

# County of Santa Clara

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## MEMORANDUM

Date: June 9, 2011

To: California State Mining and Geology Board

From: Jody Hall Esser, Director, Department of Planning & Development

Michael M. Lopez, Planning Manager

Gary Rudholm, Senior Planner

Re: Status Report Requested from the State Mining & Geology Board Regarding the Processing of Reclamation Plan Amendments and their Associated Environmental Review of the Permanente Quarry, State Mine ID #91-43-0004

On February 10, 2011, the State Mining & Geology Board received information from the County of Santa Clara, the operator of the Permanente Quarry, and testimony from members of the public. Following these presentations, the Board directed the Office of Mine Reclamation (OMR) provide a status report regarding the Permanente Quarry at an upcoming meeting. The County of Santa Clara hereby submits this report to assist the OMR and provide up-to-date information regarding the County's efforts to enforce SMARA through the reclamation plan amendment process, as well as the status of the work underway to prepare environmental impact reports required under CEQA.

### Contents of the Report:

Background .....	Page 2
Permanente Quarry Reclamation Plan Amendment Review Process .....	Page 3
Permanente Quarry RPA Environmental Impact Review Process & Schedule .....	Page 4
Explanation of Delays Encountered to Complete Permanente Quarry RPAs .....	Page 5
Communication by the County with Others Regarding Permanente Quarry .....	Page 7

This report is devoted to the reclamation plan amendment process for the Permanente Quarry, exclusively. It is not a report regarding the County's SMARA program. Currently, Permanente is the only surface mine within the jurisdiction of Santa Clara County with outstanding SMARA violations that must be addressed.

## **BACKGROUND**

The Permanente Quarry, operated by Lehigh Southwest Cement Co., is located west of the City of Cupertino at the end of Stevens Creek Boulevard. (This quarry was previously known as the Kaiser Permanente Quarry, and later known as the Hanson Permanente Quarry.) This is the largest operating surface mine within Santa Clara County. The County issued two SMARA Notices of Violation (NOV) to the mine operator. The means of abating both NOVs is through amendments to the Quarry's reclamation plan. The mine operator submitted separate amendment applications intended to address each violation. The County is currently processing reclamation plan amendments that are proposed to cure the Notices of Violations described above according to terms and schedules that have been shared with the Department of Conservation, Office of Mine Reclamation (OMR).

### *2006 Notice of Violation*

In October 2006, the County of Santa Clara issued a NOV to the mine operator of Permanente Quarry for mining activities located outside the boundary of the Permanente Quarry Reclamation Plan, which the County approved in 1985. In January 2007, the mine operator submitted an application to amend the 1985 Reclamation Plan in accordance with the NOV. The County determined that extensive geological analysis was necessary to address slope stability issues in the existing pit. In December 2007 the mine operator requested, and was given, 24 months to complete the geological analysis. The analysis was completed and the analysis determined major modifications to the application were necessary. Lehigh submitted a revised application on May 28, 2010, and the application was deemed complete on September 24, 2010. This project is subject to the California Environmental Quality Act (CEQA), and an environmental impact report is being prepared.

### *2008 Notice of Violation*

The County of Santa Clara issued a second NOV in June 2008 to Lehigh, the mine operator of Permanente Quarry, for stockpiling overburden material in the area commonly referred to as the East Materials Storage Area (EMSA) because it is not within the boundary of the approved 1985 Permanente Quarry Reclamation Plan. This NOV followed investigation of a complaint made to the County that petroleum coke was being stored in this location. Following a field inspection the County determined the material that was suspected to be petroleum coke was actually overburden excavated from the mine pit. The NOV provided the operator with two options for addressing the violation: (1) remove the material, or (2) apply for and obtain an amendment to the existing approved reclamation plan for Permanente Quarry. An approved amended reclamation plan would authorize retaining the material in the EMSA and provide for reclamation consistent with state and County mine reclamation standards. The mine operator chose to apply for the reclamation plan amendment and this application is currently under review.

The NOV also required that the mine operator cease use of the EMSA. The operator approached the County and explained that immediate use of the EMSA was necessary for operational reasons, because the approved location for overburden was running out of room. Without using the EMSA the operator would be forced to leave the material in the pit, which would prevent the operator from excavating some of the remaining mineral reserves. Following consultation with

the State Office of Mining and Reclamation (OMR), the County signed an agreement with Lehigh stipulating a rigorous schedule to complete the work necessary to submit a reclamation plan amendment application, and all other information required to complete the environmental impact review. The agreement also stipulated that the County retained its authority to impose fines against the operator, if necessary.

## **PERMANENTE QUARRY RECLAMATION PLAN AMENDMENT APPLICATION REVIEW**

### EMSA Reclamation Plan Amendment

The EMSA is an approximately 89-acre overburden and rock storage area located in the easterly portion of the Quarry. Overburden material is keyed into the existing slopes and rough-graded according to geotechnical design. The reclaimed EMSA slopes will be at a 2H:1V angle interrupted by 25-foot benches every 40 feet (2.5H:1V to 2.6H:1V overall). The EMSA is planned to receive overburden material for approximately five years (2011 through 2016).

The County and Quarry representatives consulted with OMR regarding separating out the EMSA as a reclamation plan amendment (RPA) focussed on this one area, separate from one that would cover the entire mine site, in order to expedite curing the EMSA NOV. On April 20, 2009, and subject to an Agreement executed between Lehigh and the County, the operator submitted an application for the EMSA RPA. The County deemed the application incomplete within 30 days, also in keeping with the agreement. Lehigh responded to the “incomplete” letter within 30 days with a re-submittal, which the County deemed complete on July 13, 2009.

This met the deadline contained in the agreement, which required the application be complete by July 20, 2009. All of the application materials are posted on the County Planning Office web page, [www.sccplanning.org](http://www.sccplanning.org). The County subsequently commenced CEQA review of the project.

### Comprehensive Reclamation Plan Amendment

The Comprehensive Reclamation Plan Amendment is intended to reclaim all the areas of disturbance that have occurred, or will occur, on the Permanente Quarry property. This application includes an expansion, with a new, second pit to the south of the existing pit. The operator submitted the proposed Comprehensive Reclamation Plan Amendment application to Santa Clara County on May 28, 2010, which is a modified plan from the first proposal submitted in late-2007. The changes include relocation of the proposed second pit. It also includes more extensive geology review and information, which was used to redesign the benches in the existing pit and provide for slope stability. The documentation, graphics, and maps in the 2010 application are more extensive, and the application includes a proposal for a Use Permit for the proposed second pit. All of the application materials are posted on the County Planning Office web page, [www.sccplanning.org](http://www.sccplanning.org).

The County provided copies of both proposals (EMSA and Comprehensive RPAs) to amend the Permanente Quarry reclamation plan to OMR for review and comment. On December 15, 2010, OMR provided comments regarding the Comprehensive Reclamation Plan Amendment, and County staff is using these comments to clarify the project description and ensure the CEQA

review will be complete. The County will submit responses to these comments to OMR as required under SMARA.

## **PERMANENTE QUARRY RPA ENVIRONMENTAL IMPACT REVIEW PREPARATION AND SCHEDULE**

### EMSA RPA Draft Environmental Impact Report Preparation

The East Materials Storage Area (EMSA) Reclamation Plan Amendment (RPA) requires preparation of an Environmental Impact Report (EIR), in keeping with the Requirements of the California Environmental Quality Act (CEQA). Preparation of an EIR follows the review of the RPA because the RPA application forms the description of the project that must be evaluated under CEQA.

Once the RPA was deemed complete the County sought proposals from consultants qualified to prepare the CEQA analysis and write the EIR. The County entered into a contract with an experienced environmental consulting firm. (The scope of work prepared for the EIR is attached to this report for reference, and to illustrate the complexity of the review required.) The County issued a Notice of Preparation announcing work would begin on the report on April 13, 2010. County staff subsequently convened a public scoping meeting in Cupertino on April 28, 2010. All the comments received in response to the NOP are on file with the County and available for public review.

The environmental consultant subsequently turned in an Administrative Draft EIR (ADEIR) for internal review by County staff in September 2010. While County staff reviewed this initial draft, the consultant obtains materials samples in the field and gathered additional data from the mine operator. Staff discussed progress on the EIR with the consultant and mine operator regularly through the fall and winter. The County provided comments for revisions to the ADEIR and the consultant has continued to conduct further analyses and revise the report. The current estimate to complete work on the environmental review and public a Draft EIR (DEIR) for public review is Summer 2011.

The current schedule is below:

- July/August 2011: anticipated publication of the Draft EIR and commencement of the public review period. The County will provide a 60- day comment period to allow the public ample time to review the document.
- August/September 2011: Public hearing before the Planning Commission to take public comments on the DEIR.
- September 2011: Public comment period will be closed. At the close of public comment the County's consultant will commence preparation of responses to comments.
- December 2011: Depending on the level of public comments received regarding the DEIR, December 2011 is the earliest date by which the Final EIR is expected to be certified, and final decision made by the County regarding EMSA Reclamation Plan.

### Comprehensive RPA Draft Environmental Impact Report Preparation

Staff commenced the environmental review of the proposed Comprehensive Reclamation Plan Amendment and proposed Use Permit for expansion of the Permanente Quarry in February 2011. A contract was signed with the EIR consultant, and the mine operator has provided the funds necessary to cover the consultant's costs. Staff issued a Notice of Preparation (NOP) on March 10, 2011, and held a public scoping meeting on March 30, 2011, in a community center in Cupertino. The comment period closed on May 23, 2011, and we received a total of 36 comments, which are posted on the County's website. The County's environmental consultant conducted field surveys in April and May 2011. A detailed project schedule may be found in Exhibit C; however, the schedule is summarized as follows:

- August 2011: Administrative Draft EIR delivered to the County for review and comment.
- December 2011: Draft EIR published for public review and comment for 60 days.
- March 2012: Preparation of the Final EIR based on public comments received.
- June 2012: Depending on the level of public comments received regarding the DEIR, the earliest date by which the Final EIR is expected to be certified, and consideration made by the County regarding project approval.

### **EXPLANATION OF DELAYS ENCOUNTERED TO COMPLETE THE PERMANENTE QUARRY EMSA AND COMPREHENSIVE RECLAMATION PLAN AMENDMENTS**

The County first issued a NOV for areas of disturbance outside the Reclamation Plan boundary in October 2006. The NOV included a schedule with milestones and dates by which those milestones were to be met. The original time frame for having a reclamation plan amendment completed, including all the required environmental review, was subsequently modified for several reasons, all of which have led to delays in bringing the project to the Santa Clara County Planning Commission for a final decision. The issues and events that arose, and which caused the delay in completing the review and approval process, are described below.

### Comprehensive Geology Analysis and Report Preparation

Hanson (now Lehigh Hanson, Inc.) submitted an application for a reclamation plan amendment on January 5, 2007. The application was not complete due to inadequate geology analysis, and it contained insufficient information to describe the slope stability improvements necessary for the existing pit. For this reason, in December 2007 Hanson requested a modification to the original schedule and add 24 months for geology report preparation. The additional time was required for Lehigh to obtain substantial data collection in the field, conduct analysis of the data, prepare reports that analyzed the data, and modify the project plans based on that analysis.

On May 21, 2008, after consulting with staff from the Office of Mine Reclamation and the County Geologist, the County modified the original schedule. The new schedule required the mine operator submit a revised reclamation plan amendment to mitigate the violation by February 1, 2010. This date for resubmittal was later modified due to a second NOV issued by the County for use of the East Materials Storage Area, as described above.

### Preparation for Vested Rights Determination

The Permanente Quarry has been in operation for more than 100 years. Because of this history and the County's need to determine what, if any, local land use and zoning approvals were needed for the proposed reclamation plan amendments, a determination was necessary regarding whether and to what extent quarrying activities were a legal nonconforming use on the Permanente Quarry property. Having this determination made before finishing the CEQA analysis of either the EMSA RPA, or the Comprehensive RPA, was important because it potentially affected the land use approvals required for the mine that must be part of that analysis.

The County staff completed work on extensive data collection, research, and analysis for the legal non-conforming use, or "vested rights," determination. Staff submitted its report, a staff analysis, and 63 exhibits with various documents, reports, graphics, and maps used in the report preparation. Planning Office staff posted all the information on the Planning Office web page. The Board of Supervisors convened a public hearing in the afternoon of February 8, 2011.

After a public hearing that lasted nearly five hours, the Board considered all the evidence presented, deliberated, and declared its intent to make several determinations related to the extent of vested rights that exist at the Permanente Quarry. The determination identified the parcels that are vested, including the East Materials Storage Area. The Board also determined that many of the parcels within the Comprehensive RPA boundary are vested; however, some parcels that include the proposed expansion are not vested.

The Board subsequently approved a resolution on March 1, 2011, that formally documented the final determination regarding vested rights at the Permanente Quarry. The resolution prepared by County Counsel and a staff report are posted on the County's website. This milestone completed the vested rights phase of both RPA proposals described above. The research, analysis, and report preparation were very time consuming and staff resource intensive from November 2010 through the end of February 2011. Consequently, much of the CEQA review by County staff was on hold during this time frame.

### Research and Analysis of Selenium Found on the Site

The County's consultant commenced preparation of the Draft Environmental Impact Report (DEIR) for the EMSA Reclamation Plan Amendment in March 2010. Among the issues that must be evaluated is the presence of selenium, which affects water quality. Permanente Creek is listed for this element, and selenium presence was confirmed in 2010 when Lehigh completed site and creek water testing for a report submitted to the Regional Water Quality Control Board. Subsequently, the County conducted independent site testing, and completed testing and analysis on two separate qualifying rain events. These tests confirmed the presence of selenium.

County staff has consulted with staff from the Regional Water Quality Control Board regarding the selenium issue, and potential impacts and possible mitigation measures are still being evaluated. The County did not anticipate the selenium issue when initially preparing the project schedule and scope of work for the EIR consultant. It has resulted in a three-month delay in

preparing the Draft EIR. The County is using dedicated staff to work on the project to ensure the revised schedule is met.

Additional information is required of Lehigh Hanson Inc.

In December 2010 the County received a letter from the Office of Mine Reclamation containing comments regarding the Comprehensive Reclamation Plan Amendment for Permanente Quarry. Lehigh submitted a letter acknowledging the comments and described how it would modify plans or provide additional information to response to the comments from OMR. The County directed Lehigh submit the additional information to ensure it is properly included and addressed in the CEQA analysis. While Lehigh has provided some of the information, additional information remains pending. The County notes that Lehigh is working to submit the information as directed.

**COMMUNICATION BY SANTA CLARA COUNTY**

Communication between Santa Clara County and Lehigh Hanson, Inc.

Santa Clara County staff is in regular communication with the mine operator while processing the reclamation plan amendment proposals in several ways. Written communication has been provided regarding the County's determinations whether the reclamation plan amendment proposals are complete. Staff has made several requests for data or information necessary to further the CEQA review of both the EMSA and Comprehensive reclamation plan amendments. Staff also required the operator to provide extensive historical information that was necessary to conduct the vested rights analysis the County completed in February 2011.

Communication with the Office of Mine Reclamation

Santa Clara County has been in regular communication with the Office of Mine Reclamation (OMR). In November 2008 and June 2010 County staff traveled to Sacramento to discuss the issues related to the Permanente Quarry with the Director of OMR and his staff. The County provided copies of the two proposed reclamation plan amendments to OMR with a request that a preliminary review be made and that OMR provide comments regarding the submittal. OMR issued a letter in December 2010 with comments regarding the Comprehensive reclamation plan amendment. The mine operator acknowledged the comments and has agreed to make necessary revisions or clarifications, and submit revised plans or other documentation in response. The revised information will be used as preparation of the DEIR for the Comprehensive RPA progresses.

In August 2010 the County began providing monthly update reports to OMR that describes the ongoing work regarding Permanente Quarry. The information in these reports includes status of public outreach efforts, work on each environmental impact report, the vested rights research and hearings, and the SMARA inspection report.

Santa Clara County conducts the annual SMARA inspections of Permanente Quarry and submits the completed inspection reports to OMR. (The status of the NOV's is noted in these reports). The County also obtains and reviews an annual Financial Assurance Cost Estimate as required



under SMARA. Staff reviews the FACE, requires revisions where necessary, and, in keeping with SMARA, forwards the FACE to OMR for its review and comment.

The Planning Office provides monthly update reports to OMR. To date, OMR staff has not voiced any concerns or questions regarding these reports or progress achieved by the County. Copies of these reports are provided to the SMGB Executive Officer, and the Director of OMR.

#### Communication with the General Public

Anytime a member of the public calls the office or comes to the public counter, staff are available to answer questions, and to assist individuals who wish to review the documents on file that are requested.

Santa Clara County communicates with the general public in a variety of ways. The Planning Office maintains information available on the Internet at [www.sccplanning.org](http://www.sccplanning.org). This information includes the application materials associated with each of the reclamation plan amendments. This includes a Frequently Asked Questions page. Additional information is posted as noted or described below.

Outreach meetings were held in Cupertino and in Saratoga that included staff from the County Department of Planning & Development, staff from the Bay Area Air Quality Management District, staff from the Federal Environmental Protection Agency, and staff from the Regional Water Quality Control Board. These outreach meetings, which took place on October 22, 2008, and on June 11, 2009, were intended to provide information to the public regarding the reclamation plan amendment processes, the nature of the application submittals received from the mine operator, as well as information regarding specific issues (e.g., air and water quality) related to the adjacent cement plant facility.

The County has also convened public scoping meetings in Cupertino after Notices of Preparation for the Environmental Impact Reports were published. A scoping meeting regarding the EMSA RPA took place on April 28, 2011. A separate scoping meeting was held regarding the Comprehensive RPA on March 30, 2011. The County posted these comments for public view on the Planning Office web site at [www.sccplanning.org](http://www.sccplanning.org).

When Planning Office staff conducted its research and analysis regarding vested rights at Permanente Quarry, an extensive amount of information was scanned and posted on the Planning Office web page. When it was complete, the Planning Office posted the full analysis that was presented to the Board of Supervisors. This information includes aerial-photographs, graphics prepared using electronic maps, copies of numerous technical reports, in addition to the lengthy staff report.

Each time the Santa Clara County Board of Supervisors meets, a regular portion of the agenda allows for public comment regarding any topic that is not on the agenda. During several meetings members of the public made comments related to the Permanente Quarry and to the adjacent Lehigh Southwest Cement Plant. Staff subsequently wrote memorandums to the members of the Board of Supervisors and to the County Executive that contained responses to each of these comments. These memorandums have also been posted on the Planning Office web page, making them accessible to the general public.



The information, documents, plans, and other graphics that are part of the files that contain the Permanente Quarry reclamation plan amendments, SMARA inspections, and financial assurances are public information. An individual or group may obtain access to all the information obtained by the Planning Office, information that is not posted on the Internet, by visiting the Planning Office during normal business hours and requesting the information. Staff of the Planning Office received two requests for information under the California Public Records Act, California Government Code § 6250 et seq. Staff responded to each request in accordance with state statutes, provided access to the documents on file, and also produced copies of electronic mail correspondence.

**Attachments:**

- Exhibit A: East Materials Storage Area Reclamation Plan Amendment Draft Environmental Impact Report Scope of Work
- Exhibit B: Comprehensive Reclamation Plan Amendment Draft Environmental Impact Report Scope of Work
- Exhibit C: Compliance Schedule – Lehigh Hanson Permanente Quarry, May 27, 2011

cc:

President Cortese and Members of the Board of Supervisors

Jeff Smith, County Executive  
Sylvia Gallegos, Deputy County Executive

Rob Eastwood, Senior Planner  
Marina Rush, Associate Planner

Miguel Márquez, County Counsel  
Orry Korb, Assistant County Counsel  
Lizanne Reynolds, Deputy County Counsel

# Exhibit A

Report to State Mining & Geology Board, June 9, 2011  
Permanente Quarry  
State Mine ID 91-43-0004  
Santa Clara County Planning Office File 2250-13-66-09P-10P)

# **EXHIBIT A**

## **EMSA RPA Draft Environmental Impact Report Scope of Work**

### **SECTION 1**

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## **Approach and Work Program**

*Revised January 25, 2010*

### **1.1 Project Understanding**

Based on our review of the Request for Proposal dated September 10, 2009, the April, 2009 Reclamation Plan Amendment for Permanente Quarry, the *Procedures for Consultants to Prepare Environmental Documents for Private Projects in Santa Clara County*, and our discussions with County staff, our understanding of the Hanson/Lehigh Permanente Quarry Reclamation Plan Amendment project includes the following:

- The County of Santa Clara is seeking a consultant to prepare a project-level Environmental Impact Report (EIR) for a Reclamation Plan Amendment (RPA) for the existing Hanson/Lehigh Permanente Quarry to cover ongoing and planned activities at the quarry's East Materials Storage Area (EMSA). The project includes reclamation in this area, and does not involve mining operations or reclamation in the main mining pit or in the west materials storage area. Nor does this project involve operation of the adjacent Lehigh Southwest Cement Plant. The RPA covers the entire 89-acre EMSA site only.
- In June 2008, the County issued a Notice of Violation (NOV) related to the placement of overburden material in the EMSA, as it is outside the area covered by the quarry's 1985 Reclamation Plan. The NOV required the operator to cease depositing material in the EMSA. Subsequently, the operator applied for the RPA in April 2009, and the County has allowed limited use of the EMSA while this amendment is in process. Hanson/Lehigh (the applicant) has prepared the Reclamation Plan Amendment and related technical documents.
- The principal environmental issues identified by the County include visual/aesthetic impacts from reclamation and the creation of a large new landscape feature visible from a wide area of the Santa Clara Valley; air emissions, including dust, diesel fumes, greenhouse gases, and potentially toxic air contaminants; noise; the potential for impacts to biological resources within the EMSA and adjacent areas; dynamic and static slope stability of the fill structure; and potential impacts to surface water from erosion and sedimentation both during construction and after reclamation. We have provided detailed technical scopes of work for each of these issue areas in the following section.

- This project is proceeding on a separate track from a proposed site Master Plan that covers mining and reclamation of the main mining pit, a new mining area (“pit 2”), and the west materials storage area. As the applicant is still preparing technical studies for that project, the County wishes to initiate environmental review for the EMSA RPA first. The County anticipates commencing environmental review for the larger Master Plan in the summer of 2010, by which time the EIR for the EMSA RPA will be through most of the CEQA process (see attached schedule).
- Because these two closely-related projects are undergoing separate environmental review, this EIR must carefully and thoroughly explore baseline conditions and the potential for cumulative impacts of the two projects combined. In addition, Hanson/Lehigh operates a cement plant (the Lehigh Southwest Cement Plant) on an adjacent site that has been the focus of intense scrutiny, both by the public and by regulatory agencies. Of particular concern are toxic air emissions of the cement kiln, including mercury, which occurs naturally in the limestone that is mined at the site and used as the principal raw material for making cement. The EIR will have to examine impacts, including air impacts, of the proposed EMSA RPA in combination with ongoing impacts of the cement kiln. Other issues that need to be covered in the cumulative analysis include fugitive dust emissions, diesel particulate emissions, noise (especially from truck traffic), and biological resources (e.g., cumulative loss of habitat). Our proposal includes an unusually robust treatment of the cumulative analysis.
- Despite the fact that the quarry has been in existence for over a century, ongoing mining and cement manufacturing have been the subject of considerable controversy over the past several years. We understand that the EIR will be highly scrutinized both by the project applicant and project opponents, and that it must meet the highest standards for technical and legal adequacy under CEQA.
- The County desires to contract only for preparation of the Draft EIR, with the intent of contracting separately for preparation of the Final EIR and Mitigation Monitoring and Reporting Program. This proposal therefore only includes tasks through preparation of the Draft EIR.

## 1.2 Overall Approach

ESA proposes to prepare the EIR using an approach that includes the following elements:

- We will utilize our in-house team of skilled planners, engineers and scientists to provide for an efficient environmental review process that will result in cost-effective and high quality environmental documents;
- For specialized services related to visual resources evaluation, we have included as a subcontractor on our team Environmental Vision, a firm

specializing in computer-generated visual simulations, viewshed mapping, and viewshed analysis;

- We will provide rigorous peer review of the applicant's work products, including photo simulations, by senior in-house staff and subconsultants, to ensure that the conclusions reached regarding impact significance and mitigation measure effectiveness are scientifically supported and legally defensible;
- We will identify mitigation measures that will economically and feasibly minimize any adverse environmental effects of the project while still meeting its basic objectives;
- The EIR will clearly, concisely and graphically communicate conclusions regarding the proposed projects' potential environmental impacts to the County's decision-makers, staff, the public, and other interested agencies;
- We will stay in close communication with County staff to ensure staff's satisfaction with the assumptions, approaches, alternatives, and conclusions, and overall progress of the EIR; and
- We will accomplish the proposed work program expeditiously and economically, within the project schedule and the contracted budget.

## 1.3 Work Program

### Task 1: Project Management and Coordination

ESA's Project Manager for this assignment is Dan Siclar. He will be responsible for day to day management of the project. Management tasks include coordination of all team members; communicating with County staff and with other responsible agencies (including the Bay Area Air Quality Management District (BAAQMD), and the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB); budgeting and tracking costs; invoicing; writing and editing sections of the documents; and overseeing document production. Dan will be assisted by Tania Sheyner. Tania is a planner with extensive CEQA experience, and has served in the Deputy Project Manager role for a number of complex EIRs. Tania will assist Dan in the day-to-day management of the project and coordination of the project team, will maintain the administrative record, and will prepare several sections of the EIR. Karl Heisler, Manager ESA's Community Development Group in San Francisco, will be the Project Director and as such will serve as the project's QA/QC officer. He will have ultimate responsibility for ensuring that the EIR meets the expectations of Santa Clara County.

This task also includes maintenance and preparation of the Administrative Record. We propose to maintain an all-electronic record: we will request all

documents in electronic format, or scan hardcopy documents. All materials used in preparation of the EIR will be cataloged, facilitating preparation of the record at the conclusion of the project.

## **Task 2: Meetings**

ESA proposes to initiate work with a kick-off meeting with County staff, attended by ESA's Project Manager and Project Director. This meeting will be held for the management team to receive a briefing on updates to the proposed project, to discuss issues related to the baseline, the project descriptions, the schedule, and our approach to the analysis, including thresholds of significance. We have budgeted one additional face-to-face meeting with County staff for our Project Manager. In addition, our proposal includes attendance by two ESA senior personnel (Project Manager and one other) at one scoping meeting.

## **Task 3: Prepare Project Description**

Within four weeks of project initiation, ESA will prepare a draft of the Project Description. This will include a list of project objectives, as well as clear, concise descriptions of existing permitted (baseline) conditions, and equally clear and concise descriptions of how the project differs from the baseline. The Project Description will include a description of the environmental setting, defining and describing the study area, its land use and regulatory history, property ownership, zoning, and General Plan designation. More specific descriptions of the environmental setting will be included in each topic area of the environmental impact analysis. The Project Description will also include an approach to the analysis, describing the approach taken to defining baseline, setting, and the project, and providing the legal authorities for the approach where appropriate. After County staff review of the draft Project Description, ESA will finalize this chapter of the Administrative Draft EIR, and use it as a basis for the environmental analysis.

## **Task 4: Conduct Analyses/Prepare Administrative Draft Environmental Impact Report**

ESA will conduct the necessary technical studies and prepare and submit to Santa Clara County the Administrative Draft EIR. This will be a complete document. ESA will submit five hardcopies and one electronic copy of the document for internal review by the County.

In preparing the environmental analyses in the EIR, ESA will comply with the CEQA *Guidelines* (as amended) and the County's *Procedures for Consultants to Prepare Environmental Documents for Private Projects in Santa Clara County*. For each topic area in each document, we will:

- Describe the environmental setting, including the regulatory setting;
- Establish concise significance criteria, using CEQA *Guidelines* Appendix G and other sources as appropriate;
- Identify significant impacts of the project;
- For all significant impacts, craft mitigation measures to reduce or eliminate the impact, if feasible; distinguish between measures proposed by the applicant and additional measures provided in the EIR; discuss any secondary impacts of mitigation measures;
- Determine the residual significance of each impact following mitigation, clearly identifying any significant unavoidable impacts;
- Describe impacts that are less than significant.

Detailed descriptions of our approach to each topic area follow.

### ***A. Geology, Soils, and Seismicity***

#### **Geology, Soils, and Seismicity Issues**

The project site is located on the hilly eastern flank of the Santa Cruz Mountains underlain by bedrock of the Franciscan Assemblage. The Franciscan Assemblage is a chaotic mix of highly deformed ancient marine sediments and crustal rocks, which locally include limestone (Calera Member), chert, and greenstone (altered basalt). Sandstone, conglomerate, siltstone, and claystone of the geologically younger Santa Clara Formation overlie portions of the Franciscan Assemblage. Cement-grade limestone and aggregate provide the primary resource materials at the Hanson/Lehigh Permanente Quarry.

The project site is located in a seismically active region. The San Andreas Fault Zone is located approximately 3 miles west-southwest, the Sargent-Berrocal Fault Zone parallels the San Andreas to the east, and the Monte Vista Fault Zone passes about 500 feet northeast of the property boundary. Topography of the RPA and surrounding area is controlled by a series of east-west trending ridges and valleys with slope gradients ranging from gentle to steep.

From a CEQA perspective, the primary geological issues for the proposed reclamation of the EMSA are static (non-earthquake) and seismic stability of working and reclamation slopes and excessive long term erosion that could impact slope stability. The project site will likely be subjected to strong ground shaking at sometime during the active fill placement on the EMSA or following reclamation. In early 2009, Golder Associates (Golder) conducted static and seismic slope stability analyses of the proposed EMSA slopes and



provided specific engineering recommendations for construction of the EMSA. In addition, it investigated and analyzed the effects on localized slope stability from the presence of the fine-grained waste material generated from washing limestone aggregate. This waste material would be placed in the middle portion of the EMSA waste storage areas in lifts no higher than 8 feet. Golder provided additional recommendations to reduce effects of slope displacement that could result from placement of this fine-grained waste material. These issues will be discussed and analyzed in the EIR section for Geology, Seismicity and Soils, which will be prepared as described in the tasks below.

### **Geology, Soils, and Seismicity Tasks**

- *Geologic Conditions and Setting.* ESA will develop the regional and local geologic setting using available data and information from the U.S. Geological Survey (USGS), the California Geological Survey (CGS), Santa Clara County, the natural Resource Conservation Service (NRCS), or the U.S. Forest Service (USFS). The geologic setting will rely primarily on geologic data and information provided in the April 2009 Golder slope stability evaluation. However, ESA will verify the technical adequacy of the geologic descriptions, test methods, assumptions, and conclusions prior to utilizing pertinent information from the Golder document. Project site geologic and seismic conditions will be based on the above sources, in addition to any previous site-specific investigations completed for the Hanson/Lehigh Permanente Quarry. Site-specific geologic, soils, or seismic investigation reports, if they become available, will be used to supplement geologic setting data only after ESA has thoroughly reviewed these documents for technical adequacy and for consistency with known local and regional geology. Under this task, ESA will conduct a site reconnaissance, which will verify the reported conditions and the current site status. No additional geologic testing is included in this scope of work. This task would develop the geologic and seismic setting as needed for a thorough impact analysis in the EIR.
- *Earthquake Faults and Seismicity.* Using the Golder investigation, previous geologic reports for the project site, as well as available maps and reports from the CGS, the USGS, and local fault studies (if necessary), ESA will identify and plot the major earthquake fault systems and discrete faults in the region, their distance to the project site, earthquake histories, potential to generate large earthquake magnitudes, and their general potential to affect the project site. Using local seismic data obtained through the USGS, the CGS, and Santa Clara County, ESA will verify and, if necessary, update the major sources of earthquake hazards and the predicted worst-case site-response to a maximum credible earthquake on nearby major faults. Information and data obtained from this task will provide the basis for the seismic impact analysis in the EIR.
- *Slopes Stability and Potential Geological Hazards.* Using information developed by Golder through its slope stability evaluation, and if necessary, supplemental information provided from previous site investigations or

published reports, ESA will assess static and seismic slope stability and the potential for erosion hazards on the site during construction of the EMSA and through post-reclamation. Recommendations presented in the April 2009 Golder report could be considered for mitigation measures to reduce significance of impacts, if appropriate.

- *Grading and Quarry Operations.* ESA will describe and evaluate proposed project grading including the amount of disturbance, depth of fills, and final topographic configurations. This task will also include an assessment of the existing groundwater conditions and how they would relate to geology and geologic hazards.
- *Setting and Impact Analysis.* With the information and data gathered from the above tasks, ESA will prepare an environmental setting for the EIR that addresses site geology, soils, seismicity, groundwater, and the regulatory framework. Based on the setting information and the significance criteria, ESA will analyze the potential impact the project may have on geology and the impacts the existing geology may have on the proposed project. Where necessary, ESA will propose mitigation to reduce impacts to less than significant, if feasible.

## **B. Hydrology and Water Quality**

### **Hydrology and Water Quality Issues**

The project site comprises an approximately 89 acre overburden storage area within the larger, encompassing Quarry property. Permanente Creek runs adjacent to the eastern portion of the project site, and an unnamed USGS blueline stream is located just to the north. However, all areas of the project site are outside of any 100-year floodplain boundary.

Water quality related to the operation of the Quarry (including the project site) is currently regulated by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Cleanup and Abatement Order No. 99-018 as well as by the State Water Resources Control Board (SWRCB) General Permit for Storm Water Discharges Associated with Industrial Activities.

A number of technical studies have been completed in support of the RPA and, in part, in response to potential environmental impacts. These studies include a drainage plan and runoff assessment, an erosion control plan, and a geotechnical evaluation. The primary hydrology issue concerns the potential impact the project may have upon soil loss and the subsequent delivery of sediment to Permanente Creek and/or other adjacent streams. Increased delivery of sediment to adjacent streams could degrade the existing water quality.

### **Hydrology and Water Quality Tasks**

- ESA will conduct a site reconnaissance to better understand and characterize local waterways, drainage patterns, and land surface condition.
- ESA will critically review the aforementioned technical studies completed in support of the RPA and summarize the relevant information and data presented (e.g., the stormwater runoff analysis) such that it could be effectively included in the EIR. If necessary, questions and clarification regarding these studies would be facilitated by documented telephone conversations and email exchanges rather than formal, written comments from ESA.
- ESA will develop hydrologic, water quality, and regulatory setting information from the technical studies reviewed as well as from available published sources including the USGS and Santa Clara County.
- ESA will contact the SFBRWQCB and obtain any available water quality information for Permanente Creek (or other streams) in the vicinity of the project site.
- ESA will analyze the potential impacts of the project with respect to soil loss and erosion and the subsequent delivery of sediments to streams adjacent to the project site. Concerning the chronic process of soil erosion initiated by overland flow, ESA will use the Revised Universal Soil Loss Equation (RUSLE) or equivalent methodology to assess potential soil loss volumes related to the existing and proposed project site condition. With respect to discrete, stochastic processes of soil loss and sediment delivery (i.e., landslides and slope failures), ESA will rely upon existing geotechnical analyses to assess the potential soil loss impacts of the project.
- ESA will analyze whether the proposed project could degrade water quality in Permanente Creek based upon the technical studies previously completed as well as the analyses proposed (above). If ESA's review and analyses indicates that the project would result in a substantial increase in sedimentation (and, by extrapolation, turbidity within Permanente Creek or other adjacent streams), ESA would formulate mitigation to reduce pollutant discharges to within acceptable limits.
- Using the information and data gathered from the aforementioned tasks, ESA will prepare a hydrology and water quality section for the Administrative Draft EIR (ADEIR).

### **C. Air Quality**

#### **Air Quality Issues**

The project site is located within the boundaries of the San Francisco Bay Area (Bay Area) Air Basin. The Bay Area Air Basin is currently designated "nonattainment" for the State ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> (PM<sub>10</sub> and PM<sub>2.5</sub>

consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively) standards, as well as “nonattainment” for the national 8-hour ozone and 24-hour PM<sub>2.5</sub> standards. The Bay Area Air Quality Management District (BAAQMD) is the local air district. The BAAQMD regulates air quality through its permit authority over most types of stationary emissions sources in the Bay Area Air Basin and through its planning and review activities. The Reclamation Plan Amendment (RPA) would take place as phased reclamation of the EMSA in three overlapping phases over an estimated six-year period of time. Reclamation activities would include grading fill slopes to appropriate contours, applying topsoil, installation of erosion control, revegetation, maintenance, and monitoring. These activities would generate fugitive dust that could cause local violations of particulate standards. In addition, reclamation activities would generate ozone precursors, diesel particulate matter, and greenhouse gases from heavy-duty equipment operations and motor vehicle trips.

Greenhouse gas emissions, and their relation to global climate change, has become an increasing concern for large development projects. ESA has been listed by the California Climate Registry as a firm qualified to perform baseline emission inventories for greenhouse gases. The Governor’s Office of Planning and Research is required to adopt significance criteria for greenhouse gas emissions impacts by January 1, 2010, likely before publication of the Draft EIR for this project. We therefore anticipate using the newly-adopted significance criteria for greenhouse gases for this analysis.

### **Air Quality Tasks**

- Discuss the regional and local air quality setting as it pertains to the project. Summarize the local and regional meteorology, topographic factors affecting pollutant dispersion, and ambient air monitoring data. Identify sensitive air pollutant receptors in the proposed project vicinity.
- Describe the regulatory context for air pollution in the Bay Area. Specifically, identify the responsibilities of federal, state and regional agencies such as the BAAQMD over sources of air pollution in and around the project area. Describe the regulatory approach to stationary and mobile sources of criteria air pollutants and toxic air contaminants.
- Summarize statewide planning efforts relative to climate change and the generation of greenhouse gas emissions.
- Describe the BAAQMD’s significance thresholds for air quality impacts from plans as set forth in their current CEQA *Guidelines*; discuss proposed revisions to the Guidelines (or, if already adopted, the new *Guidelines*).

- Estimate criteria pollutant and greenhouse gas emissions from reclamation activities using URBEMIS2007 version 9.2.4. Potential sources of emissions of criteria pollutants and/or greenhouse gases include off-road equipment, on-road vehicles, fugitive dust, removal of mature trees, and indirect electricity generation.
- Assess the level of impact of criteria pollutant and greenhouse gas emissions based on the applicable BAAQMD significance criteria and the air quality levels modeled for the project.
- Based on a literature search and review of documentation provided by the applicant and by the BAAQMD, ESA geologists will identify the potential occurrence of hazardous substances, including crystalline silica, mercury, and asbestos, that may be contained in the materials that would be placed in the EMSA and that have already been deposited there. Our assumption is that a portion of this material will be emitted as fugitive dust, in which case it would be considered a toxic air contaminant. ESA will provide a conservative (i.e., worst case) estimate of the potential concentration of any such substances in the overburden material (see Optional Task, below) to serve as a basis for the health risk assessment.
- To determine increases in health risk from project emissions of toxic air contaminants (including diesel particulates, PM<sub>2.5</sub>, and any constituents identified in the prior task), the USEPA-approved screening dispersion model SCREEN3 will be utilized to estimate concentrations of pollutants at key receptors that would result from emissions during reclamation activities. Screening dispersion models estimate maximum concentrations based on worst case meteorological conditions and are biased towards overestimation of public exposure. Therefore, the purpose of screening modeling is often to determine if a more detailed assessment is warranted. If risk is determined to be significant based on SCREEN3 output, emissions will be modeled using the USEPA-approved refined dispersion model, AERMOD. Refined dispersion models are designed to provide more representative concentration estimates than screening models. Estimated pollutant concentrations will then be used to evaluate health risks in accordance with methodology provided by the California Office of Environmental Health Hazard Assessment's Air Toxic Hot Spots Risk Assessment program.
- Identify practical, feasible mitigation measures for air quality impacts identified for the project. Evaluate whether mitigation measures would reduce the impacts below a level of significance.

***Optional Air Quality Task: Sampling and Laboratory Analysis of Overburden Material (Optional Task 6)***

If crystalline silica, mercury, asbestos or other hazardous substances are present in the overburden material deposited in the EMSA, they could be considered air toxics when emitted as fugitive dust. In addition, the fine-grained limestone dust material that is a product of aggregate washing is also a source of fugitive dust emissions as this material will be placed and stored

at the EMSA. Fugitive dust emissions could occur during the excavation, transport, placement, and final grading of these materials at the EMSA. Characterization of these materials will be necessary to determine the air toxics risks at the EMSA.

As an optional task, ESA would collect representative samples of the materials that would ultimately be engineered into place at the EMSA, including the fine-grained material remaining after the aggregate wash process. These samples would then be submitted for laboratory analysis of crystalline silica, asbestos, and metals including mercury. Laboratory analysis would determine the presence and concentration of crystalline silica, asbestos, and 17 metals determined by the state of California to be a potential health risk to humans. The task would involve field collection of approximately 15 representative samples from the active quarry area by ESA's California-registered professional geologist. ESA will submit the samples for the analysis of crystalline silica and asbestos using X-Ray Powder Diffraction (XRD). The 17 California Administrative Manual (CAM) metals will be analyzed by a California certified analytical laboratory using Inductively Coupled Plasma – Mass Spectrometry (ICP-MS).

ESA assumes that its staff will be escorted to the sample sites by a representative of the Hanson/Lehigh Permanente Quarry. ESA's geologist will collect the sample in an appropriate container, label the sample and place it in a cooled container for overnight shipment. Sampling is expected to require up to one full day and the receipt of sample results is expected to require about 4-6 weeks. ESA will prepare a technical memorandum regarding the sampling program methods, results, and interpretation. The results would then be incorporated into the health risk assessment.

The budget for this optional task is provided separately in the cost spreadsheet.

#### ***D. Noise and Vibration***

##### **Noise and Vibration Issues**

The Hanson/Lehigh Permanente Quarry RPA would take place as phased stockpiling and reclamation of the EMSA in three overlapping phases over an estimated six-year period of time, and would include additional noise sources that could affect noise-sensitive receptors in the project area. Reclamation activities would generate noise by off-road equipment operation and on-road vehicles that would effect the ambient noise environment based upon various factors: 1) the proximity of noise-sensitive uses (e.g., residences), 2) the character of project noise sources (impulsive versus constant), 3) the temporal distribution of project-related noise (e.g., daytime versus nighttime), 4) the presence or absence of intervening terrain or

buildings, 5) the existing ambient noise levels, and 6) the importance of quiet to the community as reflected in the noise/land use compatibility guidelines contained in the Santa Clara County General Plan and Noise Ordinance, and those of nearby affected communities, including the City of Cupertino. ESA will assess project and cumulative noise impacts with reference to the change in noise levels at noise-sensitive locations in the vicinity and with reference to noise/land use compatibility guidelines and will devise, where necessary, feasible, appropriate noise mitigation measures in accordance with CEQA.

### **Noise and Vibration Tasks**

- Describe and discuss existing major noise sources in the vicinity of the project area based on information available from the Santa Clara County General Plan Noise Element, Noise Ordinance, field studies, and other sources. Describe the existing noise environment on the basis of information provided to ESA by Santa Clara County; ESA does not propose to take any new noise measurements.
- Summarize applicable noise regulations, policies, and standards, including the noise/land use compatibility guidelines in the Santa Clara County Noise Element and Ordinance, City of Cupertino Noise Element and Ordinance, and Mine Safety and Health Administration (MSHA) standards.
- Identify the noise-sensitive land uses or activities in the vicinity of the project.
- Estimate the time that construction equipment will be in use and the type of noise each makes. Noise impacts of construction will be quantified based on the duration, nature, phasing and level of various activities.
- Estimate future noise and vibration levels for the proposed project based on traffic estimates associated with proposed reclamation activities.
- Compile “reference” noise levels from individual pieces of equipment and activities that are representative of those proposed for the project site. Reference noise levels will provide the basis for estimating future composite noise levels due to the project at noise-sensitive locations.
- Based on applicable laws, policies, and regulations, develop significance criteria to be applied to the impact analysis. Assess the level of impact based on the identified significance criteria and the noise modeled for the project.
- Estimate the change in noise levels at noise-sensitive land uses in the project vicinity based on the project description (activity levels, locations of equipment and activities, numbers of truck trips, and hours of operation), the reference noise levels discussed above, the distance between project noise sources and the noise-sensitive uses, presence or absence of intervening terrain, and existing background noise levels at the noise-sensitive locations.



- Evaluate the potential for significant noise impacts based on the estimated change in noise levels at noise-sensitive uses and based on Santa Clara County noise/land compatibility guidelines.
- Estimate the potential for significant vibration impacts to adjacent properties.
- Identify feasible, appropriate noise mitigation measures to avoid or reduce adverse impacts in consultation with Santa Clara County and the project applicant.

## ***E. Aesthetics/Visual Resources***

### **Aesthetics/Visual Resources Issues**

The project site is located in a Zoning District with a Design Review overlay (d1) for the Santa Clara Valley Viewshed, which requires higher levels of review depending on structure type and size. The EMSA site is visible from a large area of the Santa Clara valley floor, and the proposed fill structure will create a large, unnatural landscape feature and alter views of the hills from residences, parks, and roadways. The applicant has prepared a series of visual simulations depicting the phased reclamation of the EMSA from one vantage point showing the phased construction of the fill structure, which at first contrasts with the surrounding oak covered hills, then gradually naturalizes as revegetation proceeds and vegetation matures.

The Visual/Aesthetics analysis will describe and depict in visual simulations the changes to existing scenic views and scenic resources that would result from the project. Visual simulations will be prepared by Environmental Vision, a specialty firm with which ESA has worked extensively when accurate, complex visual simulations are called for in EIRs. The following describes Environmental Vision's proposed approach to creating the visual simulations, which will form the basis for the Visual/Aesthetics impact analysis:

### **Aesthetics/Visual Resources Tasks: Visual Simulations**

- **Data Review, Site Photography and Review Photographs:** Collect and review pertinent information including current project maps and drawings and aerial photographs. Conduct a site visit to observe the project site and surroundings. Using a digital single lens reflex (SLR) camera, photograph the project site from a variety of representative public viewpoints such as roadways, public open space and residential areas. Basemap annotation, photo log sheet and GPS recording will be employed to document photo lens settings and viewpoint locations.
- Prior to shooting photography, consult with County staff to determine location of potentially sensitive viewpoints. Submit a set of candidate simulation photos with a viewpoint location map for review and approval. For cost estimating purposes one site photography trip and up to 8 candidate review photographs are included.

- **Peer Review of Applicants Visual Simulations:** Environmental Vision will utilize computer modeling techniques and field observations to perform peer review of the applicant's visual simulations. The results will include an evaluation of these visual simulations in terms of whether the images portray the location, scale, and general appearance of the proposed quarry reclamation plan features with reasonable accuracy. In addition, the validity of the selected vantage points will be evaluated in terms of whether or not the selected photographic views accurately portray representative public views of the project. For cost estimating purposes, evaluation of up to four simulation images and one review/revision cycle for the memo are included.
- **Visual Simulations:** Using advanced computer modeling and rendering techniques, produce visual simulations to show the EMSA RPA project superimposed on selected photographic views of the project site. The simulation images will be presented as “before” and “after” views of the project site and will show the future stages of the proposed RPA as seen from selected public vantage points. The simulations will portray proposed grading, roadways, phased stockpiling and reclamation/revegetation and landscaping. The simulation viewpoints will be selected in consultation with County staff.

The simulations illustrate the location, scale and appearance of the proposed project components as seen from representative public viewpoints. The computer-generated visual simulations will be the result of an objective analytical and computer modeling process. Steps in the computer-assisted simulation process include:

- Developing an initial 3-D digital model of existing conditions based on topographic data;
- Developing a 3-D model of the proposed project components based on project engineering design data.
- Combining the 3-D computer model of the proposed plan with the digital site model to produce a complete computer model of the proposed project.
- Then producing a set of computer-generated perspective plots to represent the selected viewpoints and overlaying computer "wireframe" perspective plots on photographs to verify scale and viewpoint location
- Producing digital visual simulation images based on digital renderings of the 3-D model combined with selected digital photographs (see example of an Environmental Vision simulation produced for another ESA quarry project, below).

For cost estimating purposes, a total of three simulation viewpoints are included. For each viewpoint one “before” and up to four “after” images will be produced (5 images from each viewpoint, and a total of up to 15 images). The simulations will portray the project site at up to four different stages of Reclamation Plan implementation including Phases A, B and C, as well as a future stage when revegetation is established. The

simulations will assume success of revegetation efforts. The simulations will be based on project design data provided to Environmental Vision. The images will be produced at 8.5 by 11 inch, color format. Digital versions of the simulations will be provided. One review/revision cycle is included.

- **Viewpoint Location Map:** Delineate the location of the visual simulation vantage points on a map of the site and surrounding area. The viewpoint location map will be produced in black and white at 8.5 by 11 inch format.
- **Data Requirements:** To complete the visual simulations, Environmental Vision will require both digital (CAD) and hardcopy images and datasets, as follows:
  - Electronic and hardcopy versions of the applicant's visual simulations;
  - Simulation Photo Viewpoint location map;
  - Existing site topography and proposed grading with property lines;
  - Proposed site plan showing any building footprint, driveways etc.;
  - Plan and elevations drawings for any proposed structures;
  - Aerial photograph of site and surrounding area; and
  - Revegetation/Landscape plans.

***Optional Task: Prepare Viewshed Map (Optional Task 7)***

As an optional task (the budget for this task is presented separately in the cost spreadsheet), Environmental Vision will use computer modeling and digital project and topographic GIS data to produce generalized viewshed maps to depict geographic areas located within two miles from which the project would be visible. The maps will be produced in color on a USGS or aerial photo basemap (see example). Areas where different phases of reclamation will be seen may be modeled and mapped. The viewshed map(s) will be produced to support the EIR analysis of potential project visibility and will be presented as part of the EIR visual analysis.

**Aesthetics/Visual Resources Tasks: Preparation of EIR Section**

- Describe environmental and regulatory setting, including Santa Clara County General Plan policies and design review requirements, and identification of designated scenic roadways and vista points in the vicinity of the project site.
- Using unaltered (existing, or “before” condition) photography prepared for the visual simulations, describe and depict views of the project site and its surroundings from various publically-accessible vantage points. Evaluate the existing visual attributes and patterns according to objective descriptive categories: site location and spatial organization, land form, vegetation, land uses, cultural features, and specific objects having aesthetic significance.

- Analyze visual impacts of the projects based on “before” photos and “after” photo simulations of the proposed project.
- Discuss the consistency of the project with visual quality policies and guidelines of the Santa Clara County General Plan, and the General Plans of other affected communities, including the City of Cupertino.
- Analyze and describe the potential impacts of new sources of light or glare, visibility and duration of construction activities, potential damage to scenic resources from proposed earthwork, and the short-term and long-term effects on scenic views. Clearly describe each instance of an impairment of a view or other effect that constitutes a significant environmental impact.
- In consultation with County staff, explore and develop appropriate, feasible mitigation measures for any identified significant impact, and evaluate the potential for these mitigation measures to reduce impacts to a less than significant level.

## ***F. Biological Resources***

### **Biological Resources Issues**

Our preliminary review of the documents provided with the RFP, including the attachments to the RPA, suggests that the Biological Resources Assessment (BRA) provides a sound basis for the CEQA analysis. A few areas will, however, need further investigation and analysis:

1. **Oak Woodlands.** Special care must be taken to document impacts and propose appropriate mitigation for oak woodlands subject to the Oak Woodlands Conservation Act. Mitigation for this resource follows guidelines which are different from CEQA. ESA is currently doing the same type of analysis for the City and County of San Francisco on their Peninsula watershed lands.
2. **Tiger Salamander (CTS) and California Red-legged Frog (CRLF).** As noted in the RFP, the CNDDDB identifies CTS and CRLF species occurrences on or closely adjacent to the EMSA site. While the BRA does not consider occurrence of these species likely within the EMSA, both range far (up to one mile) from actual breeding areas and have been documented in permanent and temporary ponds at other quarry sites.
3. **San Francisco Dusky-Footed Woodrat.** There is little consistency in mitigation measures for this species. The mitigation proposed may need to be simplified to be practicable, as it requires suspending work under some circumstances.

Projects analyzed through the California Environmental Quality Act (CEQA) process should show that new land uses are in compliance with state and federal endangered species acts (CESA and FESA).

CEQA directs each lead agency to consult with the California Department of Fish and Game (CDFG) on any project the agency initiates that is not statutory or categorically exempt from CEQA. The CEQA Guidelines (Section 15065a) declare that impacts to rare, threatened or endangered plants or animals are significant. The Native Plant Protection Act also affords limited protection to special status plant species. A formal consultation process must be initiated with the CDFG for projects, which may or will have an adverse effect on state listed species (i.e., listed under CESA). As with U.S. Fish and Wildlife Service (USFWS) policy, "species of special concern" (as designated by the state) are not subject to the same consultation requirements as listed endangered, rare, or threatened species. CESA does encourage informal consultation for species of special concern that may become officially listed prior to completion of the CEQA process.

ESA biologists will review the revegetation plan and test plot information attached to the RPA, and inspect areas of the Permanente Quarry that have already been reclaimed and revegetated. Using this information, we will assess the likelihood of success of the revegetation plan as part of the impact analysis.

ESA will conduct a biological study of the project site. This will essentially be a peer-review of the BRA and the development/refinement of a mitigation/enhancement strategy for the project.

### **Biological Resources Tasks**

- Verify existing biological studies relating to the project area. Determine the applicability of the biological analysis in other planning and site-specific EIRs written for the region.
- Obtain additional information on special status species, communities of concern, and permit requirements through consultation with biologists at the U.S. Fish and Wildlife Service Endangered Species Office and the California Department of Fish and Game.
- Conduct general reconnaissance surveys of the project site. For each special status species for which suitable habitat has been identified, the following specific information will be collected or estimated:
  - Distribution and abundance;
  - Historic and recent status within the area;
  - Habitat quality;
  - Ecology, behavior, and habitat requirements; and
  - Aspects of biology of each species which could be relevant to the proposed uses of the project site.

- Describe the extent of Natural Communities present on-site using the BRA as primary source material.
- Summarize and evaluate federal, state, and local policies and regulations as they pertain to biological resources in the area.
- State significance criteria.
- Prepare the impact analysis; for any significant impacts, identify measures to reduce impacts to less-than-significant, as feasible. The impact analysis will include a determination of the likelihood for success of the proposed revegetation plan for the site, and the potential for significant impacts should revegetation efforts fail. This analysis will also inform the Aesthetic/Visual Resources impact analysis.

### ***G. Transportation and Circulation***

#### **Transportation and Circulation Issues**

Activities associated with the proposed Reclamation Plan would proceed without interruption to the current generation of quarry and cement plant haul truck traffic on local roadways. The scope of the transportation analysis will be to determine the extent to which the RPA may increase the daily traffic to and from the site over time. The project site is located approximately three miles from the interchange of I-280 and SR-85. Access to the quarry is from Stevens Creek Boulevard and Foothill Boulevard to the western terminus of Permanente Road.

The traffic and circulation scope of work is based on our understanding that most of the materials used for the project will be internal to the site (overburden rock, harvested top soil, etc.). Should it be determined that the need for the importation of materials on a larger scale than anticipated be required ESA would look to expand the scope (see Optional Task, below) in order to assess the potential impact of increased traffic on local and regional haul routes.

#### **Transportation and Circulation Tasks**

- Review existing data and studies performed for the area for applicability and to determine additional data needs.
- Consult with Santa Clara County to finalize the scope of work, including the identification of study intersections and roadway segments if necessary.
- Conduct field reconnaissance of the road network that serves the quarry site.
- Conduct 72-hour (mid-week) tube counts on quarry access road (Permanente Road).

- Collect three years of collision data for Stevens Creek Boulevard (between Foothill Boulevard and SR-85 and Foothill Boulevard between Stevens Creek Boulevard and I-280), through published SWITRS reports. The focus will be on accidents involving trucks, but data will be collected for all vehicle accidents.
- Describe the trip generation and distribution for the existing quarry operations (daily and peak hours) on the basis of data provided by the quarry operator.
- Describe the existing street and highway network and traffic conditions in the vicinity of the site.
- Establish significance criteria that will be used to judge project and cumulative impacts.
- Estimate the trip generation characteristics for the proposed Reclamation Plan for daily and peak-hour conditions on the basis of existing patterns and proposed changes to those patterns.
- Describe, at a programmatic level of detail, future traffic conditions in 2030 (i.e., at the end of the proposed 20-year reclamation period).
- Perform a review of the project site access and provision for on site parking, noting any changes under project conditions. Sight distance will be evaluated for safety concerns at the access location. Emergency vehicle access also will be evaluated.
- Develop feasible mitigation measures to reduce, or eliminate, significant impacts associated with the proposed project.

***Optional Transportation and Circulation Tasks (Optional Task 8)***

Should our initial investigation of traffic generated by the RPA conclude that the project has the potential to generate a substantial amount of off-site traffic (e.g., from importation of soil amendments and plant materials, and for employee vehicle trips), the following tasks may be necessary to fully characterize traffic impacts. The cost of these tasks is provided separately in the cost estimate spreadsheet.

- Conduct weekday (mid-week) traffic counts at up to four intersections, including Stevens Creek Boulevard and Foothill Boulevard during the AM peak period, and during a second two-hour period selected in consultation with County staff after review of the roadway volumes collected in the task above.
- Calculate the existing intersection levels of service (LOS) for the two analysis periods at the up to four study intersections, based on the existing intersection controls, lane geometries, and peak-hour turning movement volumes. Field observations of existing peak-hour traffic conditions will be conducted to corroborate the calculated LOS.



- Calculate existing plus project peak-hour intersection LOS and identify significant project impacts.
- Report cumulative (2030) traffic volumes at the study intersections on the basis of data provided by the County (assumed to be taken from the Santa Clara County Travel Demand Forecasting Model).
- Calculate cumulative (2030) peak-hour intersection LOS (with the project). Determine the project's contribution to unacceptable LOS, and identify significant impacts.

## **H. Land Use and Planning**

### **Land Use and Planning Issues**

The project site is located within unincorporated Santa Clara County, west of the City of Cupertino, about three miles from the intersection of I-280 and Highway 85. The existing site is designated as *Hillside* on the 2008 Santa Clara County General Plan Land Use Designation map and designated as A-Exclusive Agriculture and A1-General Use in Santa Clara County Zoning Code. A portion of the RPA Area is within the City of Cupertino's Urban Service Area and is designated as Very Low Density Residential within the City of Cupertino's General Plan. A mix of uses exist in the project site vicinity, including buffer areas, open space, parks, residential uses and another mining operation.

In June 2008, the County issued a Notice of Violation related to the placement of overburden material in the EMSA, as it is outside the area covered by the quarry's 1985 Reclamation Plan. The operator subsequently applied for the Reclamation Plan Amendment (in April 2009), which would extend the Reclamation Plan coverage to include the EMSA site. The County has allowed limited use of the EMSA while this amendment is in process.

The issues that will be of concern from a CEQA perspective include the project's potential to conflict with applicable land use plans, policies, or other regulations, and the project's land use compatibility issues (as compared to existing uses on the site and uses in the vicinity). These topics will be addressed at length in the EIR. Physical impacts of the project, however, such as those pertaining to air quality, noise, and traffic, will be analyzed under each respective section of the EIR.

### **Land Use and Planning Tasks**

- Conduct a land use inventory to identify and update the current land use types (e.g., existing quarry, residential, recreational, commercial, and open space) at the project site and its vicinity. Prepare a site map showing land use designations and existing land use in the surrounding area.

- Identify applicable plans, policies, studies, and regulations of the Santa Clara County and the City of Cupertino General Plans other land use plans as appropriate.
- Discuss any inconsistencies between the proposed project and the County General Plan, Zoning Ordinance, and other relevant land use plans, including any applicable city plans, and regional plans. Significant inconsistencies with County standards and ordinances will be discussed.
- Where inconsistencies or conflicts with land use or environmental plans would result in a physical adverse impact on the environment, identify such as significant impacts. For any identified significant impacts, provide feasible mitigation measures.
- Provide conclusions regarding the effectiveness of mitigation measures to reduce to a less-than-significant level any identified significant impacts.

## ***I. Cultural Resources***

### **Cultural Resources Issues**

An archaeological survey was completed for the Hanson-Lehigh Quarry East Materials Storage Area Reclamation Plan EIR in April 2009 (Jensen, 2009). One historic-period cultural resource, the Kaiser Permanente Quarry Mining District, is located in the project area. The Mining District has been evaluated as eligible for the California Register of Historical Resources; however it was determined that the project will not impact contributory features to the district.

### **Cultural Resources Tasks**

ESA will review all local and regional plans and policies pertaining to cultural resources with the proposed project area. Based on the findings of the 2009 archaeological study, ESA will prepare a preliminary draft cultural resources section of the EIR that identifies potentially significant direct, indirect, and cumulative impacts to cultural resources in the project area. ESA will identify feasible mitigation measures to avoid or reduce potentially significant impacts to cultural resources for both project and cumulative impacts.

### ***J. Other Issue Areas***

ESA will prepare EIR sections for the remaining CEQA issue areas, including the following:

- Agricultural Resources
- Mineral Resources
- Public Services
- Utilities/Service Systems
- Energy
- Recreation
- Population and Housing

We do not anticipate that the project will result in significant impacts in these areas, or where we do identify significant impacts, that they can be mitigated to less than significant. Nonetheless, we will prepare full EIR sections for each of these topics, including environmental and regulatory setting, significance criteria, impact analysis, and mitigation measures for any significant impacts. Our cost estimate assumes approximately 20 hours of staff time for preparation of each of these sections, including preparation of a setting section, impact discussion, and internal review by the Project Manager and QA/QC check by the Project Director.

### ***K. Cumulative Impacts and other Required Analyses***

As discussed in the Project Understanding section, an unusually robust cumulative analysis is required for this EIR. The cumulative analysis should presage the likely impacts associated with the upcoming Master Plan for the Hanson/Lehigh Permanente Quarry, discuss the EMSA RPA project's incremental contribution to impacts of the larger quarry project, and determine whether the contributions are significant. In addition, ongoing impacts of the closely-related Lehigh Southwest Cement Plant, particularly air emissions and health risks, should be considered in the cumulative analysis. Finally, the cumulative analysis will have to consider whether the effects of any other past, present, or foreseeable future projects in the vicinity have the ability to combine with the project's impacts in a cumulatively considerable manner.

One approach to the cumulative analysis may be to complete an Initial Study checklist for the Master Plan project. This would enable a quick, but thorough review of the Master Plan project, and allow us to focus the cumulative analysis. Where there is the potential for a significant impact or a less than significant impact that could combine with impacts of the EMSA RPA project, these would be further analyzed (including, for example, modeling of air emissions), and discussed in some detail. Preliminarily, we see the following

as the potentially significant cumulative impacts of the EMSA RPA, combined with the quarry Master Plan and the Lehigh Southwest Cement Plant:

**Air Quality:** criteria pollutant emissions from off-road diesel powered equipment and fugitive dust associated with reclamation; greenhouse gas emissions from combustion of fossil fuels and removal of mature plant cover (the cement plant's status as one of the largest greenhouse gas emitters in the State will be discussed, but this will likely be considered a baseline condition); health risks from combined emissions of diesel particulates, PM<sub>2.5</sub>, toxic constituents of dust, and mercury and other substances from the cement kiln.

**Biological Resources:** cumulative loss of habitat and potential for take of threatened and endangered species; cumulative loss of protected oak woodlands.

**Noise:** cumulative noise impacts from reclamation activities occurring simultaneously within the EMSA and the remainder of the quarry.

**Hydrology:** cumulative impacts to surface water quality and alteration of natural drainage networks.

**Traffic:** cumulative traffic impacts from simultaneous reclamation of the EMSA and the remainder of the quarry.

This section of the EIR will also include the required examination of growth-inducement potential and significant irreversible environmental changes.

## ***L. Alternatives***

As required by CEQA *Guidelines* and the County's *Procedures for Consultants to Prepare Environmental Documents for Private Projects in Santa Clara County*, the Alternatives section will address a reasonable range of feasible alternatives that meet some or all of the project objectives and that reduce or avoid one or more significant effects of the project. The Alternatives section will the required "no project" alternative, and up to two other alternatives, which would likely consider an off-site alternative, and a reduce or mitigated alternative.

The narrative discussion of each alternative will consist of three subsections:

- Description of the Alternative, which will describe the uses, intensities, and design concept of each alternative and contain a brief narrative description of its distinctive characteristics and objectives.
- Distinctive Environmental Characteristics of the Alternative, which will identify the major differences between the impacts of the proposed project and those of each alternative; and

- Status of the Alternative, which will indicate the status of each alternative and its relative environmental advantages and/or disadvantages.

The environmentally superior alternative will be identified and the basis for this designation explained. If the no project alternative is environmentally superior, another alternative will be identified as environmentally superior.

In addition, a description of alternatives which were considered, but were rejected will be provided. The explicit reason for rejection (would not meet at least some of the basic objectives, would not avoid or substantially lessen the potential impacts of the proposed project, or found to be infeasible) will be briefly discussed.

### ***M. Summary***

The Summary chapter will provide a brief overview of the project, the environmental setting, and the regulatory framework for the project. The Summary will include a discussion of areas of controversy as raised by other agencies and the public; will identify significant unavoidable impacts, impacts that can be mitigated, and less than significant impacts; and will include a concise description of the alternatives evaluated and rejected, and their relative environmental merits. The summary chapter will include a comprehensive table listing all impacts and mitigation measures, which will follow the formatting guidelines in the County's *Procedures for Consultants to Prepare Environmental Documents for Private Projects in Santa Clara County*.

### **Task 5: Prepare Screencheck and Publication Draft EIR**

Upon receipt of comments on the Administrative Draft EIR from Santa Clara County, the ESA team will incorporate these comments in preparing a Screencheck document for final review by County staff. Upon review of the Screencheck, ESA will prepare the Draft EIR for publication. The schedule and budget for this task assume that ESA will receive one consolidated set of comments from the County on the Administrative Draft document, and that no new substantive issues will be raised in the review of the Screencheck document. ESA will print and deliver to Santa Clara County three bound paper copies and one electronic copy of the Screencheck Draft EIR.

We propose a limited hardcopy print run of the Draft EIR, assuming that the document will be distributed primarily over the internet and on CD. We propose to produce 20 hardcopies of the document, plus 100 CDs and a web-ready version (with interactive table of contents) delivered to the County on CD. Our cost estimate includes delivery of printed documents and CDs to the County, but not mailing to individuals.

As an optional task (**Optional Task 9** ; a budget for this task is provided separately in the cost spreadsheet) ESA will produce a full 75-copy hardcopy run of the Draft EIR (optional task includes producing 55 additional hardcopies).

### **Optional Tasks**

Optional Tasks 6-9 are described above. Budgets for these tasks are provided separately in the cost spreadsheet.

# Exhibit B

Report to State Mining & Geology Board, June 9, 2011  
Permanente Quarry  
State Mine ID 91-43-0004  
Santa Clara County Planning Office File 2250-13-66-09P-10P)

**EXHIBIT B**  
**Comprehensive RPA Draft Environmental Impact Report Scope of Work**

**SANTA CLARA COUNTY  
PLANNING OFFICE**

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**Contract C10P139**

**Attachment A:  
Technical Scope of Work**

Consultant shall prepare a Draft Environmental Impact Report (EIR) for the proposed Permanente Quarry Comprehensive Reclamation Plan Amendment project. The Draft EIR shall be prepared in compliance with the standards prescribed under the California Environmental Quality Act (CEQA).

The Draft EIR shall include the following components:

**1. Visual Resources**

**Issues**

The project site is located in the West Hillside Preservation Area, which was established to protect the scenic and predominantly natural appearance of the West Valley hillsides (the foothills of the Santa Cruz Mountains) most visible from the Valley floor. The site is also within a Zoning District with a Design Review overlay (d1) for the Santa Clara Valley Viewshed, which requires higher levels of review depending on structure type and size.

Due to its relatively high elevation, the Comprehensive RPA area is visible in long-range views from much of the Santa Clara Valley floor. The proposed mining at the South Quarry and other changes proposed at the site will result in changes to views of the hillsides from residences, parks, and roadways. The applicant has prepared a series of visual simulations depicting the phased implementation of the Comprehensive RPA from several vantage point. Based on these figures, the project would result in changes to land forms and vegetation patterns. The CMSA portions of the project are located closest to



populated areas (including the City of Cupertino) and may result in the greatest changes to views from these public vantage points.

The Visual/Aesthetics analysis will describe and depict in visual simulations the changes to existing scenic views and scenic resources that would result from the project. Visual simulations will be prepared by Environmental Vision, a specialty firm with which ESA has worked extensively when accurate, complex visual simulations are called for in EIRs. Environmental Vision prepared the visual simulations for the EMSA Draft EIR. The following describes Environmental Vision's proposed approach to creating the visual simulations, which will form the basis for the Visual/Aesthetics impact analysis:

### **Aesthetics/Visual Resources Tasks: Visual Simulations**

#### ***Data Review, Site Photography and Review Photographs***

Collect and review pertinent information including project maps and drawings and aerial photographs. Conduct a site visit to observe the project site and surroundings. Using a digital single lens reflex (SLR) camera, photograph the project site from a variety of representative public viewpoints such as roadways, public open space and residential areas. Basemap annotation, photo log sheet and GPS recording will be employed to document photo lens settings and viewpoint locations.

- Prior to shooting photography, consult with County staff to determine location of potentially sensitive viewpoints.
- Submit a set of candidate simulation photos with a viewpoint location map for review and approval. For cost estimating purposes, one site photography trip and up to 8 candidate review photographs are included.

#### ***Visual Simulations***

Using advanced computer modeling and rendering techniques, produce visual simulations to show the Permanente Quarry Comprehensive RPA project superimposed on selected photographic views of the project site. The simulation images will be presented as "before" and "after" views of the project site and will show the future stages of the project as seen from selected public vantage points. The simulations will portray proposed grading, roadways, phased stockpiling and reclamation/revegetation and landscaping. The simulation viewpoints will be selected in consultation with County staff.

For cost estimating purposes, a total of five (5) simulation viewpoints are included. For each viewpoint one “before” and up to four (4) “after” images will be produced (a total of up to 25 images). The simulations will portray the project site at up to four different stages of RPA implementation over a 20-year period. The simulations will be based on project design data provided to Environmental Vision. Depicted stages of project development will be selected in consultation with County staff.

The images will be produced at 8.5 by 11 or 11 by 17 inch, color format. Digital versions of the simulations will be provided. One review/revision cycle is included. As optional services, visual simulations to show additional reclamation phases or views of the project from additional viewpoints can be prepared upon request (costs provided separately).

The simulations will illustrate the location, scale and appearance of the proposed project components as seen from representative public viewpoints. The computer-generated visual simulations will be the result of an objective analytical and computer modeling process. Steps in the computer-assisted simulation process include:

- Developing an initial 3-D digital model of existing conditions based on topographic data;
- Developing a 3-D model of the proposed project components based on project engineering design data.
- Combining the 3-D computer model of the proposed plan with the digital site model to produce a complete computer model of the proposed project.
- Then producing a set of computer-generated perspective plots to represent the selected viewpoints and overlaying computer "wireframe" perspective plots on photographs to verify scale and viewpoint location
- Producing digital visual simulation images based on digital renderings of the 3-D model combined with selected digital photographs.

### ***Viewpoint Location Map***

Delineate the location of the visual simulation vantage points on a map of the site and surrounding area. The viewpoint location map will be produced in black and white at 8.5 by 11 inch format.

## **Aesthetics/Visual Resources Tasks: Preparation of EIR Section**

Upon completion of the visual simulations, ESA will prepare the Aesthetics and Visual Resources section of the EIR. This will include the following tasks:

- Describe environmental and regulatory setting, including Santa Clara County General Plan policies and design review requirements, and identification of designated scenic roadways and vista points in the vicinity of the project site.
- Using unaltered (existing, or “before” condition) photography prepared for the visual simulations, describe and depict views of the project site and its surroundings from various publically-accessible vantage points. Evaluate the existing visual attributes and patterns according to objective descriptive categories: site location and spatial organization, land form, vegetation, land uses, cultural features, and specific objects having aesthetic significance.
- Analyze visual impacts of the projects based on “before” photos and “after” photo simulations of the proposed project.
- Discuss the consistency of the project with visual quality policies and guidelines of the Santa Clara County General Plan and Zoning Ordinance.
- Analyze and describe the potential impacts of new sources of light or glare, visibility and duration of construction activities, potential damage to scenic resources from proposed earthwork, and the short-term and long-term effects on scenic views. Clearly describe each instance of an impairment of a view or other effect that constitutes a significant environmental impact.
- In consultation with County staff, explore and develop appropriate, feasible mitigation measures for any identified significant impact, and evaluate the potential for these mitigation measures to feasibly reduce impacts to a less than significant level.

## **2. Biological Resources**

### **Issues**

ESA has previously reviewed and analyzed available information during the cumulative analysis of the EMSA and the Comprehensive RPA, and understands that the principle issue will be the presence of several special status species: western leatherwood (*Dirca occidentalis*); California red-legged frog (*Rana draytonii*), San Francisco dusky-footed woodrat (*Neotoma*

*fuscipes annectens*), white-tailed kite (*Elanus leucurus*), olive-sided flycatcher (*Contopus cooperi*), yellow warbler (*Dendroica petechia*), and grasshopper sparrow (*Ammodramus savannarum*). Other issues include impacts to approximately 0.11 acres (2,626 linear feet) of Waters of the U.S. and an additional 0.11 acre (3,208 linear feet) of Waters of the State, and the large-scale removal of oaks from approximately 36.5 acres of oak woodlands.

Any of these resource impacts would trigger a “potentially significant” determination, although in the Initial Study checklist completed for the cumulative analysis we found that, on the whole, the proposed Comprehensive RPA contained fairly robust compensation/mitigation actions. We understand that part of our work would be to complete a peer review of another firm’s biological resource assessment, and assume that “biological resource assessment” means the supporting technical, descriptive, and mitigation information sufficient to craft the EIR. Should our peer review reveal that the applicant’s assessment is insufficient for this purpose, we would request additional scope and budget to perform additional technical field work.

### **Botanical and Wildlife Environmental Analysis Tasks**

- Peer review documents prepared by other entities to determine technical and scientific accuracy and completeness, and overall adequacy for citation and incorporation by reference in the EIR. Review other existing available biological studies relating to the project area. Determine the applicability of the biological analysis in other planning and site-specific documents written for the region.
- Conduct a general reconnaissance survey of the project site. For each special status species for which suitable habitat has been identified, the following specific information will be collected or estimated:
  - Distribution and abundance;
  - Historic and recent status within the area;
  - Habitat quality;
  - Ecology, behavior, and habitat requirements; and
  - Aspects of biology of each species which could be relevant to the proposed uses of the project site.
- Describe the extent of Natural Communities and wetlands present within the project site. Classification of these communities will follow that set forth by Holland (1986). Note which communities are of special concern (e.g., wetlands) because of their rarity, sensitivity, importance as wildlife habitat, or potential to support special status species.
- Summarize and evaluate federal, state, and local policies and regulations as they pertain to biological resources in the area.

- Based on the above actions, prepare relevant portions of the EIR; propose mitigation measures to reduce impacts to less than significant. Evaluate whether mitigation measures proposed by the applicant are sufficient to reduce impacts to less than significant; if not, specify additional measures, as necessary, and determine significance of the residual impact.

### **3. Geology and Soils**

#### **Geology, Soils, and Seismicity Issues**

The project site is located on the hilly eastern flank of the Santa Cruz Mountains underlain by bedrock of the Franciscan Assemblage. The Franciscan Assemblage is a chaotic mix of highly deformed ancient marine sediments and crustal rocks, which locally include limestone (Calera Member), chert, and greenstone (altered basalt). Sandstone, conglomerate, siltstone, and claystone of the geologically younger Santa Clara Formation overlie portions of the Franciscan Assemblage. Cement-grade limestone and aggregate provide the primary resource materials at the Hanson/Lehigh Permanente Quarry.

The project site is located in a seismically active region. The San Andreas Fault Zone is located approximately 3 miles west-southwest, and the Sargent-Berrocal Fault Zone and the Monte Vista Fault Zone passes through the Quarry property. Topography of the Comprehensive RPA and surrounding area is controlled by a series of east-west trending ridges and valleys with slope gradients ranging from gentle to steep.

From a CEQA perspective, the primary geological issues for the Comprehensive RPA are static (non-earthquake) and seismic stability of reclamation slopes and excessive long term erosion that could impact slope stability. The project site will likely be subjected to strong ground shaking sometime during active quarrying, stockpiling, and following reclamation (current probability estimates will be reviewed in the EIR). The Comprehensive RPA includes geotechnical analyses of static and seismic slope stability for the proposed cut and fill slopes and provides specific engineering recommendations for the various components of the project. In addition, it provides details on known landslide features within the Quarry property and measures to improve stability. These issues will be discussed and analyzed in the EIR section for Geology, Seismicity and Soils, which will be prepared as described in the tasks below.

## **Geology, Soils, and Seismicity Tasks**

### ***Peer review of Geotechnical Studies***

ESA's Geotechnical subconsultant, will conduct the requested peer review of the two geotechnical reports prepared for the project by Golder Associates. The peer review will examine assumptions, methods, calculations, and conclusions for accuracy, reasonableness, and consistency with engineering standards and practices, in order to determine whether the studies are of sufficient technical and scientific merit to serve as a basis for the analysis in the EIR. These technical studies will be utilized, as appropriate, to prepare setting information and impact analyses as well as to develop mitigation measures to reduce the significance of identified impacts, where appropriate. The geotechnical subconsultant will author a technical memorandum detailing the results of the peer review. The technical memorandum will be submitted to the County as a separate deliverable.

### ***Geologic Conditions and Setting***

ESA will develop the regional and local geologic setting using available data and information from the U.S. Geological Survey (USGS), the California Geological Survey (CGS), Santa Clara County, the natural Resource Conservation Service (NRCS), and the U.S. Forest Service (USFS). The geologic setting will rely primarily on geologic data and information provided in the May 2010 Golder slope stability evaluation (assuming that the peer review finds this evaluation suitable for the purposes of the EIR), in addition to previous slope stability evaluations for the east and central materials storage areas. Project site geologic and seismic conditions will be based on the above sources, in addition to any previous site-specific investigations completed for the Permanente Quarry. Site-specific geologic, soils, or seismic investigation reports, if they become available, will be used to supplement geologic setting data only after ESA has thoroughly reviewed these documents for technical adequacy and for consistency with known local and regional geology. Under this task, ESA will conduct a site reconnaissance, which will verify the reported conditions and the current site status. This task would develop the geologic and seismic setting as needed for a thorough impact analysis in the EIR.

### ***Earthquake Faults and Seismicity***

Using the Golder investigation (assuming the peer review finds it suitable), previous geologic reports for the project site, as well as available maps and reports from the CGS, the USGS, and local fault studies (if necessary), ESA will identify and plot the major earthquake fault systems and discrete faults in the region, their distance to the project site, earthquake histories, potential to

generate large earthquake magnitudes, and their general potential to affect the project site. Using local seismic data obtained through the USGS, the CGS, and Santa Clara County, ESA will verify and, if necessary, update the major sources of earthquake hazards and the predicted site-response to a maximum credible earthquake on nearby major faults. ESA will also obtain detailed information on the Berrocal and Monte Vista Shannon faults, which cross the Quarry property. Information and data obtained from this task will provide the basis for the seismic impact analysis in the EIR.

### ***Slope Stability and Potential Geological Hazards***

Using information developed by Golder through its slope stability evaluation (assuming the peer review finds it suitable), and if necessary, supplemental information provided from previous site investigations or published reports, ESA will describe static and seismic slope stability and the potential for erosion hazards on the site during active mining and through post-reclamation. Recommendations presented in the May 2010 Golder report will be considered for incorporation into the EIR as mitigation measures to reduce significance of impacts, if appropriate.

### ***Quarry Operations***

ESA will describe and evaluate the proposed amount of disturbance, depth of fills, and final topographic configurations. Effects of the changed topography, character, and composition of surface materials on groundwater and surface water hydrology will be considered in the Hydrology and Water Quality analysis.

### ***Setting and Impact Analysis***

With the information and data gathered from the above tasks, ESA will prepare an environmental setting for the EIR that addresses site geology, soils, seismicity, groundwater, and the regulatory framework. Based on the setting information and the significance criteria, ESA will analyze the potential impact the project may have on geology and the impacts the existing geology may have on the proposed project. Where necessary, ESA will propose mitigation to reduce impacts to less than significant, if feasible.

### ***Materials Testing***

Under this task, ESA will examine the potential for the various minerals that would be extracted under the project to contain toxic constituents. ESA has already conducted testing of the different rock types present in the existing North Quarry. This new effort would focus on resource and overburden materials present at the proposed South Quarry. Because some of the mineral

resource that the applicant is targeting lie several hundred feet below the surface, direct sampling of these materials is problematic.

ESA proposes to obtain material samples from cores taken from exploratory bores at the proposed South Quarry completed by Golder Associates on behalf of the applicant, if available, and submit them for laboratory analysis for asbestos, crystalline silica, and metals. The bores were extended several hundred feet into the bedrock, and should represent the full range of materials to be extracted.. Assuming that the cores are available, we will obtain several samples representing the range of rock types present at the site and submit them for laboratory analysis. Laboratory analysis will include the CAM-17 metals panel and testing for asbestos using CARB method 435. Should any asbestos samples contain trace levels of asbestos below the regulatory limit (.25%), we will submit those samples for further testing using Transmission Electron Microscopy. All samples submitted for asbestos sampling will be split and analyzed by two laboratories. We do not propose to test for crystalline silica content, but rather to rely on published values to arrive at a conservative estimate.

If previously collected cores are unavailable or cannot be obtained, ESA would, as an optional task, take new core samples from the proposed South Quarry area, and submit them for laboratory analysis. This would involve subcontracting for a drilling rig and operator, and advancing new bores to a depth of several hundred feet. We have provided a preliminary cost estimate for this option, which would be far costlier than obtaining previously collected cores from Golder Associates. Should the County choose to exercise this option, we request the opportunity to refine the cost estimate.

## **4. Hydrology and Water Quality**

### **Hydrology and Water Quality Issues**

The proposed project would involve mining an additional 206.5 acres of undisturbed land south of the existing 537 acres currently disturbed by mining activities in the North Quarry area. Permanente Creek, a perennial water way, as well as other drainages, are located within the Comprehensive RPA area. Water quality related to the operation of the Quarry (including the project site) is currently regulated by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Cleanup and Abatement Order No. 99-018 as well as by the State Water Resources Control Board (SWRCB) General Permit for Storm Water Discharges Associated with Industrial Activities.



Based on preliminary review of supporting technical studies and other documentation, as well as our previous work on the East Materials Storage Area RPA, the primary hydrology and water quality concerns related to the proposed project include: increases in stormwater runoff and peak flows; depletion of base flows in Permanente Creek and other onsite surface waters; erosion and sediment delivery to surface waters; hydrogeology of the site and possible subsurface connections to adjoining drainages; stormwater runoff control and water quality; and potential effects on fish habitat in Stevens Creek, which is a steelhead stream. Additionally, based on experience gained from work on the East Materials Storage Area RPA EIR, it is likely that the potential entrainment and mobilization of trace metals, particularly selenium, would need to be addressed with respect to water quality in Permanente Creek.

A number of technical studies have been completed in support of the Comprehensive RPA application. ESA will work closely with our proposed sub-consultant, Balance Hydrologics, to conduct a critical peer review of the applicant's background reports and technical studies and determine whether these studies are of sufficient technical and scientific merit to serve as a basis for the analysis in the EIR. These technical studies will be utilized, as appropriate, to prepare setting information and impact analyses as well as to develop mitigation measures to reduce the significance of identified impacts, where appropriate.

ESA will perform the following specific tasks and will utilize the following information to complete the hydrology and water quality impact assessment for the EIR:

### **Hydrology and Water Quality Tasks**

- ESA will work directly with Balance Hydrologics to conduct critical peer reviews of the technical studies completed in support of the Comprehensive RPA. The peer reviews will consider technical adequacy, and will consider whether the studies provide sufficient information to address the specific CEQA significance thresholds for the Hydrology and Water Quality impact analysis. The studies to be reviewed include the Hydrologic Investigation (Golder Associates, May 2010), the Drainage Report (Chang Consultants, May 2010), and the Operational and Water Quality Report (Strategic Engineering and Science, Inc, May 2010). ESA and Balance Hydrologics will prepare a memorandum containing the results of the peer review.
- ESA and Balance Hydrologics staff will conduct one or more site visits to better understand and characterize local waterways, drainage patterns, and land surface condition at the proposed project site. ESA will contact the SFBWRQCB to obtain any available water quality information for Permanente Creek (or other streams) in the vicinity of the project site.

- Balance Hydrologics will prepare a technical report evaluating hydrologic conditions at the site, including possible effects of the project on (a) drainage and peak flows, (b) base flows in Permanente and Monte Bello Creeks, (c) erosion and sedimentation, (d) hydrogeology of the site and possible connections to adjoining drainages, and (e) water quality. The report will analyze site conditions, and consider likely impacts of the proposed mining and reclamation on the hydrology and quality of surface and groundwater. The report will also provide Balance's recommendations for alternatives and mitigation measures to reduce likely project impacts.
- Based on the technical report prepared under the previous item, and using information and data from the peer-reviewed studies, as appropriate, ESA will prepare a hydrology and water quality section for the Draft EIR. As part of this task, ESA will develop hydrologic, water quality, and regulatory setting information from the technical studies reviewed as well as from available published sources including the USGS and Santa Clara County.
- ESA will analyze the potential impacts of the project, considering both direct and indirect effects to groundwater and surface water hydrology and water quality, including Permanente Creek. This will include potential alteration of runoff and storm flows, potential increases in sedimentation and adverse effects on water quality, and adequacy of any proposed sediment control measures and stormwater pollution prevention measures. On-site and downstream flood risks will also be considered.
- ESA will conduct modeling and quantitative analysis, as appropriate, to determine soil loss and sedimentation-related water quality impacts. With respect to impacts such as landslides and slope failures, ESA will rely upon the applicant's geotechnical analyses (once peer reviewed) to assess the potential soil loss impacts of the project. ESA will formulate mitigation measures to reduce any significant impacts to less-than-significant levels.
- . ESA will analyze the potential impacts of the project relating to depletion of summer or dry-month baseflow in surface waters adjacent to or dissecting the project site as a long-term effect of Quarry excavation intersecting groundwater.
- ESA will prepare the analysis of cumulative hydrologic and water quality impacts, including examination of potential impacts to Stevens Creek flows and water quality from the combination of the Comprehensive RPA, the EMSA RPA, the ongoing cement plant and rock processing facility operations, and the Stevens Creek Quarry. The cumulative analysis will determine whether a cumulative impact exists or is likely to occur, and if so, whether the Comprehensive RPA project would make a considerable contribution to this impact.

## 5. Air Quality and Greenhouse Gas Emissions

### Air Quality Issues

The project site is located within the boundaries of the San Francisco Bay Area (Bay Area) Air Basin. The Bay Area Air Quality Management District (BAAQMD) is the local air district. The BAAQMD regulates air quality through its permit authority over most types of stationary emissions sources in the Bay Area Air Basin and through its planning and review activities. The proposed Comprehensive RPA would revise the existing Reclamation Plan to include areas affected by past mining activities and proposed future scheduled mining activities within the Comprehensive RPA area. These activities would generate fugitive dust that could cause local violations of particulate standards. In addition, mining and reclamation activities would generate ozone precursors, diesel particulate matter, and greenhouse gases from heavy-duty equipment operations and motor vehicle trips. Conversion of intact forest land to barren mined land will also result in the loss of carbon sequestered in soil and in living plant tissue, and the loss of future carbon sequestration potential until the site is revegetated.

### Air Quality Tasks

- ESA senior technical staff will conduct a critical peer review of the Air Quality Technical Analysis provided by the applicant for accuracy, completeness, and reasonableness of assumptions and conclusions. Information provided in this Air Quality Technical Analysis will be incorporated where suitable and applicable, and will be updated or revised as needed.
- Discuss the regional and local air quality setting as it pertains to the project. Summarize the local and regional meteorology, topographic factors affecting pollutant dispersion, and ambient air monitoring data. Identify sensitive air pollutant receptors in the proposed project vicinity.
- Describe the regulatory context for air pollution in the Bay Area. Specifically, identify the responsibilities of federal, state and regional agencies such as the BAAQMD over sources of air pollution in and around the project area. Describe the regulatory approach to stationary and mobile sources of criteria air pollutants and toxic air contaminants.
- Summarize statewide planning efforts relative to climate change and the generation of greenhouse gas emissions.
- Describe the BAAQMD's significance thresholds for air quality impacts from plans as set forth in their *CEQA Guidelines*.

- Estimate criteria pollutant and greenhouse gas emissions from mining and reclamation activities using URBEMIS2007 version 9.2.4, as well as other models and emission factors as needed. Prior to commencing the analysis, ESA will provide a brief technical memorandum outlining the modeling approach, for review and concurrence by the County and, should the County choose, by the applicant. Potential sources of emissions of criteria pollutants and/or greenhouse gases include off-road equipment (stationary and mobile), on-road vehicles, fugitive dust, removal of mature trees, and indirect electricity generation.
- Assess the level of impact of criteria pollutant and greenhouse gas emissions based on the applicable BAAQMD significance criteria and the air quality levels modeled for the project.
- Based on a literature search and review of documentation provided by the applicant and by the BAAQMD, ESA geologists will identify the potential occurrence of hazardous substances, including crystalline silica, mercury, and asbestos, that may be contained in the materials that are processed during mining and reclamation. Our assumption is that a portion of this material will be emitted as fugitive dust, in which case it would be considered a toxic air contaminant. ESA will provide a conservative (i.e., worst case) estimate of the potential concentration of any such substances in mined material, including overburden, to serve as a basis for the health risk assessment.
- To determine health risks associated with exposure of nearby sensitive receptors to toxic air emissions, KB Environmental Sciences, Inc., will prepare a human health risk assessment (HRA). The HRA will quantify emissions of toxic air contaminants, including diesel particulate matter (DPM) emissions from offroad and onroad diesel equipment, as well as fugitive dust emissions, which could contain naturally occurring asbestos, crystalline silica, or other toxic substances. The HRA will calculate the incremental increase in cancer risk, as well as chronic, and acute health risk from project-related emissions.

The HRA will be prepared based on the Air Toxics Hot Spots Program Risk Assessment Guidelines developed by California EPA and toxicity values based on California EPA Office of Environmental Health Hazard Assessment (OEHHA) guidance. The dispersion modeling and the HRA will be completed in accordance with the BAAQMD CEQA Air Quality Guidelines and BAAQMD CEQA Guidelines Tools and Methodology. The Hotspots Analysis Reporting Program (HARP) or similar techniques along with the AERMOD dispersion model will be used in the analysis to develop the exposure assessment and risk characterization. The modeling methodology will be consistent with procedures documented in the U.S. EPA Guideline on Air Quality Models and BAAQMD's Recommended Methods for Screening and Modeling Local Risks and Hazards.

Once the emission source characteristics are defined, the dispersion modeling analysis will be conducted to determine the exposure

concentrations for nearby receptors. Appropriate receptors will be developed based on available information such as photographs, site visits, and aerial photographs. The dispersion modeling will incorporate USGS terrain data and BAAQMD meteorological data from the nearby cement plant (data from 1999 and 2006 have been deemed acceptable for modeling analyses). Terrain data may be supplemented, as appropriate, based on site-specific information.

The HRA will incorporate OEHHA toxicity values and methodology along with BAAQMD guidance to develop the cancer risk and health impact estimates. The assessment will use the BAAQMD's age sensitivity adjustment factor of 1.7 for cancer risk.

- KB Environmental Sciences, Inc. will also perform the cumulative health risk impact analysis. This analysis will combine the health risk factors calculated for the Comprehensive RPA with calculated or published risk factors for other, existing, nearby sources of TAC emissions, including the EMSA RPA, the Stevens Creek Quarry, the Lehigh Southwest Cement Plant, the aggregate processing plant, nearby roadways, and other permitted sources. The cumulative impacts from the Lehigh Southwest Cement Plant will be based on the HRA conducted by the BAAQMD for Plant 17 (dated November 2008). Cumulative health risks associated with nearby roadways and permitted stationary sources will be analyzed using BAAQMD's Roadway Screening Tool and Stationary Source Risk & Hazard Analysis Tool, in accordance with the District's guidelines. Cumulative health risk factors will be compared to the BAAQMD's recently-adopted significance threshold for cumulative health risks to determine significance.
- The BAAQMD's Roadway Screening tables do not include specific data for Stevens Creek Blvd. or Foothill Blvd., the truck routes used by heavy trucks hauling materials from the Permanente site, including cement and aggregate, and from the Stevens Creek Quarry. Nor does the BAAQMD have screening data for railway lines, such as the one serving the Permanente site. It is likely, however, that these existing sources of TAC emissions contribute substantially to the cumulative health risk for sensitive receptors in the area. As an optional task for the cumulative HRA analysis, ESA will estimate TAC emissions and consequent health risks associated with heavy truck traffic on these local roadways from and to the Permanente site, and from the rail line, and add these to the tally of cumulative risk factors. Estimated emissions would be based on data requested from the two quarries regarding the number of truck trips and rail trips over the past two or three years.
- Project impacts and cumulative impacts will be compared to BAAQMD CEQA thresholds and full documentation will be provided including assumptions, methodology, and results. Assistance will be provided for the ADEIR and DEIR. Additional assistance can be provided for the FEIR under a separate scope of work, depending on comments received.

- Identify practical, feasible mitigation measures for air quality impacts identified for the project. Evaluate whether mitigation measures would reduce the impacts below a level of significance.

## **6. Noise and Vibration**

### **Noise and Vibration Issues**

The Comprehensive RPA would take place as phased quarrying, stockpiling and reclamation of the 1,105-acre area in five overlapping phases over an estimated twenty-year period of time, and would include additional noise sources that could affect noise-sensitive receptors in the project area.

Quarrying and reclamation activities would generate noise by off-road equipment operation and on-road vehicles that would affect the ambient noise environment based upon various factors: 1) the proximity of noise-sensitive uses (e.g., residences), 2) the character of project noise sources (impulsive versus constant), 3) the temporal distribution of project-related noise (e.g., daytime versus nighttime), 4) the presence or absence of intervening terrain or buildings, 5) the existing ambient noise levels, and 6) the importance of quiet to the community as reflected in the noise/land use compatibility guidelines contained in the Santa Clara County General Plan and Noise Ordinance, and those of nearby affected communities, including the City of Cupertino. ESA will assess project and cumulative noise impacts with reference to the change in noise levels at noise-sensitive locations in the vicinity and with reference to noise/land use compatibility guidelines and will devise, where necessary, feasible, appropriate noise mitigation measures in accordance with CEQA.

In addition to noise, future Quarry operations under the Comprehensive RPA may result in blasting-induced vibration that could affect neighbors of the Quarry. Gordon Revey of Revey Associates, an internationally-recognized expert on blasting and blasting effects, will perform the evaluation of blasting vibration effects, focusing on the intensity and extent of blasting-induced ground-borne vibration and air overpressure effects. Mr. Revey has lengthy experience serving both regulatory agencies and the mining industry in reviewing and designing engineered blasting programs and in developing mitigation measures to reduce the unwanted effects of blasting. Mr. Revey will conduct a site visit during which he will observe and discuss with Quarry management procedures for controlled detonations. If scheduling allows, Mr. Revey will be present for at least one blast event.

## **Noise and Vibration Tasks**

### ***Peer Review***

- ESA senior technical staff and Gordon Revey of Revey Associates will conduct a critical peer review of the applicant's noise and vibration study (Environmental Noise & Vibration Assessment, Lehigh Permanente Quarry Project, Bollard Acoustical Consultants, May, 2010). The peer review will include an examination of scope, methods, accuracy of calculations, findings, and conclusions. ESA and Mr. Revey will determine the completeness and accuracy of the study, and provide a recommendation regarding the suitability of the study results for use as a basis for the EIR analysis. The peer review results will be contained in a memorandum.

### ***Blast Vibration***

- Mr. Revey will conduct a site visit to evaluate topography, rock conditions and proximity and condition of adjacent structures and facilities. He will request the Quarry's blasting records and blast monitoring records, and will evaluate historical and proposed blasting methods, including (if possible given the quality and quantity of the records) a statistical analysis to determine scaled (i.e., relative to distance and charge weight) noise and vibration effects of the Quarry's existing blasting practices. Mr. Revey will meet with Quarry representatives and County staff to identify and define all issues and concerns involved with past blasting work and planned future blasting operations. We understand that the Quarry has been monitoring blasts for some time, and is willing to provide blasting records and monitoring data.
- In case the blasting records and monitoring data prove to be insufficient for the purposes of projecting the likely noise and vibration effects of blasting associated with the Comprehensive RPA, we will recommend proceeding with the following optional task. Under the direction of Mr. Revey, and in consultation with County staff, we will conduct a one-month monitoring study of blast-induced ground motion and air-overpressure. We will select two representative monitoring locations near the Quarry boundaries. These sites will be established so that they can be used in future studies, if needed. White Seismology Mini-Seis instruments will be set up in locked boxes placed at the monitoring locations. One off-site monitoring location may be established under terms of a written authorization from the property owner. Instruments will be self triggering at low threshold levels of vibration and overpressure. The equipment and labor for the monitoring work will be provided by PreSeisTek, Inc. Data from the monitoring study would define scaled blast-induced effects as well as background noise and vibration at the two monitoring locations.
- Mr. Revey will produce a technical report detailing the results of his investigations and studies, and relating these to the blasting associated with the proposed Comprehensive RPA. The report will include recommendations for reducing adverse effects of blasting, including

blast-induced ground motion and air-overpressure effects experienced at nearby sensitive receptors. The report will serve as a basis for the vibration impact analysis in the EIR.

### **Noise Analysis**

ESA will perform the following tasks to complete the noise and vibration section of the EIR:

- Describe and discuss existing major noise sources in the vicinity of the project area based on information available from the Santa Clara County General Plan Noise Element, Noise Ordinance, field reconnaissance, and other sources. Describe the existing noise environment using measured ambient noise levels. ESA will conduct three 72-hour long-term measurements and up to 10 short-term (10 minute) measurements.
- Summarize applicable noise regulations, policies, and standards, including the noise/land use compatibility guidelines in the Santa Clara County Noise Element and Ordinance, City of Cupertino Noise Element and Ordinance, and Mine Safety and Health Administration (MSHA) standards.
- Identify the land uses or activities in the vicinity of the project that are sensitive to noise and vibration.
- Estimate future noise levels for the proposed project based on traffic estimates associated with proposed quarrying and reclamation activities.
- Compile “reference” noise levels from individual pieces of equipment and activities that are representative of those proposed for the project site. Reference noise levels will provide the basis for estimating future composite noise levels due to the project at noise-sensitive locations.
- Based on applicable laws, policies, and regulations, develop significance criteria to be applied to the impact analysis. Assess the level of impact based on the identified significance criteria and the noise modeled for the project.
- Evaluate the potential for significant noise impacts based on the estimated change in noise levels at noise-sensitive uses and based on Santa Clara County noise/land use compatibility guidelines.
- Estimate the potential for significant vibration impacts to adjacent properties from blasting, heavy equipment operation, materials processing, and truck traffic.
- In consultation with County staff, identify feasible, appropriate noise and vibration mitigation measures to avoid or reduce significant adverse impacts, and determine the level of significance after mitigation.



## **7. Transportation and Circulation**

### **Transportation and Circulation Issues**

Activities associated with the proposed Comprehensive RPA would proceed without interruption to the current Quarry-related traffic on local roadways. The scope of the transportation analysis will be to determine the extent to which the Comprehensive RPA may increase the daily traffic to and from the site over time. The project site is located approximately two miles west of the I-280 and SR-85 interchange. Access to the Quarry is from Stevens Creek Boulevard and Foothill Boulevard to the western terminus of Permanente Road.

The scope of work presented below includes an appropriate level of effort to assess current traffic conditions along roadways and at intersections on Quarry haul routes, and to serve as a basis for determining impacts on traffic flow conditions (i.e., degree of congestion) from project-related traffic increases. No new intersection traffic counts are proposed, and intersection level of service will not be calculated.

### **Transportation and Circulation Tasks**

- Review existing traffic data and studies performed for the area for applicability and to determine additional data needs.
- Consult with Santa Clara County to finalize the scope of work, including the identification of study intersections and roadway segments.
- Use existing roadway counts to assess existing traffic conditions.
- Conduct field reconnaissance of the road network that serves the Quarry site. Traffic flow conditions (i.e., degree of congestion) will be observed at the intersection of Stevens Creek Boulevard and Foothill Boulevard during the weekday AM peak hour, and during a second weekday hour selected in consultation with County staff after review of the roadway volumes on Permanente Road.
- Utilize SWITRS reports (Years 2007-2009) previously obtained from the California Highway Patrol (CHP) for collision data along Stevens Creek Boulevard (between Foothill Boulevard and SR-85 and along Foothill Boulevard between Stevens Creek Boulevard and I-280). Accidents involving trucks will be highlighted, but all vehicle accidents will be described (e.g., number of accidents per year, and the predominant collision type and cause).
- Describe the existing street and highway network and traffic conditions in the vicinity of the site.

- Describe the trip generation and distribution for the existing Quarry operations and operations under the project (daily and peak hours) on the basis of data provided by the Quarry operator.
- Describe project impacts on traffic flow conditions (i.e., degree of congestion) from project-related traffic increases..
- Report cumulative (2030) traffic volumes on Stevens Creek Boulevard and Foothill Boulevard, and at the intersection of those roads, based on data provided by the County (assumed to be taken from the Santa Clara County Travel Demand Forecasting Model).
- Perform a review of the project site access and provision for onsite parking, noting any changes under project conditions. Emergency vehicle access also will be evaluated.
- Develop feasible mitigation measures to reduce, or eliminate, significant impacts associated with the proposed project.

## 8. Cultural Resources

A cultural resources study of the Comprehensive RPA project area has been completed by Jensen (2009). Based on the findings of the cultural resources study, ESA will prepare a preliminary draft cultural resources section of the EIR that identifies potentially significant direct, indirect, and cumulative impacts to cultural resources in the project area. ESA will review and assess all local and regional plans and policies pertaining to cultural resources with the proposed project. ESA will identify feasible mitigation measures to avoid or reduce potentially significant impacts to cultural resources for both project and cumulative impacts.

## 9. Land Use and Planning

### Land Use and Planning Issues

The project site is located within unincorporated Santa Clara County, west of the City of Cupertino, about three miles from the intersection of I-280 and Highway 85. The existing site is designated as *Hillside* on the 2008 Santa Clara County General Plan Land Use Designation map and designated as A-Exclusive Agriculture and A1-General Use in Santa Clara County Zoning Code. A portion of the RPA Area is within the City of Cupertino's Urban Service Area and is designated as Very Low Density Residential within the City of Cupertino's General Plan. A mix of uses exist in the project site vicinity, including buffer areas, open space, parks, residential uses and another mining operation.

The existing Quarry is recognized as a legal, non-conforming use on a portion of the project site. According to Chapter 4.50, *Nonconforming Uses and Structures*, of the County's Zoning Ordinance, a nonconforming use may not be intensified or expanded in area or volume, but may be modified to a use deemed similar in nature, but lesser in intensity and impacts, as determined by the Planning Commission or Planning Commission secretary. No changes to land use or zoning designations are being sought as part of the proposed Project.

The issues that will be of concern from a CEQA perspective include the project's potential to conflict with applicable land use plans, policies, or other regulations, and the project's land use compatibility issues (as compared to existing uses on the site and uses in the vicinity). These topics will be addressed at length in the EIR. Physical impacts of the project, however, such as those pertaining to air quality, noise, and traffic, will be analyzed under each respective section of the EIR.

## **Land Use and Planning Tasks**

- Based on review of County and City of Cupertino's General Plan land use maps, as well as a site visit, prepare a site map showing land use designations and existing land use in the surrounding area.
- Identify applicable plans, policies, studies, and regulations of the Santa Clara County and the City of Cupertino General Plans other land use plans as appropriate.
- Discuss any inconsistencies between the proposed project and the County General Plan, Zoning Ordinance, and other relevant land use plans, including any applicable city plans, and regional plans. Significant inconsistencies with County standards and ordinances will be discussed.
- Where inconsistencies or conflicts with land use or environmental plans would result in a physical adverse impact on the environment, identify such as significant impacts. For any identified significant impacts, provide feasible mitigation measures.
- Provide conclusions regarding the effectiveness of mitigation measures to reduce to a less-than-significant level any identified significant impacts.

## **10. Public Services**

The Santa Clara County Fire Department (SCCFD) is a Special Fire Protection District responsible for fire protection in the communities of Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Morgan Hill, Saratoga, and unincorporated areas of the county. The project

site is also located within a designated State Responsibility Area (SRA), for which the California Department of Forestry and Fire Protection's (CAL FIRE) Santa Clara Unit is primarily responsible for addressing wildfires. Regarding police services, the Santa Clara County Sheriff's Department (SCCSD) provides law enforcement services to Cupertino, Los Altos Hills, Saratoga, and unincorporated areas of the county, including the project site. The Project site lies within the boundaries of the Cupertino Union School District (CUSD) and Fremont Union High School District (FUHSD).

## **Public Services Tasks**

ESA will:

- Describe existing police, fire protection and emergency medical services, including personnel/equipment, and response times, as appropriate, and history of response by these services to the quarry, if available.
- Describe the quarry's own emergency well/storage system and capabilities and adequacy of water supplies for fire-fighting purposes.
- Describe the quarry's existing emergency access plan, and vegetation management practices it uses to reduce potential for wildland fires.
- Describe any special situations that may exist at the project site that may require special or customized fire protection or emergency medical services.
- Describe any existing local planning policies for fire protection and emergency medical services applicable to the project and project site.
- In consultation with the local police and fire protection services, evaluate whether additional fire protection or emergency medical services staff or equipment would be required to provide service to the project site as a result of the proposed project.
- Identify measures to mitigate any identified impacts on the environment generated by a need to expand or improve fire protection and emergency medical services.
- Describe school districts surrounding the project site, including enrollment trends and any capacity issues.
- Determine, based on increased employment, potential indirect increases in enrollment at district schools. Describe existing regulations and any development impact fees.

# **11. Recreation and Mineral Resources**

## **Recreation and Mineral Resources Issues**

A portion of the Project site to be mined is mapped as zone MRZ-2(d) and the remainder is mapped as zone MRZ-4 by the California Department of Mines and Geology (1982). Mineral Resource Zone MRZ-2 is generally defined as areas that contain mineral deposits based on adequate information, or where it is judged that the likelihood for their presence exists. Mineral Resources Zone MRZ-4 is defined as areas where available information is inadequate for assignment to any other MRZ category. The purpose of the project is to enable continued quarrying of mineral resources from the site for approximately the next 20 years.

Parks and publicly accessible recreation areas in unincorporated Santa Clara County are under the jurisdiction of the Santa County Parks and Recreation Department (SCCRPD), which comprises 28 parks and approximately 45,000 acres. Parks closest to the project site include Rancho San Antonio County Park (165 acres) and Stevens Creek County Park (2,172 acres). Rancho San Antonio County Park is leased and operated by SCCRPD to the Mid-Peninsula Regional Open Space District (MROSD). Combined with the adjacent MROSD, Rancho San Antonio provides 2,300 acres of trails and other recreational features. Stevens County Creek Park is divided into the 1,077-acre Stevens Creek (including the 92-acre reservoir), and the 1,095-acre Upper Stevens Creek Park. Three publicly accessible recreation trails run through the buffer areas of the Quarry. In addition, there is one planned trail route that runs within the property.

## **Recreation and Mineral Resources Tasks**

- Identify applicable state and local goals, policies and standards related to mineral resource deposits.
- Evaluate the effect of the proposed revisions to the Reclamation Plan Amendment on the ability to extract mineral resources from the site, and the resultant availability of aggregate and other rock products.
- Identify practical, feasible mitigation measures to reduce any identified significant mineral resource impacts.
- Identify all applicable state, regional, and local policies related to access to recreational resources.
- Evaluate the effect of the Reclamation Plan Amendment on recreational resources, such as increase in use resulting in degradation or loss of open space rated as high priority for acquisition

- Identify mitigation measures to reduce any impacts.

## **12. Utilities and Service Systems**

The Santa Clara Valley Water District (SCVWD) provides water to the City of Cupertino and surrounding unincorporated areas, including the Project site. This municipal water is used at the Quarry rock plant for washing aggregate rock products, although 90 percent of water used is recycled onsite. Water for dust control is pumped from the North Quarry. The Quarry is not connected to a municipal wastewater conveyance system. Instead, United Disposal regularly empties the Porta-Potties used on the site. Recology South Bay currently provides solid waste pickup service to unincorporated areas surrounding Cupertino, including the project site. Regarding electricity, Electrical service in the Project area is provided by Pacific Gas and Electric Company (PG&E).

### **Utilities and Service Systems Tasks**

ESA will:

- Identify existing utility service providers utilized by the quarry, including water, wastewater, and solid waste services.
- Contact each applicable utility service (power, water, wastewater, and solid waste) to obtain information regarding the provider's ability to serve the project site based on existing and projected utility usage.
- Discuss the quarry's current use of well/tank storage/sediment pond water for either processing, irrigation, dust control, and other uses, and whether the proposed project would increase demand of on-site water sources for these uses.
- Identify measures to mitigate any identified impacts on the environment generated by a need to expand or improve utility capacity and the delivery of services as a result of new project development.

## **13. Other Issue Areas**

ESA will prepare EIR sections for the remaining CEQA issue areas, including the following:

- Agricultural and Forestry Resources, which will be combined with the Land Use section;

- Energy, which will be combined with the Air Quality and Climate Change section;
- Population and Housing, which will be a stand-alone section.

We do not anticipate that the project will result in significant impacts in these areas, or where we do identify significant impacts, that they can be mitigated to less than significant.

## **14. Alternatives**

ESA will work with County staff to develop a reasonable range of project alternatives. As with the EMSA RPA EIR, we expect to develop the initial range and provide a brief description of each alternative in the Administrative Draft EIR. The final selection of alternatives and the alternatives analysis will occur at the next stage of document development. We will describe, examine and compare in depth up to four alternatives, including the No Project Alternative, and at least one Reduced Scale Project alternative, if feasible. The Alternatives chapter will provide impact comparisons in text form and also summarized in a table. The analysis will provide a conclusion on the “environmentally superior alternative.”

## **15. Cumulative Impacts and other Required Analyses**

ESA will conduct the required cumulative analysis for each issue area, using a list of cumulative projects generated in consultation with the County. This will include the EMSA RPA, the Stevens Creek Quarry, and other related past, current, and reasonably foreseeable future projects. The cumulative analysis will examine the potential for adverse effects of the Comprehensive RPA – both those that are found to be significant, and those found to be less than significant – to combine with similar effects of other projects in a cumulative manner. Where such a potential exists, we will determine whether the Comprehensive RPA’s contribution to the cumulative impact is “cumulatively considerable,” and therefore significant.

This section of the EIR will also consider growth-inducing effects and significant irreversible changes to the environment.

# Exhibit C

Report to State Mining & Geology Board, June 9, 2011  
Permanente Quarry  
State Mine ID 91-43-0004  
Santa Clara County Planning Office File 2250-13-66-09P-10P)



## EXHIBIT C

### COMPLIANCE SCHEDULE – LEHIGH HANSON PERMANENTE QUARRY MAY 27, 2011

Deadline	Action	Date Completed	Comments
11/15/06 – 11/30/06	Pre application meeting between County Planning Dept. and Hanson concerning reclamation plan amendment.	12/15/06	County staff met with Hanson Permanente representatives and discussed both a proposal to relocate an existing crusher and a mandated reclamation plan amendment (RPA) to include all areas of disturbance. Hanson indicated it would have an application for the RPA submitted by the end of the calendar year.
12/15/06 – 12/31/06	Hanson to submit an application for an amended reclamation plan and interim financial assurance calculations.	01/05/07	Application submitted that covered 917 acres of disturbed area and included an expansion with a second mine pit.
1/15/07 – 1/31/07	The County to complete its 30-day review of the application, and inform Hanson in writing whether the application is complete	03/22/07	Application materials were extensive, more than anticipated when the compliance schedule was written. The review of the materials encompassed more than 60 days.
No later than 3/16/07	Hanson to resubmit a revised application containing additional information required by the 30-day review letter.	3/22/07	A letter indicating the project is incomplete stated that preparation of a EIR would be required; additional information was requested regarding drainage and traffic.
4/16/07	The County to inform Hanson that the application is complete for processing. The County to provide approval for interim financial assurances, for immediate posting. The County to forward the amended reclamation plan and financial assurances	4/17/07	County forwarded a copy of the reclamation plan amendment to OMR. A cover letter addressed to OMR deemed the application complete and requested review by OMR.

**COMPLIANCE SCHEDULE – LEHIGH HANSON PERMANENTE QUARRY**

<b>Deadline</b>	<b>Action</b>	<b>Date Completed</b>	<b>Comments</b>
4/20/07	The County to begin processing CEQA review of the amended reclamation plan	4/17/07	CEQA preparations began with request for proposals from consultants to prepare a DEIR.
5/21/07	OMR to provide any comments regarding the amended reclamation plan, pursuant to the 45-day review period of Public Resources Code section 2774, subdivision (d)(1).	5/18/07	The Office of Mine Reclamation issued a comment letter to the County regarding the adequacy of the reclamation plan amendment application. Among the comments were deficiencies in the geology information and slope stability.
May 25, 2007	Notice of Preparation of a Draft Environmental Impact consistent with CEQA requirements issued by the County.	5/25/07	County issued a Notice of Preparation (NOP) of an EIR. A public scoping meeting was convened on June 20, 2007. In response to comments from the general public for a wider circulation of the notice, the County re-issued an NOP on July 2, 2007.
August 2, 2007	Close of public comment, which included two public scoping meetings, under the Notice of Preparation, the County received more than 200 letters listing issues that should be addressed in the project EIR.	08/02/07	The NOP was posted a second time and was posted from July 2, 2007 through August 1, 2007, during which time comments were received, including a second scoping meeting held in Cupertino on July 27, 2007.
<b>Geologic Investigation Phase</b>			
12/31/07	Hanson to provide schedule for geologic investigation for use in CEQA document associated with the reclamation plan amendment proposal.	12/4/07	The operator submitted to the County a report prepared by its geology consultant. The report concludes that 24 months would be required for geotechnical drilling, geotechnical lab testing and monitoring, and slope stability evaluation and reporting.
6/30/08	Status meeting with County staff on progress of geologic investigation.	6/30/08	Meeting convened during which Hanson representatives discussed status of the geology work underway with County staff, including the County geologist.
9/30/08	Status meeting with County staff on progress of geologic investigation.	10/17/08	The operator provided an update regarding work underway for data collection during a meeting with County staff.
12/31/08	Status meeting with County staff on progress of geologic investigation.	12/9/08	County received an update from Lehigh representatives of the progress of the geotechnical drilling.

**COMPLIANCE SCHEDULE – LEHIGH HANSON PERMANENTE QUARRY**

<b>Deadline</b>	<b>Action</b>	<b>Date Completed</b>	<b>Comments</b>
3/31/09	Status meeting with County staff on progress of geologic investigation.	<b>3/19/09</b>	The operator provided a progress of the geology analysis via telephone conference call with County staff.
6/30/09	Status meeting with County staff on progress of geologic investigation.	<b>6/3/09</b>	The operator provided a progress of the geology analysis via telephone conference call with County staff.
9/30/09	Status meeting with County staff on progress of geologic investigation.	<b>9/30/09</b>	Lehigh representatives made presentation of geology analysis to date during a meeting with County staff, which included the County Geologist.
03/01/10	Completion of geologic field investigation, monitoring, analysis, and reporting.	<b>3/01/10</b>	The date by which the geologic investigation would be complete was changed when an agreement was signed by the mine operator and the County to provide for the EMSA reclamation plan amendment.
3/31/10	Status meeting with County staff on completion of geologic investigation.	<b>3/04/10</b>	During a meeting with County staff on 03/04/10 Lehigh advised staff that the geology analysis was being used to complete preparation of the comprehensive reclamation plan amendment, now due by 05/30/10.

**COMPLIANCE SCHEDULE – LEHIGH HANSON PERMANENTE QUARRY**

<b>Continued CEQA Review Phase</b>			
5/30/10	Lehigh to submit revised reclamation plan amendment plans, maps, and supporting documents, as required	5/28/10	Revised submittal date to 5/30/10 per Agreement between SCC and Lehigh due to EMSA application requirement to correct violation. Comprehensive RPA application submitted prior to required deadline. County review of application due by July 27, 2010.
		6/30/10	County submitted RPA application to OMR and requested a preliminary-technical review.
6/30/10	County to complete its review of the revised amendment for completeness and compliance with SMARA.	7/27/10	County deemed the application incomplete.
8/27/10	Lehigh to resubmit any further revisions to the reclamation plan amendment, if necessary.	8/27/10	Lehigh resubmitted the application, County reviews the revised plans.
9/25/10	Determine application is complete for processing	9/25/10	Project deemed complete.
9/25/10	The County forwards the reclamation plan amendment proposal and financial assurance cost estimate to OMR for comments pursuant to Public Resources Code 2774(c).	9/25/10	Interim Financial Assurance Cost Estimate forwarded to OMR for reclamation of existing disturbed areas.  County issued Request for Proposal to hire environmental consultant to prepare an environmental impact report regarding the comprehensive reclamation plan amendment and a use permit.
10/25/10	OMR to provide any comments regarding the amended reclamation plan, pursuant to the 30-day review period of Public Resources Code 2774(d.1)	January 2011 (date of letter)	OMR submitted preliminary comments on proposed reclamation plan amendment.
11/25/10	County to issue contract for environmental consultant	January 2011 (date of contract)	Scope of work required modifications to address water quality analysis and to hire a 3 <sup>rd</sup> party qualified geologist to perform peer review on the Lehigh geology reports submitted.  Contract issued to ESA to complete the EIR.

**COMPLIANCE SCHEDULE – LEHIGH HANSON PERMANENTE QUARRY**

Deadline	Action	Date Completed	Comments
January 2011	Notice of Preparation of an EIR	<b>March 15, 2011</b>	Public scoping meeting held in Cupertino on March 30, 2011. Received 39 comment letters.
April 2011	Administrative Draft EIR submit to County for review and comment		In process. Initial field visits completed. Project description is in revision. Lehigh has submitted data as requested.  Estimated date for completion: August 2011
September 2011	Public release of Draft environmental impact report (DEIR) and beginning of public comment period.		Estimated date for completion: December 2011
	Public hearing before Planning Commission to receive public comments on the DEIR.		Estimated date for completion: February 2012
	Close public comment period. County to commence preparation of Responses to comments on DEIR.		Estimated date: March 2012 close public comment period. Commence work on the Final EIR, estimated time frame is 3 months but is contingent on level of comments received.
	County to prepare early notification to OMR of public hearing on reclamation plan amendment proposal, revised financial assurances, and Final EIR (FEIR).		
	County hold public hearing concerning application for the proposed reclamation plan amendment and FEIR.		Estimated date for public hearing to act on the reclamation plan amendment and FEIR: June 2012