

SECTION 3

Approach and Work Program

Revised January 23, 2006

Project Understanding

Based on our review of the RFP and background documents available at the San Mateo County Planning Department, as well as our familiarity with San Mateo County coastal areas and the County's approach to CEQA analysis and procedures, our understanding of this assignment includes the following:

The County of San Mateo is seeking a consultant to prepare an EIR for proposed future operation, expansion, and reclamation of the Pilarcitos Quarry. The EIR would serve as a basis for County decisions on the periodic (every 5 years) reissuance of the Quarry's Conditional Use Permit (CUP) for the February, 2005 update of the Quarry's Mining and Reclamation Plan, and for a modification of the quarry's existing Coastal Development Permit. The EIR would cover the currently proposed 20.48-acre expansion of quarrying operations as well as planned future expansion into additional areas of Nuff Creek Canyon, totaling 287 acres, and extending for approximately the next 75 years at the current rate of production. The EIR would thus include both programmatic and project-level analysis of proposed future operation of the Quarry.

Quarrying has occurred on the site since the 1930s. Operations have occurred continuously since 1960 under San Mateo County-approved CUPs, and since 1982 under the County's Surface Mining and Reclamation Ordinance (adopted pursuant to the 1975 State Surface Mining and Reclamation Act (SMARA)). The site is designated by the California Division of Mines and Geology as a source of regionally significant mineral resources. The Quarry is owned and operated by West Coast Aggregates, Inc., a locally-owned business. Products of the quarry include aggregate and sand, produced both from the weathered granite native to the site and from recycled concrete, rock, and asphalt brought to the site.

The Quarry is located within the Coastal Zone, in an area of high biological sensitivity. Proposed future quarrying operations would remove over 200 acres of relatively undisturbed native vegetation, would alter natural landforms and both surface and subsurface hydrology, and would profoundly and permanently alter the landscape of Nuff Creek

Canyon. Potential impacts to biological and hydrologic resources could extend beyond Nuff Creek Canyon, for example to Pilarcitos Creek. In addition, Nuff Creek Canyon abuts Corrinda los Trancos Canyon, the site of the Ox Mountain Landfill, which is the repository for most of San Mateo County's solid waste. Cumulative effects of present and future quarrying operations, in combination with the effects of the landfill – as well as other major land-altering projects in the vicinity – must be examined in the EIR.

Other major issues to be considered in the EIR include the future impact of Quarry truck traffic on Highway 92; the potential for disturbance of cultural resources; stability of slopes during and after quarrying operations, and the potential effects of blasting on surrounding land uses, including the Ox Mountain Landfill.

We have reviewed the Biological Assessment and the Cultural Resources Assessment for the entire mining property prepared by the Applicant. Our scope and budget reflects our finding that, for the most part, these documents can serve as the basis for the Biological Resources and Cultural Resources sections of the EIR.

Overall Approach

ESA proposes to prepare an EIR and to perform the proposed associated services through 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 other specialized services, we have assemble a team of knowledgeable professional subconsultants, well-recognized for their technical and communications skills in the issue areas associated with the Pilarcitos Quarry project;

We will judiciously and effectively utilize Geographic Information Systems (GIS) for mapping, analyzing, and presenting aspects of the environmental setting and project impacts. Maps will be of a common scale or scales as appropriate, and will adhere to accepted standards for accuracy and clarity. Maps will include environmental constraints, such as potential occurrences of special status species; and potential impacts, such as viewsheds for impaired or altered physical features;

We will provide rigorous peer review of the applicant's work products by senior in-house staff and subconsultants, to help 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 documents that we produce will satisfy the legal requirements of CEQA.

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 and responsible agencies to ensure satisfaction with the assumptions, approaches, alternatives, and conclusions contained in the EIR; and

We will accomplish the proposed work program expeditiously and economically, within the project schedule and budget presented in this proposal.

Work Program

Task 1: Project Management and Coordination

ESA's Project Manager for this assignment is Dan Sicular. He will be responsible for day to day management of the project, and will be assisted by Paul Mitchell. Management tasks include coordination of all team members including subconsultants; communicating with County staff and with other interested agencies; budgeting and tracking costs; invoicing; writing and editing sections of the documents; and overseeing document production. Marty Abel will be the Project Director and as such will have ultimate responsibility for ensuring that the EIR meets the expectations of San Mateo County.

Task 2: Meetings and Public Hearings

A total of ten (10) meetings and hearings are assumed for this EIR,. Of these, 5 would be internal meetings with County staff. ESA proposes to initiate work with a kick-off meeting with County staff. This meeting will be held for the management team to receive a briefing on updates to the proposed project, and to discuss issues related to the baseline, the project descriptions, the schedule, and our approach to the analysis. We have budgeted four additional face-to-face meetings for our Project Manager, two for our Deputy Project Manager, and one for our Project Director. These four additional meetings could consist of review sessions of administrative draft or screencheck documents.

ESA staff (up to 3 senior staff) will attend and will be prepared to speak at three public hearings, 2 before the Planning Commission and 1 before the Board of Supervisors. ESA's Project Manager and Deputy Project Manager will attend a Scoping Meeting in Half Moon Bay. Budget for one additional, unspecified meeting is included. We have included in our cost estimate budget for two of our subcontractors, Balance Hydrologics and Mr. Paul Seidelman, to attend public meetings to present the findings of their investigations and analysis.

ESA's Project Manager and Deputy Project Manager will be in close contact with County staff throughout the course of the project, principally by telephone and e-mail. We prefer to work closely and collaboratively with our clients to produce documents that meet their needs and expectations.

Task 3: Prepare Project Description

Within three weeks of project initiation, ESA will prepare a draft Project Description for the project. This will include a list of project objectives, as well as clear, concise descriptions of existing permitted (baseline) conditions for quarry operations and for reclamation, 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, property ownership, zoning, and County General Plan designation. More specific description 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 projects, and providing the legal authorities for the approach. A history of land use and permitting will be provided by way of an introduction. We will submit a draft Project Description for review by County staff and by the applicant, and a final Project Description incorporating comments on the draft.

Task 4: Prepare Initial Study and Notice of Preparation

The decision to prepare an EIR for this project renders the step of preparing an Initial Study unnecessary. There may, however, still be some value in completing the Initial Study checklist, particularly if through this process some issue areas can be "focused out" of the EIR. We propose a minimal effort to complete the checklist, basing conclusions primarily on a review of the principal project background documents. If this process reveals issues that can be eliminated from the EIR, we will inform the County and suggest a reduction in scope and cost.

ESA will also work with San Mateo County staff to produce the required Notice of Preparation for the EIR. ESA will prepare a draft of the NOP, submit it to the County for comments, and prepare the text of the final NOP. This will be submitted to the County for final formatting and distribution. ESA will also provide a list of local agencies and organizations that should be included in the NOP distribution list. Our budget does not include printing or mailing of the NOP.

Task 5: Prepare Administrative Draft EIR

The project team will prepare the Administrative Draft EIR (ADEIR) in accordance with current *CEQA Guidelines* and will submit five (5) copies (including one unbound camera-ready copy) of the ADEIR to County staff for review. The ADEIR will address concerns identified by Responsible and Trustee agencies, County staff, and the public.

Prior to commencing work on preparation of the ADEIR, appropriate members of the project team will attend a site tour, at which the applicant may provide additional background, project-related information and reference any previous discussions with staff of Responsible or Trustee Agencies that may be relevant to the project. Project staff may initiate preliminary discussions with appropriate Responsible or Trustee agencies.

The project team, with the cooperation of County staff, will identify, assemble, and review available, relevant information relating to the project site, the proposed project, and the potentially affected environment on and in the vicinity of the site. This task will include review of the technical studies prepared for the site and vicinity, including the current Mining and Reclamation Plan; the applications and environmental documents prepared for previous quarry project proposals at the site; and additional studies previously prepared for the project site. Project team members will also conduct any necessary additional site visits and field studies. This task will also include review of public and agency comments received on previous environmental documentation and the current Notice of Preparation.

On the basis of the available data, review of NOP comments, and field reconnaissance, the project team will identify additional information that may be required to prepare the EIR. If necessary, ESA will prepare a memorandum that identifies any remaining information requirements. The intent in this task is to make maximum use of available information, including the studies previously prepared by the applicant's consultants, but also to verify and supplement existing data to ensure the objectivity and completeness of the EIR.

As part of this task, above, ESA will confirm with County staff the final assumptions to be used in the EIR analyses concerning the project description, the range of alternatives to be examined, impact significance criteria, the bases for cumulative impact analyses, and any other analytic assumptions that may require further resolution. On the basis of this consultation, the review of public and agency scoping comments, and the evaluation of available information conducted as part of this task, ESA will make any appropriate recommendations for revising the scope of work, and will prepare necessary scope revisions in consultation with County staff.

The following discussion presents the proposed outline of the EIR, and strategic considerations related to the preparation and presentation of individual sections.

Introduction

The Introduction will briefly describe the relationship of the County's planning process to that of the CEQA process; will summarize the County's Implementing Procedures for Administering CEQA; will describe the principal characteristics and objectives of the project; and will explain the planning and scoping processes through which the EIR scope was developed. The Introduction will also describe briefly the role of the EIR in the overall planning process, and the procedural steps by which the EIR and the project application will be processed.

Summary

The Summary will describe the project and the alternatives, and provide a summary table and narrative that outline the project's significant environmental effects, feasible mitigation measures that would reduce or avoid those effects, residual levels of impact significance after mitigation, and principal areas of public controversy. As suggested by CEQA Guidelines, the Summary will be limited to approximately 15 pages.

Project Description

The proposed project will be described in text, tabular, and graphic forms that rely primarily on information provided by the project applicant. The reader will be referred to the EIR Introduction for information concerning the background, processing, and scheduling of the planning and environmental process. We propose to prepare the project description within 3 weeks of project initiation. A draft project description will be submitted to the County for review and confirmation of its accuracy and completeness.

Environmental Setting, Impacts, and Mitigation

To facilitate report continuity and minimize redundancy in the discussions of each environmental topic, the EIR will present the setting, impacts, and mitigation in one unified section. As required by CEQA, the setting will describe the environment in the study area “as it exists before the commencement of the project.” The setting will be presented from site-specific, local, and/or subregional perspectives, as appropriate to each environmental topic.

The environmental effects of the project will be presented under each topic of analysis. As required by *CEQA Guidelines*, the effects of the project will be defined as changes from the Environmental Setting that are attributable to the project.

The discussion of mitigation measures will be presented by environmental topic, and as required by *CEQA Guidelines*, will distinguish measures proposed or accepted by the applicant County from any other measures identified in the EIR. As required by *CEQA Guidelines*, any significant environmental effects due to the mitigation measures will also be identified. Any proposed mitigation measures shall be drafted in the form of permit conditions that can be inserted into the County’s “Conditions of Approval.”

Alternatives

As required by *CEQA Guidelines*, the Alternatives section included in the EIR 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 would include a “no project” alternative, and up to two other alternatives, which may include a mitigated, or “environmentally superior” alternative. Consistent with *CEQA Guidelines*, each of the alternatives would be designed to reduce one or more of the potentially significant impacts of the proposed project.

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

Description of 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 Alternative, which will identify the major differences between the impacts of the proposed project and those of each alternative; and

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

In addition, a description of alternatives which were considered, but were rejected because they would not meet most of the sponsor's basic objectives and/or avoid or substantially lessen the potential impacts of the proposed project while not also creating new potentially significant effects were considered but rejected as infeasible will be briefly discussed.

In their February, 2005 Mining and Reclamation Plan, the applicant states that Extensive Agriculture is the preferred end use of the site after cessation of quarrying activities. However, several other potential end uses are also presented, including intensive agriculture, commercial recreation, and solid waste disposal. Our proposal includes analysis of only the preferred end use; The other potential end uses will not be considered as alternatives, and will not be evaluated in the EIR. Any future consideration of other end uses would be subject to additional CEQA review.

Statutory Sections

On the basis of information presented in the EIR sections described above and in consultation with County staff, the EIR will contain the following additional EIR sections, as required by CEQA:

Significant Environmental Effects of the Proposed Project (including significant, unavoidable effects)

Effects Found Not to be Significant

Irreversible Environmental Changes

Distribution List, and Persons and Organizations Consulted

Appendices

Appendices, such as supporting technical studies of traffic, biological resources, cultural resources, or other issues, will be included as appropriate. Note, however, that the Draft EIR will be self-contained and fully comprehensible without reference to appendices. ESA will prepare Appendices, containing the technical studies, as a separate document which will be submitted to the County for their records and usage.

Task 6: Prepare Draft EIR

After County staff has reviewed the ADEIR, one set of comments will be submitted to ESA. ESA will incorporate the necessary revisions into the document. The Project Manager and any other appropriate members of the consultant team may meet with County staff to discuss and revise the ADEIR, and to produce the Draft EIR (DEIR). ESA will make the necessary

revisions to the ADEIR and will submit one (1) copy of a screen-check DEIR for approval by County staff. Upon staff approval, ESA will prepare and deliver fifty (50) copies of the DEIR plus Appendices, and one (1) CD copy in PDF format.

Task 7: Respond to Comments and Prepare Administrative Draft Final EIR and MMRP

County staff will receive all written comments and a transcription or summary of comments made orally at the Public Hearing(s) and provide ESA with a copy. ESA's Project Manager and Deputy Project Manager will meet with County staff to discuss the incorporation of comments and responses into the Final EIR (FEIR). The Administrative Draft FEIR will consist of responses to all of the comments as required by CEQA *Guidelines* and any appropriate revisions to the text of the Draft EIR. Should the public comments raise issues not previously within the scope of work, ESA will consult with County staff to achieve cooperative resolution of the out-of-scope issues.

Mitigation Monitoring and Reporting Program

The project team will also prepare and submit a Mitigation Monitoring and Reporting Program (MMRP) at the time of submittal of the Administrative Draft FEIR. The MMRP will be prepared in compliance with Public Resources Code Section 21081.6, CEQA *Guidelines* Section 15097, and the requirements of the County. For any significant impact identified in the EIR, the MMRP will include a list of all proposed mitigation measures. Each measure shall describe the required mitigation and the tasks and schedule necessary for monitoring mitigation compliance. The MMRP will generally identify the parties responsible for implementation of each monitoring and reporting task.

ESA will submit five (5) copies of the Administrative Draft Final EIR and MMRP to the County for review.

Task 8: Prepare Final EIR

The County shall provide one set of consolidated, non-contradictory comments on the Administrative Draft FEIR. ESA will incorporate the necessary revisions into the Final EIR (FEIR) and will provide one screencheck copy to County staff for final approval. Upon screencheck approval, ESA will prepare fifty (50) copies of the FEIR, and one (1) CD containing the FEIR and Appendices in PDF format.

Technical Approach to the Analysis of Environmental Impacts

In preparing the environmental analysis, ESA will comply with the *CEQA Guidelines* (as amended) and San Mateo County's Implementing Procedures for Administering CEQA. The following describes our approach to each issue area within the EIR.

A. Land Use and Planning

Issues

The 593-acre project site is located on the north side of State Route 92 in southern San Mateo County, over a mile east of the City of Half Moon Bay. Quarrying has been conducted on a portion of the project site for several decades, and under the ownership and operation of West Coast Aggregates, Inc. since 1993. Current quarrying operations affect about 49 acres of the 593-acre site. Much of the land to the north, west and east beyond the quarry property is part of the Ox Mountain Ranch, which includes the Ox Mountain Landfill. The next major canyon east of the project site is actively farmed. A variety of smaller ownerships (1/2 to 10 acres) front along SR 92 south of the quarry.

Pilarcitos Quarry is located within the Coastal Zone pursuant to the California Coastal Act, and designated as General Open Space in the Land Use Element of the Coastal Plan. The current zoning of the project site is RM-CZ/CD (Resource Management/Coastal Zone/Coastal Development District). The project site does not contain any prime agricultural land or prime agricultural soil as defined in the Coastal Plan.

Under the proposed project, a 20.5-acre expansion would occur first to the north of the existing quarry, with proposed quarrying ultimately affecting an estimated 287 acres within the project site. In addition to an amended reclamation plan and amended quarry permit, the applicant would require an amended coastal permit. The EIR will need to address the consistency of the project with local plans and policies as it relates to land use and agricultural resources. In addition the compatibility of the on-going quarrying operations and reclamation of the project with nearby existing and/or future industrial, rural, residential and other uses shall be addressed.

Tasks

Identify historical and existing land uses at the project site and in the immediate vicinity.

Review applicable plans, policies, and objectives of local, regional, and state public agencies having jurisdiction over the project, including the San Mateo County General Plan, Local Coastal Program, Zoning Ordinance, and any other applicable plans and policies. Determine if any Williamson Act contracts are located on the project site. Describe any inconsistencies between the proposed project and identified plans and policies.

In consultation with County staff, identify which approved and/or foreseeable developments could have significant cumulative land use effects in combination with the proposed project.

Discuss the potential project and cumulative significance of undeveloped portions of the project site from to an industrial use.

Identify measures to mitigate any identified potential agricultural/mining incompatibilities; potential land conversion effects; and cumulative impacts to land uses.

B. Geophysical Factors

Issues

The Santa Cruz Mountains, one of the northwest trending ridges typical of the Coast Ranges, forms the mountainous spine of the San Francisco Peninsula and extends from Daly City in the north to the Pajaro River, near Watsonville in the south. Locally the Pilarcitos Quarry is located at the southern end of a granitic block known as Montara Mountain. The quarry is located within the Nuff Creek Canyon, the base of which consists of coarse grained alluvium, slope wash, ravine fill, and colluvium. The granitic bedrock consists of fractured and weathered granite, granodiorite and quartz diorite. In general, the bedrock in this region is more weathered at the near surface but becomes more competent with depth, sometimes at depths of more than 100 feet. Published geologic mapping shows the eastern extent of the granitic block is truncated by the Pilarcitos Fault which is located approximately a mile from the quarry. In addition, the Seal Cove and the San Andreas Faults are also located relatively close to the quarry. Regionally, the quarry is considered by the San Mateo County Planning Department to be located in a region of many shallow landslide events. One such landslide deposit has been mapped within the project boundary. In addition, some larger active or unstable landslides have been mapped in the region although not within the boundaries of the quarry property. A large magnitude earthquake could potentially trigger slope failures within the project area.

A Mining and Reclamation Plan has been prepared for the proposed near term expansion which touched on some of the existing geologic conditions. However, the plan did not sufficiently analyze slope stability, other geologic

hazards (i.e., earthquakes, landslides) and the potential effects of blasting. Consequently, the EIR will include an assessment of slope stability, earthquake hazards, and other potential geologic hazards.

In addition, the affect of the proposed project on the existing hydrogeologic conditions will be analyzed in concert with water quality and surface water issues (also discussed in the Hydrology and Water Quality section below). Considering the proximity to the Ox Mountain Sanitary Landfill and the potential effects of altered topography on the groundwater gradient, we have added Balance Hydrologics to the ESA team to assist in the technical analysis. Balance Hydrologics has extensive experience with the hydrogeology of this region.

Also joining the ESA technical team, Mr. Paul Seidelman of Seidelman Associates will assist with geologic hazard issues associated with the project. Mr. Seidelman has completed considerable on-site geologic work in the region and for numerous quarry operations in the greater Bay Area. As a result, Mr. Seidelman is thoroughly conversant with quarry associated geologic issues and well-suited to assist the ESA team in assessing site specific geotechnical and soil issues. Part of Mr. Seidelman's analysis will be based on the work of Gordon Revey of Revey Associates, Inc., who will evaluate the vibration effects of blasting associated with quarry operations (please refer to Section I, Noise and Vibration, below).

Tasks

Literature Review- Review readily available geologic, soils and seismic reports and maps pertaining to the project area. This will include readily available geologic maps and reports published by the California Geological Survey, U.S. Geological Survey, and USDA Natural Resources Conservation Service.

Aerial Photograph Interpretation - Obtain and interpret 2 sets (one recent and one historic) of stereo-paired aerial photographs of the quarry site and immediately surrounding area. This will be done to better identify site landforms and to obtain an overview of the environmental opportunities and constraints from a geologic standpoint.

Geologic Mapping of the Quarry Site – Review any existing onsite geologic mapping of the quarry site to better characterize the site geology and to better assess the environmental impact. Mr. Seidelman is familiar with the geology of this area and will be an asset to further relate onsite geologic issues in a regional context.

Results of Subsurface Exploration – Review any existing reports and studies of recent or past resource evaluation studies. Included for review will be any available rock coring explorations conducted at the site.

Based on the existing information and that gathered in the above tasks, describe the regional and local geologic, soils, and seismic conditions for the project site.

Describe potential geotechnical and seismic impacts of the proposed mining and reclamation plan related to ground shaking, landslides and other hazards. Consider potential groundshaking hazards to structures and temporary and permanent quarry slopes.

Review hydrogeologic data and evaluate potential changes to groundwater flow characteristics. Through evaluation of available data and our acquired understanding of site hydrogeology, ESA will evaluate how the proposed mining would alter the existing characteristics of groundwater flow and how the surface water/groundwater interface would be affected by mining.

Describe and discuss potential hazards and limitations posed by steep and/or unsupported slopes, including soil erosion.

Using available information, determine potential effects of blasting as it relates to slope stability and seismic activity on nearby faults.

Evaluate potential impacts of mining within any proposed geotechnical setbacks.

Evaluate potential impact of quarry expansion on the existing septic system.

Evaluate the appropriateness of any prior recommendations for mining and reclamation on the project site.

Summarize current Conditions of Approval and identify any additional mitigation measures necessary to reduce identified impacts to a less-than-significant level. Determine the effectiveness of stated mitigation measures and state the significance of the impact after mitigation.

C. Hydrology and Water Quality

Issues

The project lies entirely within the Nuff Creek Watershed which measures approximately 690 acres. The quarry property, at 593 acres, occupies a vast majority of the watershed. Drainage from the quarry property flows into Nuff Creek, a tributary of the Pilarcitos Creek. In the area of quarry operations, Nuff Creek has been culverted and drainage is channeled through a series of sediment basins on the canyon floor. In addition, earthen berms have been installed above and below current quarry activity to protect the creek from sedimentation. The reclamation plan for the first phase of expansion includes hydrological calculations for drainage improvements and sediment basin sizing. In addition, the applicant will operate under a Storm

Water Pollution Prevention Plan (SWPPP) according to their NPDES permit. The SWPPP will include various Best Management Practices to prevent water pollution. Water quality issues are also addressed in a Hazardous Materials Plan that has been prepared for the quarry. The reclamation plan proposes revegetation in the areas in which mining is complete, in addition to eventually restoring the culverted sections of the creek. All of the water supply for the project will be derived from onsite water wells. All of the aforementioned drainage and sediment control measures will require analysis to determine their adequacy for mitigating potential impacts.

Balance Hydrologics Inc., will support ESA in the assessment of potential hydrology and water quality impacts of the proposed quarry expansion. Balance Hydrologics has unparalleled experience with groundwater and surface water-related environmental issues throughout this region. Included in their analysis will be the interface of groundwater and surface water resources with special attention paid to the neighboring Ox Mountain Sanitary Landfill. An assessment of the potential for leachate from the landfill to affect the proposed project will have to be made.

Tasks

During the initial project familiarization phase, the ESA team including Balance Hydrologics will review existing materials prepared by both San Mateo County and the applicants, including those submitted for both the current and former project. Following initial document review, ESA and Balance Hydrologics will attend a site tour for further analysis of potential issues.

Balance Hydrologics staff will then assess what additional information may be needed, and develop focused and relevant data-gathering programs. One program is likely to entail assembling a history of aerial photographs of the site, with emphasis on major storm events and periods of drought, in order to evaluate existing patterns in the Nuff Creek watershed. With coordination from ESA, Balance Hydrologics will consult with appropriate San Mateo County agencies as warranted by their findings during preparation of their analysis.

Based on the information collected and reviewed during the project familiarization, Balance Hydrologics engineers and scientists will conduct the appropriate technical analyses for the EIR. Focus of the impact/mitigation assessment is likely to be potential introduction of sediment, nutrients, and other potential pollutants as well as any potential hydraulic connection with the landfill. Potential impacts from culverting Nuff Creek and any alteration of drainage patterns. However, the specific nature of this work is anticipated to emerge from the prior analysis. These analyses are likely to entail collaborative work with the EIR team, particularly with Paul Seidelman, the geotechnical specialist, and the hazardous waste experts at ESA.

Additionally, Balance Hydrologics will evaluate geomorphic changes expected in the upper Nuff Creek watershed, both with and without the project, identifying opportunities for watershed-wide benefits which might be realized from peak-flow reduction or other measures which may reduce bank erosion and sedimentation. The work is also likely to include a description of local aquifer properties, as well as related analysis of hydrologic balances with and without the project. The potential impact to groundwater recharge and aquifer volume will be included.

Drainage calculations for the expansion phases developed for the project proponent will be reviewed by a professional engineer (PE) on the staff of Balance Hydrologics who is familiar with such calculations for quarries in San Mateo County.

Balance Hydrologics will identify, as appropriate, feasible mitigation measures, with emphasis likely to include (a) attaining peak flow attenuation over a range of recurrences, (b) achieving erosion control and sedimentation reduction, (c) reducing the flow of nitrates and/or other nutrients from the site, and (d) as identified by ESA, controlling releases of indicator constituents which may emanate from ground-water inflows to the project.

The analyses will be developed under State of California registrations as (a) Certified Hydrogeologist(s), (b) Certified Engineering Geologists, and (c) Professional Engineers.

Optional Task

If after analysis determines hydraulic connection between the project and the landfill, it may necessary to model ground-water flow to assess where, when, and how much flow passing through the landfill will enter the quarry, and identify strategies to best mitigate subsurface flow from the landfill. A MODFLOW model designed to address these issues will be developed based on the aquifer properties estimated for the local aquifers.

D. Air Quality

The project site lies within the San Francisco Bay Area Air Basin, which is designated as a “nonattainment” area with respect to state standards for ozone and particulate matter. Regional air quality plans have been developed to improve air quality within the Basin through enhanced control measures.

Air quality issues for the project include the following:

during various construction and excavation activities, the project would generate dust that could cause local violations of particulate standards;

project-related traffic, especially heavy truck traffic, as well as on-site mobile equipment, would generate ozone precursors from engine emissions and diesel particulate matter (DPM) that has been identified by the state of California to cause cancer;

The Bay Area Air Quality Management District (BAAQMD) is the agency responsible for enforcing air quality regulations in the San Francisco Bay Area. The District has established not only criteria for assessing the significance of air quality impacts of projects but also screening criteria for determining the necessity of a detailed air quality analysis. The air quality analysis will also focus on the cumulative effect of the project relative to other development in the County and the relationship between county-wide growth and the regional *Bay Area Clean Air Plan*.

Tasks

Setting

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. Discuss current air quality management efforts that may have an effect on the project. Identify sensitive air pollutant receptors in the proposed project vicinity.

Summarize relevant health information regarding critical air pollutants and also DPM.

Discuss the proposed project's consistency with goals, policies, and standards of the County and the BAAQMD. Analysis will be conducted based on the BAAQMD's *CEQA Guidelines*.

Air Quality Impacts and Mitigation Measures

Identify air quality changes that would result from proposed future quarrying and reclamation activities as they relate to potential criteria pollutant emissions (CO, NO_x, ROG, and PM₁₀) and DPM emissions. We assume that the applicant is not proposing to increase the rate or scale of operations, and therefore current emissions can be used as a basis for predicting future emissions. Furthermore, because of new federal standards for diesel equipment, we assume that emissions of DPM will decrease over time, given the same level of operations and related truck traffic.

Future quarrying activities shall be evaluated with respect to: air and water toxics, and human health impacts emanating from blasting; earthwork, site excavation, on-site circulation, rock processing, equipment and storage, and off-site trucking and truck transport air impacts. ESA will request information regarding activity levels (i.e., number of tons of material processed per day) and estimate these levels if

data is not provided. ESA will use emission factors as available from the U.S. EPA's AP42 set of emission factors. If emissions factors are not available for an activity, ESA will state this and qualitatively discuss possible emissions.

Significant Air Quality Impacts and Mitigations

For each project component, evaluate the potential for significant air quality impacts.

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 and identify the parties responsible for implementing each measure. Incorporate standard mitigations provided by the County as appropriate.

E. Transportation and Circulation

Issues

The Pilarcitos Quarry is located on State Route 92 (SR 92), a two-lane state highway (with segments with a passing lane) that accommodates commuters and others between SR 1, at the coast, and I-280 and U.S. 101, in the central Bay Area. Conditions of the current quarry's operating permit restrict the frequency of trucks departing the quarry driveway onto SR 92. The proposed expansion of the Pilarcitos Quarry would not increase the permitted production level (tons per year), and therefore would not increase the existing level of traffic (quarry trucks and employee vehicles) generated by the quarry. However, approval to continue present traffic levels beyond the life of the current five-year permit (expires in 2008) could affect traffic and circulation conditions in the area because that same level of quarry traffic would interact with increased traffic on SR 92 expected to be generated by other uses and activities. ESA will conduct a comprehensive evaluation of the potential impacts on SR 92 and at key intersections through which quarry traffic would travel.

The traffic and circulation scope of work is based on the project description, information in the RFP, and our understanding of the County's EIR requirements for similar efforts.

Tasks

Review existing data and studies performed for the area to determine additional data needs. This review will include an EIR prepared by the Local Transportation Authority and an EIS prepared by CalTrans for the planned widening and straightening of SR 92 from the Pilarcitos Creek bridge to the Half Moon Bay city limit.

Consult with San Mateo County and the City of Half Moon Bay to finalize the scope of work, including the appropriate study periods.

Conduct field reconnaissance of the road network that serves the quarry site.

Conduct peak-period counts during the weekday AM and PM two-hour peak traffic periods at up to four intersections (hours and locations to be selected in consultation with County and City staff), including the site access intersection on SR 92.

Calculate the existing intersection levels of service (LOS) for the weekday AM and PM peak hours 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 the existing roadway levels of service (LOS) for the weekday AM and PM peak hours for two road segments on SR 92 (i.e., west of, and east of, the site access intersection), based on the lane geometries and peak-hour volumes published by Caltrans.

Collect and summarize three years of collision data for SR 92 between SR 1 and I-280, through published SWITRS reports. The focus will be on the site access intersection on SR 92 and on accidents involving trucks, but data will be collected for all vehicle accidents on the road section between SR 1 and I-280.

Describe the trip generation and distribution for the existing quarry operations (daily and peak hours) on the basis of data provided by the County and/or quarry operator.

Describe and map the existing street and highway network and traffic conditions in the vicinity of the site, using existing data and field reconnaissance. Include a description of pavement condition and geometry of the SR92 shoulder in the vicinity of the site access road used by trucks as a deceleration lane.

Establish significance criteria that will be used to judge project and cumulative impacts.

Estimate future traffic volumes on SR 92 and at the up to four study intersections for four scenarios – five-year increments beyond 2008, when the current five-year permit will expire (i.e., 2013, 2018, 2023, and 2028). The future traffic volumes will be based on traffic growth factors (obtained from the County and/or Caltrans).

Calculate future-year peak-hour LOS conditions (for the four analysis scenario years) for the study intersections and roadway segments (with

and without the project), and identify project impacts. The percentage of traffic volumes increases at study intersections and on study road segments that is attributable to the proposed project will be reported.

Perform a review of the project site access, circulation and parking under the proposed project. This review will evaluate the project access driveway. Sight distance will be evaluated from the driveway location with respect to safety concerns.

Describe, at a programmatic level of detail, future traffic conditions resulting from the proposed continuation of quarry mining beyond 2028, in terms of traffic operations and safety on SR 92 and at the study intersections. The intent is to establish a framework for future project-level analyses for permit renewals beyond the 20-year planning horizon appropriate for project-level analysis at this time.

Develop feasible mitigation measures to reduce, or eliminate, significant impacts associated with the proposed project.

F. Biological Resources

Issues

Our review of the documents provided with the RFP suggests that both the Biological Resource Report and the Mining and Reclamation Plan provide a sound basis for the CEQA analysis, and excellent guidance on mitigation of impacts to, or avoidance of, sensitive biological resources.

Of more concern are issues regarding designated Critical Habitat, and how such designation interacts with state and local coastal plans.

Marbled murrelet. Critical habitat for the marbled murrelet is designated about one mile north of the project site; ESA biologists detected a murrelet within this habitat on June 14, 1998. The Service will be reviewing the murrelet's critical habitat protections over the next several years. There is sufficient distance between the habitat and the quarry to reduce this as an issue, and the ongoing review is more likely to reduce the area than expand it.

Steelhead. Nuff Creek, a tributary to Pilarcitos Creek, traverses the project site. Pilarcitos Creek is known to support a small population of federal threatened central California coast steelhead. Currently available information suggests that steelhead may not be present in Nuff Creek. However, portions of Nuff Creek appear to contain aquatic habitat characteristics that are typically associated with steelhead streams and a federal Critical Habitat designation for the species was recently proposed. ESA fisheries biologists have observed landlocked steelhead in the upper Pilarcitos Creek watershed in the past and a similar population may be

present in Nuff Creek upstream of the culvert adjacent to the existing quarry operations center.

Nuff Creek contains flowing water throughout the year and the geologic formation within the Nuff Creek canyon is likely to be a significant contributor to baseflows in Pilarcitos Creek. As such, there is a potential for indirect impacts on steelhead habitat in Pilarcitos Creek downstream of the Nuff Creek confluence if expanded quarry operations should disrupt groundwater flow to the creeks.

California Red-legged Frog. The site also contains wetlands, which may be under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and regulated by the provisions of the Clean Water Act. According to LSA (2005), at least one of these supports California red-legged frog (a federally listed species). ESA has considerable experience with this species along the coast, at both our Coast Dairies and Pescadero Marsh project areas.

Of greater complexity for the Quarry Expansion EIR is the collocation of both Critical Habitat for red-legged frog and California Coastal Commission (CCC)/Local Coastal Plan jurisdiction. As LSA noted, the Coastal Commission considers areas designated as Critical Habitat by the U.S. Fish and Wildlife Service to be Environmentally Sensitive Habitat Areas (ESHAs). This ESHA issue may also expand if the CCC views certain other non-wetland areas as ESHAs, as has been the case, for example, for oak woodlands in some southern California counties. While a federal nexus may help resolve incidental take issues within Critical Habitat for both steelhead and red-legged frog, the CCC's position on impacts to ESHAs has been problematic, as was the case during ESAs discussions with the Commission for both Coast Dairies and Long Marine Lab in Santa Cruz. The EIR must resolve this, since the Master Plan will be the primary document for determining consistency with the Coastal Act and the Local Coastal Plan.

General EIR Tasks

Projects approved through the 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.

CEQA (Section 15206) specifies that a project shall be deemed to be of statewide, regional, or area-wide significance if it would substantially affect sensitive wildlife habitats including but not limited to riparian lands, wetlands, bays, estuaries, marshes, and habitats for rare and endangered species as defined by CDFG Code Section 903.

ESA will conduct a biological study of the project site. This will require a botanical and wildlife habitat assessment, an analysis of potential direct, indirect and cumulative impacts, and the development/refinement of a mitigation/enhancement strategy for the project.

Botanical and Wildlife Environmental Analysis 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.

Consult with the California Natural Diversity Data Base (CNDDDB), as well as California Native Plant Society (CNPS) publications. 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 as described above. 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 and in adjacent borrow areas. 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 ADEIR, DEIR, and FEIR and propose mitigation measures to reduce impacts to less-than-significant.

G. Mineral Resources

Issues

The subject property is zoned RM-CZ/CD (Resource Management/Coastal Zone/Coastal Development District) and has been designated by the Division of Mines and Geology as a deposit site for regionally significant mineral resources with a Sector designation of HH. The purpose of the project is to enable continued quarrying of mineral resources from the site for approximately the next 75 years.

Tasks

Identify applicable state and local goals, policies and standards related to mineral resource deposits.

Evaluate the effect of the proposed revisions to the Mining and Reclamation Plan 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 energy impacts.

H. Hazards and Hazardous Materials

Issues

The project site is located within a relatively remote region of the Santa Cruz Mountains, with little nearby development. However, in the adjacent canyon to the west lies the Ox Mountain Sanitary Landfill. Reportedly, this landfill is lined in some areas and not in others. The potential for excavation of the quarry to be below the lowest depths of refuse placed in the landfill could present a significant change in topography and groundwater flow. Consequently, there is the potential for the quarry to intercept groundwater, and, if leachate has migrated below the landfill, cause contaminated groundwater to flow into the quarry. In addition, blasting could fracture the rock beneath the old landfill, creating the potential for the leachate to move off-site of the landfill.

Industrial activities proposed for site quarry activities and aggregate processing would require the continued handling, storage, and disposal of hazardous materials. The hazardous materials would likely include, but not be limited to, explosives, fuels, lubricants, solvents, degreasers, and herbicides/pesticides. Proposed blasting activities could potentially expose

quarry workers or the public to hazards associated with the use of explosives. The potential for the adjoining landfill to release methane gas is of particular concern in association with the routine use of explosives.

The analysis for the EIR will rely on documents and information provided by the applicant and the current local, State, and Federal regulations. Potential contamination of groundwater or receiving waters is discussed within the Hydrology and Water Quality scope, while potentially hazardous emissions are discussed within the Air Quality scope. The following scope of work would be conducted for hazards and hazardous materials analysis in the EIR.

Tasks

Review relevant data on the landfill, including any available information on groundwater quality at the Ox Mountain Landfill and more detailed information on what areas of the landfill are lined.

In conjunction with information contained in the Hydrology and Water Quality, and the Geology, Soils and Seismicity sections of the EIR, evaluate the potential of the quarry to be exposed to contaminated groundwater from the landfill.

Describe past operations and conditions at the landfill which adjoins the project site to the west and the potential for hazardous wastes in the landfill or methane gas generated in this area to impact proposed quarry operations.

Describe and evaluate the types and quantities of hazardous materials that would be used at the project site during quarrying activities and aggregate processing.

Describe and evaluate health and safety issues associated with quarry activities, particularly blasting of granitic materials.

Describe the aggregate washing and wastewater treatment processes. Specifically discuss the potential for the introduction of hazardous materials to the wastewater discharge.

Through data acquired from the geologic assessment and the hydrologic evaluation, ESA will assess the likelihood that groundwater contaminated by leachate could enter the mine pit through geologic fractures such as faults and geologic contacts. The optional task presented in the hydrologic scope could assist with this analysis by providing an estimate of the time required for leachate-contaminated water to flow towards the mine pit, if at all.

Review the applicant's Surface Mining and Reclamation Plan Application and other available materials regarding hazardous materials management. If plans, such as the Hazardous Materials Management Plan, prepared by the applicant do not fully mitigate potential impacts associated with hazardous materials, we would identify practical

mitigation measures to reduce or eliminate the identified impacts. Specifically, these mitigation measures would focus on compliance with existing regulations for safe handling of these materials.

I. Noise and Vibration

Continued quarrying operations in Nuff Creek Canyon would generate noise from on-site activities (include operation of noise-generating equipment and noise- and vibration-generating activities including blasting) and from the transportation of materials, especially over State Route 92. The effect of project-related noise on the ambient noise environment would depend upon various factors:

the proximity of noise-sensitive uses (e.g., residences or schools),

the character of project noise sources (impulsive versus constant),

the temporal distribution of project-related noise (e.g., daytime versus nighttime),

the presence or absence of intervening terrain,

the existing ambient noise levels, and

the importance of quiet to the community as reflected in the noise/land use compatibility guidelines contained in the San Mateo County General Plan Noise Element, the Half Moon Bay General Plan Noise Element, and the San Mateo County Local Coastal Program.

As quarrying proceeds into new expansion areas within Nuff Creek Canyon, potential noise impacts may increase or decrease, depending on the location and aspect of operations. 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 the local noise/land use compatibility guidelines noted above and, where necessary, will devise feasible, appropriate noise mitigation measures in accordance with CEQA. The EIR will analyze the potential cumulative effects on roadside noise levels of future truck trips, combined with projected increases in traffic on State Route 92.

Vibration from blasting could potentially effect slope stability within Nuff Creek Canyon, both on disturbed slopes and undisturbed slopes (see Section B, Geophysical Factors, above). In addition, blasting could have effects on slope stability at the neighboring Ox Mountain Landfill, and on residential and other land uses in the vicinity of the quarry. Gordon Revey of Revey Associates, a blasting expert, will perform the evaluation of blasting effects,

focusing on the intensity and extent of blasting-induced ground-bourn vibration.

Tasks

Setting

Describe and discuss existing major noise sources in the vicinity of the project area based on information available from the County General Plan Noise Element and field reconnaissance. Describe the existing noise environment on the basis of additional noise measurements taken at the project site and receptors that would be affected by the project (24-hour noise measurements taken at up to three locations and up to six short term noise measurements).

Summarize applicable noise regulations, policies, and standards, including the noise/land use compatibility guidelines in the County and City of Half Moon Bay General Plan Noise Elements, Mine Safety and Health Administration (MSHA) standards, including those related to blasting operations, as well as any applicable ordinances.

Identify the noise-sensitive land uses or activities in the vicinity of the project and haul roads.

Conduct on-site field visits (budget assumes three visits) for noise and vibration observation during the time periods of blasting, including observation from sensitive receptor sites.

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.

Impacts and Mitigation Measures

Evaluate the potential impact of future quarrying activities on the nearest sensitive receptors and land uses, and on wildlife. This assessment for will include consideration of noise impacts from equipment and back-up alarms generated during earthwork, site excavation (including blasting), on-site circulation, rock crushing and processing, cumulative noise levels from off-site trucking; and any nighttime maintenance activities. ESA has recent noise measurements from a variety of quarry projects that can be used as references for many of these activities such as rock crushing, , back-up alarms and off-site trucking. The noise analyses will include reclamation plan activities such as earth moving.

Estimate (as needed) future noise levels from project traffic based on the traffic analysis, using the Federal Highway Administration Highway Traffic Noise Prediction Model.

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, blasting schedules

and intensity, 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 potential impacts of all identified blasting effects, based on technical background information and site-specific calculations of blasting effects.

Significant Noise Impacts and Mitigations

For each project component, evaluate the potential for significant noise impacts based on the estimated change in noise levels at noise-sensitive uses.

Identify feasible, appropriate noise mitigation measures to avoid or reduce adverse impacts in consultation with San Mateo County.

J. Public Service/Utility Factors

Issues

Fire protection services to Pilarcitos Quarry is provided by the Half Moon Bay Fire District, who maintain a mutual aid agreement with the California Department of Forestry and Fire Protection (CDF). Police protection services in the area are provided by the San Mateo County Sheriff's Department, and by the California Highway Patrol (CHP) on state routes (e.g., State Route 92). The proposed project would extend the life of the quarry and coincidentally, extend the duration that the quarry would continue to need fire and police protection services. Extending the quarry into more remote and undeveloped areas within the project site and further from SR 92 could also potentially increase the risk of wildfires if proper vegetation management practices and adequate emergency access to these areas were not provided.

The quarry currently uses no public water or sewer system; water for quarry operations, emergency fire suppression, irrigation and drinking purposes is provided by on-site wells and/or water storage system. Additional water for aggregate washing is provided by the quarry's sediment pond system. The quarry uses a septic system for its on-site toilets. On-site quarry processing equipment (e.g., crushers, screens, conveyers, aggregate washing facilities) uses electricity provided by Pacific Gas and Electric Company (PG&E); communications are provided by the local phone service provider. Although not specified in the Draft Reclamation Plan, it is assumed the quarry generates minor amounts of solid waste that is collected by refuse collection service and disposed at an applicable landfill. It is assumed the utility

analysis would focus on potential impacts to electricity (and natural gas, if applicable) services, communications services, and solid waste services.

Tasks

Public Services

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.

In consultation with the local police and fire protection services, evaluate the proposed access for emergency services and identify any changes needed to prevent a significant impact.

Identify approved and/or foreseeable future development in San Mateo County that, in combination with the proposed project, could result in significant cumulative impacts on the provision of fire protection and emergency medical services.

Identify measures to mitigate any identified impacts on the environment generated by a need to expand or improve fire protection and emergency medical services.

Public Utility Services

Identify existing utility service providers utilized by the quarry, including electricity (and natural gas, if applicable), communications and solid waste services.

Contact each applicable utility service to obtain information regarding the provider's ability to serve the project site based on existing infrastructure, as well potential plans for improvements to their infrastructure.

Discuss the quarry's current use of well/tank storage/sediment pond water for either processing, irrigation and/or domestic use, and whether the proposed project would increase demand of on-site water sources for these uses.

Identify approved and/or foreseeable future development in San Mateo County that in combination with the proposed project could result in impacts to electricity, communications and solid waste service.

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.

K. Aesthetics/Visual Resources

Issues

The project site is located in an elongated north-south canyon (Nuff Creek Canyon) within the coastal mountains east of the City of Half Moon Bay. Undeveloped portions of the project site within the canyon are characterized by a number of ridges with generally steep and vegetated slopes; Nuff Creek and its associated tributaries, and thick riparian vegetation follow along the lowest elevations of the canyon. Nuff Creek is currently and temporarily culverted in the vicinity of quarry operations. In the project vicinity, State Route 92 is a state-designated scenic route, as well as designated as a scenic road in the Visual Resources section of the Local Coastal Plan.

The extension of quarrying activities into currently undeveloped areas would transform the appearance of much of the site from a natural setting to an industrial-appearing land use. The Draft Reclamation Plan indicates that no quarrying would occur within the designated Highway 92 scenic corridor which extends through the site. Following quarrying operations, reclamation activities would revegetate and recontouring the site per County SMARA standards. Nevertheless, the proposed project would result in a permanent alteration of the topography and landscaping of the site. The extent of alteration and potential effect on views from surrounding public vantage points would need to be addressed in the EIR. Using the criteria identified in Appendix G of the CEQA *Guidelines*, this EIR section will evaluate the effects of the proposed project on scenic vistas or views, and on the existing visual character in the project vicinity, and potential new sources of light and glare..

While photovisual simulations are not proposed as part of the work effort, should the County deem that visual simulations would be appropriate, ESA would be happy to amend its work effort to accommodate such task.

Tasks

Review and briefly summarize available pertinent reports and plans, as they relate to the visual aspects of the project, including proposed project plan, the proposed landscaping plan, and applicable policy documents (County's General Plan, Coastal Plan, etc.).

Conduct initial site reconnaissance to document existing visual/aesthetic conditions at the site and in the vicinity. Conduct photo-documentation of representative views of the project site.

Discuss the consistency of the project with the applicable design guidelines for San Mateo County, including the General Plan and other relevant plans and policies.

Using information on the proposed project provided by the applicant (e.g. grading and reclamation plans, etc.), analyze and describe changes in the visual environment that would result from project implementation in terms of objective descriptive categories used to characterize the setting. Assess potential changes in views within sensitive visual corridors. In the impacts assessment, apply and explain significance criteria derived from the CEQA Guidelines, including view obstruction and degradation, creation of a demonstrably negative aesthetic object, impairment of an object of aesthetic significance, conflict with adopted environmental plans and goals, or production of substantial new light or glare.

As appropriate, identify measures to mitigate any significant visual impacts of the project. Mitigation would likely be of a general nature and could include measures to establish and/or preserve view corridors across the project site and promote conformity with relevant visual quality policies for San Mateo County.

L. Cultural Resources

Issues

The Cultural Resources section of the EIR will be based partially on the Cultural Resources Assessment of the entire mining property prepared by the applicant. Our initial review of the assessment reveals that this assessment was competently and professionally prepared but that it is only partially complete for the purposes of the EIR. The assessment focuses more on archeological resources than architectural resources. Although it does identify and record some older buildings, and calls them 'cultural resources,' no actual evaluation was completed to determine whether or not they are 'historic-architectural resources' for CEQA purposes. ESA architectural historian/preservation planner Brad Brewster will therefore conduct additional analysis to determine the historical significance of buildings and other historical artifacts on the property. Based on his findings and the

information contained in the applicant's report, ESA will prepare the Cultural Resources section of the EIR.

Tasks

Site Visit. ESA cultural resources staff will complete a field reconnaissance of the site to observe sites identified in cultural resources survey, and their proximity to proposed quarry areas.

Historical Resources Assessment. Based on the limited information provided by the applicant and our own field surveys, ESA will prepare a full assessment of potential historical resources on the property.

Prepare Cultural Resources Section. ESA will summarize the findings and recommendations of the applicant's Cultural Resources Assessment and our own historical resources survey for the Cultural Resources section of the Draft EIR. The EIR section will identify potential impacts to identified cultural resources, the potential for discovery of additional cultural resources during quarrying operations, and mitigation measures to reduce the potential impacts to cultural resources.

M. Cumulative Impacts

We will conduct a CEQA investigation of the potential for cumulative impacts, both with regard to future quarry operations within Nuff Creek Canyon, and also with regard to other projects. In conducting the analysis, we will use a combination of anticipated conditions as stated in the San Mateo County General Plan, as well as a list of past and current projects provided by the County and the City of Half Moon Bay. We will consider the potential for cumulative impacts within each topic area of the EIR. Where a significant cumulative impact is identified, we will craft mitigation measures and determine their effectiveness in reducing the project's cumulative contribution to a less-than-significant level.

N. Other CEQA Sections

Based on our preliminary analysis of the project, we do not see the potential for impacts to population and housing, recreation, or energy. If substantive issues regarding these topics emerge during the scoping process, we will prepare a memorandum to the County with requesting an amendment to the scope of work and budget to cover preparation of these sections. Otherwise, we will "focus out" these sections in the Initial Study.

Table 1: Pilarcitos Quarry EIR: Estimated Costs

Revised January 23, 2006	LABOR EFFORT																				Direct Costs						TOTAL COSTS			
	Environmental Science Associates																													
TASK	Marty Abell, AICP	Dan Sicular, Ph.D. Project Manager	Paul Mitchell Deputy Project Manager	Peter Hudson, R.G., C.E.G. Geology; Hydrology; Hazardous Materials	Eric Schnewind, Senior Associate II Geology; Hydrology; Hazardous Materials	Jack Hutchison, P.E. Transportation and Circulation	Lesley Lowe, Senior Transportation Planner Transportation and Circulation	Tom Roberts, C.W.B. Biological Resources	Mark Fogiel, Senior Associate Biological Resources	Yolanda Molette, Botanist Biological Resources	Christine Gaber-O'Rourke, Associate III Biological Resources	Paul Miller Air Quality; Noise; Hazardous Materials	Matt Morales Air Quality; Noise; Hazardous Materials	Chris Mueller Land Use & Planning; Public Services and Utilities; Visual Quality	Barry Scott, RPA Cultural Resources	Kelly Runyon GIS Specialist	Word Processing	Graphics	Production/Clerical	Administrative	TOTAL HOURS	TOTAL LABOR COST	Paul Seidelman, P.E., R.G., C.E.G., G.E. Seidelman Associates (Geophysical Factors)	Balance Hydrologics (Hydrology, Water Quality and Drainage)	Gordon Revey Revey Associates, Inc. (Blasting/Vibration)	Printing	Other Direct Costs	Burden on Direct Costs (15%)		
EFFORT IN HOURS	\$/hr Rate	\$175	\$150	\$150	\$150	\$120	\$150	\$110	\$165	\$110	\$120	\$95	\$150	\$85	\$135	\$135	\$135	\$90	\$90	\$90	\$90									
1. Meetings	8	35	24																		67	\$10,250	\$1,000	\$3,500			\$600	\$765	\$16,115	
2. Project Management and Coordination	10	80	60																		150	\$22,750							\$0	\$22,750
3. Prepare Project Descriptions	2	40	32																		76	\$11,330							\$0	\$11,330
4. Prepare Initial Study		8	12	2		2		2				2									42	\$5,760							\$0	\$5,760
5. Prepare Administrative Draft Master EIR																					148	\$15,120				\$400	\$1,500	\$285	\$17,305	
Land Use, Planning and Agricultural Resources															40						40	\$5,400							\$0	\$5,400
Geology, Soils and Seismicity				12	34																46	\$5,880	\$10,000				\$250	\$1,538	\$17,668	
Hydrology and Water Quality		4		20	40																64	\$8,400		\$36,745			\$2,250	\$5,849	\$53,244	
Transportation and Circulation		4				45	104														153	\$18,790					\$1,600	\$240	\$20,630	
Air Quality		4										16	40								60	\$6,400							\$0	\$6,400
Noise and Vibration		4										16	50								70	\$7,250			\$9,000		\$500	\$1,425	\$18,175	
Biological Resources		4						16	60	30	40										150	\$17,240					\$500	\$75	\$17,815	
Hazardous Materials		4		8	32							16									60	\$8,040					\$200	\$30	\$8,270	
Public Services and Utilities															34						34	\$4,590							\$0	\$4,590
Visual Resources															50						50	\$6,750					\$200	\$30	\$6,980	
Cultural Resources																44					44	\$5,940					\$400	\$60	\$6,400	
Alternatives		28	30																		58	\$8,700							\$0	\$8,700
Other Required CEQA Sections		16	16																		32	\$4,800							\$0	\$4,800
6. Prepare Draft Master EIR	4	20	16	2		2		2				2		2	2	4	4	4	10	10	84	\$10,930	\$500	\$2,490	\$1,000	\$2,000	\$800	\$1,019	\$18,739	
7. Prepare Administrative Final Master EIR	2	20	20	18	8	14	8	16	8	4	4	12	4	12	4		16	16	4	16	206	\$26,350	\$1,000	\$4,695	\$2,000	\$400	\$800	\$1,334	\$36,579	
8. Prepare Final Master EIR		20	16														8	4	12	2	62	\$7,740				\$2,000	\$500	\$375	\$10,615	
Communications Fee (3% of ESA Labor)																														\$6,552
EFFORT (Hours)	26	291	226	62	114	63	112	36	68	34	44	64	94	140	50	48	52	78	33	61	1,696									
TOTAL	4,550	43,650	33,900	9,300	13,680	9,450	12,320	5,940	7,480	4,080	4,180	9,600	7,990	18,900	6,750	6,480	4,680	7,020	2,970	5,490		\$218,410	\$12,500	\$47,430	\$12,000	\$4,800	\$10,100	\$13,025	\$318,265	

Environmental Science Associates

Schedule for Preparation of the Pilarcitos Quarry Expansion Master EIR

Revised January 23, 2006

Task	Calendar Days to Complete	Start Date	Completion Date
Project Start-up: Authorization to Proceed	0	2/15/2006	2/15/2006
Schedule and hold Kick-off Meeting	3	2/15/2006	2/18/2006
Prepare Draft Project Description	21	2/18/2006	3/11/2006
County Review of Draft Project Description	7	3/11/2006	3/18/2006
Prepare Final Project Description	3	3/18/2006	3/21/2006
Prepare Initial Study	10	3/21/2006	3/31/2006
Schedule and hold Scoping Meeting (during 30-day circulation of the Notice of Preparation)	30	3/31/2006	4/30/2006
Preparation of Administrative Draft Master EIR	60	4/30/2006	6/29/2006
County review of Administrative Draft Master EIR	21	6/29/2006	7/20/2006
Preparation of Screencheck Draft Master EIR	10	7/20/2006	7/30/2006
County review of Screencheck Draft Master EIR	10	7/30/2006	8/9/2006
Prepare and print Draft Master EIR	7	8/9/2006	8/16/2006
45 Day Circulation of Draft Master EIR	45	8/16/2006	9/30/2006
Prepare Admin. Draft Response to Comments and Final Master EIR	45	9/30/2006	11/14/2006
County review of Admin. Draft Response to Comments and Final Master EIR	14	11/14/2006	11/28/2006
Prepare Screencheck Final Master EIR	10	11/28/2006	12/8/2006
County review of Screencheck Final Master EIR	7	12/8/2006	12/15/2006
Prepare and Print Final Master EIR	7	12/15/2006	12/22/2006