in acreage. Currently, the area under the Amendment holds approximately 543 acres of mining operations. Lehigh estimates that continuing mining and future reclamation activity will occupy another 51 acres, for 593 acres of ultimate disturbance. To this, Lehigh has added an approximately 217-acre vegetated buffer area where no mining operations will occur, for a total RPA Area of 811 acres.

<b>Component</b>	<b>Existing Acres</b>	<b>Ultimate Acres</b>
North Quarry	240.8	265.4
WMSA	140.1	172.6
EMSA	74.0	74.0
Crusher / Support Area	60.4	53.4
Surge Pile	9.0	8.8
Rock Plant	18.2	19.1
Buffer	5.2	217.2
<b>Total with Buffer</b>	<b>547.7</b>	<b>810.5</b>
Note that some changes in areas are based on reclassification. The North Quarry gains the 7.0 acres lost from the Crusher / Support Area, and the Rock Plant gains 0.2 acres from the Surge Pile.		

Because South Quarry development is no longer anticipated at this time, Lehigh’s application for a conditional use permit is being withdrawn. Future mining in the South Quarry or other portions of Lehigh’s 3,510-acre ownership outside of the Amendment boundary is not foreclosed by the Amendment, but would require a future application.

### **Summary of Amendment**

The Amendment includes site-specific reclamation standards that would apply to disturbed lands within the Amendment boundary. The standards have been designed to meet the current performance standards in Article 9 of SMARA’s regulations. (Cal. Code of Regulations, tit. 14, § 3700, et seq.) The final post-mining end use will remain open space.

The following discussion describes the reclamation of the Quarry in the event that the Amendment is approved. It also describes continuing mining operation until reclamation begins in each area, so the relationship between mining and reclamation may be understood. Mining is not, however, part of the project. The Quarry is formally recognized as a vested use and Lehigh does not require further entitlements to mine for rock, engage in overburden storage, or conduct other forms of surface mining operations as defined by law.

### **North Quarry Reclamation**

Mining for limestone and other rock types in the North Quarry would continue until mining reaches its maximum depth and breadth. The ultimate configuration of the North Quarry described in the Amendment is similar to that described in the May 2010 application. The final, maximum depth of the excavation will reach 440 amsl, which represents the same depth shown in May 2010 and is approximately 50 feet below the maximum depth listed in the existing 1985 reclamation plan.

The objectives of North Quarry reclamation are the achievement of long-term slope stability, the protection of the northern ridgeline, and elimination of a permanent surface water impoundment at the North Quarry bottom. The mechanism for achieving these objectives remains the use of backfilling.

A different source of backfill material would be used than described in the May 2010 application. Lehigh would use the existing WMSA overburden stockpile as the primary material source, rather than overburden that would have been generated from mining in the South Quarry. A lesser amount of backfill material also will be generated by the North Quarry itself, as mining continues and generates additional overburden that requires storage. The phasing and timing of these mining and overburden activities are described further below.

Backfill would be placed in the North Quarry to establish a base elevation of 990 amsl. Backfill material also would be placed at higher elevations against the existing walls in order to flatten the slope angles to ensure long term slope stability. With this material in place, the North Quarry will no longer resemble an excavation, and feature continuously down-sloping sides that provide positive drainage into the creek. Approximately 60 million tons of backfill material will be used, comprised of 48 million tons harvested from the WMSA, and 12 million tons generated by ongoing North Quarry mining and placed against the west wall. Reclaimed slopes in the North Quarry will not exceed 2.5(H):1.0(V) overall.

The movement of backfill materials from the WMSA to the North Quarry will be achieved by a combination of off-road haul trucks and a temporary conveyor circuit. Employing conveyors rather than trucks exclusively will allow for a substantial reduction in truck emissions, and also assist Lehigh to separate high-quality materials for production uses that are expected to remain in “pockets” in the WMSA stockpile.

Resoiling and revegetation will follow after the backfilling process is complete. Resoiling will consist of a minimum of one foot of topsoil medium placed over backfilled areas, and in other areas of the North Quarry according to slope angles and type of vegetation planned. Resoiling will be followed by installation of erosion control measures, then reseeding with native plants. These revegetation activities will be followed by a maintenance and monitoring period until the reclamation performance targets in the Amendment are achieved. Details are in the Amendment and its accompanying Revegetation Plan.

### **WMSA Reclamation**

The WMSA presently exists as a large overburden stockpile featuring the approximate final elevations and contours identified in the 1985 reclamation plan. The May 2010 version of Lehigh’s application would have left the WMSA mainly intact, apart from minor changes to the finished grades and the linkage to the North Quarry’s west wall backfill.

The Amendment would harvest approximately 48 million tons of overburden material from the WMSA for use as North Quarry backfill. This would effectively deplete the majority of the WMSA stockpile and return the WMSA to elevations and contours that are similar to the pre-mining conditions for the area. During this process, valuable limestone and aggregates materials will be separated for processing. Remaining pockets of overburden would be graded to blend into the hillside and the surrounding topography. Reclaimed slopes in the WMSA will not exceed 2.5(H):1.0(V) overall.

The changes in visual appearance from WMSA relocation are expected to be viewed favorably by the community. The upper elevations of the WMSA stockpile are currently visible from northern vantages. These areas appear as a distinct strip along the ridgeline without mature vegetation which marks the surrounding area. Relocating the WMSA stockpile will restore the ridgeline's approximate pre-mining appearance for northern views.

The WMSA revegetation plan is similar to the proposal for the North Quarry. Revegetation would consist of a minimum of one foot of topsoil medium over remaining areas of overburden, and in other WMSA areas according to the slopes, exposures and type of vegetation. Following installation of erosion controls, the Amendment calls for reseeded with native plants and extended maintenance and monitoring until the reclamation performance targets are achieved.

### **EMSA Reclamation**

The EMSA is not included in the existing 1985 reclamation plan. Lehigh filed a proposed reclamation plan amendment for the EMSA in April 2009, which the County has been processing. Administratively, the April 2009 application is being incorporated into the amended application for the Comprehensive RPA, although the reclamation details for the EMSA have not changed and will remain under the Amendment as proposed in April 2009. Those plans are incorporated into the Amendment.

The conclusion of overburden storage and beginning of reclamation activities in the EMSA will occur sooner than the remainder of the Quarry. As described in greater detail in the phasing schedule below, storage activities in the EMSA are expected to end by 2015. At that time, final reclamation in all areas of the EMSA will commence.

As fully built out, the EMSA will contain a maximum of 6.5 million tons of overburden material, and elevations from approximately 500 feet to 900 feet amsl. The EMSA revegetation plan is essentially the same as proposed in April 2009, with the exception that the topsoil depths have been increased in some areas and the revegetation strategy has been refined to reflect the most recent test plot data. Reclaimed slopes within the EMSA will not exceed 2.6(H):1.0(V) overall.

### **Rock Plant and Surge Pile Reclamation**

The Amendment would maintain the May 2010 proposal for reclamation at the Rock Plant and Surge Pile. At the conclusion of all rock processing activities at the Quarry, equipment used in conveying and processing will be dismantled and removed, and reclamation grading will commence. For the Surge Pile, regrading consists of removing stockpiled material and returning the land to its approximate pre-stockpile contours. For the Rock Plant, regrading consists mainly of drainage improvements and erosion controls. Revegetation would follow in both areas according to the Amendment.

### **Reclamation Phasing and Timing**

The Amendment adopts a simplified phasing schedule, compared to the complex schedule needed to accommodate the South Quarry. Mining and reclamation will occur in three distinct phases through approximately the year 2030, followed by reclamation maintenance and monitoring until performance standards have been achieved.

Phase 1 describes the period after project approval through the exhaustion of mining operations in the North Quarry in approximately 2020. This phase is characterized by ongoing mining operations in the North Quarry, although two reclamation-related activities will occur in this phase. First, by 2015, overburden storage is scheduled to shift from the EMSA to the North Quarry for placement against the North Quarry’s west wall. Second, EMSA reclamation activities will commence in full.

Phase 2 commences in approximately 2021 after North Quarry extraction ends. At this time, excavation in the WMSA begins and continues over a period of at least five years, through 2025, until North Quarry backfilling is completed. Material will be transported from the WMSA to the North Quarry using a combination of trucks and a temporary conveyor, to a maximum of 9 million tons per year. Portions of the WMSA containing quality limestone and aggregates would be separated for subsequent processing. Revegetation will commence in this phase as conditions allow, where final contours are reached, and excavation and backfilling are completed.

Phase 3 commences in approximately the year 2026, once the North Quarry has been backfilled to the height and configuration shown in the Amendment. This phase consists of revegetation, and reclamation monitoring and maintenance. The Rock Plant and Surge Pile will cease operating in this phase, and reclamation will commence in these areas. Reclamation also begins in all other disturbed areas that have not yet entered active reclamation. Phase 3 is scheduled for five years, corresponding to the timing expected for revegetation to establish according to the performance standards in the Amendment. Phase 3 will extend as needed until these standards are met.

The table below summarizes the activities during each phase.

Phase	Years (estimate)	Summary of Activities
1	2011 – 2020	Continued North Quarry mining until completion; overburden storage in EMSA and North Quarry west wall; EMSA storage ends and EMSA enters active reclamation.
2	2021 – 2025	WMSA stockpile is excavated and North Quarry receives this material as backfill; EMSA reclamation is completed.
3	2026 – 2030	North Quarry backfilling is completed; Rock Plant is dismantled then reclaimed; remaining disturbed areas to enter final reclamation.

The schedule with respect to Phase 1 is based on annual average mineral production of 4,700,000 tons (limestone and aggregates). This estimate assumes a market demand comparable to past production during the baseline period. The actual timing of mining and reclamation may vary depending on market demand and conditions encountered during mining. Lehigh does not expect any change in the intensity of processing, blasting, water use, electrical use, or onsite or offsite traffic during the remainder of mining operations compared to existing conditions.

### **Other Changes**

The amended application could result in other, relatively minor changes to employment, site fencing and security, and other matters that will require consideration either under SMARA

or as part of the CEQA review for the project. Details on these changes will accompany the amended application.

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