SANTA CLARA COUNTY, CALIFORNIA

STEVENS CREEK QUARRY

MINE AND RECLAMATION DESCRIPTION FOR USE PERMIT AND RECLAMATION PLAN AMENDMENT

CA MINE ID 91-43-0007

DECEMBER | 2020

Lead Agency: Santa Clara County Department of Planning and Development

Prepared for: Stevens Creek Quarry, Inc.

Preparer: Benchmark Resources



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Lead Agency:

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1. OVERVIEW

Stevens Creek Quarry (SCQ) is an existing mining and processing operation located in southwestern Santa Clara County (County) (as shown in Figure 1, "Regional Location," and Figure 2, "Site Location"). SCQ and its predecessors have continuously mined aggregates at the quarry for more than 80 years. This project description has been prepared to support an expanded use permit for the entirety of the site and to amend the reclamation plan. The use permit will provide for a term of 30 years, amend SCQ's existing use permit issued for Parcel A and extend its coverage to Parcel B, allow import of recycle to Parcel B consistent with recycle activities on Parcel A, and allow the import of native greenstone from an adjacent vested and permitted mine site. The reclamation plan amendment includes a revised slope design to correct the potential slope instability identified in the western pit slope, updated plans for stormwater flow, and proposes a combination of backfilling the quarry using on-site materials and importing fill materials to meet the final reclaimed site elevations. The County is the lead agency for the quarry under the California Surface Mining and Reclamation Act (SMARA) and California Environmental Quality Act (CEQA).

2. BACKGROUND

In 1983, SCQ developed an updated mine plan covering an area of approximately 147 acres. To meet the requirements of the reclamation plan, a 1.5:1 (horizontal to vertical) (1.5H:1V) cut slope was developed. The County granted SCQ a use permit for Parcel A (Use Permit) in January 1984 (modified September 10, 1996) and continued use of Parcel A for 20 years from February 18, 1995 (i.e., until February 18, 2015).

In 2009, the reclamation plan was amended to provide for long-term stability of slopes, prevent wind and water erosion by stabilizing the soil surface through proper grading and drainage, and implement a revegetation program to establish self-sustaining vegetation cover. Since 2009, interim phase mining slopes failed, causing the surface disturbance to extend past the property line and become steeper.

In 2014, before expiration of the use permit, SCQ filed an application with the County to extend the Use Permit. The County Planning Commission delayed the public hearing for the Use Permit renewal to an undetermined date.

On September 27, 2017, the County issued a notice of violation (NOV). Between September 2017 and May 2018 the County and SCQ worked to resolve the violations identified in the September 2017 NOV. On May 16, 2018, the parties signed a compliance agreement and stipulated order that outlined the violations and proposed resolution. On January 4, 2019, SCQ submitted a corrective action plan that outlined a submittal schedule to address the corrective actions outlined below:

• **Violation 1:** The Upper Pond is located within Rattlesnake Creek.

Corrective Action: SCQ is coordinating with the San Francisco Bay Regional Water Quality Control Board (RWQCB) regarding an appropriate solution. The RWQCB's most recent site inspection occurred on January 29,2020 with no violations noted. The current approach is to reroute the drainage away from the Upper Pond and Rattlesnake Creek. In consultation with the RWQCB, a new settling basin outside of the high-water mark of Rattlesnake Creek will be established.

• **Violation 2:** The Upper Pond and dam are outside the approved reclamation plan boundary.

Corrective Action: The reclamation plan amendment for Parcels A and B will ensure that the Upper Pond and dam are within the proposed reclamation plan boundary.

• **Violations 3 and 4:** The mining-related ground movements are outside the approved reclamation plan boundary.

Corrective Action: The reclamation plan amendment for Parcels A and B will ensure that the mining-related ground movements and associated disturbances within SCQ's ownership are within the proposed reclamation plan boundary.

• Violations 5, 6, and 7: There are failed finished cut slopes.

Corrective Action: The reclamation plan amendment for Parcels A and B will incorporate the recommendations in previously prepared geologic investigation reports.

A corrective action plan was agreed upon and a schedule to file for a conditional use permit and reclamation plan.

An existing roadway located on the adjacent Permanente Quarry property was previously limited to general-purpose and utility company (currently Pacific Gas and Electric Company [PG&E]) access. SCQ began accepting aggregate material in May of 2018 for processing from Permanente Quarry, located north of the facility. The material is a native greenstone mined at Permanente Quarry to expose the limestone layer underneath for excavation and processing. SCQ does not accept limestone that is mined at Permanente Quarry. The greenstone that will be stored and processed will be staged in Parcel B, northwest of the primary crusher. Based on direction from the County, SCQ ceased importing aggregate from Permanente Quarry in December 2018. Permanente Quarry is reclaiming the haul road under agreement with the City of Cupertino, as the road inadvertently crossed the City boundary on Permanente property (Cupertino does not have a mining ordinance). Plans for a new road have been submitted to the County as part of a reclamation plan update for Permanente Quarry. Development of the new route will depend on the County's decision on import to SCQ.

3. PURPOSE AND OBJECTIVES

SCQ's purpose of this application is to continue an 80-year-old local business supplying the Santa Clara County region with essential construction materials. Sand, gravel, and crushed stone are referred to as "aggregates." These basic raw materials are the first step in the construction process and are used in a large variety of products. Buildings, homes, schools, hospitals, roads, airports, shopping centers, sewer and stormwater systems depend on aggregates. Between 40 and 60 percent of all aggregates are used in public works projects. Sand, gravel, and stone comprise nearly 90 percent of the materials needed to build federal, state, and local roads.

The proposed project is intended to achieve the following objectives:

- continue mining and processing operations at the same production rate that has been historically met (2 million tons per year);
- extend and amend the use permit that currently applies to Parcel A to apply to the entire site (Parcels A and B) for a term of 30 years;
- reduce regional vehicle miles travelled and greenhouse gas emissions by retaining a local source of aggregate;
- provide for the continued use of the site for the crushing, processing, and distribution of rock, gravel, sand, aggregate, and soil materials;



- consistent with the approved reclamation plan, continue to import fill to backfill the quarry and buttress slopes, and to provide for a post-reclamation surface accommodating of future uses allowed in this zone;
- import of approximately 3.7-12.5 million cubic yards of fill for reclamation over the remaining 30-year life of the quarry;
- import up to 1 million tons annually and up to 400 truck trips per day of aggregate for processing and sale using an internal/private haul road from the adjacent Permanente Quarry site, to avoid on-road traffic impacts;
- if required to meet market demands, provide for maximum annual permitted sales of up to 2 million tons of aggregate material to provide a reliable supply of aggregate materials to meet the existing and future regional market demands;
- amend the existing reclamation plan to include an updated mine and reclamation plan that addresses identified slopes stability issues at the site; and
- amend the existing reclamation plan to include a newly located settling basin.

4. SITE SETTING

4.1 **Project Location, Parcels, and Access**

SCQ is located approximately 15 miles south of San Jose, California (see Figure 1 and Figure 2), at the southwestern limits of Santa Clara County in the Monte Bello Ridge Canyon. Monte Bello Ridge, which defines the southern flank of Rattlesnake Canyon, rises to elevations over 2,200 feet mean sea level (msl). Parcel B is carved into an unnamed hillside that rises to approximately 1,800 feet msl and defines the northern flank of Rattlesnake Canyon. Elevations on the existing quarry site range from approximately 550 feet msl near the main site entrance at the southeast corner of Parcel A to approximately 1,295 feet msl at the northwest corner of Parcel B.

The existing quarry site occupies an area of approximately 167 acres. Parcel A consists of one irregularly shaped parcel that is approximately 66.27 acres (assessor's parcel numbers [APN] 351-18-048). Parcel B consists of two rectangular parcels and a third narrow wedge-shaped parcel (APNs 351-10-019 [40 acres], 351-10-044 [41.95 acres], and 351-10-040 [4.4 acres] respectively). This reclamation plan amendment also includes portions of adjacent parcels (APNs 351-10-017 and 351-10-039,) currently owned by Heidelberg Cement, Inc. (Lehigh). Table 1, "Parcel Acreage and Ownership," provides use, size, and ownership of each parcel discussed above and throughout this project description.

Parcel Number	Jurisdiction	Parcel Acreage	Ownership
351-10-017	City of Cupertino	40	Heidelberg Cement, Inc.
351-10-019	Santa Clara County	40	Stevens Creek Quarry, Inc.
351-10-039	City of Cupertino	35.5	Heidelberg Cement, Inc.
351-10-040	City of Cupertino	4.4	Stevens Creek Quarry, Inc.
351-10-044	Santa Clara County	41.9	Stevens Creek Quarry, Inc.
351-18-048	Santa Clara County	66.3	Stevens Creek Quarry, Inc.

TABLE 1 PARCEL ACREAGE AND OWNERSHIP



Three driveways provide vehicular access to Parcel A from Stevens Canyon Road: the main entrance near the southeast corner of Parcel A, used for ingress only; an exit-only driveway located about 180 feet northeast of the entrance; and a third driveway at roughly the midpoint of the site's frontage on Stevens Canyon Road, used infrequently by trucks that have already been weighed. The recycling operation will continue to operate and utilize these access points.

A gated (locked) entrance at the northeast corner of Parcel A is used by the City of Cupertino for access to compost facilities that are part of a City program.

One private residence occupied by quarry personnel and private stables are in the southern and western portions of Parcel A. The primary access to this residence is via a driveway extending from Montebello Road though they can be accessed from quarry entrances on Parcel A.

4.2 Existing Entitlements

The original reclamation plan for Stevens Creek Quarry was approved by the County on December 6, 1983. It covered two parcels, Parcel A (subject to a use permit) and Parcel B (subject to vested rights). The most recent Parcel A use permit was approved by the County Board of Supervisors on September 10, 1996. A January 2009 reclamation plan amendment corrected minor discrepancies between actual and planned activities (i.e., minor boundary adjustment, updated mine and reclamation maps, and update revegetation planting palette).

4.3 Existing and Surrounding Land Uses

As shown on Figure 3, "Existing Conditions Aerial Photograph," and Sheet 1, "Existing Conditions Aerial Photograph," operations at SCQ currently consist of excavation/extraction of aggregate resources (i.e., rock and gravel), processing (crushing and screening) of aggregate resources, materials recycling, material loading and weighing, and material hauling. Excavation/extraction and processing of mined native materials occurs on Parcel B. Parcel A includes materials recycling, material loading and weighing, administrative and maintenance buildings, Rich Voss Trucking, and material hauling. The following sections provide a description of the existing operations and facilities on each parcel and in areas not subject to existing surface disturbance. In addition, a description of surrounding land uses is provided.

4.3.1 Parcel A

As shown on Figure 3 and Sheet 1, Parcel A contains the offices, scales, and a concrete recycling facility. The eastern half of Parcel A has a level pad area occupied by stockpiles of soil and finished product, a truck loading area, an area for recycling of concrete and clean fill, the quarry offices, a machine shop, and parking. Truck scales are located adjacent to the quarry offices, near the site exit. Active mining still occurs on the eastern half of Parcel A. A second machine shop and a large outdoor equipment and truck storage area are in the center of the parcel, along with a second truck scale nearby. The Middle and Lower Ponds are in the northwest corner of Parcel A. Based on RWQCB requirements, the use of these ponds has been phased out and replaced with an off-channel basin. An undisturbed hillside vegetated with trees and scrub occupies the northern edge of the parcel, north of the Lower Pond. The southern and western portions of Parcel A consist of forested hillsides developed with one private residence occupied by quarry personnel. Vegetative screening and berms are used to shield site operations from Stevens Canyon Road and surrounding properties as shown on Figure 3 and Sheet 1.



4.3.2 Parcel B

Parcel B contains the main quarry area, rock crushing, screening, sorting and conveying equipment, overburden stockpiles, haul roads, and ponds. The majority of Parcel B has been completely consumed by mining activities, as shown on Figure 3 and Sheet 1. Excavated slopes extend along the western, northern, and eastern sides of the parcel, defining the current pit. These cut slopes are approximately 300 feet tall on the west side and under 100 feet tall on the east side. The northern portion of the quarry has been mined down to the approved pit floor elevation of 700 feet msl. The backfilling of the northern portion has begun and fill has been placed up to approximately 785 feet msl. Parcel B is largely surrounded by undeveloped land owned by Lehigh. Certain Lehigh parcels maintain vested rights recognized by the County Board of Supervisors in 2011.

The aggregate processing plant is located in the center of the Parcel B (see Figure 3 and Sheet 1), with additional conveyors and screens located about 200 feet south of the main plant. An unpaved access road originating near this equipment climbs the east side of the quarry walls, then continues northward along the eastern parcel boundary, terminating near the northeast corner of the parcel. The road formerly wrapped around the northern half of Parcel B, ending at a temporary stockpile located on the western parcel boundary, but is now accessible only on foot. Additional stockpiles of soil and processed aggregate are located at various locations in the central pit area.

A second unpaved access road originating near the aggregate plant equipment and exiting the eastern edge of Parcel B connects SCQ with the Permanente Quarry. Using this access road, SCQ began accepting aggregate material in May of 2018 for processing from Permanente Quarry. The greenstone was stored and processed in Parcel B, northwest of the primary crusher. Based on direction from the County, SCQ ceased importing aggregate from Permanente Quarry in December 2018.

4.3.3 Surrounding Land Uses

The project site is surrounded by undeveloped open space, low-density residential development, mining, and Stevens Creek Reservoir. Table 2, "Surrounding Land Uses," provides a summary of the surrounding land uses closest to the project site. Figure 3 and Sheet 1 shows the location of the land uses described below.

Direction	Land Uses	
North	Open space, mining, and cement plant	
West	Open space	
South	Stevens Creek Reservoir, low-density residential	
East Open space, Sunnyvale Rod & Gun Club		

TABLE 2 SURROUNDING LAND USES

4.4 General Plan Land Use Designations and Zoning Classifications

As shown in Table 1 above, the majority of the site is located within the unincorporated portion of the County. The remaining parcel acreage is located within the City of Cupertino. Because quarry operations have been under the County's oversight since operations began and because the City of Cupertino (City) lacks a surface mining ordinance necessary to regulate mining operations, the two jurisdictions have agreed under a Memorandum of Understanding (August 2008) that a limited area along the east wall of Parcel B is subject to County approval and regulation under SMARA.

The *City of Cupertino General Plan* land use map (City of Cupertino 2019) does not assign a land use designation to the areas of the project within the City. The City land use map notes that "Land use densities for lands located outside the urban service area shall be consistent with residential densities established by the *Santa Clara County General Plan.*" As shown on Figure 4, "Zoning," the City zoning district assigned to the project area and neighboring properties is Residential Hillside (RHS). Although a quarry is not a permitted or conditionally permitted use in the RHS district, the City has waived jurisdiction over the proposed project; thus, this is not considered a zoning conflict. This is reflected in the existing reclamation approved in 2008.

The *Santa Clara County General Plan, 1995-2010* (General Plan) (Santa Clara County 1994) classifies the site as Hillside (see Figure 5, "Land Use Designations"). The General Plan describes this designation as follows:

R-LU 17: These lands also contain such important resources as grazing lands, mineral deposits, forests, wildlife habitat, rare or locally unique plant and animal communities, historic and archeological sites, and recreational and scenic areas of regional importance, which serve to define the setting for the urbanized portions of Santa Clara County. Given the importance of these lands to the county's overall quality of life, allowable uses shall be consistent with the conservation and wise use of these resources and levels of development shall be limited to avoid increased demand for public services and facilities.

R-LU 18: All allowable uses must be consistent with the basic intent of the 'Hillside' designation. The range of allowable uses shall be limited to:

- a. agriculture and grazing;
- b. mineral extraction;
- *c. parks and low-density recreational uses and facilities;*
- d. land in its natural state;
- e. wildlife refuges;
- f. very low density residential development; and
- g. commercial, industrial, or institutional uses, which by their nature
 - *i.* require remote, rural settings; or
 - *ii.* which support the recreational or productive use, study or appreciation of the natural environment.

As shown on Figure 4, those areas of the site within the County have a zoning designation of HS-d1-sr. The County Zoning Ordinance provides, "Permitted uses include agriculture and grazing, very lowdensity residential use, low density, low intensity recreation, mineral and other resource extraction, and land in its natural state. Low-intensity commercial, industrial, and institutional uses may also be allowed if they require a remote, rural setting and are sized to primarily serve the rural residents or community, or if they support the recreational or productive use, study, appreciation, or enhancement of the natural environment."

4.5 Agricultural Use and Agricultural Reserve Contracts

The California Department of Farmland Mapping and Monitoring Program rates the project site as "Other" land. None of the land within the project site is rated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. In addition, the property is not subject to a Williamson Act contract.



5. MINING AND PROCESSING ACTIVITIES

This use permit includes a revised mine plan expanding mining deeper within Parcel B and import of materials for processing and sale. Figure 6, "Mine Plan," and Figure 7, "Mine Plan Cross Sections," show the mine expansion design. No changes to operational parameters (e.g. production rates) and the processing facilities and equipment used for mining change. The following sections provide a description of existing mining operations and the expansion area and design. Table 3, "Mine and Reclamation Plan Data," provides a summary of key data related to operations and reclamation of the site.

Design/Operating Characteristics	Description/Parameters/Assumptions ¹		
OPERATIONAL ACTIVITIES			
Mining	Hillside excavation using excavators, front end loaders, hau		
	trucks, articulated haul trucks, dozers, and scrapers		
Processing	Aggregate plant, topsoil plant, and recycle plant for broker		
	asphalt and concrete		
Reclamation	Open space condition with temporary structures and equipmen		
	removed, mining area backfilled, fill slopes graded, revegetation		
	completed; recycling operation may continue, as determined by		
	site owner		
MINE AND RECLAMATION DATA			
Operation Period	30 years from approval		
Volume	13 million tons		
Maximum annual plant production/sales	2 million tons/year		
Maximum annual import of aggregate	1 million tons		
Overburden/ Fines	30%		
Mine excavation area dimensions			
Approximate limits of surface disturbance	±147 acres		
Maximum depth	550 feet msl		
Grading			
Ramp:			
Width	40 feet		
Grade	15% maximum		
Cut slope:			
Slope Angle	Overall slope angle of 1.5:1 horizontal to vertical		
Bench height	50 feet		
Bench width	15 feet		
Fill Slope:			
Slope Angle	Maximum 2H:1V; majority ranging between 3H:1V to 5H:1V		
Setbacks	Minimum 25-foot setback (except where SCQ has a license		
	agreement on adjacent Lehigh parcels)		
Operating hours			
Excavation, crushing, processing, hauling	6:30 a.m. to 5:00 p.m. Monday–Friday		
Stack, load, haul, etc. on the premises	6:00 a.m. to 5:00 p.m. Monday–Friday		
NO excavation, crushing, processing, hauling	New Year's Day, Memorial Day, Independence Day, Labor Day		
, <u>o</u> , <u>i</u>	Thanksgiving Day, and Christmas Day		
Saturday work	No more than 15 Saturday's per year; no longer than 7:00 a.m.		
cuturuly work	3:00 p.m.; no more than 1 Saturday per wonth from May 15		

 TABLE 3

 MINE AND RECLAMATION PLAN DATA



Design/Operating Characteristics	Description/Parameters/Assumptions ¹		
	October 15, inclusive		
Evening work for special circumstances	30 work evenings per year, no longer than 5:00 p.m.–8:00 p.m.		
Special circumstances	Completion of a project, emergency situations		
Workforce	75 employees		
Reclamation Plan Boundary	±147 acres		

Notes:

1. All values approximate.

2. Amount includes aggregate and overburden. Overburden will be used for reclamation.

3. Total aggregate for the proposed 30-year life of the permit. Mining and reclamation may be completed within a shorter time frame depending on market demand for the product.

5.1 Expansion of Mining

Expansion of mining operations will occur within the central, southern, and eastern portions of Parcel B. Site development involves lowering the existing quarry floor approximately 300 feet. Consistent with existing mining methods, the quarry will be developed by continuing to mine new benches to a bottom elevation between 550 and 600 feet msl in the central, southern, and eastern portion of Parcel B. The highwall will be developed by stripping and transporting materials to the processing facilities for crushing and stockpiling. Cut slopes are planned to be 1.5H:1V. The quarry floor is planned to have an upper pad with a maximum depth of 600 feet msl and a lower pad with a maximum depth of 550 feet msl. As discussed in sections 5.3 and 7 below, the quarry floor will then be backfilled to a maximum elevation between 1,100 and 1,200-feet msl with fill slopes not to exceed 2H:1V overall. The site is estimated to contain approximately 13 million tons of reserves.

5.2 Aggregate Processing

Raw aggregate from the active quarry area is transported via loader or haul truck to the rock plant for primary processing. The material is stockpiled or feed directly into the primary crusher/feeder. The material discharged from the primary crusher is moved along a series of conveyors to the secondary and ancillary processing facilities. Aggregate material is separated by a large vibrating screen that isolates the larger material for reduction in a secondary cone crusher. Smaller material is screened out as base material or conveyed for additional screening and reduction in tertiary crushers. The material is conveyed to finished product screens. The fines are further processed using a dewatering screen along with coarse and fine sand screws. The ultra-fine material is then processed through a plate press. The material is then conveyed to individual stockpiles for shipment. Overburden and fines generated from the mining will be hauled to designated areas and stored temporarily for future reclamation (i.e., for backfilling the pit and creating fill slopes) or undergo further processing and sold as product.

The location of the aggregate processing facilities is shown on Figure 3 and Sheet 1. No significant changes to the method or type of equipment used for aggregate processing is proposed as part of this application. The aggregate processing equipment and material stockpiles will remain within Parcel B but may be moved as necessary to access reserves and lower the quarry floor as discussed in Section 5.1, above.



5.3 Imported Materials

5.3.1 Recycling Materials

The existing recycle plant is capable of crushing asphalt concrete, broken Portland Cement Concrete, and a combination of asphalt and Portland Cement Concrete. The plant can produce recycled base rock and/or recycled asphalt product. Actual production at the plant depends on the available supply of material for recycling and client demand for specific products.

Recycle materials generated from construction demolition sites are trucked in and stockpiled adjacent to the recycle plant area. Material is loaded into the feeder by wheel loader. A grizzly (gravity-fed sorting chute) removes the fines and directs the larger-sized material to the jaw crusher. Once on the main belt, a large magnet downstream of the crusher pulls off any rebar or steel present in the crushed material. The rebar and steel is collected and sent to a metal recycler.

The material is then sent over a screen deck for sizing and separation and oversize material would go to another crusher for further reduction and recirculation to the screen deck. The throughput material is conveyed to a stockpile. Recycled base product is stockpiled for future loading onto trucks.

The recycling operation, including storage of materials, is maintained in a manner that keeps adjacent streams, lakes, and percolation ponds free of siltation, contamination, or pollution. Retention devices will be installed and maintained to control sediments so that they are not deposited in Stevens Creek Reservoir.

The recycling operations are currently located in the area shown on Figure 3 and Sheet 1. The recycle plant will eventually be moved to Parcel B and located near the aggregate processing facilities.

5.3.2 Raw Aggregate

A planned new off-highway roadway will be developed connecting the adjacent Permanente Quarry to the SCQ site. Native greenstone mined at Permanente Quarry would be purchased by SCQ and transported to Parcel B for processing. SCQ would not accept limestone that is mined at Permanente Quarry. A screening protocol will ensure only greenstone is imported. The greenstone that will be stored and processed will be staged in Parcel B, northwest of the primary crusher. This material will undergo the same aggregate processing treatment as described in section 5.2, above. Up to 400 roundtrip truck trips will occur daily along this road. Use of this private road will keep these haul trucks off public roads. The hours for these truck trips will be the same as for the operating hours specified in Table 3, above.

5.3.3 Fill Materials

The quarry floor will be backfilled to achieve final reclamation grade using overburden generated onsite and importation of clean fill from regional construction projects (see section 7). A total volume of approximately 11.7 to 20.5 million cubic yards is required to fill the quarry floor to its final design elevation. Approximately 8 million cubic yards of backfill may be generated on-site from the proposed mining described in section 5.1 above. It is anticipated approximately 3.7 to 12.5 million cubic yards of backfill material will be imported fill generated from off-site sources. Backfilling the quarry using surplus soil from regional construction projects will be beneficial to long-term water quality. The use of imported fill will be superior because the type and chemical composition of the backfill material can be specified to ensure water quality impacts are minimized during placement. This practice is common in the Bay Area

and statewide. Mining operations that involve lands already disturbed by grading and have capacity to accept such fill provide an ideal solution for disposing of excess clean construction fill. By doing so, compliance with water quality objectives and the WDR mandates can be achieved with greater certainty, with limited interim impacts, and in an expedited time frame.

This soil would be subject to site-specific acceptance criteria developed in coordination with regulatory agencies according to the following guidelines:

- 1. California Environmental Protection Agency Department of Toxic Substances Control (DTSC) Information Advisory on Clean Imported Fill Material guidance document (DTSC 2001);
- constituents of concern limits established via the RWQCB environmental screening levels and California Human Health Screening Levels (to establish whether the material is considered a "designated waste" under the California Water Code, in which case it would not meet the Quarry's acceptance criteria);
- 3. federal and state hazardous and nonhazardous waste criteria; and
- 4. background concentration data using DTSC, U.S. Environmental Protection Agency Commercial Regional Screening Levels, and federal Resource Conservation and Recovery Act guidelines.

Acceptance of soil will be determined for each individual source location (e.g., construction project), and all soil imported to the site will be subject to testing and quality controls to ensure it meets the site-specific acceptance criteria. Imported soil is anticipated to be received and unloaded near the processing plant on Parcel B if not directly unloaded in the fill placement area.

Backfill will occur from the bottom upward and placed in a series of lifts. Adequate compaction will be achieved by truck and dozer traffic, as the lifts are advanced. Compaction is not required for the end use but is typically employed in practice by the loading imposed by the heavy hauling equipment and heavy, tracked vehicles. Backfill will become compacted after two to five passes with a truck or dozer.

5.3.4 Soil Plant

As part of material recycling operations, SCQ imports and processes soils from local construction and earthmoving projects. Prior to bringing soils onsite, the material is tested to meet San Francisco Bay Regional Water Quality Control Board requirements. Once onsite, the material is screen to remove debris and processed to 3/8-inch minus soil.

The soil plant is located on parcel A adjacent to Stevens Canyon Road, as shown on Figure 3 and Sheet 1. This plant, like the recycle plant, will eventually be moved to Parcel B and located near the aggregate processing facilities.

5.4 Production Levels

SCQ proposes to maintain existing production and sale levels of two million tons per a year with 30 percent of the material being overburden and fines. The annual two million tons a year includes production and sales from the rock plant (aggregate and sand), recycle plant (concrete and asphalt), topsoil plant, salable products generated from overburden and fines, and imported aggregate material from Lehigh.



6. SITE FACILITIES AND OPERATIONS

The following sections provide a description of the facilities that support ongoing mining and processing operations described in Section 5, above. The majority of the equipment and facilities described below will not change under the proposed use permit and reclamation plan amendment. To facilitate expansion of mining or backfilling areas, equipment and support facilities (e.g. stormwater control and containment) may be changed or relocated to different areas of the site.

6.1 Mobile Equipment

Mobile equipment associated with mining, processing, and reclamation activities is listed in Table 4, "Typical Equipment." The types of mobile equipment and/or machines to be employed are typical excavation equipment, such as a dozer, excavator, self-loading scraper, front-end wheel loader, portable water pump, motor grader, conveyers, and haul trucks. A water truck is used for maintenance of surfaces and dust control. The type of vehicles used varies somewhat over time depending on availability and the introduction of new models to suit different conditions.

Equipment ^{1,2}	Description	Quantity	Year/HP/Tier	
PRODUCTION MINING EQUIPMENT				
Caterpillar 345BL	Excavator	1	2002/320/1	
Caterpillar 349EL	Excavator	1	2013/425/41	
Caterpillar 735	36-ton haul truck	2	2003/365/2	
Caterpillar 740B	40-ton haul truck	1	2013/469/4i	
Volvo A40G	40-ton haul truck	3	2015/469/4F	
Caterpillar D6NLGP	Mud dozer	1	2005/140/2	
Caterpillar D9T	Dozer	1	2015/500/4F	
Caterpillar D10N	Dozer	1	1988/520/0	
Caterpillar D11T	Dozer	1	2014/924/4i	
MATERIAL LOADOUT EQUI	PMENT			
Caterpillar 988F	Wheeled loader	1	1999/430/1	
Caterpillar 988G	Wheeled loader	1	2004/453/2	
Caterpillar 988H	Wheeled loader	2	2007/520/3	
Caterpillar 980K	Wheeled loader	1	2013/402/4i	
Komatsu WA500-8	Wheeled loader	1	2016/357/4F	
ANCILLARY EQUIPMENT				
Caterpillar 14G	Motor grader	1	1984/150/0	
Caterpillar 140H	Motor grader	1	1998/185/0	
Caterpillar 815F	Compactor	1	2002/220/1	
Caterpillar CB224D	Double drum roller	1	2004/33/2	
Caterpillar CS56B	Smooth drum roller	1	2012/157/4i	
Caterpillar SS250	Soil stabilizer/grinder	1	1990/547/0	
Caterpillar 226D	Skid steer	1	2016/67/4F	
Caterpillar 322L	Long reach excavator	1	2005/180/2	
Caterpillar 328D LCR	Excavator	1	2013/300/41	
Caterpillar 330BL	Excavator	1	1998/222/1	
Caterpillar 330CL	Excavator	2	2003/245/2	
Caterpillar D5NXL	Dozer	1	2004/115/2	

TABLE 4 TYPICAL EQUIPMENT



Equipment ^{1,2}	Description	Quantity	Year/HP/Tier
Caterpillar D6RXL	Dozer	1	1998/175/1
Caterpillar D6NLGP	Mud dozer	1	2011/173/3
Caterpillar 963	Track loader	1	1984/150/0
Caterpillar D8R	Dozer	1	2002/305/2
Massey Ferguson 640B	Wheeled loader/drag box	1	1996/78/0
Caterpillar 950G	Wheeled loader	1	2003/183/2
Volvo L120E	Wheeled loader	1	2006/243/3
Caterpillar 972G	Wheeled loader	1	2003/279/2
Grove RT745	Rough-terrain crane	1	1989/196/0
Caterpillar TH83	Telehandler-forklift	1	1997/106/1
Caterpillar TH460	Telehandler-forklift	1	205/100/2
Caterpillar TL1055	Telehandler-forklift	1	2010/125/3
Caterpillar TL943C	Telehandler-forklift	2	2013/111/4i

Notes:

1 Equipment will be purchased at the time it is needed and may differ from equipment listed.

2 The equipment listed uses diesel fuel.

6.2 Rich Voss Trucking

Rich Voss Trucking (RVT) is a construction and material hauling trucking company with affiliated entities that operates from Stevens Creek Quarry. As shown on Figure 3 and Sheet 1, RVT facilities and truck storage are in the central portion of Parcel A. RVT and its affiliates maintain a fleet onsite of approximately:

- 23 semitrucks,
- 12 trailers, and
- 4 pick-up trucks.

These vehicles are primarily used to supply SCQ aggregate and recycled materials to local construction projects. As a result, most vehicle trips associated with RVT are incurred as part of SCQ operations and traffic volume. RVT does occasionally contract work outside SCQ contracts. In these situations, the number of vehicles needed for the contract would leave for the day and not return until the end of the shift. Twenty-two employees are employed by RVT.

6.3 Buildings and Ancillary Support Facilities

As shown on Figure 3 and Sheet 1, the site has several existing buildings and structures to support project operations. Figure 8, "Building and Structure Photographs," provides photographs of the existing buildings and facilities. All but one building is located on Parcel A. The following is a list of those buildings:

- Office
- Upper and lower scale house
- Tractor office and shop
- Maintenance office and shop
- Radio tower building (shipping container)



These buildings provide ancillary support to ongoing mining and processing activities including administrative functions, sales and ticketing, equipment maintenance and repair, and site communications. This project does not propose any changes to the existing buildings and structures, nor does it propose any new buildings.

6.4 Access and Vehicle Trips

The following subsections provide details related to on- and off-site transportation for mine operations and site reclamation.

6.4.1 Public Road Access

Three driveways (as shown in Figure 3 and Sheet 1) currently provide vehicular access to Parcel A from Stevens Canyon Road:

- the main entrance near the southeast corner of Parcel A, used for ingress only;
- an exit-only driveway located about 180 feet northeast of the entrance; and
- a third driveway at roughly the midpoint of the site's frontage on Stevens Canyon Road, used infrequently by trucks that have already been weighed.

A gated (locked) entrance at the northeast corner of Parcel A is used by the City of Cupertino for access to compost facilities that are part of a City program.

6.4.2 Internal Circulation, Queuing, and Parking

As shown on Figure 9, "Internal Circulation, Queuing, and Parking," trucks enter the site from Stevens Canyon Road and immediately turn right towards the and then circle back towards the office and lower scale house. Trucks turn right past the office and proceed to the north, past the tractor shop, continuing northwest through the site to the recycled or finished aggregate plants and stockpile areas. If trucks are delivering or picking up recycled materials, they will turn right into the recycled plant area. Trucks picking up crushed aggregates products will continue to drive northwest into Parcel B where they will make a large circle to pick-up finished aggregate product. Trucks will follow the same route to exit the site, stopping at one of two scale location to be weighed and ticketed. Figure 9 also shows the locations for truck queueing in the event trucks must wait for loading.

There are several different locations onsite where employees, customers, or guests may park. Employees will typically park in locations closest to their job responsibility. As shown on Figure 9, parking spots are located near all buildings, site facilities, and plant areas. In addition, parking spots for customers and guests are provided in front of and adjacent to the office. In total, approximately 60 parking spaces are available onsite.

6.4.3 Vehicle Trips and Haul Routes

Activities at SCQ are restricted by the number of truck trips that are permitted to exit the quarry each operational day. The existing conditions of approval establish a limit of 1,300 (roundtrip) on-road trips of material loads per day (this limit would not apply to the proposed haul trucks using the private road to Lehigh's site, the use of which would keep additional haul trucks off public roads). The trip limitation applies to all trips including aggregate, recycled material, soil, or other salable products. This condition is not expected to change under the proposed project. Figure 10, "Project Trip Distribution," provides the approximate percentage of vehicle trips that travel throughout the region. This trip distribution is based

on several factors including major roadways and highways, local and regional growth, and market area. SCQ does not anticipate significant changes to this trip distribution or the roads that would be used by their trucks and customers trucks.

As discussed in Section 5.3.2 above, SCQ is proposing to import native greenstone from the adjacent Permanente Quarry using a private road connecting the two sites. Up to 400 roundtrip truck trips will occur daily along this road.

The site also receives a variety of deliveries and visitors during operating hours. Daily delivery and visitor vehicle trips, on average, does not exceed 6 trips per a day.

6.5 Hours of Operation, Employment, and Visitors

The site has an existing condition of approval that specifies hours of operation and the project does not propose to change those operational hours. The following are the project's operating hours as specified in the existing conditions of approval:

- Excavation, crushing, processing, and hauling: 6:30 a.m. to 5:00 p.m. Monday—Friday.
- Trucks stack, load and haul, etc.: 6:00 a.m. to 5:00 p.m. Monday Friday.
- No excavation, crushing, processing, hauling on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- The quarry shall be allowed to operate (to include, excavation, crushing, processing, and hauling) a maximum of 15 Saturdays a year. The Planning Office shall be notified on the preceding Friday of any proposed Saturday activities.
- The quarry shall be allowed to operate up to a maximum of 39 work evenings per year, (between the hours of 5:00 p.m. and 8:00 p.m.); such evening work shall be allowed under special circumstances as specific in the conditions of approval.

Approximately 75 people are employed at SCQ. The individuals perform a variety of functions including heavy mobile construction equipment operators, haul truck drivers, plant equipment operators, mechanics, and office personnel.

Visitors periodically come onsite for a variety of functions including meetings, site inspections, deliveries, and other various matters. On average, no more than six visitors are onsite per a day.

6.6 Water Supply and Use

Quarry operations require water for dust control and aggregate processing. This water is supplied from stormwater stored in ponds and settling basins.

6.7 Utilities

Locations of utility features, roads, and other necessary site infrastructure within the vicinity of the site are shown in Figure 3 and Sheet 1. The following utilities are necessary for operation and are available at the site:

- **Power:** Line power and diesel generators
- Water: Supplied from stormwater stored in ponds and settling basins



- Sewage: Portable facilities are provided throughout the site (see Figure 3 and Sheet 1) and relocated as necessary. These facilities are serviced twice a week by Western Site Services LLC. Western Site Services disposes collected septage at Zanker Recycling. No septic system is used onsite.
- **Potable Water:** potable water is supplied by Alhambra Water Company with deliveries of 600-800 gallons of potable water twice a month.

6.8 Surface Water Management

Surface drainage at the facility generally flows southeast towards Stevens Creek Reservoir. Stormwater is conveyed through culverts, french drains, concrete swales, and drainage ditches to sediment traps, sediment ponds, and an onsite stormwater storage tank. The facility is divided into seven (7) drainage areas as shown on Figure 11(a&b), "Stormwater Containment and Management." These figures show the facility layout, including the general site topography, storm drainage system, drainage inlets, and discharge locations within their respective drainage areas. A summary of each drainage area is provided below, and a detailed description can be found in Attachment A, "Stormwater Pollution Prevention Plan."

Drainage Area No. 1 is approximately 16 acres and includes a portion of the Parcel B processing plant area and material stockpiles (see Figure 11). Drainage Area No. 1 is sloped to drain toward a sediment pond with drainage ditches, a concrete swale, and culverts conveying stormwater flows. Water in this sediment pond is retained by a riser and conveyed through a culvert to outfall on Rattlesnake Creek.

Drainage Area No. 2 is approximately 43 acres and receives stormwater from the eastern portion of Parcel B and central portion of Parcel A. This area includes the staging area for RVT, fueling area, and fueling tanks. Water is conveyed through drainage ditches, concrete swales, culverts, and sheet flow to one of two sediment traps or to a metal stormwater storage tank. Water from the sediment traps are conveyed through a culvert or weir to an outfall which discharges to Swiss Creek.

Drainage Area No. **3** includes the office buildings, scale house, scale, recycle plant, and quarry maintenance storage. The drainage area is approximately 9 acres and slopes southwest towards Swiss Creek. Stormwater in this area is conveyed through a French drain into sediment trap, then conveyed through a drainage ditch or culvert into another sediment trap where it discharges to an outfall before reaching Swiss Creek.

Drainage Area No. 4 is approximately 11.2 acres and comprises the eastern portion of Parcel A. Runoff from the topsoil plant is contained by on-site berms adjacent to Stevens Canyon Road. Stormwater is collected in a sediment pond, drainage ditches, concrete lined swales, french drains, swales with check dams, culverts, drop inlets, an underground stormwater storage tank by the Office, and an open concrete drainage box with check dams. Stormwater is eventually conveyed into a sediment trap and discharged through a culvert to outfall before reaching Swiss Creek.

Drainage Area No. 5 is approximately 21.4 acres. This area was recently regraded to direct all stormwater flow towards Drainage Area No. 7.

Drainage Area No. 6 is approximately 4.7 acres and collects runoff from the roads on the southern portion of Parcel B. Runoff from this area is directed into drainage ditches, swales, drop inlets, and



culverts, a concrete swale, and eventually into a sediment trap, which discharges through a culvert into an outfall before reaching Rattlesnake Creek.

Drainage Area No. 7 is approximately 78 acres. This drainage area encompasses the active mining and changes frequently due to this activity. The area contains one sediment trap, which collects surface runoff from the access roads on the north hillside and the Radio Tower. Flow from this sediment trap is conveyed into the pit pond. The majority of surface runoff from the excavated hillsides sheet flows into the pit pond. Surface runoff from the access roads sheet flows into a drainage ditch, which eventually goes into the pit pond. The pit pond does not have any outfall structures.

The National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial General Permit) requires Best Management Practices (BMPs) to be implemented to direct off-site and nonindustrial run-on away from industrial areas and erodible surfaces. Berms, drainage ditches, drop inlets, sediment traps, silt fences, check dams, and straw wattles will be implemented to meet this requirement. These BMPs will be located along the quarry roads and throughout the facility as necessary. Figures showing off-site drainage areas and associated stormwater conveyance facilities or BMPs are provided in Attachment A. As part of the terms of a discharge permit from the RWQCB, the SCQ operator regularly monitors water quality of the discharge from the quarry and is required to submit quarterly monitoring reports to the RWQCB.

Bay Area Geotechnical Group (BAGG Engineering) designed and engineered a new settling basin. The new settling basin will be located in the northeast portion of Parcel A as shown on Figure 6. See Attachment B, "BAGG Technical Report." An overflow structure will be constructed as part of new settling basin development to prevent the water level in the pond from overtopping the development access road, which will function as a dam once raised by 10 feet. The increased height of the development access road will allow for a desirable pond capacity. The capacity of the dam will not reach or exceed the California Division of Safety of Dams's (DSOD's) 15-acre-foot jurisdictional threshold capacity. The new settling basin capacity is estimated to be approximately 4.4 acre-feet provided that the pond's side slopes are cut at an approximate gradient of 2H:1V and the development access road is raised by 10 feet at an approximate 1.5H:1V gradient. The two water tanks at the current location will be relocated. The new settling basin will be designed to comply with design storm standards in the Industrial General Permit.

6.9 Fuel, Equipment Maintenance, and Hazardous Materials

Trucks and other mobile equipment run on diesel and gasoline. Diesel fuels are stored on-site in aboveground tanks on an impervious surface with secondary containment, as required by existing regulations.

A mobile fuel and lubrication truck is used to service vehicles on-site. The fuel/lube truck can carry a limited amount of petroleum products, is equipped with automatic shut-off valves to prevent spills and carries appropriate absorbent materials to contain and recover spillage. An approved spill prevention, control, and countermeasures (SPCC) plan guides reporting, control, and cleanup activities in the event of a spill in the quarry or other operating areas.

As shown on Figure 3 and Sheet 1, the site has four locations where hazardous material are stored. The hazardous materials are typical to mining, processing, and hauling operations and include such items as motor oil, grease, lubrication, antifreeze, and other materials necessary to maintain onsite equipment. The



site's Hazardous Material Business Plan has been included as Attachment C, "Hazardous Materials Business Plan.

Materials present at the facility that may contribute pollutants to stormwater runoff that are identified in the SWPPP include rock, gravel, sand, silt, clay, petroleum products (fuel, oil, grease), antifreeze, batteries, waste oil, and new and/or spent solvents. Detailed information regarding potential pollutants associated with each potential source area and the BMPs implemented for each area are identified in the SWPPP (see Attachment A). The SWPPP will be updated to reflect the new settling basin once constructed.

Any waterbody created during operations will be maintained in such a manner as to provide mosquito control and to prevent the creation of health hazards or public nuisance.

6.10 Noise and Dust Control Measures

Onsite stationary equipment and loading areas are in the three plant areas of the site, including the rock plant, recycle plant, and topsoil plant. See Figure 3 and Sheet 1 for the location of these facilities. Mobile equipment operates throughout the site but is concentrated in the active quarry and plant loading areas. To minimize noise from stationary equipment processing plant transfer points utilize rubber or heavy plastic (UHMW) instead of steel to dampen noise as material hits it. In addition, conveyor belts are vulcanized to eliminate the use of metal clips that create additional noise. Mobile equipment has been equipped with Mine Safety and Health Administration approved "squawk" (e.g., ssh-ssh, ssh-ssh sound) back-up alarms that produce a lower frequency alarm than traditional tonal (e.g. beep, beep sound) alarms.

The site also maintains a robust dust control management program to prevent visible dust and track-out of county roadways. The site owns and operates a water truck to control dust on all internal roadways that operates as frequently as needed based on weather conditions (e.g., more frequently on hot, dry days and less frequently on cool or wet days). Water sprayers are included on processing equipment transfer points to reduce dust. Finally, a street sweeper is utilized to reduce dust on internal paved roads and adjacent County roadways.

6.11 Security and Fencing

Fencing of the property has been installed and maintained on portions of parcel A. These fencing features are described in the following list:

- a) A chain-link fence along the right-of-way of Stevens Canyon Road
- b) A four-strand barbed-wire fence along the property line with Sunnyvale Rod & Gun Club
- c) A chain-link fence adjacent to Montebello Road and the site boundary

Four gates exist onsite that control access when SCQ is closed. The gates will be maintained. Signage has also been placed around the site consistent with County code requirements (see Figure 12, "Fencing and Signage").

7. RECLAMATION PLAN AMENDMENT

This application request also includes amending the 2009 Reclamation Plan to provide for backfilling of the quarry area, updated plans for stormwater flow, and a new settling basin. The 2009 Reclamation Plan

for the quarry includes a combination of backfilling the quarry using on-site materials and importing fill materials that meet applicable clean fill requirements. SCQ proposes to continue to use a combination of on-site material and surplus soil available from regional construction projects. Based on the revised reclamation design, a total volume of approximately 11.7 to 20.5 million cubic yards is required to fill the quarry floor to its final design elevation. Approximately 8 million cubic yards of backfill will be generated on-site from the proposed mining described in section 5.1 above. It is anticipated approximately 3.7 to 12.5 million cubic yards of backfill material will be imported fill generated from off-site sources.

SMARA requires mines to be reclaimed to a usable condition that is readily adaptable for a productive alternative land use that does not endanger public health or safety. Proposed reclamation is shown on Figure 13(a&b), "Reclamation Plan" and Figure 14, "Reclamation Plan Cross Sections." The site will be reclaimed to an open space condition suitable for future development as allowed under the County Zoning Ordinance for "Hillside" districts. The County "Hillside" district allows by right uses such as general agriculture, livestock, agricultural accessory structures and uses, nurseries, consumer recycling facilities and wineries. A variety of other uses are allowed subject to a use permit. After mining is complete, all temporary structures and mining and processing equipment will be removed, finished slopes will be graded and engineered where necessary, fill will be imported and used to backfill slopes to reclamation specifications, and revegetation of the entire quarry site will be performed.

The reclamation plan for the quarry has been prepared in accordance with the requirements of SMARA, found in California Public Resources Code (PRC) Section 2710 et seq., Title 14 of California Code of Regulations (CCR) Section 3500 et seq., and the County's (the lead agency) implementing ordinance (Santa Clara County Surface Mining Ordinance Sections 2.10.040 and 4.10.370).

7.1 Slope Stability

Section 5 provides an overview of the cut and fill slopes. Figures 6, 7, 13(a&b), and 14 provide the cut and fill slope designs. Slopes angles are revised to provide for aggregate production at SCQ and long-term stability. This mine is designed to have final fill slopes between 2H:1V and 5H:1V.

7.2 Fill Placement

As described in Section 5.3, after completion of mining, the bottom of the pit will be backfilled to between 1,100 and 1,200 feet msl, with slopes not to exceed 2H:1V overall but generally range from 3H:1V to 5H:1V. Figures 13(a&b) and 14 show the reclaimed topography. Suitable on-site and imported fill will be used to backfill the pit. As described in section 5.3 above, importation and placement of fill material will meet specific criteria. Backfill material will come from regional construction projects. The imported material will be required to meet site-specific acceptance criteria developed in coordination with regulatory agencies. Once the fill material is placed the material will be compacted by equipment movement.

7.3 Revegetation

Revegetation will occur on the Parcel B slopes and fill pad and Parcel A overburden and recycled materials stockpile area. Parcel A ancillary facility areas, including the office, shop, access road, and trucking facility, will remain and not be revegetated. Revegetation will provide vegetative cover using predominantly native plants for final contours, thus controlling erosion and stabilizing slopes. Revegetation efforts will utilize plant materials capable of self-regeneration without continued



dependence on irrigation, soil amendments, or fertilizer. Seeding of the fill slopes with a mixture of grasses, herbaceous plants, and shrubs will provide surface cover and erosion control. Shrub planting areas will be scattered throughout the site. A revegetation plan included in the reclamation plan includes a comprehensive approach for a test plot program, soil treatment and plant installation, maintenance and adaptive management guidelines, and verifiable monitoring standards to achieve the goals and objectives listed above.

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