



# LAND USE SERVICES DEPARTMENT PLANNING COMMISSION STAFF REPORT

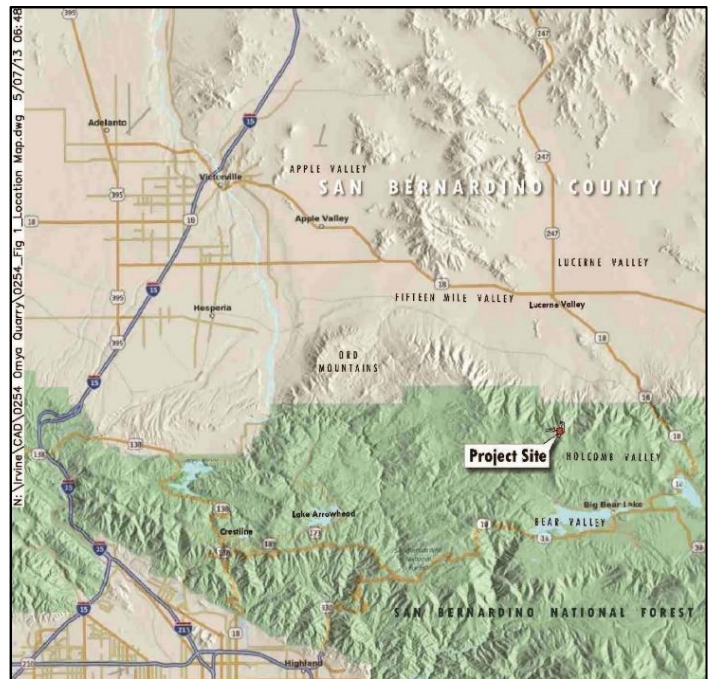
**HEARING DATE: December 19, 2019**

**AGENDA ITEM #3**

Project Description

Vicinity Map

APN:	0446-121-04, -06, -17
APPLICANT:	Omya, Inc.
COMMUNITY:	Lucerne Valley
LOCATION:	Approximately 7.5 miles south of Lucerne Valley and 5 miles north of Big Bear Lake within the San Bernardino National Forest
PROJECT NO:	AP20120022 CA MINE ID# 91-36-0052 RECLAMATION PLAN 94M-02
CO STAFF:	Reuben J. Arceo
APP REP(S):	Craig Maetzold, Omya Inc.
PROPOSAL:	A) An addition and revision to an existing Mining and Land Reclamation Plan Conditional Use Permit to expand the Butterfield and Sentinel Limestone Quarries on 94.9 acres of SBNF land.  B) Incorporate an amended Plan of Operations and Reclamation Plan.  The Butterfield and Sentinel Quarries would be mined for an additional 40 and 20 years, respectively. Up to 1,487,500 tons of material (limestone and waste rock) would be excavated resulting in 680,000 of quality limestone being produced annually.



210 Hearing Notices Sent On: December 5, 2019

Report Prepared By: Reuben J. Arceo

**SITE INFORMATION**

Project Size: 94.9 Acres  
 Terrain: Montane  
 Vegetation: Jeffrey Forest/Pinyon-Juniper Woodlands

**SURROUNDING LAND DESCRIPTION:**

AREA	EXISTING LAND USE	LAND USE ZONING DISTRICT
Site	Butterfield and Sentinel Quarries	Resource Conservation
North	Undeveloped land/forest/woodlands	Resource Conservation
South	Undeveloped land/forest/woodlands	Resource Conservation
East	Undeveloped land/forest/woodlands	Resource Conservation
West	Undeveloped land/forest/woodlands	Resource Conservation

AGENCY

COMMENT

City Sphere of Influence	N/A	N/A
Water Service	Onsite Wells	Presently Served
Sewer Service	Portable Toilets	Presently Served

**STAFF RECOMMENDATION:** That the Planning Commission **APPROVE** the Water Supply Assessment, **CERTIFY** the Joint EIR/EIS, **ADOPT** the recommended Findings, **APPROVE** the Mining and Land Reclamation Plan Conditional Use Permit, subject to the Conditions of Approval, and **DIRECT** staff to file the Notice of Determination<sup>1</sup>.

<sup>1</sup> In accordance with Section 86.08.010 of the Development Code, the action taken by the Planning Commission may be appealed to the Board of Supervisors within ten (10) days after the Planning Commission hearing.

**FIGURE 1 – REGIONAL LOCATION MAP**

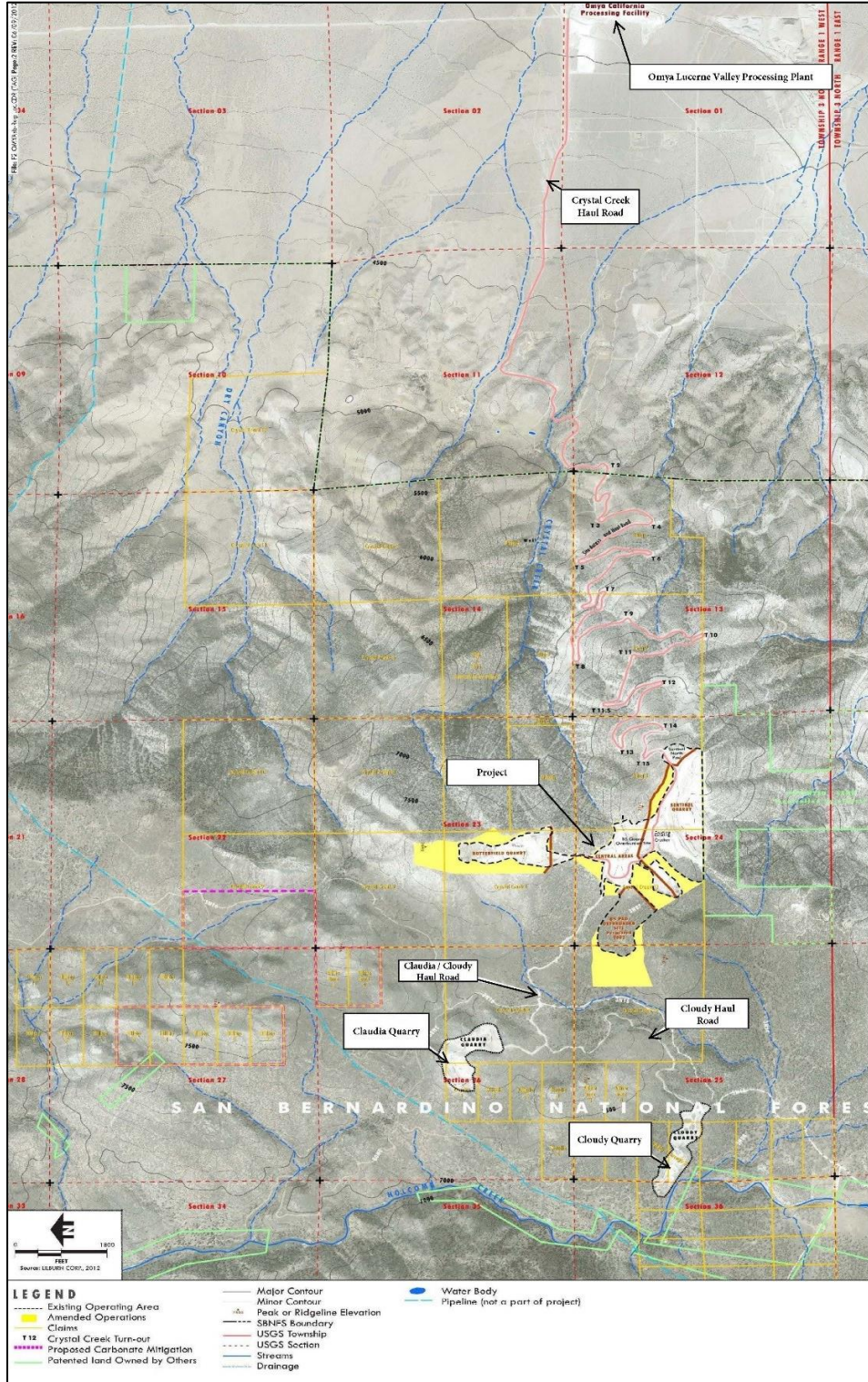
Omya, Inc. – Butterfield and Sentinel Quarries Expansion





**FIGURE 2 – PROJECT VICINITY MAP**

Omya, Inc. – Butterfield and Sentinel Quarries Expansion





**FIGURE 3 – SITE PHOTO**

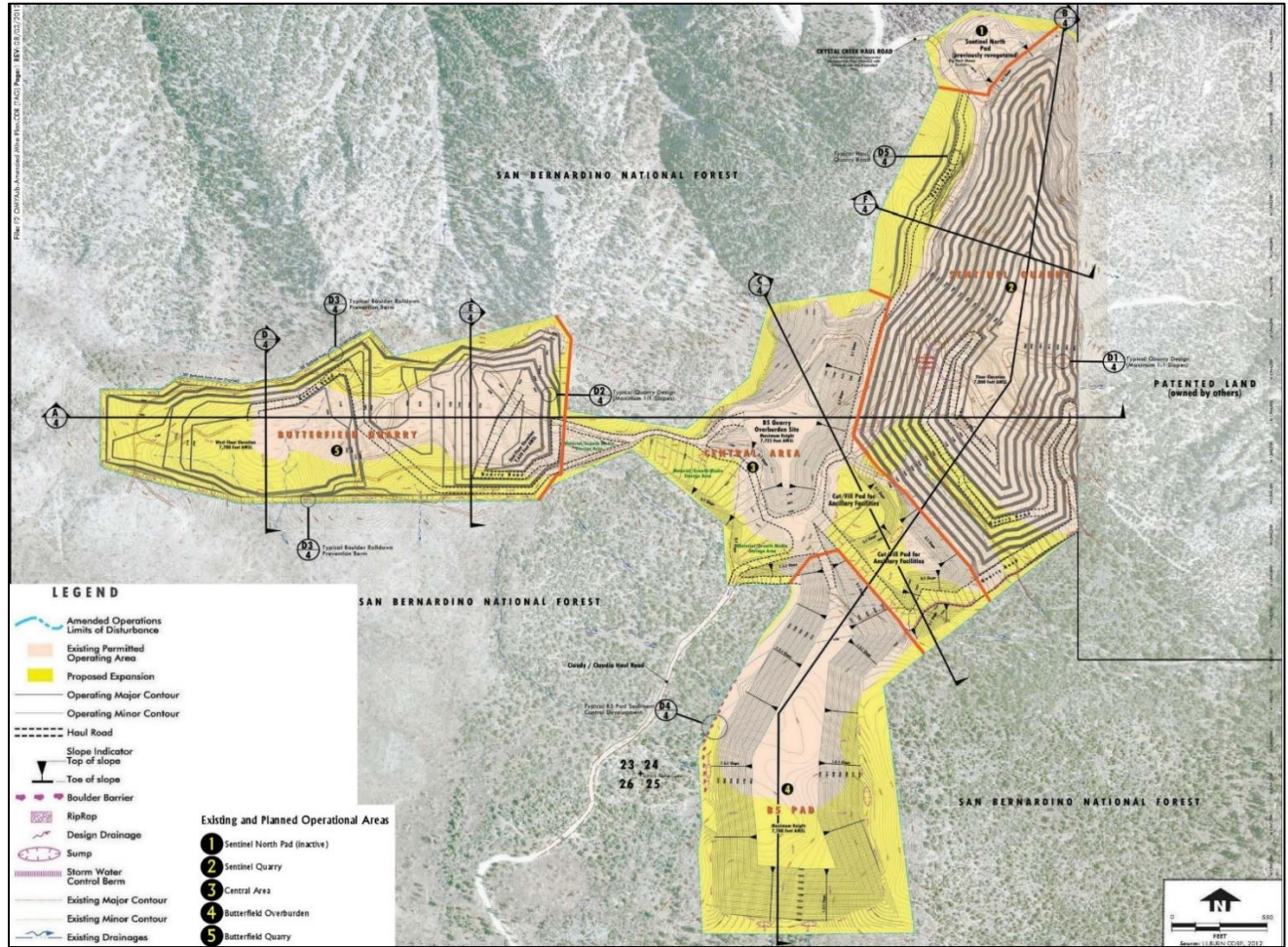
Omya, Inc. – Butterfield and Sentinel Quarries Expansion





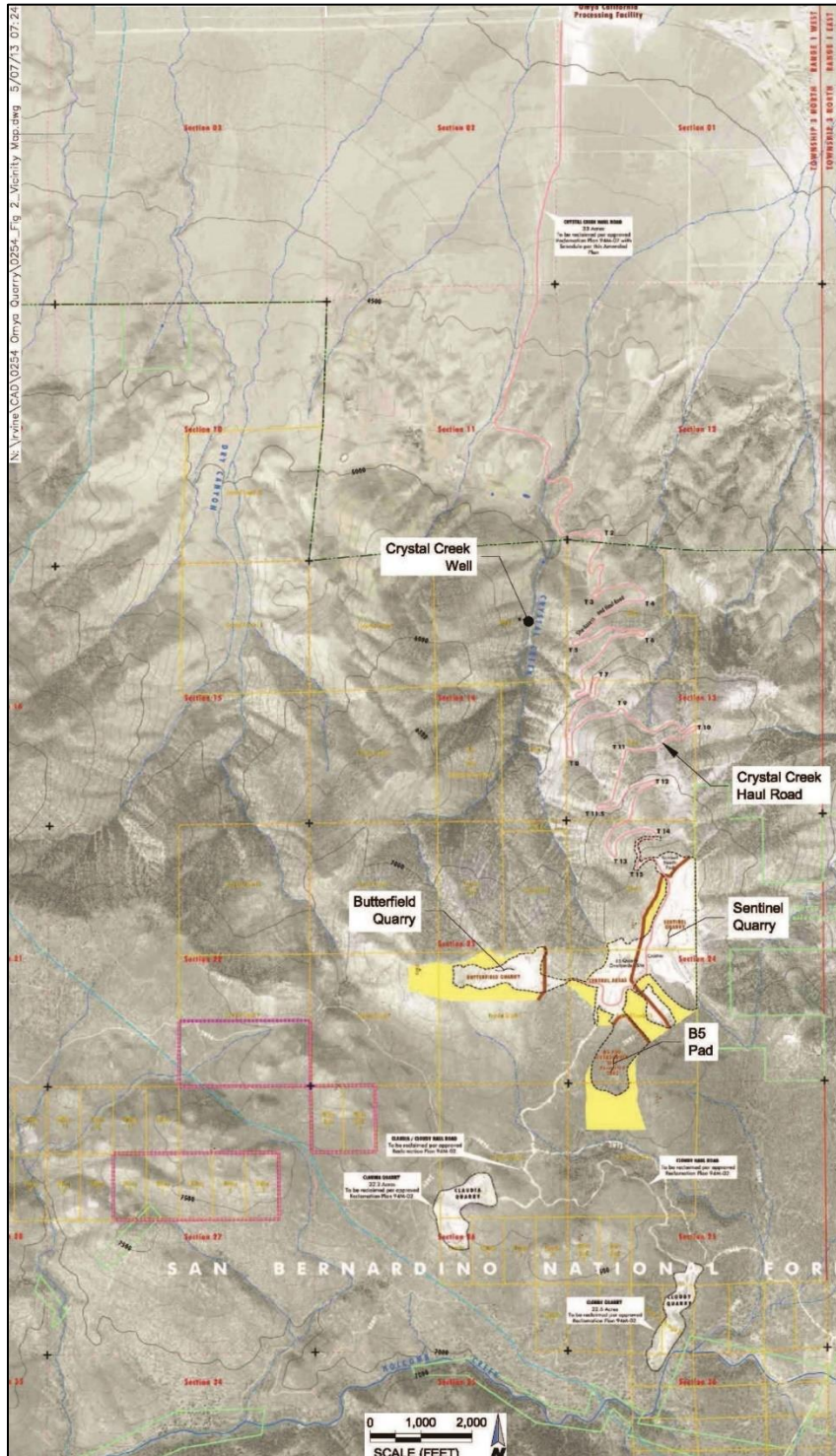
**FIGURE 4 – EXISTING QUARRIES AND PROPOSED OPERATIONS**

Omya, Inc. – Butterfield and Sentinel Quarries Expansion



**FIGURE 5 – PROJECT AREA VICINITY MAP**

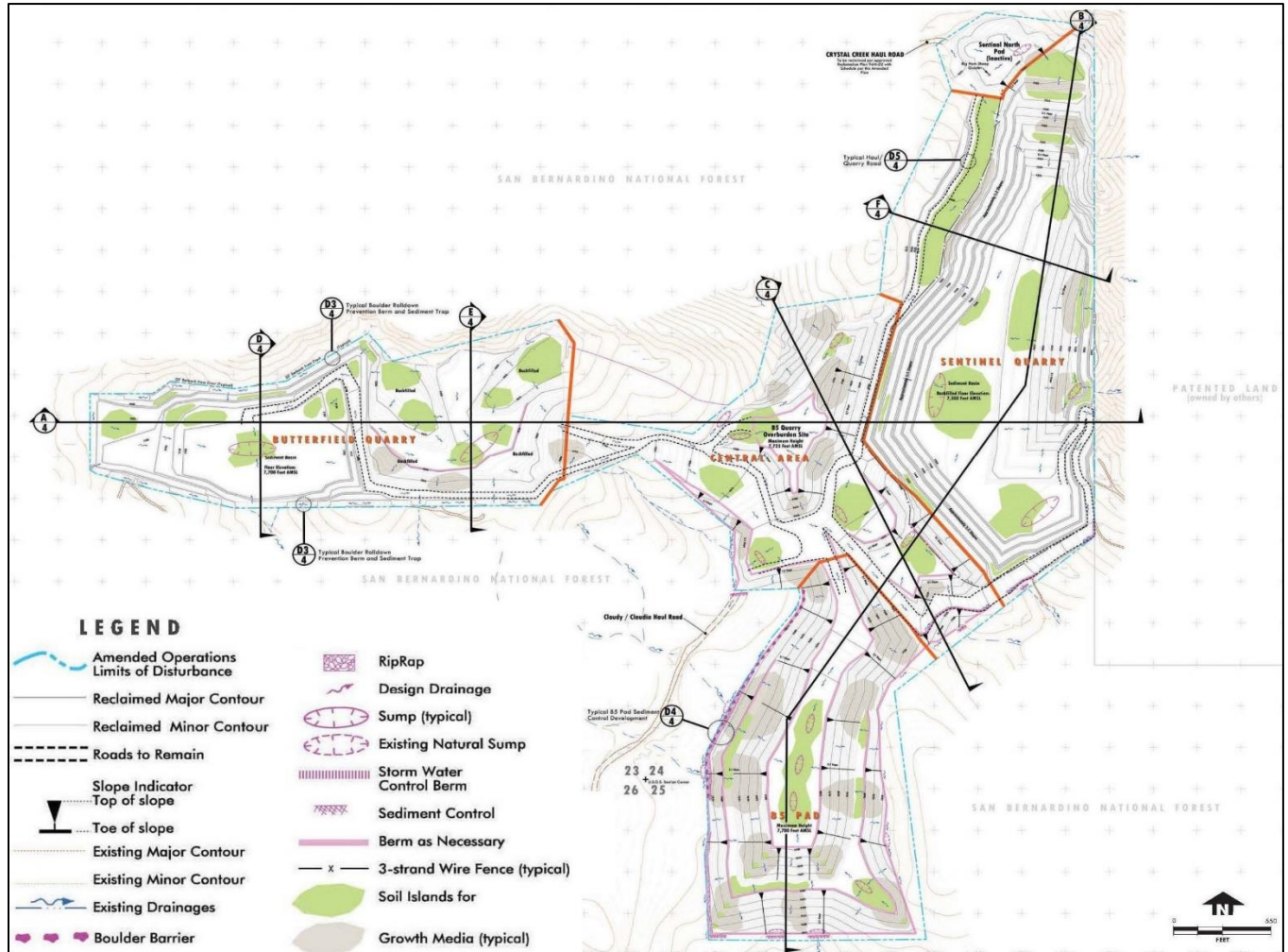
Omya, Inc. – Butterfield and Sentinel Quarries Expansion





**FIGURE 6 – PROJECT RECLAMATION PLAN**

Omya, Inc. – Butterfield and Sentinel Quarries Expansion



## **PROJECT DESCRIPTION:**

The proposed project is a Mining and Land Reclamation Conditional Use Permit (CUP) and an Amended Plan of Operations (POO) and Reclamation Plan to expand the existing Butterfield and Sentinel Limestone Quarries on 94.9 acres within the San Bernardino National Forest (SBNF)(collectively referred to herein as the “Project”).

## **Project Location and Environmental Setting**

The Butterfield and Sentinel Limestone Quarries are located in the San Bernardino Mountains approximately 7.5 miles south of the community of Lucerne Valley and 5 miles north of Big Bear Lake (Project site) within the SBNF in San Bernardino County, California (see Figures 1 and 2). The Project site is zoned Resource Conservation (RC). The Project site is surrounded by mountain ridges and rugged slopes. The natural land features present unique development constraints, but the geologic characteristics are conducive for mining operations.

The existing Butterfield and Sentinel limestone quarries as well as the Project expansions are, and would, continue to be entirely within portions of approximately 954 acres of unpatented mining claims controlled by Omya, but located on public land administered by the SBNF. As can be seen by the photo provided in Figure 3, the quarries themselves are located behind a ridge high in the mountains and cannot be seen from the Lucerne Valley. Only the Crystal Creek access road can be seen from the valley which is not part of the Project.

The quarry sites are located within portions of the following claims in Table 1:

**Table 1 - Mining Claims**

<b>Claim Name</b>	<b>Area (acres)</b>	<b>Section</b>	<b>Township</b>	<b>Range</b>
Crystal Creek 1	160	23	3N	1W
Crystal Creek 2	160	23	3N	1W
Crystal Creek 13	160	24	3N	1W
Crystal Creek 14	160	25	3N	1W
King 3	160	24	3N	1W
Crystal Creek 4	80	23	3N	1W
Slope North	74	23	3N	1W

The Butterfield and Sentinel Quarries are bounded on the south, west and north by mountainous undeveloped Forest Service lands and to the east by patented open space with an active limestone mine called the Furnace Canyon Quarry that is operated by Specialty Minerals, Inc.



Omya has petitioned and received from the California Division of Mines and Geology (CDMG) Mineral Resource Zone 2 status (MRZ-2) for the limestone deposits on the Omya claims. Core drilling, detailed geologic mapping and assay data prove the deposits are significant mineral resources (MRZ-2) and exceeded the MRZ-2 criteria established by the California Department of Conservation Division of Mines and Geology (Joseph, 1984). Therefore, the State has classified the limestone deposits with a zoning classification to help protect the resource against other land uses that would preclude mineral extraction.

The existing and proposed quarries are within the Carbonate Habitat Management Strategy (CHMS), a habitat conservation plan for carbonate soil types. The carbonate soils, which include limestone, provide a unique habitat for five federally listed threatened or endangered plant species. However, only one of these species, Cushenbury Puncturebract, have been found within the Project site. The CHMS is designed to provide long-term protection for the carbonate endemic plants while also providing for long-term continued mining in the San Bernardino Mountains. Identified areas of the carbonate habitat reserves are protected from mining impacts in perpetuity by being dedicated and managed as described in the CHMS. A Memorandum of Understandings and Agreement was signed in 2003 by Omya, the United States Forest Service (USFS), Bureau of Land Management (BLM), San Bernardino County, Specialty Minerals, Mitsubishi Cement Company, California Native Plant Society, and the Cushenbury Mine Trust stipulating that the signatories will implement the CHMS for the dual purpose of conserving threatened and endangered carbonate plants and streamlining the permitting of mining operations.

### **Background and Site History**

Mining on the properties now controlled by Omya began by the Sentinel Mining Company during the late 1950's and has been, more or less, continuous since 1958. The Crystal Creek Haul Road was started in 1958 and was extended to the top of the mountain at that time. Mining of the Sentinel deposit began by La Habra Products during the early 1970's and mining of the Butterfield deposit began by Pluess-Staufer (later renamed Omya) during the late 1970's.

Omya acquired the mining and processing operation in 1976 introducing extensive geologic exploration and quarry development programs. Omya has continuously mined these quarries since that time. Geologic mapping, sampling and core drilling continue to the present day, and have substantially increased known limestone resources. The Butterfield and Sentinel resources are adequate to allow mining to continue through 2055 at present and projected rates of mining.

In 1975, the Surface Mining and Reclamation Act (SMARA) (Public Resources Code, Sections 2710-2796.5) was enacted by the California Legislature to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. On January 11, 1988, the Forest Service

approved an Omya Umbrella Plan of Operations and Reclamation Plan which included the Sentinel, Butterfield, Cloudy, and Claudia Quarries and associated haul roads. The current approved Plan of Operations and Reclamation Plan (94M-02) was approved by the County (SMARA lead agency) and the Forest Service in 1994.

In 2002/2003 Omya submitted a Sentinel Quarry Area Expansion Plan of Operations and Reclamation Plan and received approval for the expansion from the Forest Service. The 2003 Reclamation Plan included a site-specific approved revegetation plan, including growth media salvage, organics placement, seeding and revegetation, seed collection and propagation, irrigation, monitoring and maintenance plans and bond release criteria. The Project would incorporate the conditions of the previously approved plans.

## **Mining Operations**

### ***Overview***

Known limestone ore resources within the proposed quarry expansion areas would add an additional 40 years life to the Butterfield quarry and an additional 20 years life to the Sentinel quarry. The Project would allow continued mining of these reserves to be extended until approximately 2055. Disturbance proposed for the Project includes expansion of existing Butterfield and Sentinel quarries, expansion of associated overburden placement sites, additional internal access roads and ancillary facility areas, and minor adjustments to existing disturbance boundaries. The Project does not include any new quarries, new haul roads, new overburden sites or changes to the ore processing which is conducted at the Lucerne Valley Processing Plant (LVPP). The LVPP processes ore from the Butterfield – Sentinel quarries as well as another Omya quarry, the White Knob Quarry, located in the valley west of the LVPP.

The proposed expansion would include 30.6 acres of disturbance at the Butterfield Quarry, and 64.3 acres of disturbance at the Sentinel Quarry area. The 64.3 acres of disturbance at the Sentinel Quarry includes 16 acres at the Sentinel Quarry, 27.8 acres at the Overburden Pad 5, 19.5 acres in the Central Area and 1 acre for a maintenance buffer at the Sentinel North Pad. The total area of disturbance associated with the Project would be 94.9 acres. Quarry development and expansion would be phased and reclamation would occur concurrently.

Depending on market demand, the maximum combined Butterfield and Sentinel quarries average ore production rates would be approximately 680,000 tons per year compared to the 3-year average from 2004 – 2006 of approximately 378,000 tons per year.

The existing operational hours currently in place at the quarries would not change with this Project. Mining activities would vary through the year, and could occur 24 hours/day, 7 days/week depending on operational requirements. Blasting would be restricted to daylight hours. Winter snowfall and ore production requirements are, and would be, the major



determining factors for scheduling of ore and waste rock mining. Other factors such as market conditions and maintenance requirements would also affect this schedule.

The quarries would be multi-bench open pit mines. Several working levels would be operated at any one time to supply the quota of ore needed to meet production demands. The multi-working level concept allows for greater selectivity and blending of rock qualities to meet stringent quality standards of customers, and allows maximum utilization of the resource. Five grades of ore would be selectively mined. The ore would be drilled and blasted, loaded into haul trucks and hauled to the crusher currently located just southwest of the Sentinel Quarry. Crushed ore would be loaded into off-road haul trucks and transported eight miles on the vested Crystal Creek Haul Road to the existing LVPP. As discussed above, there are no proposed changes to the processing rate at the LVPP and the LVPP is not part of the Project.

Waste rock, defined as limestone and other rock not suitable for the manufacture of Omya produced limestone products, would be stockpiled within the planned overburden stockpiles and/or backfilled within the quarries' footprints to reduce the size of separate stockpiles, thereby reducing surface disturbance and potential impacts to wildlife habitat, sensitive vegetation, and visual resources.

There would be no operational settling ponds on-site or new runoff diversion channels required. No change in the number of blasts would be expected which is approximately one per week at each quarry. Figure 4 shows the existing mine plan and proposed expansion areas.

Numerous Project design features, best management practices (BMPs) and environmental protection measures are incorporated into the mining activities that minimize or avoid potential impacts. These measures are discussed in detail in the Draft EIR/EIS Section 3.0 for each environmental effect evaluated (Exhibit C).

### ***Pre-Mining Activities of Undisturbed Lands***

The following activities would be conducted prior to mining and overburden/waste rock stockpile development in order to limit disturbed areas and to facilitate ongoing and future reclamation and revegetation:

- Excavation and development limits would be located and marked in the field;
- Specified plants that can tolerate transplant would be salvaged to the degree possible, stored in a nursery and replanted on reclaimed land as areas become available for revegetation;
- As feasible, seeds of specified plants would be collected and either used for revegetation or stored appropriately for maximum future viability; and

- Salvageable soils and/or growth media would be placed in separate identified stockpiles for use as a seed bank and seedbed during reclamation. Soil stockpiles would be clearly marked and managed to limit wind and water erosion.

### ***Ore Crushing System***

There would be no change in the crushing process other than moving the crusher to another previously disturbed site within the Project site. Ore from the Butterfield and Sentinel Quarries would be hauled to the primary crusher and screens for size reduction, screening, and sorting of ore grades. Stockpiles of sorted ore would be made by the radial stacker at the crusher. From these stockpiles, haul trucks would be loaded and the crushed ore would be transported to the LVPP.

### ***Production Water***

The water usage for the Project would not result in a significant change from the current mining operations water requirements. Water used to control dust is, and would continue to be, obtained from two previously permitted sources, a well located at the processing plant site and a well located in Crystal Creek Canyon near Turnout 5 on the Crystal Creek Haul Road (refer to Figure 5). Both existing wells are permitted by the State of California Water Resources Control Board and County of San Bernardino Department of Environmental Health Services (Permit #06259026). Bottled drinking water for employees at the mining area is brought to the site as necessary. No surface water is, or would be, used in the operation.

No treatment facilities would be needed. Water would continue to be hauled in a water truck and sprayed on the haul roads and active mining and overburden areas to minimize fugitive dust. The water truck would work during active quarry operations as needed to control visible dust. This water would typically evaporate and at times percolate; therefore, the dust control activities would not result in any wastewater or run-off.

### ***Blasting***

Drilling and blasting operations would be conducted by licensed individuals in such a manner as to meet or exceed Mine, Safety and Health Administration (MSHA) and California Safety and Health Administration (CalOSHA) requirements. Blasting would typically be conducted about once each week at each quarry during daylight hours. Blasting operations would involve drilling, placement of charges, and detonation of the charges by a blaster with all required licenses and permits for handling explosives. All explosives and detonators would be transported, handled, and stored in accordance with all Federal, State, and local regulations.

The blasting agent used at the quarries, ammonium nitrate and fuel oil (ANFO) explosives, would not be stored at the quarry sites. These hazardous materials have been and would continue to be stored separately in magazines located at designated locations at Omya's



Lucerne Valley operations per Federal, State, and local regulations. The explosives are only transported to the quarry site as necessary.

Blasts in the Omya quarries are, and would continue to be, relatively small to maximize selectivity. There are no residences for over 2 miles in any direction from the Project site, and one or more major mountain ridges are present in between quarries and residences. Blasting has occurred in these existing quarries for over 35 years with no known adverse impact on people, structures, or wildlife. The blasts cannot be seen, heard or felt in any residential areas.

### ***Reclamation and Revegetation***

The Forest Service approved the previous Omya Umbrella Plan of Operations and Reclamation Plan in 1988 and the Reclamation Plan (94M-02) was approved by the Forest Service and the County in 1994. The Forest Service and County approved the Sentinel Quarry Area Expansion Plan of Operations and Reclamation Plan in 2002/2003. The 2002/2003 Plans includes mining and operation of the current Butterfield and Sentinel Quarries.

The Sentinel Quarry Area Expansion Plan of Operations and Reclamation Plan (2003) includes a detailed Revegetation Plan that was also reviewed and approved by the Forest Service and the County. No changes to the approved reclamation/revegetation methods are proposed for the Project. Figure 6 provides the Reclamation Plan for the Project.

Article 9, Section 3700 of SMARA (14 CCR § 3700) states the following:

*“Reclamation of mined lands shall be implemented in conformance with standards in this Article (Reclamation Standards). The standards shall apply to each surface mining operation to the extent that:*

- *They are consistent with required mitigation identified in conformance with CEQA; and*
- *They are consistent with the planned or actual subsequent use or uses of the mining site.”*

Omya would reclaim the quarry sites to meet both Forest Service Minerals Regulations (36 CFR 228, Subpart A) under the jurisdiction of the Forest Service and SMARA regulations implemented by the County. The objectives of this Reclamation Plan are to:

- Eliminate or reduce environmental impacts from mining operations;
- Reclaim in a usable condition for post-mining end uses which will include open space/habitat;
- Reshape mining features and revegetate disturbed areas to return biological productivity and to minimize aesthetic impacts; and
- Reclaim the site as necessary to eliminate hazards to public health and safety.

Because of the phased nature of the mining development, reclamation concurrent with mining can only occur to a limited degree due to safety and logistical reasons. Reclamation would start with the initiation of mining and would include the following activities, as feasible:

- Salvaging and stockpiling of grubbed organics, soils, growth media, seeds, and re-locatable plants and cuttings for propagation and direct deposition and/or re-planting to available reclamation areas during clearing of areas to be developed;
- Ongoing seed collection on-site and/or adjacent to the site and propagation of seeds, salvaged plants and cuttings at local nursery by a contracted revegetation contractor;
- Backfilling of the eastern half of the Butterfield Quarry and portions of the Sentinel Quarry as feasible (not applicable to Alternative 1);
- Sloping and grading of completed quarries and stockpile slopes for safety, slope stability, and erosion control;
- Placement of darker materials, as available, on outside of more visible slopes and colorization if shown successful for slopes not susceptible to raveling to reduce color contrast;
- Ripping of compacted areas prior to revegetation;
- Covering approximately 30% of equipment accessible horizontal areas with salvaged soil, growth media and organics utilizing the island concept;
- Reclamation of on-site roads after reclamation of quarries and pads certified complete as determined by Forest Service in order to allow access to all reclamation areas;
- Revegetation – hand seeding and direct seeding followed by imprinting, seedling planting, and hydroseeding, as appropriate;
- Irrigation, as needed, for two years to maximize establishment; and
- Monitoring and remediation until success criteria achieved.

Although mining would be more or less continuous, the development of the quarries and their ultimate timing for reclamation would be linked to operational parameters and product demand needs. Mining operations may experience unscheduled phasing changes due to various market/economic demands and variation in material quality since the natural deposit is not of uniform quality. The Forest Service and the County would be updated in the annual monitoring report on the status of operational and reclamation phases.

Reclamation would consist of sloping excavated cuts and benches to meet the designed approximate 1H:1V overall slope. The individual benches would be approximately 60 feet vertical at 70° and 30 to 35 feet wide at Sentinel; and 50 feet vertical at 70° and at least 25 feet wide at Butterfield. Slopes may be flatter where backfilled with waste rock. Bench heights also would vary with material encountered. Reclamation of the quarries would include the creation



of angled pathways and interlacing reclaimed benches in order to facilitate the movement of bighorn sheep and other wildlife.

A Monitoring Plan and success criteria have been previously approved by both the Forest Service and the County for the current Butterfield and Sentinel mining activities. The plan meets both Federal and State requirements and the Project does not propose any changes to the Monitoring Plan and success criteria.

SMARA requires that reclaimed sites provide wildlife habitat "*at least as good as that which existed before ... mining,*" and that reclaimed sites must be "*similar to naturally occurring habitats in the surrounding area.*" (14 CCR § 3703.) SMARA also requires the operator to demonstrate that vegetation on reclaimed sites has been self-sustaining without irrigation, fertilization, or weeding for a minimum of two years prior to release of performance bond. The Forest Service requires that revegetated sites reach 50% of pre-disturbance vegetation cover and 15% of pre-disturbance species richness by the end of a ten-year monitoring period for release of the performance bond.

The approved quantitative success criteria described in the existing Revegetation Plan is currently being implemented at other Omya operations. Based on comments from Department of Mine Reclamation (DMR), the success criteria provided below has been included in the Amended Reclamation Plan to more clearly address current guidelines. The Revegetation Plan provided in the Amended Reclamation Plan (located in Appendix C of the Draft EIR/EIS) provides a detailed description of the success criteria.

- **Cover:** 37% cover all native perennials combined per 50-m x 1-m transect.
- **Species Richness:** Five species native perennials per 50-m x 1-m transect.
- **Density:** 20 native perennials per 50-m x 1-m transect.

The first two to three years would measure survivor of planted stock, need for weeding, and successful establishment of seeded native plants. In later years monitoring would focus on the site's resemblance to undisturbed vegetation in terms of the criteria above. This schedule could be revised depending on the results of the revegetation effort and the meeting of the success criteria. Monitoring data would be reviewed and verified by the Forest Service and County.

## **PROJECT ANALYSIS:**

### **Purpose and Need for the Project**

- **Calcium Carbonate Resources:** The Project would allow the expansion of two existing limestone (calcium carbonate) quarries. Within the United States, productive deposits of white, high purity limestone are found in only a few areas and the Omya deposits are one of these sources. High calcium limestone can be used as whitening in the form of nontoxic

filers and extenders in a large number of products ranging from paper products to environmental cleanup, carpet backing, plastics, PVC, paint, paper and other building products. Limestone can also be used as a substitute for other components in industrial processes and the manufacture of consumer products.

Omya's LVPP operations require high brightness, high purity limestone ore (calcium carbonate) of specific quantities and qualities to produce fine ground calcium carbonate for the numerous consumer and industrial products discussed above. To meet current and future product demand, Omya requires reliable and economic resources of high quality limestone ore. The Project would assure Omya that the processing plant would have the raw limestone resources needed to meet consumer demand.

In addition, the MRZ-2 rating of the Butterfield and Sentinel Quarries limestone deposits demonstrates that these quarries are an important mineral source and their value to mining and land use planning is well recognized.

- **SBNF Land Management Plan:** Under the National Forest Management Act (NFMA), the Forest Service is required to identify the best use of forest land, including potential options such as mining, timber, range and recreation. The management of these resources within the SBNF is described in the SBNF Land Management Plan (LMP). The purpose of the SBNF LMP is to articulate the long-term vision and strategic management direction for the SBNF and to facilitate the development of activities that will contribute towards the realization of the National Forests' desired conditions. Therefore, part of the purpose and need for this Project is to facilitate the development of management activities that will contribute towards the realization of the National Forests' desired conditions as identified in the LMP Southern California National Forest Vision.
- **Economic Benefit:** Long-term cumulative economic benefits of limestone mining along the north range front of the San Bernardino Mountains have added to the County economy for decades including tax payments and jobs. The limestone mining industry provides stable high paying jobs and professional careers for many people. The Project would allow continued (up to 40 years) mining of the resource and provide long-term employment for many employees.

Omya helps support federal, state and local governments and schools through payment of property taxes, excise, fuel and other taxes for the long term. Omya supports local economies through direct purchases of equipment, materials, supplies, and services, and indirect turnover of these expenditures in the economy. Omya also supports local communities through charitable contributions, and employee involvement in various community affairs.

## **Project Objectives**

The overall intent of the Project is to supply the LVPP with high brightness, high purity limestone ore of specific quantities and qualities to produce fine ground calcium carbonate for numerous consumers and industrial products.

The Project was developed with these specific objectives and goals:

- Continue the mining and recovery of a rare calcium limestone resource;
- Supply the LVPP with sufficient quantities of reliable resources of high quality limestone for the production of a wide range of calcium carbonate products;
- Enable the LVPP to meet consumer demands;
- Make available for consumer and industrial use a recognized valuable mineral resource as identified by the MRZ-2 rating of the Butterfield and Sentinel limestone deposits;
- Provide long-term employment and economic benefits to the local community and County of San Bernardino.
- Minimize additional land disturbance through the expansion of contiguous existing quarries and minimal expansion of existing overburden stockpiles and haul roads;
- Limit the area of disturbance outside the quarries in order to reduce impacts on sensitive plant habitats and viewsheds by developing internal waste rock stockpiles within the completed portions of the quarries;
- Meet the SBNF regulations that require activities to cause no undue and unnecessary degradation;
- Meet the State's and County's requirements;
- Mitigate for impacts to carbonate plants consistent with the Carbonate Habitat Management Strategy by relinquishing mining claims;
- Minimize impacts to sensitive plants and wildlife including bighorn sheep and raptors through quarry design and conservation management programs;
- Reclaim the site for post-mining uses which will include open space habitat and be in compliance with SMARA regulations;
- Contour mining features and revegetate disturbed areas to minimize aesthetic and erosion impacts; and
- Reclaim and maintain the site as necessary to eliminate hazards to public safety.



## **ENVIRONMENTAL ANALYSIS:**

Because the Project is located completely within the SBNF, and in accordance with Article 14 of the California Environmental Quality Act (CEQA) Guidelines - *Projects Also Subject to the National Environmental Policy Act (NEPA) Section 15222 - Preparation of Joint Documents* and Section 15226 - *Joint Activities*, a joint Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) was prepared. The involvement of the Forest Service is necessary because federal law generally prohibits a federal agency from using an EIR prepared by a state agency unless the federal agency was involved in the preparation of the document. Pursuant to the 1992 Memorandum of Understanding by and between the State of California and the U.S. Department of Agriculture (U.S. Forest Service), the County as “lead agency” designated by the State Mining and Geology Board, has the principal responsibility under SMARA for approving a surface mining operation’s reclamation plan. The provisions of SMARA apply to all public and private lands throughout the unincorporated areas of the County.

The joint EIR/EIS was prepared for the Project in accordance with the requirements of the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and California Code of Regulations Title 14, Section 15000 et seq. (CEQA Guidelines) as well as the NEPA regulations, 40 Code of Federal Regulations (CFR) Parts 1500-1508. The EIR/EIS evaluated potentially significant effects for several environmental areas of concern. The conclusions of the EIR/EIS indicate that all of the potentially significant environmental impacts may be reduced to a less than significant level with implementation of recommended mitigation measures. The Final EIR/EIS includes the Draft EIR/EIS, public and agency comments, responses to comments, errata and the Mitigation Monitoring and Reporting Program (MMRP).

The following identify the process that has been followed for the preparation of this EIR/EIS:

- **Distribution of a Notice of Preparation (NOP) and Initial Study:** The County prepared a NOP and an Initial Study. The NOP and Initial Study was distributed to all responsible agencies and interested parties, including the California State Clearinghouse, beginning on February 22, 2013. The Forest Service prepared a Notice of Intent (NOI) which was published in the Federal Register on February 29, 2013. A joint NOP/NOI was mailed to the agencies, organizations, and individuals on both the Forest Service and County mailing lists.
- **Public Review and Comment Period:** In order to ensure that the public agencies, organizations, and individuals had access to the Initial Study as well as the technical documents supporting the Initial Study, the scoping period was extended two times, once to April 16, 2013, and again to June 6, 2013. A joint NOP/NOI was also published in local newspapers. The Initial Study and the Amended POO and Reclamation Plan were posted on the agency websites.

- **Conduct of a Scoping Meeting:** Two public scoping meetings were held to provide the public and government agencies an opportunity to receive information on the CEQA/NEPA process and the Project, as well as provide verbal and written comments. Approximately six people attended the meeting in Big Bear and seven people attended the meeting in Lucerne Valley. Thirteen letters and emails were received (eight from governmental agencies and five from organizations/individuals).
- **Circulation of the Draft EIR/EIS:** The County distributed the Draft EIR/EIS Notice of Completion (NOC) to the California State Clearinghouse SCH#2013021057 and the Forest Service published the Draft EIR/EIS Notice of Availability (NOA) in the Federal Register. The NOA was filed in the Federal Register on July 13, 2018. The NOC was filed with the State of California Clearinghouse on July 13, 2018. A Legal Notice/NOA was also posted in the San Bernardino Sun Newspaper on July 13, 2018. A joint NOA/NOC was posted on both the County's and Forest Service's Internet websites, along with links to download the Draft EIR-EIS.

In addition, notices were mailed to the agencies, organizations and individuals on the County and Forest Service mailing lists.

The Draft EIR/EIS was circulated for the 45 day review and comment period between July 13, 2018 and August 28, 2018.

The Draft EIR/EIS was made available for public review at both the San Bernardino and Fawnskin SBNF field offices, as well as the County Planning Division offices in San Bernardino and Hesperia. The Draft EIR/EIS was also available on both the Forest Service's and County's internet websites.

Copies (CDs) of the Draft EIR/EIS were provided, upon request, to responsible, trustee, and other federal, state, and local agencies expected or known to have expertise or interest in the resources that the Project may affect, as well as to organizations and individuals.

- **Distribution of the Final EIR/EIS:** Responses to comments on the Draft EIR/EIS were addressed in the Final EIR/EIS and the Final EIR/EIS was distributed to commenting parties on December 5, 2019.

The County of San Bernardino planning staff has reviewed and provided comments on the Draft and Final EIR/EIS, and the technical studies/reports. Presentation of these documents reflect the County's own independent judgment, including reliance on applicable County technical personnel from other departments and review of all technical sub consultant reports.

- **Division of Mine Reclamation (DMR):** The County submitted the Plan of Operations and Reclamation Plan to the Department of Conservation (DOC) Office of Mine Reclamation (OMR) [currently Division of Mine Reclamation (DMR)] on October 22, 2012. DMR provided their comments in a letter dated August 19, 2012. The County provided a response to comment to DMR and a revised Plan of Operations and Reclamation Plan in

November 2017. The County further addressed DMR's comments and submitted a revised Plan of Operations and Reclamation Plan in February 2018. The DMR has no further comments on the Plan of Operations and Reclamation Plan and is considered approved by the County.

### **CEQA Appendix G Environmental Checklist – Initial Study**

The environmental resource areas (effects) identified below were determined not to be significantly affected by the implementation of the Project and did not require further analysis in the Draft EIR/EIS. However, due to some public interest in several areas that were eliminated during scoping, brief discussions were included in Section 3.0 of the Draft EIR/EIS (Agriculture and Forestry, Cultural Resources, Hazards and Hazardous Materials, and Noise).

- Agriculture and Forestry (3.2)
- Cultural Resources (3.5)
- Hazards/Hazardous Materials (3.7)
- Land Use and Planning
- Mineral Resources
- Noise (3.9)
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

The following environmental resources (effects) are described and evaluated in detail within Section 3.0 of the Draft EIR/EIS. If determined necessary and feasible, mitigation measures were identified to reduce the impact(s) to less than significant. The Draft EIR/EIS section numbers are provided in parentheses.

- Aesthetics (3.1)
- Air Quality and Greenhouse Gases (3.3)
- Biological Resources (3.4)
- Geology and Soils (3.6)
- Hydrology and Water Quality (3.8)

The Draft EIR/EIS identified that there were no potential impacts that could not be mitigated to less than significant. A summary of the mitigation measures and the Mitigation Monitoring and Reporting Plan (MMRP) are provided in the Draft EIR/EIS Executive Summary Table ES-3 and the Final EIR/EIS Section 4.0, respectively.

#### ***Aesthetics***

A Scenery Report prepared by Lilburn Corporation (2014) inventories and analyzes potential changes to the aesthetics of the surrounding areas. Because the Project is located completely within the SBNF and cannot be seen from Lucerne Valley, the Scenery Report used the United States Forest Service Scenery Management System (SMS) and Scenic Integrity Objectives (SIOs) to evaluate potential impacts to aesthetics. The SMS methodology is discussed in detail in the Draft EIR/EIS Section 3.1.



Five viewpoints were simulated and evaluated for potential visual resource impacts from the Project and alternatives. These key viewpoints were selected because they are representative views from the identified travel ways and use areas from within SBNF lands. As mentioned above, the Project is located near the community of Lucerne Valley; however, a viewpoint was not selected in the Lucerne Valley because the Project is not visible from Lucerne Valley or from any major public highways or secondary paved routes because it is located over the range crest and between the mountain ridges. The Crystal Creek Haul Road which is used to access the Project, constructed in 1958, is plainly visible from Lucerne Valley but the Project does not include any changes to the existing road (other than extending its use for Project access).

The Project would be visible from four of the five SBNF viewpoints evaluated in the scenic resources analysis. As discussed in the Draft EIR/EIS Section 3.1.3.4, the Project would be in conformance to and consistent with the Forest Service SIOs and scenic values. Therefore, the potential impacts on scenic vistas and/or views associated with the Project would be less than significant.

### ***Air Quality and Greenhouse Gases***

An Air Quality and Greenhouse Gas Impact Assessment report (AQIA) was prepared by Sespe to determine the short-term, long-term direct, indirect and cumulative air quality impacts associated with the Project and is provided in Appendix E of the Draft EIR/EIS. Emissions were estimated using methods and parameters from the Mineral Industry Emissions Inventory Guidance, AP-42, EMFAC2011, OFFROAD2011, and CalEEMod. Air dispersion/deposition modeling and health risk assessment were then performed to determine the potential for the Project to result in significant impacts.

As discussed in Section 3.3 of the Draft EIR/EIS, the Project is limited to expanding the Butterfield and Sentinel Quarry areas but overall combined production from all Omya quarries that provide ore to the LVPP is limited by the maximum production rate of the LVPP. In order to ensure that the air quality analysis was conservative and represented a worst-case scenario, it was assumed that the Project would allow up to the maximum LVPP production rate to be extracted exclusively from the Butterfield and Sentinel Quarries. This would result in no material being quarried from Omya's other quarry, White Knob Quarry. (Note: Omya's White Knob Quarry is not part of this Project.)

Results of the AQIA criteria pollutant modeling showed that the Project alone would not exceed the most stringent Ambient Air Quality Standards but would the US EPA Significant Impact Levels (SILs) which are used to evaluate cumulative impacts. The exceedances are because of road dust which is overestimated in the calculations in order to have overly conservative results. Nevertheless, mitigations have been identified that will reduce the impact to less than significant. The mitigations require unpaved roads to be controlled by at least 80% using methods consistent with MDAQMD guidance.

To address whether the Project would expose the public, specifically sensitive receptors, to substantial pollutant concentrations, the concentrations of toxic air contaminants (TACs) were evaluated by conducting a HRA. As discussed in Section 3.3 of the Draft EIR/EIS, TACs emitted from Project operation consist mainly of those found in vehicle and mining equipment exhaust and, to a lesser extent, trace amounts of metals and silica found fugitive dust. Table 3.3-25 of the Draft EIR/EIS presents health risk predicted at nearby receptors. As shown, health risk impacts from the Project are less than significant.

### ***Biological Resources***

Because the Project site is completely within the SBNF, the Forest Service took the lead on evaluating impacts to biological resources. They worked closely with the California Department of Fish and Wildlife (CDFW), the US Fish and Wildlife (USFW) and the Regional Water Quality Control Board (RWQCB). The Forest Service conducted or reviewed extensive field studies and prepared a Biological Assessment and Evaluation Report, a Non-native Species Risk Assessment and a Wildlife and Botany Report (“Biology Reports”, July 19, 2017). Biological resources are discussed in the Draft EIR/EIS Section 3.4.

The Biology Reports addressed the potential effects that the Project might have on Threatened, Endangered and Sensitive species for both state and federal identified species. The Forest Service and CDFW concluded that with the mitigations identified in the Draft EIR/EIS, the Project would have a less than significant impact on biological resources. The following three management and conservation strategies were considered during the evaluation and are part of the identified mitigation measures.

*Carbonate Habitat Management Strategy (CHMS)*: Soils found in the Project Area are derived from carbonate rock with a coarse-grained sandy texture. These soils provide a unique habitat for several endemic rare plant species, including four Federally listed threatened and endangered plant species; however only one of these species is found in the Project Area. These listed plant species are addressed in the Carbonate Habitat Management Strategy (CHMS).

The CHMS was developed in 2003 through an intensive collaborative effort. The strategy is designed to provide long-term protection for the carbonate endemic plants while also providing for long-term continued mining in the San Bernardino Mountains. Certain areas of the carbonate habitat reserves are protected from mining impacts in perpetuity by being dedicated and managed as described in the CHMS. A Memorandum of Understandings and Agreement was signed in 2003 by Omya, the USFS, Bureau of Land Management (BLM), San Bernardino County, Specialty Minerals, Mitsubishi Cement Company, California Native Plant Society, and the Cushenbury Mine Trust stipulating that the signatories will implement the CHMS for the dual purpose of conserving threatened and endangered carbonate plants and streamlining the permitting of mining operations.

*Raptor Conservation Strategy (RCS)*: The Forest Service developed a final RCS for the San Bernardino Mountain's North Slope in coordination with three North Slope mining companies (Mitsubishi, Omya and Specialty Minerals), the USFWS and the CDFW. The Forest Service and mining companies are cooperatively participating in the monitoring of nesting special status raptors on the North Slope. The objective of the RCS is to provide consistent management actions, processes, and management tools across the affected mining companies on the North Slope. The RCS is a dynamic document which will be updated as new information and scientific understanding of the subject species become available. A copy of the final RCS is provided in the Final EIR/EIS.

*Bighorn Sheep Conservation Strategy (BSCS)*: A North Slope Bighorn Sheep Conservation Strategy has been finalized by CDFW and the Forest Service in coordination with three North Slope mining companies (Mitsubishi, Omya and Specialty Minerals). The BSCS includes the following:

- Guidelines/thresholds for population status that would trigger augmentation of the herd;
- A strategy and guidelines for developing water sources to respond to drought years;
- Herd monitoring methodology and objectives;
- Avoidance measures to minimize effects on bighorn sheep;
- A requirement that participating mining companies will be a partner in the Bighorn Sheep Conservation Strategy and will help support the long-term management goals of maintaining a sustainable population of bighorn sheep on the North Slope; and
- An endowment supported by the participating mining companies in the area to finance the conservation strategy.

A copy of the Final BSCS is provided in the Final EIR/EIS.

### ***Geology and Soils***

The Project site is not located within a currently designated State of California Earthquake Fault Zone (Alquist-Priolo Zone, known as Special Studies Zones prior to January 1, 1994). However, there are active faults in the region, from which ground shaking can be anticipated to occur over the life of the Project. In most of California, ground-shaking caused by earthquakes associated with rupturing faults is likely to occur.

A seismic evaluation and slope analysis report was prepared by CHJ Consultants (2012). Peak ground acceleration of 0.52 g was calculated by CHJ for the Project Area, which is a relatively high degree of ground acceleration (shaking) during an earthquake. The potential hazard to humans associated with such shaking would be failure of structures and resulting falling objects. However, no inhabited structures are anticipated in the Project Area. Therefore, the Project would not expose people or structures to potential substantial adverse effects. In steep



slope areas, such as the quarries' walls, heavy ground shaking can cause slope failures. Based on factors of safety calculated for the proposed slopes in the Slope Stability Investigation, CHJ concluded that the proposed slopes would be suitably stable against gross failure for the anticipated long-term conditions, including the effects of seismic shaking. Mitigation measures require that the slope condition be inspected after a seismic event exceeding 5.5 magnitude on the Richter Scale originating from an epicenter located within 100 miles of the Project Area. Quarry operations would be halted until a qualified geotechnical engineer is retained to inspect slope conditions for potential loose blocks or other unsafe or unstable conditions.

Section 3.6 of the Draft EIR/EIS provides the evaluation of impacts related to geology and soils.

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

Potential impacts associated with hydrology and water quality were addressed in the Hydrology Technical Study (SLR, 5/2013), the Water Supply Assessment (WSA) (Lilburn Corporation, 6/2013) and the Jurisdictional Delineation (JD) (Tetra Tech, 11/2013).

Geologic materials exposed in the quarries consist mainly of calcium carbonate and similar minerals, and do not contain deleterious materials or chemical constituents capable of affecting groundwater. Groundwater would not be encountered during the Project mining activities and groundwater quality would not be affected.

There are two components of the Project water use and potential impact on groundwater supplies. These components are:

- Consumptive water use during mining and processing;
- Reduced surface runoff, potentially reducing direct groundwater recharge of the alluvial aquifer to the north.

The water use for the Project, assuming maximum production at 680,000 is expected to increase by 3.75 AF/yr. The water would be used primarily for dust control. Based on a 5 year average, the total annual water demand of the existing Omya mining operations and the Lucerne Valley Processing Plant (LVPP) has been approximately 13.8 AF/year in recent years. Therefore, Omya's total groundwater production, including the processing plant which is NOT part of the Project, is anticipated to be 17.55 AF/yr with the Project operating at the maximum ore production rate. Therefore, at the maximum ore production rate, the Project would not require new or additional water supply entitlements, and water supply needs would continue to be met using existing sources. The cumulative incremental increase in groundwater production of 3.75 AF/yr is minor, and Omya would remain well within its Free Production Allowance (FPA) designated by the Mojave Water Agency (MWA) of 19 AF/year.

Potential for the Project to reduce runoff volumes in nearby watercourses was evaluated due to the role the watercourses have in recharging aquifers into which they infiltrate. Sentinel Quarry would be expanded into the Furnace Canyon watershed by approximately 10.8 acres. The Central Area would be enlarged by 15.2 acres primarily into Furnace Canyon and Holcomb Creek watersheds, and to a lesser extent the Crystal Creek watershed.

The Project would effectively remove 12.9 acres from the Furnace Canyon watershed, which represents 0.1% of the watershed area. 27.9 acres would be removed from the Holcomb Creek watershed. The Forest Service has delineated the entire Holcomb Creek watershed at 30,231 acres (USFS, 2010), so the acreage removed due to the Project would represent a negligible proportion (much less than 0.01%) of this watershed. Based on the relatively small areas that would be removed from these watersheds, reductions in surface flow caused by the Project are considered to be less than significant. Therefore, the reduction in recharge of valley aquifers near the Project Area is also expected to be less than significant.

Section 3.8 of the Draft EIR/EIS provides the evaluation of impacts related to hydrology and water quality.

### ***Project Alternatives***

CEQA requires that a lead agency identify and evaluate a range of reasonable alternatives to the Project in the EIR to foster informed decision making and public participation. The alternatives identified should achieve most of the basic objectives of the proposed Project while substantially lessening or avoiding significant environmental damage of the proposed Project (CEQA Guidelines Section 15126.6(a).) The review must focus on feasible alternatives capable of either eliminating any significant adverse effects, or reducing them to a less than significant level. The Forest Service and County identified four alternatives, including the Project, for detailed analysis in the Draft EIR/EIS. Each alternative is summarized below and a detailed analysis of the potential impacts associated with the alternatives is provided in Section 3 of the Draft EIR/EIS.

*Alternative 1: No Action – Continue Mining under Current Entitlements:* Under this alternative, Omya would not expand the Butterfield and Sentinel Quarries. The existing mining activities located on 137 acres within the 954 acres of unpatented placer claims controlled by Omya would continue in accordance with the approved POO and Reclamation Plans and other federal, state and local regulations.

*Alternative 2: Proposed Project:* Alternative 2 is the Project (Proposed Action). It reflects the activities identified in the Amended POO and Reclamation Plan submitted to the Forest Service and the CUP application submitted to the County.

*Alternative 3: Partial Implementation – Butterfield Quarry Expansion Only:* Under Alternative 3 only the Butterfield Quarry would be expanded. The Sentinel Quarry would continue to be

mined under its current POO and Reclamation Plan. In this alternative the Butterfield Quarry would have a shorter duration of 20 years instead of 40 years as proposed in the Project. This alternative would also have a smaller footprint than the Project by approximately 50 acres.

**Alternative 4: Mixed Production with the White Knob Quarry to Meet Omya's Processing Plant Capacity:** Omya also owns and operates the White Knob Quarry in Lucerne Valley. The ore produced from the White Knob Quarry also goes to the LVPP. The Draft EIR/EIS conservatively evaluated potential impacts by assuming that all the ore going to the LVPP would come from the Butterfield – Sentinel Quarries. The Draft EIR/EIS evaluated 100% of the maximum ore production rate of 680,000 tpy would come the Butterfield -Sentinel Quarry expansion. This alternative would assume that instead of the Butterfield - Sentinel Quarries providing 100% (680,000 tpy) of the ore to the LVPP, an alternative production mix between the Butterfield – Sentinel Quarries and the White Knobb Quarry would be evaluated.

However, this alternative would limit Omya's operational flexibility and potentially prevent Omya from meeting the market demand for high quality limestone. This is because the quality of limestone varies between the ore deposits and often Omya is required to mix resources, or exclude resources from various deposits/quarries in order to obtain a final product that meets the necessary purity levels. It is not possible to predict when resources from one deposit/quarry would be required to "sweeten" the mix in order to accomplish this. In addition, if Omya's White Knob Quarry were to shut down for some unexpected reason, and production limitations were imposed that rely on a certain ratio mix specified this alternative, it could prevent Omya from meeting the market demand. As recently approved, the White Knob quarry is able to provide 100% of the material to the LVPP and as such it would be consistent to allow 100% of the Butterfield and Sentinel Quarries to as well (which would not be feasible in this alternative).

### **Public Comment**

After the publication of the NOP, two public scoping meetings were held to provide the public and government agencies the opportunity to receive information on the CEQA/NEPA process and the Project as well as provide verbal and written comments. Approximately six people attended the meeting in Big Bear and seven people attended the meeting in Lucerne Valley. Thirteen letters/emails were received, eight from governmental agencies and five from organizations or individuals. The comments varied from support for the need of high quality limestone to concern regarding impacts to aesthetics, air quality, biological resources and water quality.

The Draft EIR/EIS was circulated for review and comment from July 13, 2018 to August 28, 2018. The Forest Service and County received three letters from public agencies, and two letters from organizations. In addition, on the last day of the comment period (August 27, 2018), the Forest Service, County and Sespe Consulting each received 1,155 electronically generated emails from "everyactioncustom.com". The 1,155 e-blast were sent by "everyactioncustom.com" on behalf of national and international individual members of the

Center for Biological Diversity (CBD) (communication between SBNF and CBD, 8/24/18). A list of these emails is provided in Appendix A of the Final EIR/EIS, but copies of the 1,155 emails are not included in the Final EIR/EIS. The emails were essentially identical and the substantive concerns are addressed in the Final EIR/EIS.

All comments were carefully reviewed and common concerns that were expressed by several authors were identified. Section 15006 of the CEQA Guidelines and Section 1503.4 of the NEPA Guidelines encourage that environmental documents be organized and written in an efficient and streamlined manner; therefore, “Collective Responses” were developed to address these general concerns. The primary concern addressed in comment letters and in the e-blast was the need to finalize the conservation strategies that were being used as mitigation measures. All conservation strategies (i.e., RCS, BSCS) were finalized and included in the Final EIR/EIS.

**RECOMMENDATION:** That the Planning Commission:

- 1) **APPROVE** the Water Supply Assessment (Exhibit C, Appendix I);
- 2) **CERTIFY** the Final Environmental Impact Report (SCH No. 2013021057)(Exhibit C);
- 3) **ADOPT** the Mitigation Monitoring and Reporting Program (Exhibit D);
- 4) **ADOPT** the recommended Findings for approval (Exhibit A);
- 5) **APPROVE** the addition and revision to the existing Mining and Land Reclamation Plan Conditional Use Permit to expand the Butterfield and Sentinel Limestone Quarries on 94.9 acres, and incorporate an amended Plan of Operations and Reclamation Plan subject to the recommended Conditions of Approval (Exhibit B); and
- 6) **DIRECT** Staff to file a Notice of Determination.

**ATTACHMENTS:**

- Exhibit A: Findings  
Exhibit B: Conditions of Approval  
Exhibit C: Draft and Final EIR/EIS and Technical Studies posted at:  
<https://www.fs.usda.gov/project/?project=32613>  
<http://cms.sbcounty.gov/lus/Planning/Environmental/Desert.aspx>  
Exhibit D: Mitigation Monitoring and Reporting Program  
Exhibit E: Site Plan

# **EXHIBIT A**

## **Findings**



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## **FINDINGS: CONDITIONAL USE PERMIT**

The following are the required findings, per the San Bernardino County Development Code ("Development Code") Section 85.06.040, and supporting facts for a revision to an existing Mining and Land Reclamation Plan and Conditional Use Permit (CUP) to expand the Butterfield and Sentinel Limestone Quarries on 94.9 acres of SBNF land. The Butterfield and Sentinel Quarries would be mined for an additional 40 and 20 years, respectively. (Project: A20120022) (APN: 0446-121-04, -06, -17)

**1. THE SITE FOR THE PROPOSED USE IS ADEQUATE IN TERMS OF SHAPE AND SIZE TO ACCOMMODATE THE PROPOSED USE AND ALL LANDSCAPING, OPEN SPACE, SETBACKS, WALLS AND FENCES, YARDS, AND OTHER REQUIRED FEATURES PERTAINING TO THE APPLICATION.**

All required features of the Project and proposed use are accommodated including crushing process, haul roads, and material; stockpiling, yards and other required mining and excavation features pertaining to the CUP mining application. The quarries would be multi-bench open pit mines. Several working levels would be operated at any one time to supply the quota of ore needed to meet production demands. The ore would be drilled and blasted, loaded into haul trucks and hauled to the crusher currently located just southwest of the Sentinel Quarry. Crushed ore would be loaded into off-road haul trucks and transported eight miles on the vested Crystal Creek Haul Road to the existing Lucerne Valley Processing Plant. The 94.9 acre mining area will be excavated and reclaimed in a phased plan intended to minimize impacts as mining and reclamation activities occur. Moreover, the Project conforms to all the requirements of the Development Code for the proposed use and incorporates the necessary conditions to safeguard the public health, safety and welfare, including biological, hydrology and reclamation conditioning to ensure the site is reclaimed in accordance with the adopted reclamation plan.

**2. THE SITE FOR THE PROPOSED USE HAS ADEQUATE ACCESS, WHICH MEANS THAT THE SITE DESIGN INCORPORATES APPROPRIATE STREET AND HIGHWAY CHARACTERISTICS TO SERVE THE PROPOSED USE.**

The Project site design incorporates appropriate street, haul roads and highway characteristics to serve the proposed use. The Project site has adequate access via National Trail Highway from Interstate I-40. National Trail Highway will not be significantly impacted by the 10-20 truck trips per day that are projected to occur. In that the project is located in a remote area surrounded by vacant land, there are no conflicts with access to surrounding properties.

**3. THE PROPOSED USE WILL NOT HAVE A SUBSTANTIAL ADVERSE EFFECT ON ABUTTING PROPERTY OR THE ALLOWED USE OF THE ABUTTING PROPERTY, WHICH MEANS THE USE WILL NOT GENERATE EXCESSIVE NOISE, TRAFFIC, VIBRATION, LIGHTING, GLARE, OR OTHER DISTURBANCE.**

The proposed mining operation and project improvements have been designed to incorporate the necessary mitigation and improvements to comply with the County's Surface Mining and

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Reclamation Act (SMARA) Ordinance and recommendations by the State Division of Mining and Reclamation (DMR) and, therefore, will not have a substantial adverse effect on abutting property or the allowed use of the abutting property, including but not limited to excessive noise, traffic, vibration, or other disturbance. In addition, the use will not substantially interfere with the present or future ability to use solar energy systems.

**4. THE PROPOSED USE AND MANNER OF DEVELOPMENT ARE CONSISTENT WITH THE GOALS, MAPS, POLICIES, AND STANDARDS OF THE COUNTY GENERAL PLAN AND ANY APPLICABLE COMMUNITY OR SPECIFIC PLAN.**

The proposed site plan together with the provisions for the Project's phased expansion, excavation and reclamation are consistent with the County General Plan and Resource Conservation (RC) land use designation. The Project specifically implements the following goals:

General Plan Goal ED 7: The County will conserve mineral resources for extractive industries.

General Plan Goal ED 10: The County will have a strong and diversified base.

General Plan Goal CO 7: The County will protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment.

General Plan Goal CO 7.5: Provide for the monitoring of mining operations for compliance with the established operating guidelines (i.e., SMARA) conditions of approval and the reclamation plan.

General Plan Goal LU 1: The county will have a compatible and harmonious arrangement of land uses by providing a type and mix of functionally well-integrated land uses that are fiscally viable and meet general social and economic needs of the residents.

General Plan Goal LU 11: Promote beneficial uses of land to address regional problems through coordination and cooperation among the County, the incorporated cities, Southern California Association of Governments (SCAG), San Bernardino Associated Governments (SANBAG), the various special districts and other local, state (i.e., DMR) and federal agencies.

**5. THERE IS SUPPORTING INFRASTRUCTURE, EXISTING OR AVAILABLE, CONSISTENT WITH THE INTENSITY OF THE DEVELOPMENT, TO ACCOMMODATE THE PROPOSED PROJECT WITHOUT SIGNIFICANTLY LOWERING SERVICE LEVELS.**

The mining site is in a remote rural location significantly isolated from residential and commercial uses. The site is largely disturbed by past unauthorized mining activities. It is estimated that the existing disturbance occurred during the 1970s or 1980s. No reclamation of the mined area occurred.

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**6. THE LAWFUL CONDITIONS STATED IN THE APPROVAL ARE DEEMED REASONABLE AND NECESSARY TO PROTECT THE OVERALL PUBLIC HEALTH, SAFETY AND GENERAL WELFARE.**

The conditions of approval include measures to mitigate biological impacts, air quality impacts, cultural resources impacts, greenhouse gas impacts, hydrology and water impacts while enforcing performance standards and are deemed reasonable and necessary to protect the overall public health, safety and general welfare as determined by the County's environmental analysis of the Project.

**7. THE DESIGN OF THE SITE HAS CONSIDERED THE POTENTIAL FOR THE USE OF SOLAR ENERGY SYSTEMS AND PASSIVE OR NATURAL HEATING AND COOLING OPPORTUNITIES.**

The design of the Project site considered the potential for the use of solar energy systems and passive or natural heating and cooling opportunities, through the orientation and design with adequate building setbacks. Although solar was not proposed, there is opportunities to place solar in the future.

**OMYA BUTTERFIELD AND SENTINEL QUARRY EXPANSION PROJECT**  
**Project No. AP20120022**  
**Mine ID: 91-36-0052**  
**Reclamation Plan No 94M-02**

**Findings: Reclamation Plan**

Amended Reclamation Plan No. 94M-02 for the addition and revision to an existing Mining and Land Reclamation Plan Conditional Use Permit (CUP) to expand the Butterfield and Sentinel Limestone Quarries on 94.9 acres of San Bernardino National Forest (SBNF) land and to amend an existing Plan of Operations (POO) / Reclamation Plan (Project). The Butterfield and Sentinel Quarries would be mined for an additional 40 and 20 years, respectively. Up to 1,487,500 tons of material (limestone and waste rock) would be excavated resulting in 680,000 of quality limestone being produced annually.

Pursuant to Development Code Section 88.03.060(k)(1) and (2), the following findings must be made in the affirmative in order to approve the Project's Reclamation Plan:

- 1. The Amended Reclamation Plan No 94M-02 (Reclamation Plan) complies with the California Surface Mining and Reclamation Act (SMARA)(Public Code Sections 2772-2773) and any other applicable provisions.**

The Reclamation Plan was reviewed, and conditioned, for compliance with SMARA. It has also been reviewed and accepted by the California Department of Conservation Division of Mine Reclamation.

- 2. The Reclamation Plan complies with applicable requirements of State regulations (California Code of Regulations Sections 3500-3505 and 3700-3713).**

The Reclamation Plan was reviewed, and conditioned, for compliance with SMARA. It has also been reviewed and accepted by the California Department of Conservation Division of Mine Reclamation.

- 3. The Reclamation Plan and potential use of land reclaimed in compliance with the Reclamation Plan are consistent with the Development Code, General Plan and any applicable resource plan or element.**

The Reclamation Plan and potential end use of lands disturbed and reclaimed in compliance with the Plan, as conditioned, are consistent with the Development Code and General Plan.

- 4. The Reclamation Plan has been reviewed in compliance with the California Environmental Quality Act (CEQA) and the County's environmental review guidelines, and all significant adverse impacts from reclamation of the surface mining operations are mitigate below a level of significance or to the maximum extent feasible.**

An Initial Study and a joint Environmental Impact Report and Environmental Impact Statement (EIR/EIS) were prepared in compliance with CEQA and the National Environmental Protection Act (NEPA). The Project will not have a significant adverse impact on the environment, subject to implementation of the proposed Conditions of Approvals and mitigation measures. There are no statements of overriding consideration necessary for this Project. The County as lead agency for the State of California has reviewed and considered the Initial Study, EIR/EIS, and supporting documents/technical reports prior to its adoption and prior to approval of the Project. The Initial Study and EIR/EIS reflects the independent judgment of the County of San Bernardino.

- 5. The Project site and/or resources, such as water, will be reclaimed to a condition that is compatible with, and blends in with, the surrounding natural environment, topography, and other open space resources, or suitable off-site development will compensate for related disturbance to resource values.**

Affected lands will be reclaimed to a condition compatible with, and blending with, the surrounding natural environment, topography, and other open space resources as identified in the Reclamation Plan. Financial Assurances and annual mine inspections pursuant to SMARA will take place to ensure this occurs. Groundwater resource will also be monitored and mitigated should related disturbance to this resource occur.

- 6. The Reclamation Plan will reclaim the mined lands to a usable condition which is readily adaptable for alternative land uses consistent with the General Plan and applicable resource plan.**

The Reclamation Plan, as conditioned, along with annual mine inspections pursuant to SMARA will ensure reclamation of the mined lands return to a usable condition that is readily adaptable for alternative land uses, which with regard to this Project, is open space.



**7. The County has responded to comments and recommendations raised by the Division of Mine Reclamation (DMR), a division of the State Department of Conservation, in its review of the Projects Reclamation Plan.**

In a letter dated August 19, 2013, DMR (OMR at that time) provided comments on the Project's Reclamation Plan. On July 23, 2018, the County provided comment responses to DMR. The County has not received any further comments from DMR. The County notified DMR of the Planning Commission hearing scheduled for December 19, 2019, at which time approval of the Project was to be considered, pursuant to the County's responses, and the Conditions of Approval (COAs) required for this Project, the concerns expressed by DMR have been addressed.

8. An Initial Study and a joint Environmental Impact Report and Environmental Impact Statement (EIR/EIS) were prepared in compliance with CEQA and the National Environmental Protection Act (NEPA). The Project will not have a significant adverse impact on the environment, subject to implementation of the proposed COAs and mitigation measures. There are no statements of overriding consideration necessary for this Project. The County as lead agency for the State of California has reviewed and considered the Initial Study, EIR/EIS, and supporting documents/technical reports prior to its adoption and prior to approval of the Project. The Initial Study and EIR/EIS reflects the independent judgment of the County of San Bernardino.

## **EXHIBIT B**

### **Conditions of Approval**

## **CONDITIONS OF APPROVAL**

### **OMYA BUTTERFIELD AND SENTINEL LIMESTONE QUARRIES**

Mining Conditional Use Permit and Reclamation Plan 94M-02

Omya, Inc.

Conditions of Operation and Procedures

### **GENERAL CONDITIONS**

#### **LAND USE SERVICES DEPARTMENT– Planning Division (909) 387-8311**

1. Project Description. Mining Conditional Use Permit (Mining CUP) and Reclamation Plan 94M-02 approval for the Butterfield and Sentinel Limestone Quarries on 94.9-acre surface mining operation within the San Bernardino National Forest (SBNF) land. The Project will produce up to 680,000 tons of high-quality limestone per year. The Butterfield and Sentinel Quarries will be mined for an additional 40 years and 20 years, respectively.
2. Project Location. The proposed Butterfield and Sentinel Quarries are located approximately 7.5 miles south of Lucerne Valley and 5 miles north of Big Bear Lake within the SBNF, in San Bernardino County, California. The Land Use Zoning District is Resource Conservation (RC), which allows for mining with an approved Mining CUP and Reclamation Plan. (APNs: 0446-121-04, -06, -17, AP20120022, 94M-02)
3. Effective Dates. This Mining CUP and Reclamation Plan approval (project account number AP20120022) shall be effective from the time of approval for 40 years. Reclamation will require an additional 10 years. The approval shall be considered exercised on the effective date. At the conclusion of all mining activities, the site will be reclaimed to vacant open space and support wildlife habitat.
4. Reclamation Plan Recordation. Pursuant to Public Resources Code Section 2772.7, Planning will prepare a “Notice of Reclamation Plan Approval” on a form to be approved by the County Recorder’s Office. The operator shall be responsible for review costs and recording fees.
5. Revisions/Amendments. Any alteration or expansion of these facilities or increase in the developed area of the site from that shown on the final approved Mining and Reclamation plans will require submission of an additional application for review and approval. If Mining and Reclamation Plan procedures change from those outlined in the Butterfield and Sentinel Mining and Reclamation Plan prepared by Omya, Inc., and their consultants Lilburn Consulting and Sespe Consulting, dated February, 2018, the applicant/operator shall file an amendment and secure approval before such changes can be made effective.
6. Continuous Effect/Revocation. All conditions of the Butterfield and Sentinel Mining CUP and Reclamation Plan 94M-02 are continuing conditions. Failure of the applicant/operator to comply with any or all of said conditions at any time could result in the notice of a public

hearing before the Planning Commission to consider revocation of the Mining CUP. If revocation is confirmed, the Planning Commission may provide for a reasonable period of time to amortize any lawful existing uses and require the commencement of reclamation in accordance with approved Reclamation Plan 94M-02.

7. Written Notification. The Land Use Services Department shall be notified in writing, within 30 days, regarding any:
  - a) Change in operating procedures, or inactive periods of operation for one (1) year or more.
  - b) Changes of Company ownership, address, or telephone number during the life of the Mining CUP and Reclamation Plan.
  - c) Changes to provisions in lease agreements or real property having any effect on the approved Mining and Reclamation Plan.
8. Mining and Reclamation Plan. The approved Butterfield and Sentinel Mining CUP and Reclamation Plan 94M-02 and these corresponding Conditions of Approval shall be kept at the site at all times during active operations and be presented to the inspector upon request.
9. CA Mine ID. The existing Butterfield and Sentinel Quarries operate under the California Mine Identification number 91-36-0052 as designated by the California Department of Conservation (DOC) pursuant to Public Resources Code, Section 2207. Omya shall file annual reports and pay all associated fees to the State.
10. Blasting. Blasting shall continue in the same manner as currently being conducted and in compliance with the Mine Safety and Health Administration (MSHA) and California Safety and Health Administration (CalOSHA) requirements. Blasting may be conducted approximately once a week at each quarry during daylight hours.
11. Interim Management Plan. The applicant shall implement measures to stabilize and secure the site during periods of inactivity as per the approved Mining CUP and Reclamation Plan. An Interim Management Plan (IMP) as required by SMARA, Public Resources Code Section 2770(h)(1) shall be submitted to Planning for review and approval within 90 days of the mining operation becoming idle.
12. Additional Permits/Approvals. The applicant/operator shall ascertain and comply with requirements of all County, State, and Federal agencies as may be applicable to the Project. These include, but are not limited to the following: US Forest Service, San Bernardino County Departments of Land Use Services, Public Health, Environmental Health Services, Public Works, Fire Department, Mojave Desert Air Quality Management District (MDAQMD), Lahontan Regional Water Quality Control Board (RWQCB) Region 6, , State Fire Marshal, Mojave Water Agency, California Department of Fish and Wildlife (CDFW) Region 6, U.S Fish and Wildlife, Army Corp of Engineers, State Mining and

Geology Board, California Department of Conservation, California Highway Patrol, California Occupational Safety and Health Administration (OSHA), and the Mine Safety and Health Administration (MSHA).

13. Existing Conditions of Approval: The existing Conditions of Approval (Revised July 30, 2003) are made a part of this amendment or expansion to Reclamation Plan 94M-02. Notwithstanding, this amendment shall not affect the completion of the previously approved mine facilities, excepting where new disturbance is proposed.
14. Indemnification. In compliance with San Bernardino County Code (SBCC) Section 81.01.070, the applicant shall agree, to defend, indemnify, and hold harmless the County or its "indemnitees" (herein collectively the County's elected officials, appointed officials (including Planning Commissioners), Zoning Administrator, agents, officers, employees, volunteers, advisory agencies or committees, appeal boards or legislative body) from any claim, action, or proceeding against the County or its indemnitees to attack, set aside, void, or annul an approval of the County by an indemnitee concerning a map or permit or any other action relating to or arising out of County approval, including the acts, errors or omissions of any person and for any costs or expenses incurred by the indemnitees on account of any claim, except where such indemnification is prohibited by law. In the alternative, the applicant may agree to relinquish such approval.

Any Condition of Approval imposed in compliance with the County Development Code or County General Plan shall include a requirement that the County acts reasonably to promptly notify the applicant of any claim, action, or proceeding and that the County cooperates fully in the defense. The applicant shall reimburse the County and its indemnitees for all expenses resulting from such actions, including any court costs and attorney fees, which the County or its indemnitees may be required by a court to pay as a result of such action. The County may, at its sole discretion, participate at its own expense in the defense of any such action, but such participation shall not relieve the applicant of their obligations under this condition to reimburse the County or its indemnitees for all such expenses.

This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. The applicant's indemnification obligation applies to the indemnitees' "passive" negligence but does not apply to the indemnitees' "sole" or "active" negligence or "willful misconduct" within the meaning of Civil Code Section 2782.

15. Financial Assurances. The applicant/operator shall maintain an acceptable form of Financial Assurance for the Mining CUP and Reclamation Plan 94M-02. The Financial Assurance mechanism shall identify the County of San Bernardino and the California DOC as the beneficiaries.

The Financial Assurance shall be calculated based on a cost estimate submitted by the applicant/operator and approved by the County and the California Department of Conservation, Division of Mine Reclamation for the approved reclamation procedures.



Within 30 days following the mine site inspection, a Financial Assurance Cost Estimate shall be provided to the Land Use Services Department. The assurance amount shall be reviewed and, if necessary, adjusted to account for new lands disturbed by surface mining operations, inflation and reclamation of lands accomplished in accordance with approved Reclamation Plan 94M-02.

The Financial Assurance is not established to replace the applicant's/operator's responsibility for reclamation, but to assure adequate funding to complete reclamation per the Mining and Reclamation Plan 94M-02 and Conditions of Approval. Should the applicant/operator fail to perform or operate within all of the requirements of the approved Mining and Reclamation Plan, the County or Department of Conservation will follow the procedures outlined in Sections 2773.1 and 2774.1 of SMARA regarding the encashment of the assurance and applicable administrative penalties, to bring the applicant/operator into compliance. The requirements for the assurance will terminate when reclamation of the site has been completed in compliance with the approved Mining and Reclamation Plan and accepted by the County and the California Department of Conservation, Division of Mine Reclamation pursuant to California Code of Regulations (CCR), Section 3805.5.

16. SMARA and State Regulations. The provisions of the California Surface Mining and Reclamation Act of 1975 ("SMARA", Public Resources Code Section 2710 et seq.), Public Resources Code Section 2207, and the regulations implementing SMARA ("State Regulations", California Code of Regulations Section 3500 et seq.) are made a part of the CUP. In the event that the State amends SMARA to the extent it adds to or conflicts with the Conditions of Approval, State law shall prevail.
17. Annual Reporting and Inspection. The applicant/operator shall provide a Mining Operation Annual Report to the California DOC and to Land Use Services Department on a date established by the California DMR, using forms furnished by the State Mining and Geology Board. The County is required to conduct an inspection of the surface mining operation by a qualified person not less than once each calendar year to determine if the operation is in compliance with the approved Conditions of Approval, Reclamation Plan, and SMARA statutes and regulations. The County is required to notify the California DMR upon completion of the inspection that the inspection has been conducted and provide a statement regarding the status of compliance of the operation within 90 days after completion of the inspection. The operator of the mining operation is responsible for filing an application with the County to request an inspection and shall be responsible for paying the County's costs in conducting the mine site inspection.
18. Applicant/Operator. Requirements extend to the property owner and any person, lessee, tenant or sub-tenant, operator, individual, firm, association, corporation, organization, limited liability company or partnership, or any city, county, district, or the state or any department or agency thereof for any disturbance or improvements to the mined lands. The applicant/operator may include an agent or other interested party, and any heir or successor in interest in the project land use by sale or by lease of all or of a portion of the

mine site including land use within any or all of the mine structures or areas on the mine site.

19. Minerals. Include any naturally occurring chemical element or compound, or groups of elements and compounds, formed from organic and inorganic processes. Clay, sand, gravel, rock, decomposed granite, salts, alumina, silica, alkali, topsoil or growth medium, organic humus and gems represent the aggregate of different minerals.
20. Construction and Demolition (C&D). Materials left on site shall be deemed as waste material produced in the process of site clearing activities, construction, renovation, or demolition of structures of all types to include roads and bridges. Waste materials include, but is not limited to concrete, asphalt, wood, metals, gypsum wallboard and brick. The Financial Assurance Cost Estimate shall include costs to remove C&D materials to an approved offsite facility that is permitted to receive such materials.
21. Exploration or Prospecting. Includes the activities in search for minerals by geological, geophysical, geochemical or other techniques, including, but not limited to, sampling, assaying, drilling, or any surface or underground works needed to determine the type, extent, or quantity of minerals present.
22. Project Design Features: Project Design Features (PDFs) are aspects of the proposed project that have already been designed into the mining operations.
23. Mitigation Measures: Mitigation Measures (MMs) are environmental protection measures developing during the CEQA process (in addition to the proposed PDFs) that have been determined necessary to further protect the environment.
24. Ownership. The person(s) involved in the ownership of the property include all persons having interest in the ownership of the surface and subsurface property, including mineral rights. If the applicant/operator is not the recorded owner(s) of the property must submit a signed statement by the property and mineral rights owner(s) authorizing the Applicant to act on their behalf.
25. Operator. The Operator includes the Applicant and any person who is engaged in surface mining operations, and others contracted to conduct operations on his or her behalf, except a person who is engaged in surface mining operations as an employee with wages as his or her sole involvement and compensation.
26. Operations. Surface mining operations include all, or any part of, the process involved in the mining of minerals on mined lands, borrow pitting, segregation and stockpiling of mined materials (and recovery of same).
27. Mined Lands. Include the surface, subsurface, and groundwater of an area in which surface mining operations will be, are being, or have been conducted, including private ways and

roads appurtenant to any such area, land excavations, workings, mining waste, and areas in which structures, facilities, equipment, machines, tools, or other materials or property which result from, or are used in, surface mining operations are located.

28. Parcel Map. The applicant/operator shall, prior to final inspection for reclamation and release of the financial assurance, record a parcel map for Assessor Parcel Numbers (APNs) 0446-121-04, -06, and -17 any other parcel(s) where unconsolidated fill is part of the final reclamation. The parcel map shall indicate those areas backfilled with uncompacted material and designate said areas as unbuildable. At such time a California Building Code (CBC) compaction report has been approved by Building and Safety, that particular area can have the building restriction removed.
29. Limestone Removal. The applicant shall not sell or otherwise move off the mine site any limestone or other produced minerals to a public agency unless the operator certifies, under penalty of perjury, that the mining operation is identified in the AB 3098 List published pursuant to PRC Section 2717(b).
30. Produced Minerals. As defined in CCR Section 3501 includes all minerals sold, given or otherwise moved off the site of the operation, as defined in the approved reclamation plan. Recycled products (e.g. broken concrete, bricks, asphaltic concrete, etc.) or stockpiles of mineral products that remain on the site are not produced minerals for purposes of CCR Section 3695(b).
31. Project Account. As determined necessary on a case by case basis, the applicant/operator shall deposit funds with the County necessary to compensate staff time and expenses for review of compliance monitoring reports and site inspections. The project account number for this Mining CUP is AP20120022. This is an actual cost project with a deposit account to which hourly charges are assessed by various county agency staff, including but not limited to: Land Use Services, Public Works, and County Counsel.

Upon notice, the applicant shall deposit additional funds to maintain or return the account to a positive balance. The applicant/operator is responsible for all expenses charged to this account.

**COUNTY FIRE DEPARTMENT – Community Safety Division (760) 254-5474**

32. Jurisdiction. The above referenced Project is under the jurisdiction of the San Bernardino County Fire Department herein (“Fire Department”). Prior to any construction occurring on any parcel, the developer shall contact the Fire Department for verification of current fire protection requirements. All new construction shall comply with the current Uniform Fire Code requirements and all applicable statutes, codes, ordinances and standards of the Fire Department.

33. Access. The primary access route shall comply with the minimum requirements for fire protection and/or emergency response with applicable local ordinances, codes, and/or fire protection standards.

## **MINING OPERATIONS**

### **LAND USE SERVICES DEPARTMENT – Planning Division (909) 387-8311**

#### **General**

34. Operations. Extraction and processing operations shall proceed in accordance with the Butterfield and Sentinel Quarries Mining CUP and Reclamation Plan 94M-02. Mineral extraction, stockpiling and crushing will adhere to the mining operations outlined in the Butterfield and Sentinel Quarries Mining Plan.
35. Best Management Practices (BMP's). The operator shall implement the BMP's procedures. BMP provisions shall include, but not limited to, the following:
- Good Housing Keeping – Dust minimization, waste spills, discharges.
  - Preventive Maintenance – Minimize spills, and on-site leaks, prompt maintenance.
  - Spill and Leak Preventive Response – In place spill procedures and controls.
  - Material Handling and Waste Mgmt. – Waste covering, storm water diversion practices, waste clean ups.
  - Implement Erosion and Sediment Controls – Sediment and Erosion Stabilization
  - Employee Training Program- BMP Training.
  - Exposure Minimization – Storm resistant shelters to prevent contact of storm water with mining materials, as feasible.
  - Storm Water Containment & Discharge Reduction – BMP's that divert, reuse, contain or reduce volume of storm water runoff.
36. Employee Training. Develop an Employee Training Awareness Plan that addresses training requirements, as necessary to comply with relevant regulations and approval conditions and mitigations identified in the Final EIR/EIS. (PDF: TR-1)
37. Additional Environmental Control Measures. In addition to the BMPs and PDFs stated herein, the Operator shall implement the environmental control measures identified below in the specific resource sections of these COAs.

#### **Cultural Resources**

38. Archaeological Resources. The developer/property owner shall submit a letter to the County Land Use Services Department- Planning Division (County) agreeing to adhere to the following requirements:

In the event archaeological resources are uncovered during earthmoving activities, all work in that area shall cease immediately and the County shall be notified. A qualified archeologist shall be retained to access the findings, and if, necessary, provide appropriate disposition of the resources. Earthmoving shall be diverted temporarily around the deposits until they have been evaluated, recorded, excavated, and/or recovered as necessary. Earthmoving shall be allowed to proceed on the site when the archaeologist, in consultation with the appropriate Native American Tribe(s), the County, and the qualified archaeologist determines the resources are recovered to their satisfaction.

39. Paleontological Resources. The developer/property owner shall submit a letter to County Land Use Services Department- Planning Division (County) agreeing to adhere to the following requirements:

In the event paleontological resources are uncovered during earthmoving activities, all work in that area shall cease immediately and the County shall be notified. A qualified paleontologist shall be retained to access the findings, and, if necessary, provide appropriate disposition of the resources. Earthmoving shall be diverted temporarily around the deposits until they have been evaluated, recorded, excavated, and/or recovered as necessary. In consultation with the Project proponent, the County, the qualified paleontologist shall develop a plan of mitigation which shall include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation in the find a local qualified repository, and preparation of a report summarizing the find.

### **Hydrology, Drainage and Water Quality**

40. Drainage and Sedimentation. In accordance with the Geology and Soils Memorandum by SLR (SLR, June 5, 2013) and the slope stability investigation report prepared by CHJ (CHJ, 2012), the following PDFs shall be implemented to address drainage control:
- a) Control of surface drainage, erosion, and sedimentation of the proposed haul road and quarry operations would involve the following primary components currently being implemented for existing operations: (PDF: GEO-1)
- Limiting surface disturbance to the minimum area required for active operations.
  - Diverting runoff, where operationally feasible, such that runoff from undisturbed areas does not enter the area of active operations.
  - Using ditches, sediment basins and localized control and maintenance measures to intercept and control runoff along the haul road.
  - Stabilizing disturbed areas through regarding, revegetation and other restoration practices.

- Direct runoff into the quarries, sediment catchment basins, sumps and culverts.
- b) Dispose of sediment from runoff control basins to pre-approved sites rather than side cast. (PDF: GEO-2)
- c) Control runoff, drainage, off-site transport and erosion at fill and overburden pads by:
- Constructing berms near the crest of the pads.
  - Placing rip rap, catchment basins and/or energy dissipaters along the toe of the fill and in the drainage below the fill slope. (PDF: GEO-3)
- d) Implement BMPs in accordance with the most current Industrial General Stormwater Permit and per the Omya's SWPP Plan. (PDF: GEO-7; PDF: SW-1)
- e) Minimize ground disturbance to the minimum that is required to construct and operate the quarry. (PDF: GEO-8)
41. Water Supply. Ensure that water production will remain within Omya's designated Free Production Allowance (FPA). (PDF: GW-1)
42. Compliance. Comply with all SMARA, water quality and hazardous materials management regulatory requirements and identified BMP/design features. (PDF: GW-2; PDF GW-3)

Note: Also see COA 48 through 64, COA 95

### **Air Quality**

43. Air Quality – General. Comply with all relevant MDAQMD regulations and permit conditions to minimize air emissions (PDF: AIR-1)
44. Baghouse. Ensure the baghouse for the stationary crusher is in a good operating condition as required by the permit. (PDF: AIR-2)
45. Dust Control Plan. Prepare and implement a Dust Control Plan pursuant to SBCC Chapter 88.02 and Section 88.02.040 and the Mojave Desert Air Quality Management District (MDAQMD). The Plan shall, at minimum, include the following aspects:
- a) Use water or chemical suppressants to control dust at the quarry, crusher site, overburden pads and haul/quarry roads. (PDF: AIR-3)
  - b) Mining activities will be limited or stopped during significant wind events. (PDF: AIR-5)
  - c) Unpaved roads shall be controlled by at least 80% using methods that are consistent with MDAQMD guidance. (MM: AQ-1)



- d) Areas to be graded and where bulldozer operates shall controlled by at least 85% using methods that are consistent with MDAQMD guidance. (MM: AQ-2)
46. Diesel Emissions. Ensure that diesel equipment and vehicles meet the required CARB diesel regulations. (PDF: AIR 4)
47. Equipment Emission Reduction and Idling. Maintain and operate construction equipment so as to minimize exhaust emissions. During mining, trucks and vehicles in loading and unloading shall have their engines turned off when not in use, to reduce vehicle emissions.
48. Exhaust Control Measures. Comply with all existing and future EPA (Clean Air Non-road Diesel Rule-May 2004), CARB and MDAQMD regulations related to diesel-fueled trucks and equipment, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

Operation of all off-road and on-road diesel vehicles/equipment shall comply with the County Diesel Exhaust Control Measures (SBCC, Section 83.01.040 (c)) including but not limited to:

- a) Equipment/vehicles shall not be left idling for period in excess of five minutes;
- b) Engines shall be maintained in good working order to reduce emissions;
- c) Onsite electrical power connections shall be made available where feasible;
- d) Ultra-low-sulfur diesel fuel shall be utilized;
- e) Electric and gasoline powered equipment shall substitute for diesel powered equipment where feasible;
- f) Signs shall be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use;

### **Hazardous and Hazardous Materials; Geology Slope Stability**

49. Hazardous Materials Business Plan / Emergency/Contingency Plan. The operator shall establish a Business Emergency/Contingency Plan to establish protocol in the event of release or threatened release of hazardous materials and wastes. Contact Office of the Fire Marshall, Hazardous Materials Division at (909) 386-8401.
50. Hazardous Materials Handling. The operator shall be required to apply for one or more of the following permits: a Hazardous Materials Permit, a Hazardous Waste Permit, and/or a Aboveground Storage Tank Permit, as appropriate.
51. Chemical Spills/Leakage. All chemical spills or leakage of petroleum products during mining or reclamation activities shall be remediated in compliance with applicable federal, state and local regulations regarding cleanup and disposal of the contaminant released. Contaminated wastes shall be collected and disposed of at an appropriately licensed disposal or treatment facility.

In the event of any soil contamination on-site, the applicant/operator shall remove any soils that become chemically contaminated to a County-approved disposal site so as to preclude any chemical leaching into the local ground water supply over time.

52. Compliance. Comply with the Hazardous Materials Business Plan, SWPPP, SPCC Plan and BMPs as required by these plans and hazardous materials and waste regulatory requirements. (PDF: HM-1)
53. Management of Hazardous Materials. Ensure that the use, transport, management, storage and disposal of fuels (i.e. diesel and gasoline) and other hazardous materials used for mining operations (i.e. motor oil, transmission fluids, hydraulic fluids, lubricating greases, brake fluids and/or antifreeze) are in accordance with federal, state and local hazardous materials and waste management regulations. (PDF: HM-2)
54. Above Ground Storage Tank. Inspect and maintain the fuel above ground storage tank to ensure that the secondary containment (i.e. double wall tank) and spill prevention controls and countermeasures are present and/or operating as required. (PDF: HM-3)
55. Hazardous Materials Business Plan. Maintain an updated Hazardous Materials Business Plan and hazardous materials inventory per CUPA requirements. (PDF: HM-4)
56. Blasting Schedule. Minimize blasting events to the extent possible (approximately once per week per quarry) and only blast during daylight hours. (PDF: HM-5)
57. Management of Explosive Materials. Conduct transportation, storage and handling of explosives in accordance with regulatory requirements and only with licensed, trained and qualified professionals. (PDF: HM-6)
58. Emergency Response Equipment. Maintain all emergency and spill response equipment in proper operating condition and have available at areas where hazardous materials and waste are used, transported and/or stored. (PDF: HM-7)
59. Hazardous Material/Waste Training. Ensure all personnel are appropriately trained in hazardous materials and waste management, including spill prevention and response procedures. (PDF: HM-8)
60. Seismic Events: Inspect slope conditions after seismic events and remove precarious rocks from slopes. Slope conditions in the Project Area shall be inspected after a seismic event exceeding 5.5 magnitude on the Richter Scale originating from an epicenter located within 100 miles of the Project Area. Quarry operations shall be halted until a qualified geotechnical engineer is retained to inspect slope conditions for potential loose blocks or other unsafe or unstable conditions. Any required slope stabilization measures must lead to achievement of a minimum factor of safety of 1.5 before quarry operations continue.

The Project Area shall also be inspected for precarious rocks. Natural weathering processes would result in accumulation of talus on excavated benches. The talus can be left on the slopes to facilitate revegetation and to give reclaimed slopes a relatively natural appearance. It is anticipated that any boulders resulting from weathering processes would be angular and would therefore be less likely to roll downhill. Any large unstable rounded boulders on slopes steeper than 2:1 must be removed or stabilized where accessible. Areas below loose rocks shall be restricted from entry and identified with proper signage. (MM: GS-1; PDF: GEN-1; PDF: GEO-4)

61. Blasting. Blasting shall be conducted in accordance with applicable regulations, including but not limited to MSHA, CalOSHA, SMARA, DOT). The blasting agent used at the quarries shall be stored off the Project site, in magazines at designated locations at the Omya Lucerne Valley operations. Explosives are only transported to the site by a licensed contractor as necessary.
62. Slope Inspections. Routinely inspect quarries for unsafe and unstable conditions. (PDF: GEO-5)
63. Slope Design. Implement quarry design and procedures recommendations identified in approved slope stability investigations and per SMARA requirements. (PDF: GEO-6)
64. Slope Monitoring. Slope monitoring shall be implemented to assure that unnecessary hazards are not created with the active or final reclaimed slopes. A qualified independent California Certified Professional Civil Engineer and/or Engineering Geologist shall complete a stability assessment of existing and new quarry development areas when deemed necessary by the County inspector. The analysis shall identify and discuss significant structural features or indications of potential instability encountered. (MM: GEO-1)
65. Vehicle Maintenance. Ensure that all equipment shall be properly tuned and maintained in accordance with manufacturer's specifications. Vehicle maintenance and servicing shall be accomplished offsite at the mine contractor's equipment facility except for situations where unplanned maintenance situations occur.
66. Fuel Sources. Ensure on-site mobile equipment is powered by alternative fuel sources (i.e. methanol, natural gas, propane, or butane) as feasible. Commercial power shall be used when feasible.

## **Biological Resources**

67. General Biological Resource Protection: Omya shall minimize disturbance or hazards to surrounding vegetation, habitat, and wildlife, such as toxic substances, dust, noise, and lighting, as follows:
  - a) New lighting shall be established at the minimum necessary to meet safety requirements, and shall be shielded to avoid lighting the surrounding habitat and the night sky;

- b) Except as necessary to survey or maintain the safety of the mine site, the Project's disturbance footprint shall be limited to areas designated for mining and related activities;
  - c) Equipment staging areas and other construction or related habitat disturbance shall be limited to areas within the new or existing quarry footprint(s) and shall be designed and operated to the goal of minimizing impacts to adjacent habitat and sensitive biological resources;
  - d) Design future overburden to be placed or backfilled into existing overburden areas and completed quarries as much as feasible to avoid possible impacts to existing Cushenbury oxytheca populations.
  - e) Any soil bonding or weighting agents to be used on unpaved surfaces shall be non-toxic to wildlife and plants and non-attractants for wildlife;
  - f) All vehicles and equipment shall be maintained in proper working condition to minimize the potential for spill of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials; except as necessary to repair or remove disabled vehicles or equipment, vehicle servicing shall take place only at a designated area;
  - g) All trash and food-related waste shall be secured in self-closing animal-proof containers and removed daily from the site;
  - h) Only authorized personnel (including CDFW, USFWS and USFS) shall bring firearms or weapons to the site;
  - i) No recreational target shooting will occur on NFS lands within the permit area.
  - j) Standard erosion control measures shall be implemented for all phases of construction and operation where sediment run-off from exposed slopes may enter native soils or habitat or jurisdictional streambeds; and
  - k) Disturbed soils and roads within the Project Area shall be stabilized to reduce erosion potential. (PDF: GEN-1)
68. Employee Training. Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program will address bighorn sheep, desert tortoise, raptors, other animals of the area, and rare plants. This will include the importance of avoiding harassment/disturbance, adherence to speed limits, adherence to defined project boundaries, reporting guidelines, etc. CDFW and USFS will provide assistance in developing the training program. (PDF: GEN-2)
69. Fencing. Omya shall minimize potential impediments to wildlife movement across the site by fencing only those areas within the facility where access must be restricted for safety or security reasons; identifying likely or potential wildlife movement routes across or around the site and avoiding or minimizing potential new barriers to wildlife movement in those areas.

In the event fencing is necessary during construction and/or extraction activities, project personnel shall ensure that any such fence meets existing specifications that have been developed to preclude accidental entanglement of bighorn sheep, deer and other animals. Biologists from the Forest Service and CDFW will be consulted for appropriate fence guidelines (PDF: GEN-3)

70. Reclamation. Reclamation of the quarries shall include the creation of angled pathways and interlacing reclaimed benches in order to facilitate the movement of bighorn sheep and other wildlife through the quarries. These benches will be created as the mining sequence is completed and prior to restoration. (PDF: GEN-4)
71. Pets and Domestic Animals. Omya employees shall not bring pets or domestic animals to the work site. Omya will not authorize the housing or grazing of domestic animals on their property. (PDF: GEN-5)
72. Attract Raptors. Maintain facilities and grounds in a manner that minimizes any potential impacts to hunting or scavenging raptors and other predators/scavengers (e.g., minimize storage of equipment near active quarries that may attract prey, remove trash/garbage daily, etc.). All trash and food-related waste shall be secured in self-closing animal-proof containers and removed daily from the site. Avoid practices that attract/enhance prey populations and opportunities for raptor hunting or scavenging near active quarries, haul roads, and processing areas. This would also help discourage the spread of non-Native birds; to discourage the spread of disease and pathogens, etc. PDF: GEN-6)
73. Collision Risk. Reduce vehicle collision risk to raptors and other scavengers by removing animal carcasses from haul and access roads. (PDF: GEN -7)
74. Disturbance Avoidance. Omya employees and contractors will not use Omya roads in order to access National Forest lands for recreation or hunting. Access for personal use will be through National Forest system roads and trails that are open to the general public. (PDF: GEN-8)
75. Blasting – Visual Inspections. Prior to blasting activities within the Project Area, mine employees shall conduct a visual inspection (with both naked eyes and binoculars) for a minimum of five minutes to ascertain the presence or absence of bighorn sheep, deer, golden eagles, peregrine falcons or other large animals. If animals are located within the blast area, mine employees shall wait until animals have moved from the area or may use sound such as shout, vehicle or air horns to move them out of the blast area prior to detonation of any blasting materials. (PDF: GEN-9)
76. Biomass Disposal. All woody vegetation to be cleared from the surface (quarry site, haul road, etc.) will be disposed of as follows: All vegetation and organic material will be chipped and/or stockpiled or applied to inactive quarry benches, overburden piles, or on sidecast areas along roads and quarries. This should be done as part of phased reclamation to minimize stockpile duration and associated weed risk. (PDF: GEN-10)

77. Quit-Claim. The withdrawal and quit-claim of specified unpatented mining claims (discussed below under Carbonate plants) is also designed to mitigate for the loss of wildlife habitat. (PDF: GEN-11)
78. Carbonate Endemic Plant Species. As specified under the Carbonate Habitat Management System (CHMS) Omya may, at their discretion, salvage carbonate endemic plant species (whole plants, cuttings, or seed), and propagules of associated species, to aid in carbonate habitat revegetation efforts on or off-site. (PDF: CARB-1)
79. Threaten and Endangered Plants. The Operator shall quit-claim, upon withdrawal, specified unpatented mining claims held within San Bernardino National Forest, and convey specified patented lands, which have been verified by the Forest Service to contain occupied endangered species habitat as mitigation for impacts of the expansion on Cushenbury oxytheca (*Acanthoscyphus parishii* var. *goodmaniana*) pursuant to the CHMS. (PDF: CARB-2)
80. Personnel Training – Domestic and Feral Animals: Omya personnel shall be trained and shall report sightings of domestic sheep, goats, dogs, and cats on and near the facility to the Forest Service and CDFW within two hours of the observation. In the event of domestic or feral animals being found, Omya shall employ a trained trapper to catch and remove the animals following County regulations. CDFW may assist capture/removal efforts if available. (MM: BIO-5, SBNF Biological Report PDF NNS-4)
81. Wildlife and Plant Awareness: Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program will address bighorn sheep, desert tortoise, raptors, other animals of the area, and rare plants. This will include the importance of avoiding harassment/disturbance, adherence to speed limits, adherence to defined project boundaries, reporting guidelines, etc. CDFW and USFS will provide assistance in developing the training program. (MM: BIO-6, SBNF Biological Report GEN-2)
82. Raptor Conservation Strategy (RCS): A RCS been developed in coordination with the Forest Service, USFWS, and CDFW. Omya has provided input to the development/finalization of the RCS and shall follow the guidelines put forth in the effort. The RCS has been tailored for activities associated with mining activities and effects. Upon approval of the Plan of Operations and the Reclamation Plan by the County and the Forest Service, Omya shall participate in the implementation of the strategy by contributing to specified survey and monitoring efforts and by the following applicable operation guidelines.

The RCS covers the North Slope of the San Bernardino Mountains from the White Mountain to Terrace Springs, and addresses golden eagles, California condor, peregrine falcon, and prairie falcon. The RCS may be updated to include other raptors in the future if concerns develop over their local population status.



The RCS is a dynamic document and will be updated by the Forest Service as new data and scientific understanding of the aforementioned species become available. It will include monitoring and information gathering and measures to avoid, minimize, rectify, and reduce (or eliminate over time) effects to raptors nesting on the North Slope. The intent is to use systematic monitoring or raptor nesting chronology and observed behavior to develop site- and activity- specific measures to ensure successful nesting and provide for adaptive management opportunities (MM: BIO-7 SBNF Biological Report PDF RAPTOR-1).

83. Raptor Monitoring: If an occupied raptor nest is located within 1.5 miles of the active mining area, Omya shall provide a qualified biologist to monitor during blasting for disturbance as a result of the mining activities. Monitoring results will be provided to the Forest Service biologist via email within 48 hours of a blast. The Forest Service will coordinate appropriate notification, as necessary, with USFWS and CDFW. (MM: BIO-8, SBNF Biological Report PDF RAPTOR-1)
84. Raptor Nesting Regulatory Coordination: If an occupied nest for a federally or state protected species is found within 1.5 miles of an active quarry operation, the SBNF shall conduct an evaluation to determine the appropriate course of action under applicable state and federal laws (e.g. "incidental take" authorization, Endangered Species Consultation) (MM: BIO-9, SBNF Biological Report PDF RAPTOR-2)
85. Personnel Training – Desert Tortoise: Omya shall work with the Forest Service and CDFW to incorporate desert tortoise education and awareness into their training for employees, customers, and contractors. This shall include how to minimize impacts to desert tortoises and their habitats. Information about penalties shall also be included. These briefings shall include guidelines about driving in desert tortoise habitat, handling prohibitions, etc. Omya shall work with the Forest Service and CDFW to develop other protective measures if monitoring identifies a need. (MM: BIO-11, SBNF Biological Report PDF DETO-1)
86. Raptor Nesting Protection: If monitoring detects that blasting or other mine activities are resulting in disturbance of nesting raptors that could lead to mortality or nest abandonment, the Forest Service, Omya, USFWS and CDFW, as appropriate, shall evaluate the feasibility of implementing measures to avoid or reduce the effects. The RCS contain some potential methods for reducing or avoiding effects. (MM: BIO-10, SBNF Biological Report PDF RAPTOR-3)
87. Desert Tortoise Reporting: Any sightings of desert tortoises, including dead tortoises, shall be reported to the Forest Service biologist. The report should include photos if possible, location, date, time, cause of death (if obvious), and any other pertinent information. (MM: BIO-12, SBNF Biological Report PDF DETO-2)
88. Ground Clearing: During the development of the quarry and associated facilities, all initial ground clearing (vegetation removal, grading, etc.) shall ideally occur outside the avian breeding season, and potential nesting habitat shall not be removed from February 1 through August 31, or appropriate dates based on on-site nesting phenology determined by

a qualified biologist. For initial ground clearing (vegetation removal, grading, etc.) that is not feasible to be conducted outside the nesting season, surveys shall be conducted to locate active nests. Any active nest sites that are located shall be buffered and no work shall be conducted within those buffered areas until the nests are no longer active. The buffer distances would be determined by current species-specific standards. (MM: BIO-13, SBNF Biological Report PDF BIRD-1)

89. Nesting Surveys: Nesting bird surveys for passerine birds, as outlined under MM BIO-13, guidelines area as follows: A qualified biologist shall be experienced and familiar with robust nest-locating techniques or comparable to those described by Martin and Guepel (1993). Surveys shall be conducted in accordance with the following guidelines: 1) Surveys shall cover all potential nesting habitat to be disturbed and a 500-foot buffer surrounding areas to be disturbed. 2) At least two pre-construction surveys, separated by a minimum 10-day interval, shall be completed prior to initial grading or grubbing activity; the later survey shall be completed no more than 10 days preceding initiation of initial grading or grubbing activity. Additional follow-up surveys shall be required if periods of construction inactivity exceed one week in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation. (MM: BIO-14, SBNF Biological Report PDF BIRD-2)
90. Nesting Season – Crystal Creek Well: To the greatest extent possible, maintenance activities at the Crystal Creek well and access road would be avoided during the nesting season for California spotted owl and other nesting birds (February 1 through August 15). Exceptions may be considered depending on planned activities and associated noise levels, after coordination with the Forest Service biologist or if protocol-level surveys determine the territory is vacant. If emergency repairs are required within the breeding season, the company shall notify the Forest Service within 24 hours. (MM: BIO-15, SBNF Biological Report PDF CC-1)
91. Bighorn Sheep Foraging Habitat: When trucks spray water on haul roads to control fugitive dust, some overspray occurs on road berms for a short distance beyond. Those watered areas sometimes support vegetation that bighorn sheep consume. Omya will not make an effort to eliminate the overspray. The Project's Revegetation Plan shall focus on using native species that will help enhance bighorn sheep habitat. (MM: BIO-16, SBNF Biological Report PDF BHS-1)
92. Bighorn Sheep Reporting of Mortality: Omya shall immediately report any bighorn sheep mortalities, whatever the cause, to the CDFW and Forest Service as soon as possible after the observation. The bighorn sheep carcass shall be left in place until the CDFW or Forest Service biologist can examine it and determine the proper disposal method. In the event that mountain lion predation is occurring at levels that compromise the viability of the population, Omya shall cooperate fully by ensuring access to Omya properties to determine the predator involved or, in the event that an individual predator has been identified, for removal of the predator. (MM: BIO-17, SBNF Biological Report PDF BHS-2)

93. North Slope Bighorn Sheep Conservation Strategy: A North Slope Bighorn Sheep Conservation Strategy has been developed by CDFW and the Forest Service which includes: 1) guidelines/thresholds for population status that would trigger augmentation of the herd; 2) a strategy/guidelines for developing water sources to respond to drought years; 3) herd monitoring methodology and objectives. Omya is a partner in the North Slope Bighorn Sheep Conservation Strategy and shall help support the long-term management goals of maintaining a sustainable population of bighorn sheep on the North Slope. (MM: BIO-19, SBNF Biological Report PDF BHS-4)
94. Future Conservation and Management: Within one year after approval, Omya shall begin contributing to a non-wasting endowment, designated as the North Slope Bighorn Sheep Conservation Fund (Fund). The amount of Omya's contributions shall be determined by CDFW in coordination with Omya. The Fund shall be administered by the National Fish and Wildlife Foundation as a sub-account of the California Department of Fish and {Game} Wildlife Master Mitigation Account. This sub-account shall be managed as a long term endowment dedicated to activities that aid in conservation and monitoring of bighorn sheep both within the Cushenbury herd and on proximate habitats, occupied or unoccupied, including the Bighorn Mountains and San Gorgonio Wilderness where immigration and emigration may connect groups into a functional metapopulation. (MM: BIO-20, SBNF Biological Report PDF BHS-5)
95. Bighorn Sheep Employee Awareness Training: Omya shall consult with the CDFW to incorporate bighorn sheep education and awareness into their training for employees and contractors. Training shall include how to minimize impacts to bighorn sheep and include guidelines for driving, operation of heavy equipment, general quarry operation, and blasting in bighorn sheep habitat. (MM: BIO-21, SBNF Biological Report PDF BHS-6)
96. Jurisdictional Water and Agency Consultation: Prior to activities that could impact Waters of the United States or the State as identified in the Project Jurisdictional Delineation (JD), the Army Corp of Engineers (ACOE), RWQCB-Lahontan Region and CDFW shall be consulted for concurrence with the findings of the JD and to determine if regulatory permits or approvals (i.e.: Streambed Alteration Agreement, coverage under the National Permit, Waste Discharge Request/Section 401) would be required and if considered necessary, the appropriate permits and/or approvals shall be obtained. (MM: BIO-22)

## **Aesthetics**

97. On-Site Lighting. The area of illumination from any on-site lighting shall comply with SBCC Section 83.07.040 Glare and Outdoor Lighting. Light pollution shall be minimized and confined within the site boundaries to limit impacts to surrounding properties. The glare from any luminous source, including on-site lighting shall not exceed one-half (0.5) foot-candle at property line. On-site lighting shall be fully shielded, diffused, or directed in a manner to avoid glare directed at adjacent properties, roadways or any light spill into any wildland areas surrounding the site that might affect nocturnal animals. No light shall project onto adjacent roadways in a manner that interferes with on-coming traffic. All

lighting shall be limited to that necessary for maintenance activities, security and safety purposes. All signs proposed by this project shall only be lit by steady, stationary, shielded light directed at the sign.

98. Site Maintenance. The applicant/operator shall maintain the premises in a neat and orderly manner at all times. All refuse generated at the premises shall at all times be stored in approved containers and shall be placed in a manner so that visual or other impacts and environmental public health nuisances are minimized. All refuse not containing garbage shall be removed from the premises at least one time per week, or as often as necessary to minimize public health nuisances. Refuse containing garbage shall be removed from the premises at least two times per week, or as often as necessary to minimize public health nuisances, by a permitted hauler to an approved solid waste facility. For information, call DEHS/LEA at (800) 442-2283.
99. Surface Disturbances. Surface disturbances shall be limited to those areas identified in the Mine Reclamation Plan. Disturbances outside of these areas shall be prohibited. (PDF: SCEN-1)
100. Backfilling. Backfill eastern half of the Butterfield Quarry and portions of the Sentinel Quarry, as feasible. (PDF: SCEN-2)
101. Waste Rock. Waste rock shall be deposited into waste rock stockpiles within the quarry footprint to reduce the area of disturbance and visual impact outside of the quarry and to reduce internal slopes and aid in revegetation. (PDF: SCEN-3)
102. Dark Materials. Placement of darker materials, as available, on outside of highly visible slopes. (PDF: SCEN-4)
103. Color Staining. Approved color staining methods should be used on highly visible slopes that are not susceptible to raveling to reduce color contrast. (PDF: SCEN-5)
104. Location of Crusher. Locate replacement crusher or a new mobile crusher system out of viewshed. (PDF: SCEN-6)
105. Reclamation Management. Reclamation and revegetation shall be implemented per the approved Reclamation Plan on completed benches concurrent with mining. As areas become available, implement concurrent reclamation/revegetation of completed quarries and overburden stockpiles to reduce visual impacts through backfilling, re-contouring and slope reduction, growth media and habitat log placement, revegetation with native plant species, and colorization as applicable. (PDF: SCEN-7)
106. Visible Dust Plumes. MDAQMD dust controls shall be implemented to reduce visible dust plumes. (PDF: SCEN-8)

## Noise

107. Noise Level. Should results of a noise study indicate that operations would not comply with the County noise ordinance; the Planning Director may require modification of such operations.
108. Noise Operations. Noise levels shall be maintained at or below County Standards, SBCC Section 83.01.080.

## Reclamation and Revegetation

109. Mining CUP and Reclamation Plan 94M-02. Surface mining operations shall adhere to the Mining and Reclamation Plan. Any changes from the Reclamation Plan's provisions shall not be undertaken until review by the Land Use Services Department.
110. Reclamation Time Schedule. Reclamation shall be initiated at the earliest possible time on those portions of the disturbed lands that will not be subject to further disturbance by the surface mining operation.
111. Reclamation and Revegetation. Reclamation and revegetation of the site shall proceed in accordance with the Butterfield and Sentinel Quarries Mining CUP and Reclamation Plan 94M-02.
112. Plant Seeds. The operator shall provide for the collection of seed and other propagules as needed in support of the revegetation plan. Propagules shall be collected within the Project Area to the extent possible. (PDF: Plants-1)
113. Plant Salvage: The operator shall provide for salvage of rare native plants within the Project Area to be propagated and/or transplanted to protected habitat reserve. (PDF: Plants-2)
114. Barriers/Signage. Safety barriers and signage per MSHA requirements shall be maintained around the mined slopes.
115. Growth Medium Stockpiles. The operator shall stockpile topsoil and vegetation from areas to be disturbed. Stockpiled topsoil shall be identified with clearly labeled signs stating "Topsoil – Do Not Disturb" and stored separately from silt and overburden material stockpiles and protected to preserve as much of the organic material and seeds as practicable. Locations for these topsoil stockpiles are to be identified in the Mining Plan.

Stockpiles shall be maintained with temporary erosion control methods, and shall be stabilized through establishment of temporary vegetative cover or other acceptable means of surface treatment for prolonged storage periods. At the time of reclamation, areas being reclaimed shall have the stockpiled growth medium and vegetation spread over them. Revegetation shall be supplemented by broadcast seeding with native and locally adapted

seed and planting of established seedlings and/or shrubs in accordance to the approved Reclamation Plan.

116. Seed Types and Amounts. A seed mix is designed for the Project site to promote a plant community similar to that found in undisturbed areas. The seed mix will serve as a guideline for the revegetation plant community. Seed types and amounts will conform to the site's Revegetation Plan. The seed mixes will be applied based on the seed mix plan cited in the Revegetation Plan.
117. Re-vegetation Annual Monitoring. The project biologist will document the progress of the revegetation effort at the mine site and submit Annual Maintenance and Monitoring reports to the County of San Bernardino as necessary.
118. Revegetation Attainment. Revegetation will be deemed successful when all success criteria have been achieved on an average property-wide basis. If these criteria have not been achieved, maintenance seeding and monitoring will continue annually until success criteria has been met.
119. Financial Assurances - Revegetation. Revegetation in arid areas is tenuous at best and, therefore, the applicant shall provide in the Financial Assurance Cost Estimate, the costs to monitor and report on revegetation, incidental disturbance and erosion control for a time period of ten (10) years following the termination date of operation.

#### **PUBLIC HEALTH – Environmental Health Services (DEHS) (800) 442-2283**

120. Refuse. Refuse generated at the premises shall at all times be stored in approved containers and shall be placed in a manner so that visual, or other impacts, and environmental public health nuisances are minimized and complies with the SBCC, Section 33.0803 et seq. For information, please call DEHS/Local Enforcement Agency (LEA) at: 800-442-2283.
121. Solid Waste Removal. No landfilling of wastes shall occur on-site. In the event that refuse is stored onsite, all refuse containing garbage shall be removed from the premises at least one time per week, or as practicable, to an approved solid waste facility in conformance with SBCC Section 33.0803 et seq. For information, please call DEHS/LEA at: 800-442-2283.
122. Portable Toilets. An adequate number of portable toilets shall be provided and maintained so as not to create a public nuisance and shall be maintained by a DEHS permitted pumper. Portable unit shall provide hand washing capacity. Units shall be serviced at least weekly while in use. Submit a copy of the service contract from an approved pumper to DEHS. For information, call DEHS/Wastewater Section at 800-442-2283.
123. Ponding Water. Applicant/Operator shall manage ponding water to avoid vector breeding, e.g., mosquitoes, midges, and gnats.

**PRIOR TO FINAL CLOSURE  
The Following Conditions Shall Be Met**

**LAND USE SERVICES – Planning Division (909) 387-8311**

124. Equipment. At the time of termination of the operation for any reason, all equipment, structures and refuse associated with the operation shall be removed from the site, all hazards mitigated, and reclamation initiated as per the approved Mining CUP and Reclamation Plan 2017M-01.
125. Wells. Upon final reclamation, evidence shall be provided that all wells, exploration holes or test holes, as defined by DWR Bulletin 74-81 as revised in 1988 or the latest revision are destroyed in accordance with DEHS regulations and in such a manner that will no longer be a hazard to the health and safety of people and wildlife.
126. Access Roads. All access roads on site, which will not be retained for post-operation uses, shall be reclaimed at the conclusion of ground-disturbing activities.
127. Site Re-Contour. The applicant/operator shall re-contour the site at the conclusion of operations (platforms, stockpiles, settling ponds, etc.). The site should resemble natural landforms where possible.
128. Reclamation Verification. As portions of the site are reclaimed, they shall be identified on a map. The final map shall be provided to County Planning Division for review and approval.
129. Reclamation Completion. Following reclamation verification and release of Financial Assurances pursuant to CCR Section 3805.5, Planning will prepare a “Notice of Reclamation Plan Completion” on a form to be approved by the County Recorder’s Office. The operator shall pay any and all review and recording fees.

**CONCLUSION OF CONDITIONS**



## EXHIBIT C

**Draft and Final EIR/EIS and Technical Studies posted  
at:**

**<https://www.fs.usda.gov/project/?project=32613>**  
**[http://cms.sbcounty.gov/lus/Planning/Environmental/  
Desert.aspx](http://cms.sbcounty.gov/lus/Planning/Environmental/Desert.aspx)**

## **EXHIBIT D**

### **Mitigation Monitoring and Reporting Program**

#### 4.0 MITIGATION MONITORING AND REPORTING PLAN

CEQA Section 21081.6 requires adoption of a Mitigation Monitoring and Reporting Plan (MMRP) for those measures or conditions placed on the Project to mitigate or avoid adverse effects on the environment. The law states that the MMRP shall be designed to ensure compliance during Project implementation. When implemented, environmental effects associated with the Project will be reduced or eliminated.

NEPA Section 1505.3 also requires that the federal Lead Agency provide for monitoring to assure that mitigations and other conditions established in the Draft EIR/EIS, during the public review period, or otherwise committed to as part of the Lead Agency decision shall be implemented. The MMRP has been prepared to address these NEPA requirements and ensure compliance during Project implementation.

The MMRP has been prepared as a matrix containing the following elements:

- Measures that would mitigate significant impacts on the environment are recorded with the action and the procedure necessary to ensure compliance.
- A procedure of compliance and verification is outlined for each measure. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.
- The MMRP is designed to provide focused, yet flexible guidelines. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the MMRP.

The MMRP will be in place through all phases of the Project. The Forest Service coordinator, assigned to the Project and the County planner, assigned to the Project, shall coordinate enforcement of the MMRP and oversee it to ensure that proper action is taken on each mitigation measure. Each applicable Forest Service and County department or division shall ensure compliance of the conditions (mitigations) that relate to that particular Forest Service and County department.

The Project planners or responsible Forest Service and County departments have the authority to stop the work of the operator if compliance with aspects of the MMRP are not occurring after written notification has been issued. The Project planners or responsible Forest Service and County departments also have the authority to deny entry into a new mining phase until compliance with a mitigation measure occurs.

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**Table 4-1 Mitigation Monitoring and Condition Compliance Program**

Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
<b>AIR QUALITY</b>			
<p><b>Impact AQ-2:</b> Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?</p>	<p><b>Mitigation Measure AQ-1: Dust Control – Unpaved Roads:</b> Unpaved roads shall be controlled by at least 80% using methods that are consistent with Mojave Desert Air Quality Management District (MDAQMD) guidance.</p>	<p><b>AQ-1:</b> Compliance shall be verified through annual County mine inspections and periodic MDAQMD site inspections.  In addition, documentation demonstrating compliance with the identified unpaved road requirements shall be maintained onsite and provided to the Forest Service, County, and MDAQMD upon request.</p>	<p>San Bernardino County, Land Use Servicers Department, Planning Division  U.S. Department of Agriculture, Forest Service, San Bernardino National Forest  Mojave Desert Air Quality Management District</p>
<p><b>Impact AQ-2:</b> Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?</p>	<p><b>Mitigation Measure AQ-2: Dust Control – Grading:</b> Areas to be graded and where bulldozer operates shall controlled by at least 85% using methods that are consistent with MDAQMD guidance.</p>	<p><b>AQ-2:</b> Compliance shall be verified through annual County mine inspections and periodic MDAQMD site inspections.  In addition, documentation demonstrating compliance with the identified grading and bulldozer requirements shall be maintained onsite and provided to the Forest Service, County, and MDAQMD upon request.</p>	<p>San Bernardino County, Land Use Servicers Department, Planning Division  U.S. Department of Agriculture, Forest Service, San Bernardino National Forest  Mojave Desert Air Quality Management District</p>
<p><b>Impact AQ-4:</b> Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</p>	<p><b>Mitigation Measures AQ-1 and AQ-2</b></p>	<p><b>AQ-1 and AQ-2:</b> Compliance shall be verified through annual County mine inspections and periodic MDAQMD site inspections.  In addition, documentation demonstrating compliance with the identified unpaved road and grading/bulldozer requirements shall be maintained onsite and provided to the Forest Service, County, and MDAQMD upon request.</p>	<p>San Bernardino County, Land Use Servicers Department, Planning Division  U.S. Department of Agriculture, Forest Service, San Bernardino National Forest  Mojave Desert Air Quality Management District</p>
<b>BIOLOGICAL RESOURCES</b>			
<p><b>Impact BIO-1:</b> Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p>	<p>See Below</p>	<p>See Below</p>	<p>See Below</p>

<p><b>Impact BIO-1a:</b> Threatened and Endangered Plants Species</p>	<p><b>Mitigation Measure BIO-1: Relinquish Mining Claims:</b>                  Omya shall relinquish through a quit-claim process, the identified acreage located within the unpatented mining claims as shown in Table 3.4-3 in the Draft EIR/EIS. These areas have been verified by the SBNF to contain habitat for the specified endangered or threatened species pursuant to the CHMS. Table 3.4-6 in the Draft EIR/EIS identifies the number of acres in the Project and mitigation parcels for each T/E plant species. Mitigation for affected T/E plants is a minimum of 3:1 based on conservation value (as described in the CHMS). (SBNF Biological Report PDF CARB-1 and 2)</p> <p><b>Mitigation Measure BIO-2: Non-native Species – Inspections:</b>                  Omya shall visually monitor the occurrence of non-native invasive plants on-site by visual inspection. The goal is to prevent non-native invasive plants from becoming established and depositing seeds in areas to be re-vegetated at a later date. If inspections reveal that weeds are becoming an issue or have established on-site, then removal would be initiated by Omya in coordination with the Forest Service botanist. Inspections shall be made in conjunction with Project’s revegetation monitoring. (SBNF Biological Report PDF NNS-1)</p> <p><b>Mitigation Measure BIO-3: Non-native Species – Equipment Cleaning:</b>                  To reduce the risk of introducing non-native invasive plants, insects, and pathogens from off-site, all heavy mining equipment (e.g., drill rigs, haul trucks and loaders) must be thoroughly washed of all soil and vegetation debris prior to being brought into the Project Area. (SBNF Biological Report PDF NNS-2)</p> <p><b>Mitigation Measure BIO-4: Non-native Species – Control and Eradication:</b>                  Since the Project is expected to last 40 years and new non-native invasive plants and animals may become established in the region, an adaptive management approach is necessary. If any new non-native invasive plants, animals, or pathogens are identified as having a potential for establishment in the Project Area, the Forest Service, CDFW and Omya will develop measures for detection, control, and eradication as necessary. Omya shall be responsible for funding detection, control, and eradication efforts. (SBNF Biological Report PDF NNS-3)</p> <p><b>Mitigation Measure BIO-5: Personnel Training – Domestic and Feral Animals:</b>                  Omya personnel will be trained and will report sightings of domestic sheep, goats, dogs, and cats on and near the facility to the Forest Service and CDFW within two hours of the observation. In the event of domestic or feral animals being found, Omya shall employ a trained trapper to catch and remove the animals following County regulations. CDFW may assist capture/removal efforts if available. (SBNF Biological Report PDF NNS-4)</p>	<p><b>BIO-1:</b>                  Documentation demonstrating relinquishment of identified unpatented mining claims shall be maintained onsite and provided to the Forest Service, County, and other relevant agencies upon request.</p> <p><b>BIO-2:</b>                  Qualified revegetation specialist/botanists shall conduct non-native invasive plants visual inspections during revegetation monitoring.</p> <p>If inspections reveal that weeds are becoming an issue or have established on-site, then removal would be initiated by Omya in coordination with the Forest Service botanist.</p> <p>Compliance shall be demonstrated and verified through annual County mine inspections. Per the Amended Plan of Operations &amp; Reclamation Plan, reports of inspections and weed control implementation shall be part of the annual monitoring report prepared and submitted to the Forest Service, County, and California Department of Conservation.</p> <p>In addition, documentation demonstrating compliance with the identified non-native invasive plants requirements shall be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p> <p><b>BIO-3:</b>                  Omya will utilized Forest Service-approved vehicle and equipment cleaning procedures/standards prior to using the vehicle or equipment in the National Forest System. Compliance shall be demonstrated and verified through County, Forest Service, and/or CDFW inspections.</p> <p>In addition, documentation demonstrating compliance with the identified equipment cleaning requirements shall be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p>	<p>San Bernardino County, Land Use Services Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>California Department of Fish and Wildlife</p> <p>United States Fish and Wildlife Service</p>
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	<p><b>Mitigation Measure BIO-6: Wildlife and Plant Awareness:</b>                  Omya shall continue to conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program will address bighorn sheep, desert tortoise, raptors, other animals of the area, and rare plants. This will include the importance of avoiding harassment/disturbance, adherence to speed limits, adherence to defined project boundaries, reporting guidelines, etc. CDFW and USFS will provide assistance in developing the training program. (SBNF Biological Report GEN-2)</p>	<p><b>BIO-4:</b>                  Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program will instruct employees on how to properly identify potential non-native invasive plants, animals, or pathogens. CDFW and USFWS will provide assistance in developing the training program and will help Omya will develop measures for detection, control, and eradication as necessary. The CDFW and USFW will also provide consultation if Omya detects and reports a potential new non-native invasive plants, animals, or pathogens. Omya shall be responsible for funding detection, control, and eradication efforts for new non-native invasive species.</p> <p><b>BIO-5:</b>                  Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program will also address sightings of domestic sheep, goats, dogs, and cats on and near the facility and how properly report sightings of domestic and feral animals to the Forest Service and CDFW within two hours of the observation. CDFW and USFWS will provide assistance in developing the training program, as needed.</p> <p>In the event of domestic or feral animals being found, Omya shall employ a trained trapper to catch and remove the animals following County regulations. CDFW may assist capture/removal efforts if available.</p> <p>In addition, documentation demonstrating compliance with the identified domestic and feral animal training and reporting requirements shall be maintained onsite and provided to the Forest Service, County, CDFW, and USFWS upon request.</p>	
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Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
		<p><b>BIO-6:</b>                      Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program will address bighorn sheep, desert tortoise, raptors, other animals of the area, and rare plants. This will include the importance of avoiding harassment/disturbance, adherence to speed limits, adherence to defined project boundaries, reporting guidelines, etc. CDFW and USFWS will provide assistance in developing the training program, as needed.</p> <p>In addition, documentation demonstrating compliance with the identified employee wildlife/plant awareness and training program requirements shall be maintained onsite and provided to the Forest Service, County, CDFW, and USFWS upon request.</p>	
<p><b>Impact BIO-1b:</b> Threatened and Endangered Animal Species</p>	<p>See Below</p>	<p>See Below</p>	<p>See Below</p>

<p>California Condor (<i>Gymnogyps californianus</i>)</p>	<p><b>Mitigation Measure BIO-1, and the following:</b></p> <p><b>Mitigation Measure BIO-7: Raptor Conservation Strategy (RCS):</b>                  A RCS shall be developed in coordination with the Forest Service, USFWS, and CDFW. Omya shall provide input to the development/finalization of the RCS and shall follow the guidelines put forth in the effort. The RCS will be tailored for activities associated with mining activities and effects. Upon approval of the Plan of Operations and the Reclamation Plan by the County and the Forest Service, Omya will participate in the implementation of the strategy by contributing to specified survey and monitoring efforts and by the following applicable operation guidelines.</p> <p>The RCS will cover the North Slope of the San Bernardino Mountains from the White Mountain to Terrace Springs, and will address golden eagles, California condor, peregrine falcon, and prairie falcon. The RCS may be updated to include other raptors in the future if concerns develop over their local population status.</p> <p>The RCS will be a dynamic document and will be updated as new data and scientific understanding of the aforementioned species become available. It will include monitoring and information gathering and measures to avoid, minimize, rectify, and reduce (or eliminate over time) effects to raptors nesting on the North Slope. The intent is to use systematic monitoring or raptor nesting chronology and observed behavior to develop site- and activity- specific measures to ensure successful nesting and provide for adaptive management opportunities. (SBNF Biological Report PDF RAPTOR-1)</p> <p><b>Mitigation Measure BIO-8: Raptor Monitoring:</b>                  If an occupied raptor nest is located within 1.5 miles of the active mining area, the mining company shall provide a qualified biologist to monitor during blasting for disturbance as a result of the mining activities. Monitoring results will be provided to the Forest Service biologist via email within 48 hours of a blast. The Forest Service will coordinate appropriate notification, as necessary, with USFWS and CDFW. (SBNF Biological Report PDF RAPTOR-1)</p> <p><b>Mitigation Measure BIO-9: Raptor Nesting Regulatory Coordination:</b>                  If an occupied nest for a Federally or State protected species is found within 1.5 miles of an active quarry operation, the SBNF shall conduct an evaluation to determine the appropriate course of action under applicable State and Federal laws (e.g. "incidental take" authorization, Endangered Species Consultation) (SBNF Biological Report PDF RAPTOR-2)</p>	<p><b>BIO-1:</b>                  See BIO-1</p> <p><b>BIO-7:</b>                  A Final Raptor Conservation Strategy (RCS) has been prepared in coordination with the Forest Service, USFWS, and CDFW. Upon approval of the Plan of Operations and the Reclamation Plan by the County and the Forest Service, Omya will participate in the implementation of the strategy by contributing to specified survey and monitoring efforts, and by following applicable operational guidelines.</p> <p>The RCS will be updated as new data and scientific understanding of the target species become available. It will include monitoring and information gathering procedures and requirements.</p> <p>Compliance shall be demonstrated and verified through County, Forest Service, and/or CDFW inspections.</p> <p>In addition, documentation demonstrating compliance with RCS requirements will be maintained onsite and provided to the Forest Service and County upon request.</p> <p><b>BIO-8:</b>                  Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program shall also address sightings of occupied raptor nests on or near the facility and how properly report to the Forest Service and CDFW. CDFW and USFS shall provide assistance in developing the training program, as needed.</p> <p>If Omya employees discover a potential raptors nest on or near the facility, a qualified biologist shall conduct pre-construction surveys for nesting raptors and oversee avoidance of active nests during blasting activities.</p>	<p>San Bernardino County, Land Use Servicers Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>California Department of Conservation, Division of Mine Reclamation</p> <p>California Department of Fish and Wildlife</p> <p>United States Fish and Wildlife Service</p>
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Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
	<p><b>Mitigation Measure BIO-10: Raptor Nesting Protection:</b>                      If monitoring detects that blasting or other mine activities are resulting in disturbance of nesting raptors that could lead to mortality or nest abandonment, the Forest Service, Omya, USFWS and CDFW, as appropriate, shall evaluate the feasibility of implementing measures to avoid or reduce the effects. The RCS will contain some potential methods for reducing or avoiding effects. (SBNF Biological Report PDF RAPTOR-3)</p>	<p>If nests are found within identified ranges, the USFWS and CDFW shall be contacted. The qualified biologist shall provide the results of the monitoring activities to the Forest Service via email within 48 hours of a blast event.</p> <p><b>BIO-9:</b>                      Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program shall also address sightings of occupied raptor nests on or near the facility and how properly report to the Forest Service and CDFW. CDFW and USFS shall provide assistance in developing the training program, as needed.</p> <p>If Omya employees discover a potential raptors nest on or near the facility, a qualified biologist shall conduct pre-construction surveys for nesting raptors and oversee avoidance of active nests during mining activities.</p> <p>If nests are found within identified ranges, the Forest Service, USFWS, and CDFW shall be contacted. The qualified biologist, in consultation with the Forest Service, USFWS, and CDFW, shall determine the appropriate course of action under applicable State and Federal laws.</p> <p><b>BIO-10:</b>                      See BIO-7</p>	

Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
<p>Desert Tortoise (<i>Gopherus agassizii</i>)</p>	<p><b>Mitigation Measure BIO-11: Personnel Training – Desert Tortoise:</b>                      Omya shall work with the SBNF and CDFW and incorporate desert tortoise education and awareness into their training for employees, customers, and contractors. This shall include how to minimize impacts to desert tortoises and their habitats. Information about penalties shall also be included. These briefings shall include guidelines about driving in desert tortoise habitat, handling prohibitions, etc. Omya shall work with SBNF and CDFW to develop other protective measures if monitoring identifies a need. (SBNF Biological Report PDF DETO-1)</p> <p><b>Mitigation Measure BIO-12: Desert Tortoise Reporting:</b>                      Any sightings of desert tortoises, including dead tortoises, must be reported to the Forest Service biologist. The report should include photos if possible, location, date, time, cause of death (if obvious), and any other pertinent information. (SBNF Biological Report PDF DETO-2)</p>	<p><b>BIO-11:</b>                      Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The program shall also incorporate desert tortoise education, including how to minimize impacts to their habitats and their habitats. The training shall also include information about potential penalties if deserter tortoises are impacts, guidelines about driving in desert tortoise habitat, handling prohibitions, etc. CDFW and USFS shall provide assistance in developing the training program, as needed.</p> <p>In addition, documentation demonstrating compliance with the identified desert tortoise employee awareness program requirements shall be maintained onsite and provided to the Forest Service, County, CDFW, and USFWS upon request.</p> <p><b>BIO-12:</b>                      If Omya employees discover a desert tortoise, including dead tortoises, on or near the facility, the sighting shall be document and reported to the Forest Service biologist. The report of the sighting shall include photos of the desert tortoise species and documentation of the location, date, time, cause of death (if obvious), and any other pertinent information.</p> <p>In addition, documentation demonstrating compliance with the identified desert tortoise reporting requirements will be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p>	<p>San Bernardino County, Land Use Servicers Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>California Department of Fish and Wildlife</p> <p>United States Fish and Wildlife Service</p>
<p>Southern Rubber Boa (<i>Charina bottae umbratica</i>)</p>	<p><b>Mitigation Measures BIO-1 and BIO-6</b></p>	<p>See Above</p>	<p>See Above</p>
<p><b>Impact BIO-1c:</b> Other Special Status Species – Plants</p>	<p>See Below</p>	<p>See Below</p>	<p>See Below</p>

Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
Coville’s Dwarf Abronia ( <i>Abronia nana</i> var. <i>covillei</i> ), Crested Milkvetch ( <i>Astragalus bicristatus</i> ), Bear Valley Milkvetch ( <i>Astragalus lentiginosus</i> var. <i>sierra</i> ), Parish’s Rock Cress ( <i>Boechera parishii</i> ), Shockley’s Rock Cress ( <i>Boechera shockleyi</i> ), Parish’s Alumroot ( <i>Heuchera parishii</i> ), Bear Valley Phlox ( <i>Phlox dolichantha</i> )	<b>Mitigation Measures BIO-1</b>	See Above	See Above
<b>Impact BIO-1d:</b> Other Special Status Species – Amphibians and Reptiles	See Below	See Below	See Below
Southern Rubber Boa ( <i>Charina bottae umbratica</i> ), Large-Blotched Ensatina ( <i>Ensatina klauberi</i> ), Yellow-Blotched Ensatina ( <i>Ensatina eschscholtzii</i> ), Southern California Legless Lizard ( <i>Anniella stebbinsi</i> ), Northern Three-Lined Boa ( <i>Lichanura orcutti</i> ), San Bernardino Ringneck Snake ( <i>Diadophis punctatus modestus</i> ), San Bernardino Mountain Kingsnake ( <i>Lampropeltis zonata parvirubra</i> ), Two-Striped Garter Snake ( <i>Thamnophis hammondi</i> ), Coast Patch-Nosed Snake ( <i>Salvadora hexalepis virgultea</i> )	<b>Mitigation Measures BIO-1 and BIO-6</b>	See Above	See Above

<p><b>Impact BIO-1e:</b> Other Special Status Species – Birds</p>	<p><b>Mitigation Measure BIO-1, BIO-6, and the following:</b></p> <p><b>Mitigation Measure BIO-13:</b> Ground Clearing: During the development of the quarry and associated facilities, all initial ground clearing (vegetation removal, grading, etc.) shall ideally occur outside the avian breeding season, and potential nesting habitat shall not be removed from February 1 through August 31, or appropriate dates based on on-site nesting phenology determined by a qualified biologist.</p> <p>For initial ground clearing (vegetation removal, grading, etc.) that is not feasible to be conducted outside the nesting season, surveys shall be conducted to locate active nests. Any active nest sites that are located shall be buffered and no work shall be conducted within those buffered areas until the nests are no longer active. The buffer distances would be determined by current species-specific standards. (SBNF Biological Report PDF BIRD-1)</p> <p><b>Mitigation Measure BIO-14: Nesting Surveys:</b> Nesting bird surveys for passerine birds, as outlined under MM BIO-13, guidelines area as follows:</p> <ul style="list-style-type: none"> <li>• A qualified biologist shall be experienced and familiar with robust nest-locating techniques or comparable to those described by Martin and Guepel (1993).</li> <li>• Surveys shall be conducted in accordance with the following guidelines:             <ul style="list-style-type: none"> <li>○ Surveys shall cover all potential nesting habitat to be disturbed and a 500 foot buffer surrounding areas to be disturbed.</li> <li>○ At least two pre-construction surveys, separated by a minimum 10 day interval, shall be completed prior to initial grading or grubbing activity; the later survey shall be completed no more than 10 days preceding initiation of initial grading or grubbing activity. Additional follow-up surveys shall be required if periods of construction inactivity exceed one week in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation. (SBNF Biological Report PDF BIRD-2)</li> </ul> </li> </ul>	<p><b>BIO-1 and BIO-6:</b> See Above</p> <p><b>BIO-13 and BIO-14:</b> Omya shall conduct all quarry development and construction activities, including tree removal/trimming, vegetation clearing, grading, grubbing, or blasting activities (collectively, “land clearing activities”), in such a way as to avoid nesting native and migratory birds. This shall be accomplished by implementing one of the following options:</p> <ul style="list-style-type: none"> <li>• Timing of construction: Prohibit land clearing activities during the breeding and nesting season (February 1 – August 31), in which case the following surveys are not required; or</li> <li>• Surveys and avoidance of occupied nests: Conduct site-specific surveys by a qualified biologist prior to land clearing activities during the breeding and nesting season (February 1 – August 31) and avoid occupied bird nests. Surveys shall be conducted to identify any occupied (active) bird nests in the area proposed for disturbance. Occupied nests shall be avoided until juvenile birds have vacated the nest.</li> </ul> <p>Nesting bird surveys shall be conducted by a qualified, Forest Service-approved biologist who is familiar with the robust nest-locating techniques or comparable to those described by Martin and Guepel (1993).</p> <p>An initial breeding and nesting bird survey shall be conducted 30 days prior to the initiation of land clearing activities. The site must be surveyed a minimum of two (2) times, separated by a minimum of 10 days. The last survey shall be completed no more than 10 days prior to the initiation of land clearing activities. Additional follow-up surveys shall be required if periods of construction inactivity exceed one (1) week in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation. The nesting bird survey must cover the development</p>	<p>San Bernardino County, Land Use Services Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>California Department of Conservation, Division of Mine Reclamation</p> <p>California Department of Fish and Wildlife</p> <p>United States Fish and Wildlife Service</p>
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	<p><b>Mitigation Measure BIO-15: Nesting Season – Crystal Creek Well:</b>                  To the greatest extent possible, maintenance activities at the Crystal Creek well and access road would be avoided during the nesting season for California spotted owl and other nesting birds (February 1 through August 15). Exceptions may be considered depending on planned activities and associated noise levels, after coordination with the Forest Service biologist or if protocol-level surveys determine the territory is vacant. If emergency repairs are required within the breeding season, the company shall notify the Forest Service within 24 hours. (SBNF Biological Report PDF CC-1)</p>	<p>footprint and 500-feet from the development footprint. If occupied (active) nests are found, land clearing activities within a setback area surrounding the nest shall be postponed or halted. Land clearing activities may commence in the setback area when the nest is vacated (juveniles have fledged) provided there is no evidence of a second attempt at nesting, as determined by the Forest Service-approved biologist. Land clearing activities can also occur outside of the setback areas. The required setback is 300-feet for most birds and 500-feet for raptors, as recommended by the CDFW. This setback can be increased or decreased based on the recommendation of the Forest Service-approved biologist in consultation and approval from the CDFW.</p> <p>Compliance with the pre-construction nesting surveys shall be demonstrated and verified through County, Forest Service, and/or CDFW inspections.</p> <p>In addition, documentation demonstrating compliance with the pre-construction nesting surveys requirements will be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p> <p><b>BIO-15:</b>                  To the greatest extent possible, Omya shall avoid conducting maintenance activities at the Crystal Creek well and access road during the nesting season for California spotted owl and other nesting birds (February 1 through August 15). If required during the nesting bird season, Omya shall contact the Forest Service biologist prior to initiating maintenance activities. Exceptions may be considered depending on planned activities and associated noise levels, only after coordination with the Forest Service biologist or if protocol-level surveys determine the territory is vacant. If emergency repairs are required within the breeding season, the company shall notify the Forest Service within 24-hours.</p>	
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Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
		<p>Compliance with the pre-construction nesting surveys shall be demonstrated and verified through County, Forest Service, and/or CDFW inspections.</p> <p>In addition, documentation demonstrating compliance with the pre-construction nesting surveys requirements will be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p>	
California Spotted Owl ( <i>Strix occidentalis occidentalis</i> )	<b>Mitigation Measures BIO-6 and BIO-13 through BIO-15</b>	See Above	See Above
Willow Flycatcher ( <i>Empidonax traillii</i> )	<b>Mitigation Measures BIO-6 and BIO-13 through BIO-15</b>	See Above	See Above
Gray Vireo ( <i>Vireo vicinior</i> )	<b>Mitigation Measures BIO-6 and BIO-13 through BIO-15</b>	See Above	See Above
Golden Eagle ( <i>Aquila chrysaetos</i> )	<b>Mitigation Measures BIO-1, BIO-6, BIO-7 through BIO-10, BIO-13 through BIO-15</b>	See Above	See Above
<b>Impact BIO-1f:</b> Other Special Status Species – Mammals	See Below	See Below	See Below
Long-eared Myotis ( <i>Myotis evotis</i> ), Fringed Myotis ( <i>Myotis thysanodes</i> ), Long-legged Myotis ( <i>Myotis volans</i> ), Small-footed Myotis ( <i>Myotis ciliolabrum</i> ), Western Red Bat ( <i>Lasiurus blossevillii</i> ), Spotted Bat ( <i>Eucерma maculatum</i> ), Townsend’s Big-eared Bat ( <i>Corynorhinus townsendii</i> ), Pallid Bat ( <i>Antrozous pallidus</i> ), Mexican Free-tailed Bat ( <i>Tadarida brasiliensis</i> ), Pocketed Free-tailed Bat ( <i>Nyctinomops femorosaccus</i> ), Western Mastiff (Bonneted) Bat ( <i>Eumops perotis</i> ), Yuma Myotis ( <i>Myotis yumanensis</i> ), Little Brown Myotis ( <i>Myotis lucifugus</i> )	<b>Mitigation Measures BIO-1</b>	See Above	See Above
American Badger ( <i>Taxidea taxus</i> )	<b>Mitigation Measures BIO-1</b>	See Above	See Above



<p>Nelson's Bighorn Sheep (<i>Ovis canadensis nelsoni</i>)</p>	<p><b>Mitigation Measures BIO-1, BIO-6, and the following:</b></p> <p><b>Mitigation Measure BIO-16: Bighorn Sheep Foraging Habitat:</b> When trucks spray water on haul roads to control fugitive dust, some overspray occurs on road berms for a short distance beyond. Those watered areas sometimes support vegetation that bighorn sheep consume. Omya will not make an effort to eliminate the overspray. The Project's Revegetation Plan shall focus on using native species that will help enhance bighorn sheep habitat. (SBNF Biological Report PDF BHS-1)</p> <p><b>Mitigation Measure BIO-17: Bighorn Sheep Reporting of Mortality:</b> Omya shall continue to immediately report any bighorn sheep mortalities, whatever the cause, to the CDFW and Forest Service as soon as possible after the observation. The bighorn sheep carcass shall be left in place until the CDFW or Forest Service biologist can examine it and determine the proper disposal method. In the event that mountain lion predation is occurring at levels that compromise the viability of the population, Omya shall cooperate fully by ensuring access to Omya properties to determine the predator involved or, in the event that an individual predator has been identified, for removal of the predator. (SBNF Biological Report PDF BHS-2)</p> <p><b>Mitigation Measure BIO-18: Bighorn Sheep Monitoring/Adaptive Management:</b> Omya shall monitor bighorn sheep use in and near their operations and at water sources in and adjacent to their operations. Monitoring shall consist of maintenance of cameras stationed at water sources and recording of data from cameras in a database developed by CDFW, as well as collection of observations by Omya employees. An annual monitoring report will be provided to the Forest Service and CDFW. (SBNF Biological Report PDF BHS-3)</p> <p><b>Mitigation Measure BIO-19:</b> North Slope Bighorn Sheep Conservation Strategy: A Draft North Slope Bighorn Sheep Conservation Strategy will be developed by CDFW and the Forest Service which will include:</p> <ul style="list-style-type: none"> <li>• Guidelines/thresholds for population status that would trigger augmentation of the herd;</li> <li>• A strategy/guidelines for developing water sources to respond to drought years;</li> <li>• Herd monitoring methodology and objectives.</li> </ul> <p>Omya will be a partner in the North Slope Bighorn Sheep Conservation Strategy and will help support the long-term management goals of maintaining a sustainable population of bighorn sheep on the North Slope. (SBNF Biological Report PDF BHS-4)</p>	<p><b>BIO-1 and BIO-6:</b> See Above</p> <p><b>BIO-16:</b> Omya shall not make an effort to eliminate overspray when using water on haul roads to control dust. Per the Amended Plan of Operations &amp; Reclamation Plan, revegetation of the site shall be completed by a qualified revegetation specialist/botanist using locally native species that will help enhance bighorn sheep habitat. Reports of ongoing/completed revegetation efforts and related bighorn sheep habitat enhancement shall be part of the annual monitoring report submitted to the Forest Service and/or County.</p> <p>In addition, documentation demonstrating compliance with the identified revegetation and related bighorn sheep habitat requirements shall be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p> <p><b>BIO-17:</b> If a bighorn sheep mortality is observed on or near the facility, whatever the cause, the sighting shall be immediately reported to the CDFW and Forest Service as soon as possible after the observation. The bighorn sheep carcass shall be left in place until the CDFW or Forest Service biologist can examine it and determine the proper disposal method. If the CDFW or Forest Service biologist determines that mountain lion predation is potentially occurring at levels that compromise the viability of the affected bighorn sheep population, Omya shall cooperate fully by ensuring access to Omya properties to determine the predator involved or, in the event that an individual predator has been identified, for removal of the predator.</p> <p>Compliance with the bighorn sheep mortality requirements and related surveys shall be demonstrated and verified through County, Forest Service, and/or CDFW inspections.</p>	<p>San Bernardino County, Land Use Services Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>California Department of Conservation, Division of Mine Reclamation</p> <p>California Department of Fish and Wildlife</p> <p>United States Fish and Wildlife Service</p>
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	<p><b>Mitigation Measure BIO-20: Future Conservation and Management:</b>                  Within one year after approval, Omya shall begin contributing to a non-wasting endowment, designated as the North Slope Bighorn Sheep Conservation Fund (Fund). The amount of Omya’s contributions shall be determined by CDFW in coordination with Omya. The Fund shall be administered by the National Fish and Wildlife Foundation as a sub-account of the California Department of Fish and {Game} Wildlife Master Mitigation Account. This sub-account shall be managed as a long-term endowment dedicated to activities that aid in conservation and monitoring of bighorn sheep both within the Cushenbury herd and on proximate habitats, occupied or unoccupied, including the Bighorn Mountains and San Gorgonio Wilderness where immigration and emigration may connect groups into a functional metapopulation. (SBNF Biological Report PDF BHS-5)</p> <p><b>Mitigation Measure BIO-21: Bighorn Sheep Employee Awareness Training:</b>                  Omya will consult with the CDFW to incorporate bighorn sheep education and awareness into their training for employees and contractors. Training will include how to minimize impacts to bighorn sheep and include guidelines for driving, operation of heavy equipment, general quarry operation, and blasting in bighorn sheep habitat. (SBNF Biological Report PDF BHS-6)</p>	<p>In addition, documentation demonstrating compliance with the bighorn sheep requirements will be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p> <p><b>BIO-18:</b>                  Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings). The training shall also include information on how to properly monitor bighorn sheep use in and near their operations and at water sources in and adjacent to their operations. CDFW and USFS shall provide assistance in developing the training program, as needed.</p> <p>In addition, if directed by the CDFW or Forest Service biologist, Omya shall install remote cameras stationed at water sources to record data. The CDFW and Forest Service shall provide guidance on proper camera location and maintenance. Omya shall be responsible for maintain the remote cameras in proper working condition, and recorded data shall be placed in a database developed by CDFW.</p> <p>Compliance with the bighorn sheep monitoring requirements and related employee observations/training shall be demonstrated and verified through County, Forest Service, and/or CDFW inspections.</p> <p>In addition, documentation demonstrating compliance with the identified bighorn sheep training/monitoring program requirements shall be maintained onsite and provided to the Forest Service, County, CDFW, and USFWS upon request.</p> <p><b>BIO-19:</b>                  A Final North Slope Bighorn Sheep Conservation Strategy has been prepared with the Forest Service, USFWS, and CDFW. Upon approval of the Plan of Operations and the</p>	
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Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
		<p>Compliance with the requirements of the North Slope Bighorn Sheep Conservation Fund will be demonstrated and verified through County, Forest Service, and/or CDFW inspections.</p> <p>In addition, documentation demonstrating compliance with the identified North Slope Bighorn Sheep Conservation Fund requirements will be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p> <p><b>BIO-21:</b> Per Project Design Feature GEN-2, Omya shall conduct wildlife/plant awareness programs for employees (including new employee orientation and annual refresher trainings) and applicable contractors. The program shall also incorporate bighorn sheep education, include how to minimize impacts to bighorn sheep and include guidelines for driving, operation of heavy equipment, general quarry operation, and blasting in bighorn sheep habitat. CDFW and USFS shall provide assistance in developing the training program, as needed.</p> <p>In addition, documentation demonstrating compliance with the identified bighorn sheep education and awareness requirements shall be maintained onsite and provided to the Forest Service, County, CDFW, and USFWS upon request.</p>	
Mountain Lion ( <i>Felis concolor californica</i> )	<b>Mitigation Measure BIO-1</b>	See Above	See Above

Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
<p><b>Impact BIO-2:</b> Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p>	<p><b>Mitigation Measure BIO-22: Jurisdictional Water and Agency Consultation:</b>                      Prior to activities that could impact Waters of the United States or the State as identified in the Project JD, the ACOE, RWQCB-Lahontan Region and CDFW shall be consulted for concurrence with the findings of the JD and to determine if regulatory permits or approvals (i.e.: Streambed Alteration Agreement, coverage under the National Permit, Waste Discharge Request/Section 401) would be required and if considered necessary, the appropriate permits and/or approvals shall be obtained.</p>	<p><b>BIO-22:</b>                      Prior to activities that could impact Waters of the United States or the State as identified in the Jurisdictional Delineation (JD) prepared by Tetra Tech in November 2013, Omya shall consult with the U.S. Army Corps of Engineers (ACOE), the Regional Water Quality Control Board, Lahontan Region (RWQCB-Lahontan Region), and the California Department of Fish and Wildlife (CDFW) to determine if regulatory permits or approvals are required. As shown in Figure 3.4-3 in the Draft EIR/EIS, there are four (4) potential drainage areas delineated within the Project Area. Work shall not commence in these areas until the appropriate agencies have provided concurrence with the findings of the JD and the appropriate permits and/or approvals have been obtained.</p> <p>Reports of potential impacts to jurisdictional waters and related permits/approvals shall be part of the annual monitoring report prepared and submitted to the Forest Service, County, and/or California Department of Conservation.</p> <p>In addition, documentation demonstrating compliance with the identified jurisdictional waters requirements shall be maintained onsite and provided to the Forest Service, CDFW, and County upon request.</p>	<p>U.S. Army Corps of Engineers</p> <p>Regional Water Quality Control Board, Lahontan Region</p> <p>California Department of Fish and Wildlife</p> <p>San Bernardino County, Land Use Services Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>United States Fish and Wildlife Service</p>
<p>Other Sensitive Natural Communities</p>	<p><b>Mitigation Measure BIO-1</b></p>	<p>See Above</p>	<p>See Above</p>

<p><b>Impact BIO-6:</b> Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?</p>	<p>Carbonate Habitat Management Strategy:  <b>Mitigation Measures BIO-1, PLANT-1 and PLANT-2, CARB-1 and CARB-2</b></p> <p>Raptor Conservation Strategy:  <b>Mitigation Measures BIO-6 through BIO-10</b></p> <p>North Slope Bighorn Sheep Conservation Strategy:  <b>Mitigation Measures BIO-6, BIO-16 through BIO-20</b></p>	<p><b>CARBONATE HABITAT MANAGEMENT STRATEGY</b></p> <p><b>BIO-1:</b>                  See Above</p> <p><b>PLANT-1:</b>                  Per Project Design Feature PLANT-1, Omya shall provide for the collection of seed and other propagules as needed in support of the revegetation plan presented in the Plan of Operations and the Reclamation Plan. Omya shall collect propagules within the Project Area to the maximum extent possible. Omya shall implemented the revegetation plan requirements, including seed and other propagule collection, in coordination with the Forest Service.</p> <p>Compliance with PLANT-1 shall be demonstrated and verified through annual County mine inspections.</p> <p>In addition, documentation demonstrating compliance with the identified PLANT-1 requirements will be maintained onsite and provided to the Forest Service and County upon request.</p> <p><b>PLANT-2:</b>                  Per Project Design Feature PLANT-2, in coordination with the Forest Service, Omya shall provide for salvage of rare native plants within the Project Area to be propagated and/or transplanted to protected habitat reserve areas at the discretion of the Forest Service.</p> <p>Compliance with PLANT-2 shall be demonstrated and verified through County and/or Forest Service inspections.</p> <p>In addition, documentation demonstrating compliance with the identified PLANT-2 requirements will be maintained onsite and provided to the Forest Service and County upon request.</p>	<p>U.S. Army Corps of Engineers</p> <p>Regional Water Quality Control Board, Lahontan Region</p> <p>California Department of Fish and Wildlife</p> <p>San Bernardino County, Land Use Servicers Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>United States Fish and Wildlife Service</p>
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		<p><b>CARB-1:</b>                  Per Project Design Feature CARB-1, as specified under the Carbonate Habitat Management Strategy (CHMS), and within the Project Area, Omya or the Forest Service shall at their discretion salvage carbonate endemic plant species (whole plants, cuttings, or seed), and propagules of associated species, to aid in carbonate habitat revegetation efforts on or off-site.</p> <p>Compliance with CARB-1 shall be demonstrated and verified through County and/or Forest Service inspections.</p> <p>In addition, documentation demonstrating compliance with the identified CARB-1 requirements will be maintained onsite and provided to the Forest Service and County upon request.</p>	
		<p><b>CARB-2:</b>                  Per Project Design Feature CARB-2, for threatened and/or endangered plants, Omya shall, upon withdrawal, quit-claim specified unpatented mining claims held within San Bernardino National Forest, and convey specified patented lands, which have been verified by the Forest Service to contain occupied endangered species habitat as mitigation for impacts of the expansion on Cushenbury oxytheca (<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>) pursuant to the CHMS.</p> <p>Compliance with CARB-1 shall be demonstrated and verified through County and/or Forest Service inspections.</p> <p>In addition, documentation demonstrating compliance with the identified CARB-1 requirements will be maintained onsite and provided to the Forest Service and County upon request.</p>	

Environmental Impact	Mitigation Measures	Compliance/Monitoring Procedure	Responsible Department
		<p><b>RAPTOR CONSERVATION STRATEGY</b></p> <p><b>BIO-6 through BIO-10:</b> See Above</p> <p><b>NORTH SLOPE BIGHORN SHEEP CONSERVATION STRATEGY</b></p> <p><b>BIO-6, BIO-16 through BIO-20:</b> See Above</p>	
<b>GEOLOGY AND SOILS</b>			
<p><b>Impact GS-1:</b> Would the Project expose people or structures to potential substantial adverse effects, involving the risk of loss, injury, or death involving (CEQA Guidelines Threshold Criteria (a)):</p> <ul style="list-style-type: none"> <li>Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map issued by the State Geologist for the area or based on other substantial evidence of known fault;</li> <li>Strong seismic ground shaking;</li> <li>Seismic-related ground failure, including liquefaction; or landslides.</li> </ul>	<p><b>Mitigation Measure GS-1: Inspect slope conditions after seismic events and remove precarious rocks from slopes:</b></p> <p>This mitigation measure requires that slope conditions in the Project Area be inspected after a seismic event exceeding 5.5 magnitude on the Richter Scale originating from an epicenter located within 100 miles of the Project Area. Quarry operations will be halted until a qualified geotechnical engineer is retained to inspect slope conditions for potential loose blocks or other unsafe or unstable conditions. Any required slope stabilization measures must lead to achievement of a minimum factor of safety of 1.5 before quarry operations continue.</p> <p>Under this mitigation measure, the Project Area also must be inspected for precarious rocks. Natural weathering processes would result in accumulation of talus on excavated benches. The talus can be left on the slopes to facilitate revegetation and to give reclaimed slopes a relatively natural appearance. It is anticipated that any boulders resulting from weathering processes would be angular and would therefore be less likely to roll downhill. Any large unstable rounded boulders on slopes steeper than 2:1 must be removed or stabilized where accessible. Areas below loose rocks must be restricted from entry and identified with proper signage.</p>	<p><b>GS-1:</b></p> <p>In the event a magnitude 5.5 seismic event occurs within 100 miles of the Project Area, quarry operations shall cease until a qualified geotechnical engineer can inspect affected slope conditions for potential loose blocks, precarious rocks, or other unsafe or unstable conditions. If required, slope stabilization measures shall achieve of a minimum factor of safety of 1.5 before quarry operations continue. Additionally, any large unstable rounded boulders observed by the qualified geotechnical engineer on slopes steeper than 2:1 shall be removed or stabilized where accessible. Areas below loose rocks shall be restricted from entry and identified with proper signage. Safe slope conditions following a seismic event shall be verified by the qualified geotechnical engineer before quarry operations continue.</p> <p>Reports of seismic events and subsequent geotechnical evaluations shall be part of the annual monitoring report prepared and submitted to the Forest Service, County, and/or California Department of Conservation. In addition, documentation demonstrating compliance with the identified seismic slope stability requirements shall be maintained onsite and provided to the Forest Service and County upon request.</p>	<p>U.S. Army Corps of Engineers</p> <p>Regional Water Quality Control Board, Lahontan Region</p> <p>California Department of Fish and Wildlife</p> <p>San Bernardino County, Land Use Services Department, Planning Division</p> <p>U.S. Department of Agriculture, Forest Service, San Bernardino National Forest</p> <p>United States Fish and Wildlife Service</p>

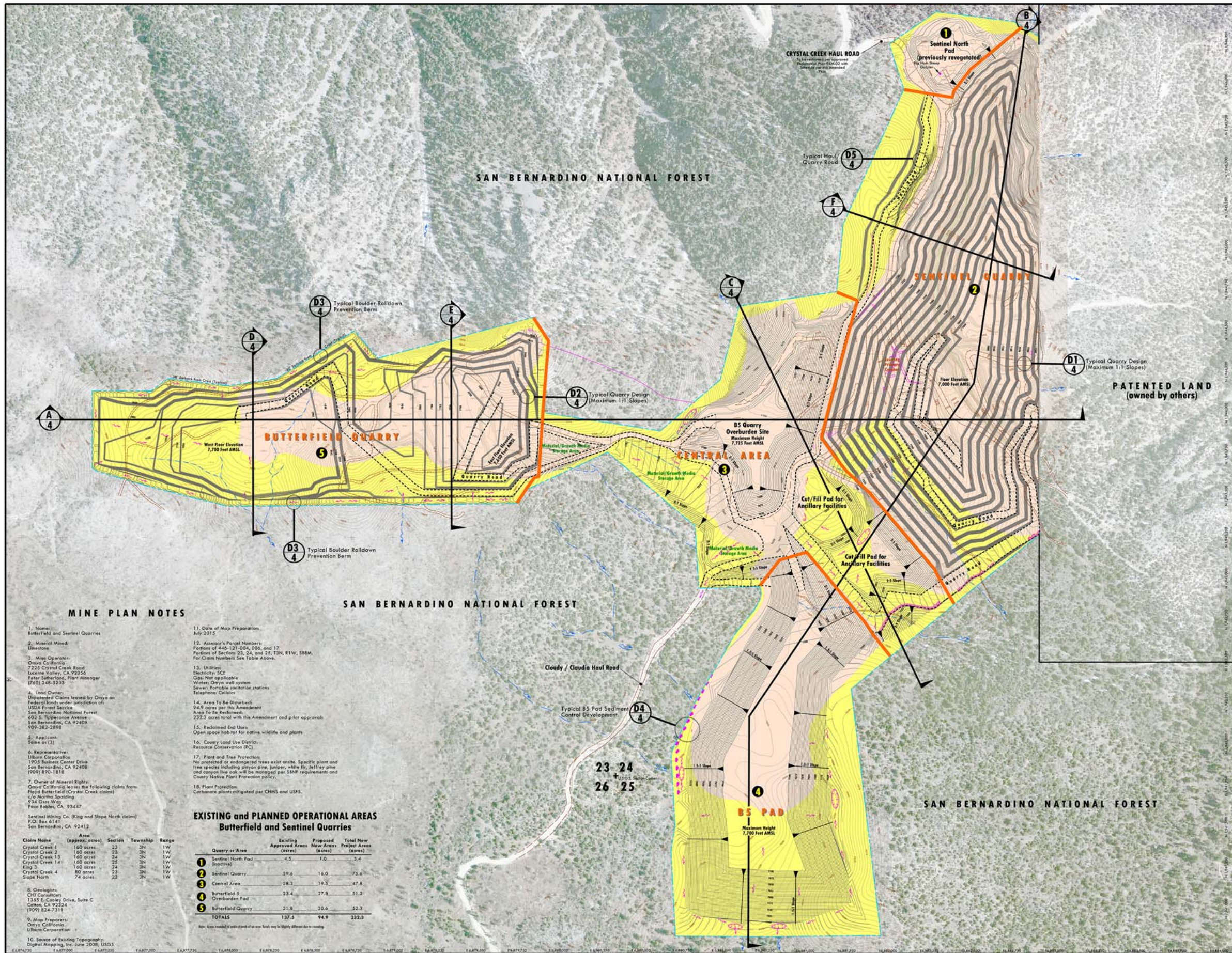


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# **EXHIBIT E**

## **Site Plan**





**LIBURN**  
CORPORATION

Scale: 1 inch = 200 feet  
Not to be used for construction purposes without the approval of the Engineer.

**LEGEND**

- Amended Operational Limits of Disturbance
- Existing Permitted Operating Area
- Proposed Expansion
- Operating Major Contour
- Operating Minor Contour
- Haul Road
- Slope Indicator
- Top of slope
- Toe of slope
- Boulder Barrier
- Riprap
- Design Drainage
- Sump
- Storm Water Control Berm
- Existing Major Contour
- Existing Minor Contour
- Existing Drainages

**AMENDED MINE PLAN**  
Butterfield and Sentinel Quarries Expansion - Onyo California  
SAN BERNARDINO NATIONAL FOREST, SAN BERNARDINO COUNTY, CALIFORNIA

Sheet 2 of 8

**MINE PLAN NOTES**

1. Name: Butterfield and Sentinel Quarries
2. Mineral Mined: Limestone
3. Mine Operator: Onyo California  
7323 Crystal Creek Road  
Lucerne Valley, CA 92356  
Peter Suberland, Plant Manager  
(760) 248-5233
4. Land Owner: Dispersed Claims leased by Onyo on Federal lands under jurisdiction of: USDA Forest Service  
San Bernardino National Forest  
602 S. Tippecanoe Avenue  
San Bernardino, CA 92408  
092-282-2898
5. Applicant: Same as (3)
6. Representative: Liburn Corporation  
1903 Business Center Drive  
San Bernardino, CA 92408  
(909) 890-1818
7. Owner of Mineral Rights: Onyo California leases the following claims from: Payne Butterfield (Crystal Creek claims)  
c/o Mather Spaulding  
924 East Way  
Trapo Falls, CA 93447
8. Geologists: CH2 Consultants  
1355 E. Casley Drive, Suite C  
Colton, CA 92324  
(909) 824-7311
9. Map Preparer: Onyo California  
Liburn Corporation
10. Source of Existing Topography: Digital Mapping, Inc. June 2008, LSC05
11. Date of Map Preparation: July 2012
12. Assessor's Parcel Numbers: Portions of 446-121-004, 006, and 17 Portions of Sections 23, 24, and 25, T3N, R1W, S8M. For Claim Numbers See Table Above.
13. Utilities: Electricity: SCE  
Other: Not applicable  
Water: Onyo well system  
Sewer: Portable sanitation stations  
Telephone: Cellular
14. Area To Be Disturbed: 94.9 acres per this Amendment  
Area To Be Reclaimed: 232.3 acres total with this Amendment and prior approvals
15. Reclaimed End Uses: Open space habitat for native wildlife and plants
16. County Land Use District: Resource Conservation (RC)
17. Plant and Tree Protection: No protected or endangered trees exist onsite. Specific plant and tree species including piñon pine, juniper, white fir, Jeffrey pine and canyon live oak will be managed per SBNE requirements and County Native Plant Protection policy.
18. Plant Protection: Carbonate plants mitigated per CHMS and USFS.

**EXISTING and PLANNED OPERATIONAL AREAS  
Butterfield and Sentinel Quarries**

Quarry or Area	Existing Approved Areas (acres)	Proposed New Areas (acres)	Total New Project Areas (acres)
1. Sentinel North Pad (inactive)	4.5	1.0	5.4
2. Sentinel Quarry	59.6	16.0	75.6
3. Central Area	28.3	19.5	47.8
4. Butterfield S Overburden Pad	23.4	27.8	51.2
5. Butterfield Quarry	21.8	30.6	52.3
<b>TOTALS</b>	<b>137.5</b>	<b>94.9</b>	<b>232.3</b>

Note: Area shown in shaded pink is an area that may be slightly different due to mapping.