



December 6, 2019

File No.: 0916-01  
***SLO Co. File No. DRC2007-00016***

Ms. Cindy Chambers  
Old County Courthouse  
Department of Planning & Building  
976 Osos Street, Room 300  
San Luis Obispo, CA 93908

**Subject:       Review of Preliminary Engineering Geology Investigation**

**Project:       Whale Rock Quarry (State Mine ID# 91-40-0010)**  
1424 Old Creek Road (APN's 046-201-028 & 073-093-008)  
Cayucos Area of San Luis Obispo County, California

- References:**
1. Preliminary Engineering Geology Investigation, Negranti Material Mine, 1424 Old Creek Road, Cayucos Area, San Luis Obispo County, California, Project No. SL06036-1, prepared by Geosolutions, Inc., dated June 27, 2007.
  2. Initial Peer Review Comments, Engineering Geologic Investigation, Negranti Mine Application (SLO File No. 2007-00016), APN 046-201-028 (Old Creek Road), San Luis Obispo County, California, Project No. 2147C, prepared by Pacific Geotechnical Engineering, dated January 30, 2008.
  3. Response to Comments: Preliminary Engineering Geology Investigation, Negranti Material Mine, 1424 Old Creek Road, Cayucos Area, San Luis Obispo County, California, Project No. SL06036-1, prepared by Geosolutions, Inc., dated March 31, 2008.
  4. Supplemental Peer Review Comments, Engineering Geologic Investigation, Negranti Mine Application (SLO File No. 2007-00016), APN 046-201-028 (Old Creek Road), San Luis Obispo County, California, Project No. 2147C, prepared by Pacific Geotechnical Engineering, dated July 15, 2008.
  5. Reclamation Plan Amendment Review, Whale Rock Quarry, CA, Mine ID #91-40-0010, prepared by the State of California, Natural Resources Agency, Department of Conservation, Division of Mine Reclamation, dated January 19, 2018.
  6. Staff Review of DRC2007-0016, Negranti Whale Rock Mine Reclamation Plan Amendment, prepared by the County of San Luis Obispo, Department of Planning & Building, dated February 2, 2018.
  7. Preliminary Engineering Geology Investigation, Quarry Expansion Area, Negranti Material Mine, 1424 Old Creek Road, Cayucos Area, San Luis Obispo County, California, Project No. SL06036-3, prepared by Geosolutions, Inc., dated June 14, 2018.

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Dear Ms. Chambers:

The purpose of this letter is to summarize our findings and review of the above referenced Preliminary Engineering Geology Investigation (Reference 7) and preceding supporting documents (References 1 through 6) for the proposed expansion of the Whale Rock Quarry (State Mine ID# 91-40-0010) located in the Cayucos area of San Luis Obispo County, California.

The Preliminary Engineering Geology Investigation report (Reference 7) was reviewed for conformance section 23.07.084 of the San Luis Obispo County Coastal Land Use Ordinance (CZLUO) and the San Luis Obispo County Guidelines for Engineering Geology Reports. It is our opinion that the referenced report presents a comprehensive outline, modeling the site engineering geology and geologic constraints.

It is our opinion that the site geologic conditions are accurately modeled as represented. Our findings are congruent with the conclusions and recommendations of the Preliminary Engineering Geology Investigation prepared by Geosolutions, Inc., dated June 14, 2018.

It is our opinion that the project engineering geologic constraints have been adequately characterized and appropriate mitigative measures have been included for CEQA, CZLUO and State regulatory compliance. The itemized recommendations summarized on pp. 4 & 5, Section 3.0, Nos. 1 through 10 (Reference 7) should be included as conditions of approval prior to the issuance of permits.

Please contact me at (831) 443-6970 or bpapurello@landseteng.com if you have questions regarding this matter.

Respectfully,  
LandSet Engineers, Inc.

  
Brian Papurello, CEG 2226

Doc. No. 1912-109.REV



Copies: Ms. Cindy Chambers, San Luis Obispo Co., Dept. of Planning & Building (1)  
SLO County Geology files

**SAN LUIS OBISPO COUNTY ENGINEERING GEOLOGY REPORT REVIEW FORM**

The San Luis Obispo County Planning and Building Department uses the following checklist as part of reviewing engineering geology reports. Explanatory notes are appended and keyed to each numbered item.

Checklist item within consulting report	Adequately described: satisfactory	Additional data needed: unsatisfactory
1. Project Description	X	
2. SLO County Geological Study Area Map	X	
3. Site Location	X	
4. Regional Geologic Map	X	
5. Original engineering geologic map of site	X	
6. Aerial photograph interpretation	X	
7. Subsurface site geology	X	
8. Geologic cross sections	X	
9. Active faulting and coseismic deformation across the site	X	
10. Landslides	X	
11. Flooding, severe erosion, deposition	N/A	
12. On-site septic systems	N/A	
13. Hydrocollapse of alluvial fan soils	N/A	
14. Evaluation of historical seismicity and regional faults	X	
15. Characterize and classify geologic site class	N/A	
16. Probabilistic evaluation of earthquake ground motion	N/A	
17. Peak ground acceleration for MCE levels of ground motion	N/A	
18. Site coefficients $F_a$ & $F_v$ and spectral accelerations $S_s$ , $S_1$ , $S_{MS}$ , $S_{M1}$ , $S_{DS}$ & $S_{D1}$	N/A	
19. Geologic setting for liquefaction analysis	X	
20. Liquefaction methodology	N/A	
21. Bluff erosion	N/A	
22. Tsunami or seiche potential	N/A	
23. Expansive soil	N/A	
24. Naturally occurring asbestos	X	
25. Radon and other hazardous gasses	X	
26. Geologic constraints anticipated during grading operations	X	
27. Areas of cut and fill, preparation of the ground, and depth of removals	N/A	
28. Subdrainage plans for groundwater	N/A	
29. Final grading report and as-built map	N/A	
30. Summary sheet	X	
31. Age of report	X	
32. Engineering geology report signed by CEG	X	



Date: July 25, 2018  
To: Cindy Chambers, Project Planner  
From: Glenn Marshall, Development Services  
Subject: **Public Works Project Referral for DRC2007-00016, Whale Rock Quarry CUP, Old Creek Road, Cayucos, APN 046-201-028**

Thank you for the opportunity to provide information on the proposed subject project. Public Works has reviewed Attachment C of the *Reclamation Plan Amendment for the Whale Rock Quarry, State Mine ID#91-40-0010*, prepared by *EnviroMINE Inc.*, dated July 12, 2018. The following summarizes our comments and recommended conditions of approval

**Public Works Comments:**

- A. Attachment C is adequate as a preliminary report and plan, but as County and State Ordinances for drainage, flood hazard and stormwater change over the coming years a new report and plan must be prepared by a registered civil engineer and submitted for County review at the time of reclamation plan implementation.
- B. Under current Ordinances the proposed reclamation project appears to not meet the applicability criteria for Stormwater Management because it is currently located outside a Stormwater Management Area. Under future conditions, or if site disturbance is 1.0 acre or more, the applicant it may be required to enroll for coverage under California's Construction General Permit, which may require preparation of a project Stormwater Control Plan even though its located outside a Stormwater Management Area.

**Recommended Project Conditions of Approval:**

**Drainage**

1. **At the time of application for reclamation plan construction permits**, the applicant shall submit complete drainage plans prepared by a licensed civil engineer for review and approval in accordance with Section 22.52.110 (Drainage) or 23.05.040 (Drainage) of the Land Use Ordinance.
2. **At the time of application for reclamation plan construction permits**, the applicant shall submit complete erosion and sedimentation control plan for review and approval in accordance with 22.52.120.
3. **Prior to issuance of reclamation plan construction permits**, the applicant shall provide evidence satisfactory to the Department of Planning and Building that the Army Corps of Engineers and the California Department of Fish and Game environmental permits have either been secured or that the regulatory agency has determined that their permit is not required.

**Stormwater Pollution Prevention Plan (SWPPP)**

4. **At the time of application for reclamation plan construction permits**, if the project disturbs more than 1.0 acre or is part of a common plan of development, the applicant may be required to enroll for coverage under California's Construction General Permit. Sites that disturb less than 1.0 acre must implement all required elements within the site's erosion and sediment control plan as required by San Luis Obispo County Codes.

G:\Development\DEV\SERV Referrals\Land Use Permits\CUP\DRC2007\DRC2007-00016 Negranti CIP Cayucos\DRC2007-00016 Negranti CUP Cayucos.docx

# SAN LUIS OBISPO AGRICULTURAL PRESERVE REVIEW COMMITTEE

## MINUTES OF THE MEETING OF

Monday, February 26, 2018

Minutes of the Regular Meeting of the Agricultural Preserve Review Committee held at the SLO County Board of Supervisors Chambers, County Government Center, 1055 Monterey Street, Room D170, in San Luis Obispo, California, at 1:30 p.m.

The meeting is called to order at 01:30 P.M.

The following action minutes are listed as they were acted upon by the Chairperson of the Agricultural Preserve Review Committee and as listed on the agenda.

### ROLL CALL

**PRESENT:** Don Warden, Agricultural Liaison Committee, Environmental Organization Member, Irv McMillan, Land Conservancy, Kaila Dettman, Wine Industry, Paul Hoover, County Ag. Commissioner, Lynda Auchinachie, and County Assessor, Ross Felthousen

**ABSENT:** Farm Service Agency, Public-at-Large, TBD, Soil Science Member, TBD, Cattlemen's Association, Farm Advisor, Farm Bureau, and County Planning and Building

### PUBLIC COMMENT PERIOD

**Presentations are limited to three minutes per individual.**

Lynda Auchinachie: opens Public Comment with no one coming forward.

### **STAFF UPDATES - AGRICULTURAL PRESERVE REVIEW COMMITTEE (APRC) BUSINESS:**

Terry Wahler, staff: reports on a question of whether this meeting has a quorum.

Lynda Auchinachie: states since there are two vacancies on the APRC, the quorum is based on filled membership.

### **CONSENT AGENDA:**

### **ACTION ITEMS: (Posted for 1:30 p.m.)**

- ~~1. **AGP2017-00003** – Erik Ustin - Partial Notice of Nonrenewal of Land Conservation Contract. The Rules of Procedure requires that Partial Notices of Nonrenewal be reviewed by the Agricultural Preserve Review Committee to determine if the remaining property under Land Conservation Contract is eligible to remain in the program prior to proceeding to the Board of Supervisors for approval, and prior to serving the County and filing the notice. The subject property is an 18-acre parcel (Assessor Parcel Number 070-221-064), a portion of the 378 acre ranch. The parcel is located at 4044 Las Pilitas Road in the Las Pilitas sub-area of the North County Planning Area, approximately 7 miles east of the community of Santa Margarita.~~

**Conservancy, Kaila Dettman and on the following roll call vote:**

**AYES:** Wine Industry, Paul Hoover, Land Conservancy, Kaila Dettman, Don Warden, Agricultural Liaison Committee, Environmental Organization Member, Irv McMillan, County Ag. Commissioner, Lynda Auchinachie, County Assessor, Ross Felthousen

**NOES:** None

**ABSENT:** Farm Service Agency, Cattlemen's Association, Farm Advisor, Farm Bureau, County Planning and Building, Public at Large, Soil Science Member

Following the discussion the APRC recommends the Board of Supervisors approve this request to alter the boundaries of an agricultural preserve to reflect a lot line adjustment, rescind an existing contract, and simultaneously enter into a new contract. Preserve Designation: El Pomar Agricultural Preserve No. 82, Amendment No. 1. Minimum Parcel Size: 80 acres. Minimum Term of Contract: 10 years.

5. **AGP2017-00007 - Proposal by Trilogy Farms & Vineyard LLC to establish an agricultural preserve to enable the applicant to enter into a land conservation contract. The 91.38 acre parcel is located within the Agriculture land use category, at 5650 Calle Las Colinas, approximately 0.5 mile west of the community of Creston. The site is in the El Pomar-Estrella sub-area of the North County planning area. Assessor Parcel Nos: 043-051-043; Supervisor District 5.**

Staff report

Stephanie Fuhs, Project Manager: presents staff report via a Power Point presentation.

Lynda Auchinachie: opens Public Comment.

Bill Hoffman, Owner: is available for questions.

**Thereafter, on motion of Land Conservancy, Kaila Dettman, seconded by Don Warden, Agricultural Liaison Committee and on the following roll call vote:**

**AYES:** Land Conservancy, Kaila Dettman, Don Warden, Agricultural Liaison Committee, Environmental Organization Member, Irv McMillan, Wine Industry, Paul Hoover, County Ag. Commissioner, Lynda Auchinachie, County Assessor, Ross Felthousen

**NOES:** None

**ABSENT:** Farm Service Agency, Cattlemen's Association, Farm Advisor, Farm Bureau, County Planning and Building, Public at Large, Soil Science Member

Following the discussion the APRC recommends the Board of Supervisors approve this request to amend an agricultural preserve. Preserve Designation: El Pomar Agricultural Preserve No. 82, Amendment No. 1. Minimum Parcel Size: 80 acres. Minimum Term of Contract: 20 years.

Staff report

6. **DRC2007-00016 - Amended Reclamation Plan, Whale Rock Quarry. Proposal by Jon Negranti for a Minor Use Permit to approve a Reclamation Plan Amendment for the Whale Rock Quarry (Mine ID#91-40-0010) to include additional mining activity within an area of vested mining rights. The current area of mining operations (site disturbance) is 19 acres; the proposed mining operation includes 63 additional acres for a total area of 82 acres. The 233-acre project site is within the Agriculture land**

**use category, located at 1424 Old Creek Road, approximately 1.3 miles northeast of the community of Cayucos. The site is in the Adelaida sub area of the North County planning area. Assessor Parcel Nos: 046-201-028 and 046-093-008; Supervisor District 2. Action Item – Review and Recommendation**

Cindy Chambers, Project Manager: presents staff report via a Power Point presentation.

Lynda Auchinachie: opens public comment.

John Negranti, quarry operator: explains proposal from 10 years ago.

Irv McMillian: asks why the APRC is reviewing this application

Terry Wahler: explains compatibility review is to how to go about reclamation and to maintain a 100 acre minimum grazing.

Lynda Auchinachie: asks Mr. Negranti if she were to suggest a condition of approval that maintains a 100 acre minimum grazing would Mr. Negranti be amenable, with Mr. Negranti stating he cannot make that decision as he is not the owner, however a 100 acre minimum will be maintained for grazing.

Don Warden: asks who monitors Williamson Act compliance since this is a phased project.

Cindy Chambers, Project Manager: explains staff will be monitoring through our mitigation monitoring program.

Lynda Auchinachie: recommends a condition be added to include a 100 acre minimum for grazing.

Terry Wahler, staff: explains this item will be coming back with the environmental document at which time this will be considered in that document.

There being no further business to discuss regarding this item the APRC received and files the item with the notation to consider a condition be added to include a 100 acre minimum for grazing.

**7. Amendment to the Rules of Procedure to add "Cannabis Activities" as an allowed use under Table 2 – Compatible Uses; (Countywide) - Action Item – Review and Recommendation DISCUSSION ITEMS None**

**Staff report**

Brandi Cummings, Project Manager: presents staff report.

Lynda Auchinachie: opens Public Comment with no one coming forward.

Paul Hoover: asks if there are any tax advantages to growing cannabis in greenhouses or processing facilities.

Ross Felthausen: states greenhouses will not be valued as an ag operation. The Assessor is requesting the property owner provide lease information in order to determine an accurate assessment.

Lynda Auchinachie: asks if HEMP is a qualifying use since this is considered crop production.





January 19, 2018

**VIA EMAIL:**

**ORIGINAL SENT BY MAIL**

Ms. Cindy Chambers

San Luis Obispo County Department of Planning and Building

970 Osos Street, Room 300

San Luis Obispo, CA 93408

**RECLAMATION PLAN AMENDMENT**

**WHALE ROCK QUARRY, CA MINE ID #91-40-0010**

Dear Ms. Chambers:

The Division of Mine Reclamation (DMR) reviewed the amended reclamation plan (ARP) for the Whale Rock Quarry. The County of San Luis Obispo (County) is the Surface Mining and Reclamation Act of 1975 (SMARA) Lead Agency. The surface mining operation is located approximately two miles northeast of Cayucos. The primary commodity mined from the operation is construction aggregate. The applicant, Negranti Construction, proposes to expanded surface mining operations from 19 acres to 82 acres on a 230-acre site during the next 200 years. The mined lands will be reclaimed to grazing and open space.

On February 10, 2015, the San Luis Obispo County Board of Supervisors, through resolution number 2015-40, determined the scope and nature of established vested rights for the Whale Rock Quarry. A copy of the resolution was included in the Amended Reclamation Plan as Attachment F. Although the County determined that the scope and nature of the existing surface mining operation conducted at the site is not subject to a surface mining permit, the surface mining operation and mined lands are subject to a Reclamation Plan that must meet the minimum requirements of SMARA outlined in Public Resources Code (PRC) Section 2772.1(a)(3).

SMARA (Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.) and associated regulations (California Code of Regulations (CCR) Title 14, Division 2, Chapter 8, Subchapter 1, Articles 1 and 9) require that specific items be addressed or included in reclamation plans. DMR staff conducted a site visit with County staff on December 19, 2017 to observe site conditions. Pursuant to PRC Section 2772.1(b)(2), the following comments, prepared by a restoration ecologist and a geologist, are offered to assist in your review of this project.

#### **General Considerations**

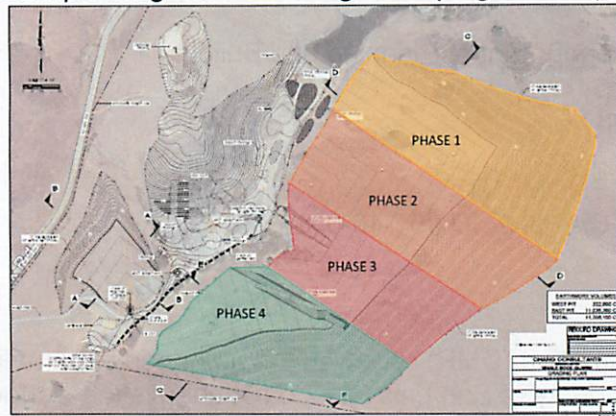
(Refer to PRC Sections 2770, 2772, 2773 and 2776 and CCR Sections 3502, 3709, and 3713)

Comment 1- SMARA Section 2772(c)(6) requires that the reclamation plan include a time schedule that provides for initiation of reclamation at the earliest possible time on each portion of the mined land that will not be subject to further disturbance. The operator proposes to mine the site in two phases over a 200-year period from the "bottom-up," which essentially delays reclamation of mined land until the resource has been exhausted or when the operator decides to cease mining activities. DMR recommends that the Lead Agency and operator consider revising the reclamation plan to consider additional mining phases with shorter durations, so that



concurrent reclamation can be initiated at the earliest possible time on mined lands. One example would be to employ a "sweeping" technique of mining and concurrent reclamation where excavation would begin along the "short" side of the mine and continue along the length of the mine in four to six phases. This phased mining technique may allow for reduced financial assurances, as mined lands can be concurrently reclaimed while active extraction of minerals can occur in other phases of the mine. Figure 1 depicts an example of a sweeping phasing technique.

Figure 1. Example diagram illustrating 'sweeping' technique of mining.



Comment 2- SMARA Section 2772(c)(5)(a) requires that the ownership of the parcels affected by the mining operation be identified. Page 4 of the plan identifies a different owner than page 19 for parcel APN: 046-201-028 and should be corrected.

### **Geology and Geotechnical Considerations**

(Refer to PRC Sections 2772 and 2773 and CCR Sections 3502 and 3704)

Comment 3- CCR Section 3502(b)(3) requires an engineering analysis for slope stability where the final slopes approach the critical gradient. The "Preliminary Engineering Geology Investigation" prepared by GeoSolutions, Inc. (dated June 27, 2007) should be updated to incorporate the reclamation maps prepared by Chang Consultants for the proposed expansion. The geologic report included with this submittal was originally prepared for a 2007 expansion and does not include geologic or engineering analysis of the baseline conditions for the expanded area proposed in this amended reclamation plan. The reclamation plan should be revised to include an updated geologic analysis that includes the entire proposed expansion area. The updated technical documents should also address the issues identified in the "Initial Peer Review Comments (IPR)", prepared by Pacific Geotechnical Engineering (dated January 30, 2008) as well as the "Response to comments: Preliminary Geology Investigation," prepared by GeoSolutions, Inc., dated March 31, 2008.

- Please include the locations of the slope stability cross sections.
- Please include features such as the current processing facility
- The recommendations resulting from the geotechnical investigations should be added to the notes on the grading plan prepared by Chang Consultants.

Once updated and prior to approval, the geologic and geotechnical reports should be reviewed by the designated person in responsible charge of civil engineering for the County to ensure compliance with county development ordinances and state Business and Professions Code. These technical documents are relied upon to design the final configuration of the reclaimed mined lands as shown on the final topographic map required by SMARA Section 2772(c)(5)(C).

Comment 4- The reclamation plan maps submitted to satisfy SMARA Section 2772(c)(5) should be reviewed prior to approval by the designated person in responsible charge of civil engineering and land surveying for the County to ensure compliance with county development ordinances and state Business and Professions Code.

**Hydrology and Water Quality Considerations**

(Refer to PRC Sections 2770, 2772 and 2773 and CCR Sections 3502, 3503, 3706, 3710, and 3712)

Comment 5- The "Drainage Report for the Whale Rock Quarry" prepared by Chang Consultants (dated January 7, 2016) should be signed by the engineer of record upon finalization. The drainage report should be reviewed prior to approval by the designated person in responsible charge of civil engineering for the County to ensure compliance with county development ordinances and state Business and Professions Code.

Comment 6- On page 14, the plan states "A large impoundment has been constructed on Willow Creek upstream of the processing area to manage runoff from the northeastern portion of the parcel." DMR staff observed the impoundment during the site visit. Fish and Game Code section 1602 requires that any person notify the California Department of Fish and Wildlife (DFW) before beginning any activity that will substantially modify a river, stream, or lake. CCR Section 3706(f)(1) requires that any stream diversions shall be constructed in accordance with the Lake and Streambed Alteration Agreement (LSAA) between the operator and the DFW. Prior to approval, the County should ensure that the operator has consulted with DFW regarding the impoundment and any other potential impacts to the stream(s) affected by the ongoing surface mining operations.

**Sensitive Species and Habitat Considerations**

(Refer to CCR Sections 3502, 3503, 3703, 3704, and 3710)

Comment 7- CCR Section 3703(a) requires that all sensitive species be conserved or mitigated as prescribed by the Federal and California Endangered Species Acts. The California Natural Diversity Database (CNDDDB) lists 59 sensitive species for the map quadrangle in which the mine is located. A Botanical Report is included in the APR submittal dated October 2008 and revised in September 2009 for a 37.2-acre expansion area that was proposed at that time. The current proposed expansion area was not included in this survey. Biological surveys that cover the entire proposed SMO should be conducted.

Comment 8 - One rare plant species, San Luis Obispo morning glory (*Calystegia subacualis* ssp. *episcopalis*) was found growing extensively in a 2.5-acre area during the 2007-08 botanical surveys within the 32.7-acre expansion footprint. Recommendations for mitigation are included in the report, which included transplanting plants into 2 proposed mitigation areas. Those areas now lie within the new proposed mine footprint. In order to comply with the Endangered Species Act, updated mitigation measures will need to be developed for the morning glory in consultation with the DFW. Prior to approval, the lead agency should ensure that DFW has been notified of the project.

CCR Section 3705(a) requires that the density, cover, and species richness of naturally occurring habitats shall be documented in baseline studies carried out prior to the initiation of mining activities in order to establish a self-sustaining vegetative cover similar to the surrounding habitat. Once

baseline studies are performed, the revegetation performance standards (discussed below) should be revised accordingly.

### **Revegetation Considerations**

(Refer to PRC Section 2773 and CCR Sections 3503 and 3705)

Comment 9 - CCR Section 3705(b) requires test plots to be conducted simultaneously with mining to determine the most appropriate planting procedures. Test plots are discussed on page 38 - 40. DMR has the following recommendations:

- The plan proposes to install the test plots at a time that will provide only 1-2 years of monitoring before quarry revegetation. This will not allow adequate time to get meaningful results that can inform site-wide reclamation. DMR recommends that the plan be revised to allow for earlier implementation of at least one of the test plot locations so that a minimum of 5 years of monitoring will be performed prior to quarry revegetation.
- The plan proposes to test four treatment alternatives. DMR recommends that this section be revised to allow for more treatment options on smaller plots. Only one plot should be a no-treatment control. Different mixes of topsoil and overburden can be tested and each of the different seed and plant mixes for the different habitat types to be established (coastal scrub, grassland, oak woodland, and riparian woodland) should be applied in separate plots. However, the riparian woodland test plots should be developed in a separate area suitable for this habitat type.

Comment 10 - The revegetation plan includes three seed mixes for coastal scrub, grassland, and riparian woodland as well as planting riparian trees as cuttings and oak trees as acorns. There are brief descriptions of where each seed mix/tree planting will be applied, such as "areas steeper than 2:1 and on quarry benches". DMR recommends that the ARP include a final revegetation map to show the locations and extent of each vegetation type to be established. This will also enable the calculation of total acreages for each seed mix and planting requirements for the Financial Assurance Cost Estimate (FACE) and the development of a sampling plan for monitoring the success of revegetation for each vegetation type.

Comment 11 – Based on species observed during the site visit, DMR recommends the following changes to the seed mixes and planting palette:

- On page 42 in Table 4, for proposed seed mix for coastal scrub, coast buckwheat (*Eriogonum parvifolium*) should be deleted from the shrubs as it only occurs immediately adjacent to the coast. DMR recommends adding yarrow (*Achillea millefolium*) to the forbs and California brome (*Bromus carinatus*) to the grasses.
- On page 43, Table 6 lists the riparian woodland seed mix. DMR recommends adding elderberry (*Sambucus nigra* ssp. *caerulea*) and mugwort (*Artemisia douglasiana*) to the mix.
- On page 44, Table 7 lists the riparian tree species that will be installed as cuttings planted directly into the soil. Sycamores are listed as being among the species planted as cuttings. DMR recommends this species be planted using container stock as it does not readily establish from cuttings planted in this manner.

Comment 12 - CCR Section 3705(m) requires that the reclamation plan include success criteria that can be quantified by cover, density, and species-richness. Success criteria are listed in Table 9 on page 49. DMR recommends the following revisions as explained below and as summarized in the table. Additional revision may be necessary once baseline data is collected. Native perennials are emphasized in specifying success criteria, since annual species can vary significantly in cover



and density depending on annual rainfall; also most annual species in the habitats present are non-natives.

- Under the species composition/species richness column, the criteria are worded as "4 (or 5) or more of the most prevalent species shall be from the "community type" seed mix." DMR recommends that these be revised to read "4 (or 5) native perennials per plot".
- Under the Percent Cover column, the criteria for grassland and riparian woodland are worded as "60% cover (native species)." DMR recommends that these be revised to read "60% cover of native perennials."
- Under the Density column, the density for the chaparral seed mix is 200 woody plants per acre. DMR recommends increasing this density in order to achieve the desired cover criterion of 40%. Since the chaparral seed mix is being applied to the benches, long narrow plots (transects) are the most logical choice for a sample plot.
- The column titled "Test Plot Size" should be revised to read "Sample Plot Size". See suggested revisions to the sampling plot sizes in the table below.
- Density criteria are needed for chaparral and riparian woodland, such as the recommendations provided below
- Under the species richness column for riparian woodland, the species number is 5. However, only 4 species are proposed to be planted. A success criterion of 3 species would be more realistic.

**Table 9. Suggested Success Criteria**

<b>Vegetation Type</b>	<b>Species richness</b>	<b>Percent cover</b>	<b>Density</b>	<b>Sample plot size</b>
Chaparral	4 species of native perennials	40% native perennial cover	8 native woody plants	25-m x 1-m belt transects
Grassland	5 species of native perennials per 1m <sup>2</sup> quadrat	60% cover of native perennials per 1m <sup>2</sup> quadrat	N/A	1m <sup>2</sup> quadrats
Riparian woodland	3 species of native perennials per 25-m x 1-m belt transect	50% cover of native perennials	10 native perennials per 25-m x 1-m belt transect	25-m x 1-m belt transects
Oak clusters	1 species of oak per tree island	N/A	3 trees per planting location	Each tree island planting location

Comment 13 - CCR Section 3705(k) requires that noxious weeds be managed when they threaten the success of the proposed revegetation; spread to nearby areas; or produce a fire hazard. Weed management is discussed on page 47. However, inspections for the presence of weeds is only to occur in conjunction with revegetation monitoring, which will not occur for approximately 30 years or more. In order to be effective, weed control should be implemented throughout mine operations as well as during reclamation. The sentence should be revised to provide for annual inspections and management activities throughout the life of the mine.

The only weed species in the text is yellow star-thistle (*Centaurea solstitialis*). During the site visit, we also observed tree tobacco (*Nicotiana glauca*), fennel (*Foeniculum vulgare*), purple star-thistle (*Centaurea calcitrapa*), and castor bean (*Ricinus communis*). These species should be added to the ARP weed management plan section.

**Agricultural Considerations**  
(Refer to CCR Sections 3707 and 3708)

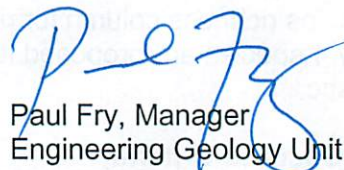
Comment 14 - On page 12, the plan states: "The USDA classifies the farmland within the RPA Area as Grazing, Other Land, and Prime Farmland. ...The RPA Area is located on lands currently under a Williamson Act contract." DMR recommends the County consult with the Division of Land Resource Protection within the Department of Conservation to ensure compliance with the Williamson Act.

If you have any questions on these comments or require any assistance with other mine reclamation issues, please contact either of us at (916) 323-9198.

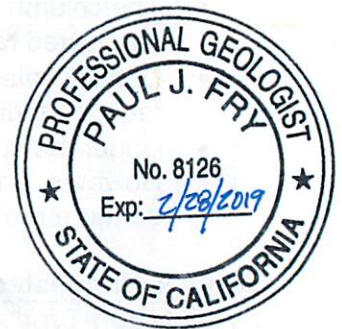
Sincerely,



Beth Hendrickson, Manager  
Environmental Services Unit



Paul Fry, Manager  
Engineering Geology Unit



cc: Mr. Glen Marshall, PE  
San Louis Obispo County Public Works  
Division Manager – Development Services  
[gdmmarshall@co.slo.ca.us](mailto:gdmmarshall@co.slo.ca.us)

Ms. Linda Connolly  
[Linda.Connolly@wildlife.ca.gov](mailto:Linda.Connolly@wildlife.ca.gov)  
Department of Fish & Wildlife, Region 4