SAN BERNARDINO COUNTY

INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

This form and the descriptive information in the application package constitute the contents of Initial Study pursuant to County Guidelines under Ordinance 3040 and Section 15063 of the State CEQA Guidelines.

PROJECT LABEL:

APN:	**0464-022-54**
APPLICANT:	Webber-Pyley Inc.
COMMUNITY:	Fairview Valley/1st Supervisorial District
LOCATION:	Northeast of Apple Valley, within Reed Dry Lake in Fairview Valley (Figure 2).
PROJECT NO:	AP20120001
STAFF:	Reuben Arceo, Contract Planner
REP('S):	Webber & Webber Mining Consultants, Inc.
PROPOSAL:	Revision to an approved Mining & Reclamation Plan to extend the life of the Mine to 2052, allow excavations up to 40 feet deep, and provide erosion control for a 40 acre clay mine.

USGS Quad:	Fairview Valley
T, R, Section:	**T: 6N R:2W Sec: 28**
Thomas Bros.:	Page 4209, Grid: A-5,6,7
Planning Area:	Fairview Valley
Land Use Zoning:	FW-Floodway
Overlays:	None

PROJECT CONTACT INFORMATION:

Lead agency: County of San Bernardino
Land Use Services Department - Current Planning
385 North Arrowhead Avenue
San Bernardino, CA 92415-0182

Contact person: Reuben Arceo
Phone No: (909) 387-4374 Fax No.: (909) 387-3223
E-mail: reuben.arceo@lus.sbcounty.gov

Project Sponsor: Webber & Webber Mining Consultants, Inc.
101 E. Redlands Blvd. Suite 240
Redlands, CA 92373
Phone No: (909) 793-3416

PROJECT DESCRIPTION AND BACKGROUND:

The Sigma Clay Mine is generally located in the southern Mojave Desert region of San Bernardino County, northeast of the town of Apple Valley, in the Fairview Valley (Figure 1). The Project proposes to extend the life of the existing permit to forty (40) years to 2052; to allow continued excavation of clay material to a depth of (40) feet below natural grade; and propose to increase the rate of production to 60,000 tons per year. The existing project area is 31.5 acres with expansion proposed to include an additional 4.9 acres as per Figure 2.

Mining Activities

Mining will be accomplished via track loader inbank material directly into over-the-road haul trucks for final delivery. During periods of active excavations, operations will occur between 6:00 a.m. and 5:00 p.m., up to six (6) days per week. Truck travel from the mine site will vary greatly, depending on market conditions and may be up to 100 (one-hundred) per day for short periods of time. No building, processing equipment or any other stationary equipment is proposed for the life of the project.

Table 1. Estimated Equipment List Operations

Quantity	Equipment Type [1]
1	Tracked Loader (Cat-medium)
1	Water Truck (4000 gallons)
60	Haul Trucks (25-ton bottom dump)
1	Bobcat (Reclamation activities)

[1] Equipment estimates based on project description.

Reclamation & Revegetation

Active excavations at the mining site will cease in 2052, or forty (40) years after the date of approval. The total area to be reclaimed will be 36.4 acres. Reclamation will occur concurrently with mining activities to the extent practical. As portions of the site are graded or excavated to final contours, reclamation can occur on those areas no longer subject to further disturbance. The final maximum depth of excavation will be forty (40) feet with graded slopes not steeper than 4:1 (horizontal-vertical). Any equipment on-site at the end of excavations will be removed. The access road leading from Johnson Road to the north will remain subject to reclamation. Post-reclamation drainage will be stabilized.

When operations terminate, the site will be returned to open space. Current site conditions exhibit dense vegetative growth where prior areas were disturbed. The mine site would be reclaimed to approximately 40 acres of saltbush scrub series vegetation at the end of operations. The site will be prepared for revegetation scarifying the ground surface to create conditions optimal for seeding. The revegetation areas will be covered with available surface materials in "islands," broadcast seeded, and raked to cover seeds and protect them from desiccation and predation. Seeding would occur following the first rain of the fall season and before the winter rains.

The acceptable performance standards for the Sigma Clay Mine would measure success at 25% of the baseline cover, 25% of the baseline density, and 20% of the baseline species richness five years after reclamation until success criteria achieved. Accordingly successful revegetation in the saltbush scrub series revegetation area would be achieved at 5.5% cover by native perennials, three native perennials per 100 m2 plot, and one species per 100 m2 plot. Annual assessments of the reclamation area will be conducted by a revegetation specialist to determine the success of the revegetation effort until said criteria are achieved. Remedial action would occur per the recommendation of the revegetation specialist.

ENVIRONMENTAL/EXISTING SITE CONDITIONS:

The overall site comprises approximately 40.8 acres in the dry lake bed. Vegetation on the project site includes a disturbed and sparse saltbush scrub community, and two non-native communities dominated by tamarisk trees an Russian thistle. Access to the site is via Johnson Road (a dirt road approximately 2 miles north of the project site) an unnamed dirt road from Johnson Road to the northwest corner of the site. Most of the mine site has disturbed off-road vehicle use. Existing land use and zoning districts are shown on Table 2.

Table 2. Existing Land Use and Zoning Districts

AREA	EXISTING LAND USE	LAND USE/OVERLAY DISTRICT
Site	Sigma Clay Mine	Apple Valley Floodway AV/(FW- Floodway)
North	Vacant	Apple Valley Floodway(AV/FW)
South	Vacant	Apple Valley Rural Living-20 acre minimum lot size (AV/RL-20)
East	Vacant	Apple Valley Floodway (AV/FW)
West	Vacant	Apple Valley Floodway and Apple Valley Rural Living – 20 acre minimum lot size (AV/FW and AV/RL-20)

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

Federal: None.

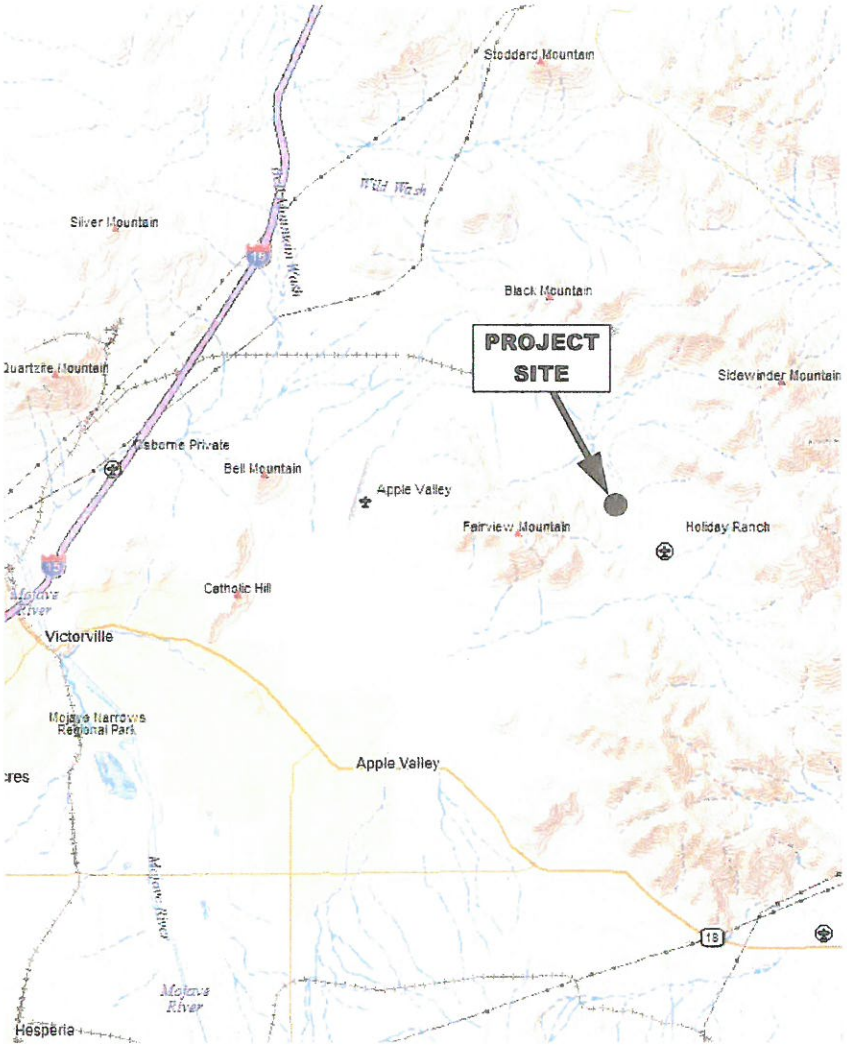
State of California: California Department of Fish & Wildlife, Colorado Regional Water Quality Control Board, Department of Conservation Office of Mine Reclamation

County of San Bernardino: Land Use Services Department- Code Enforcement, Building and Safety, Public Health-Environmental Health Services, Special Districts, Public Works, and County Fire.

Regional: Mojave Desert Air Quality Management District (MDAQMD).

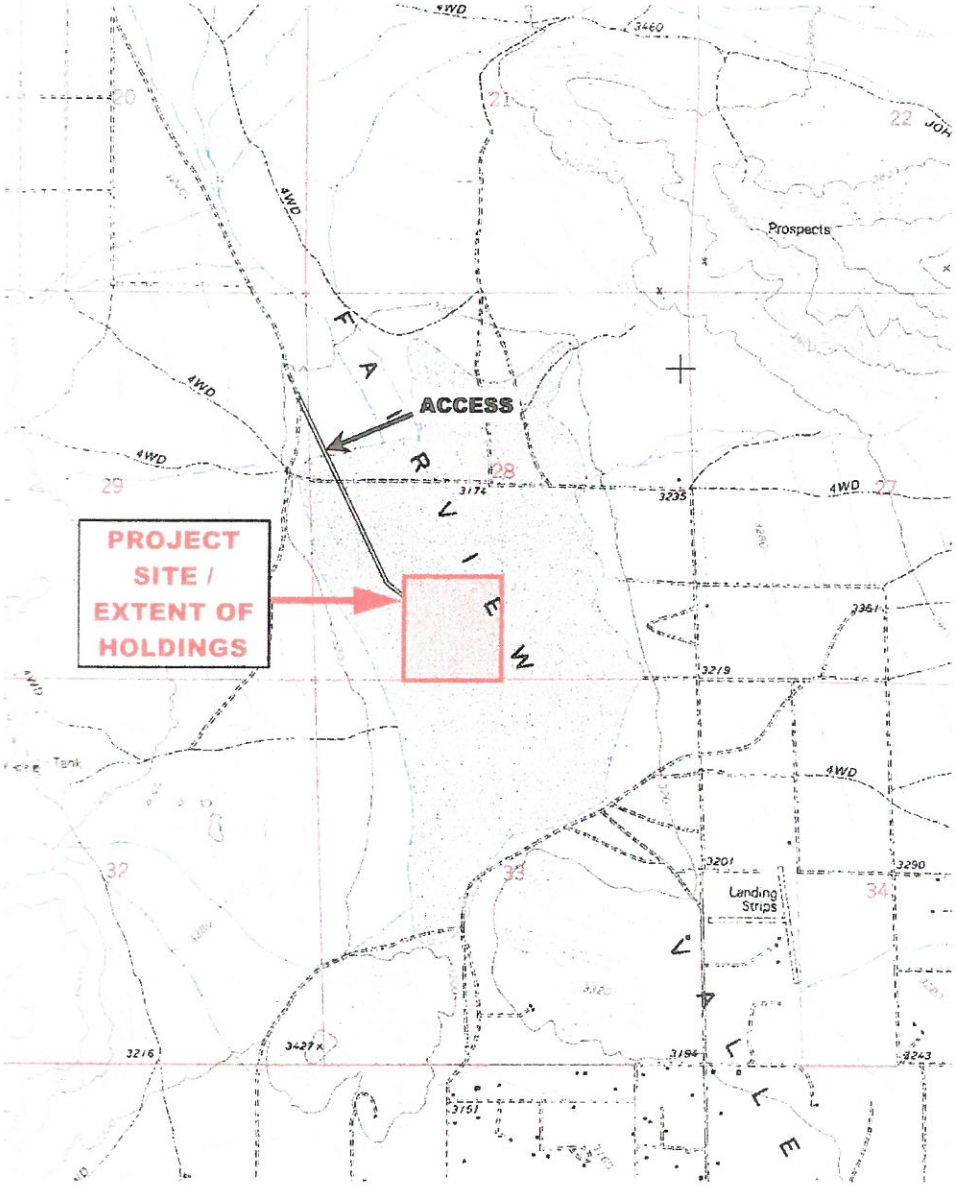
Local: None

N



Sigma Clay Mine	Project Location	Figure 1

N



Sigma Clay Mine	**Mining & Reclamation Site Plan**	**Figure 2**

EVALUATION FORMAT

This initial study is prepared in compliance with the California Environmental Quality Act (CEQA) pursuant to Public Resources Code Section 21000, et seq. and the State CEQA Guidelines (California Code of Regulations Section 15000, et seq.). Specifically, the preparation of an Initial Study is guided by Section 15063 of the State CEQA Guidelines. This format of the study is presented as follows. The project is evaluated based upon its effect on seventeen (17) major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the project on each element of the overall factor. The Initial Study Checklist provides a formatted analysis that provides a determination of the effect of the project on the factor and its elements. The effect of the project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant	No Impact

Substantiation is then provided to justify each determination. One of the four following conclusions is then provided as a summary of the analysis for each of the major environmental factors.

1. **No Impact**: No impacts are identified or anticipated and no mitigation measures are required.

2. **Less than Significant Impact**: No significant adverse impacts are identified or anticipated and no mitigation measures are required.

3. **Less than Significant Impact with Mitigation Incorporated**: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. The required mitigation measures are: (List of mitigation measures)

4. **Potentially Significant Impact**: Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts, which are (List of the impacts requiring analysis within the EIR).

At the end of the analysis the required mitigation measures are restated and categorized as being either self- monitoring or as requiring a Mitigation Monitoring and Reporting Program.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology / Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use/ Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service Systems	☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

☐	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION shall be prepared.
☒	Although the proposed project could have a significant effect on the environment, there shall not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION shall be prepared.
☐	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Prepared by: Ernest Perea, Contract Planner

Reuben Arced, Contract Project Manager — *Date* 8/18/2014

Dave Prusch, Planning Supervisor — *Date* 8/18/2014

Appendices: (On Compact Disk)

A. *Biological Resources Assessment and Focused Survey for the Desert Tortoise, Sigma Clay Mine, August 27, 2010* by Leatherman Bioconsulting.

B. *Letter Report to Update the Sigma Clay Mine Biological Resources Assessment and Focused Survey for Desert Tortoise, by Hernandez Environmental Services, June 23, 2014.*

C. *Preliminary Hydrology Study and Flood Analysis, Sigma Clay Mine, October 2010* by Jay Gunther.

	Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant	No Impact
I.	**AESTHETICS** - Would the project				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

SUBSTANTIATION (Check ☐ if project is located within the view-shed of any Scenic Route listed in the General Plan):

I a) **No Impact.** The County General Plan Open Space Element, Policy OS 5.1. states that a feature or vista can be considered scenic if it:

- Provides a vista of undisturbed natural areas;
- Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed; or,
- Offers a distant vista that provides relief from less attractive views of nearby features such as views of mountain backdrops from urban areas).

31.5 acres of the overall 40.8 acre site is is being actively mined. The site has been heavily disturbed by mining activities and off-road vehicle use. The overall project site does not meet the criterion for a scenic vista pursuant to County General Plan Open Space Element Policy OS 5.1. Therefore, the project will have no impact on a scenic vista.

I b) **No Impact.** According to The San Bernardino County General Plan the project site is not within a scenic route (Ref. General Plan Pg. IV-16). Therefore, no impact is anticipated.

I c) **Less than Significant.** The visual character of the site and surroundings is that of an existing mining operation surrounded by vacant desert land. The proposed use is an allowable use within the Resources Conservation Land Use Zoning District. The continued operation and expansion of mining activities will not significantly impact the existing visual character of the area. Therefore, a less than significant impact is anticipated.

I d) **No Impact.** The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. No new light sources are proposed and therefore no impacts are anticipated.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
II.	**AGRICULTURE and FORESTRY RESOURCES** - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

SUBSTANTIATION (Check ☐ if project is located in the Important Farmlands Overlay):

II a) **No Impact.** The proposed project will have no impact to agricultural resources, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. There are no agricultural land uses within the subject property or in the vicinity.

II b) **No Impact.** The project site is not zoned as agricultural land use or Williamson Act land. The project would not conflict with current zoning. No impact is anticipated. Therefore, the project will not conflict with existing zoning for agricultural use, or a Williamson Act contract.

II c/d) **No Impact.** The project site and surrounding area does not occur within forest land, timberland, or timberland zoned production. No impacts to these resource lands would result with implementation of the project.

II e) **No Impact.** The proposed project will not have any direct or indirect impacts to agricultural resources in the County including the conversion of Farmland to non-agricultural uses because no such lands exist in the vicinity of the project site.

	ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant	No Impact
III.	**AIR QUALITY** - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c)	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)?	☐	☐	☒	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

SUBSTANTIATION (Discuss conformity with the Mojave Desert Air Quality Management Plan, if applicable):

The project site is located in the Mojave Desert Air Basin (MDAB). The Mojave Desert Air Quality Management District (MDAQMD) has jurisdiction over air quality issues and regulations within the MDAB. To assist local agencies to determine if a project's emissions could pose a significant threat to air quality, the MDAQMD has prepared *the California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, August 2011*. The air and dust emissions from the operational use of the Project were evaluated and compared to the MDAQMD standards and evaluated against the most recent thresholds applicable.

III a) **Less than Significant.** The project site is within the MDAB and under the jurisdiction of the MDAQMD. The MDAQMD is responsible for updating the Air Quality Management Plan (AQMP). The AQMP was developed for the primary purpose of controlling emissions to maintain all federal and state ambient air standards for the district. A project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast.

The project is consistent with the zoning and land use classifications that were used to prepare the Mojave Desert AQMP (FW-Floodway). In addition, based on Table 2, Project-generated emissions

generated will not exceed emission thresholds. Therefore, the project's emissions are in compliance with the thresholds established by the Mojave Desert Air Quality Management District. The project would not significantly increase local air emissions and therefore would not conflict with or obstruct implementation of the plan. Therefore, no impact is anticipated.

III b) **Less than Significant With Mitigation Incorporated.** Mining will be accomplished via track loader inbank material directly into over-the-road haul trucks for final delivery. During periods of active excavations, operations will occur between 6:00 a.m. and 5:00 p.m., up to six (6) days per week. Truck travel from the mine site will vary greatly, depending on market conditions and may be up to 100 (one-hundred) per day for short periods of time. No building, processing equipment or any other stationary equipment is proposed for the life of the project.

Emissions associated with the project are primarily a result of material mining and transport of materials to and from the site. Emissions were screened using MDAQMD guidelines, CalEEMod, and Off-Road Mobile Source Emissions Factors (2012 based on the following equipment as shown in Table 3 below.

Table 3. Estimated Typical Equipment List

Quantity	Equipment Type [1]
1	Tracked Loader (Cat-medium)
1	Water Truck (4000 gallons)
60	Haul Trucks (25-ton bottom dump)
1	Bobcat (Reclamation activities)

[1] Equipment estimates based on project description.

As shown in Table 4, Project emissions would not exceed MDAQMD thresholds for the types of emissions associated with mining operations and the transport of materials from the site.

Table 4. Sigma Clay Mine Operations (Pounds per Day)

Source[1,2]	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Clay Mining Operations (Tracked Loader & Water Truck)	1.34	16.83	9.11	10.26	2.22
Hauling Trucks	0.017	0.047	0.063	0.57	0.06
Worker Trips	0.078	0.031	0.287	7.45	0.75
Reclamation (Bobcat)[2]	0.71	2.31	2.95	0.19	0.07
Totals (lbs/day)	**2.15**	**19.22**	**12.41**	**18.47**	**3.10**
MDAQMD Threshold (lbs/day)	137	137	548	82	82
Significant	**No**	**No**	**No**	**No**	**No**

[1] CalEEMod 2013.2.2
[2] Off-Road Mobile Source Emissions Factors (2012)

However, in order to ensure that impacts are mitigated to the maximum extent feasible, the following mitigation measures are required:

AQ-1: The Project proponent shall ensure that any portion of the site to be graded shall be pre-watered prior to the onset of grading activities.

AQ-2: Project proponent shall ensure that watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading and mining activity on the site. Portions of the site that are actively being mined shall be watered to

ensure that a crust is formed on the ground surface, and shall be watered at the end of each

workday.

AQ-3: The Project proponent shall ensure that all disturbed areas are treated to prevent erosion.

AQ-4: The Project proponent shall ensure that all mining and processing activities are suspended when winds exceed 25 miles per hour.

AQ-5: During operation, street sweeping will be conducted at least daily, and as needed, along site access roadways to remove dirt dropped by vehicles. Site access driveways and adjacent streets will be washed if there are visible signs of any dirt track-out at the conclusion of any work day.

AQ-6: All equipment used for mining and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.

AQ-7: The operator shall maintain and effectively utilize and schedule on-site equipment and on-site and off-site haul trucks in order to minimize exhaust emissions from truck idling.

AQ-8: The operator shall comply with all existing and future CARB and MDAQMD regulations related to diesel-fueled trucks, 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.

AQ-9: This facility must handle all material (raw, byproducts, and finish materials) so as not to cause a Nuisance (odors) per District Rule 402.

AQ-10: A Blue Smoke Control filter cartridge will be used in this project to mitigate for the blue smoke.

III c) **Less than Significant**. The project is located in a region that has been identified as being in Non-Attainment for Ozone and PM10 (State) according to the California Air Resources Board Area Designation Maps. This means that the background concentration of these pollutants have historically been over the Federal and/or State Ambient Air Quality Standards. With respect to air quality, no individual project would by itself result in Non-Attainment of the Federal or State Ambient Air Quality Standards. However, a project's air pollution emissions although individually limited, may be cumulatively considerable when taken in combination with past, present, and future development projects. In order to be considered significant, a project's air pollutant emissions must exceed the emission thresholds established by the regional Air Quality Management District.

As shown in Table 3, the thresholds for the above referenced criteria pollutants would not be exceeded by the project. Therefore, impacts from the project are not cumulatively considerable when included with other past, present, and future probable projects.

III d) **No Impact.** The project is located in a remote desert area of San Bernardino County. No sensitive receptors are located within the project vicinity. Therefore, no impacts are anticipated.

III e) **No Impact.** The generation of objectionable odors is typically not associated with surface mining operations and there are no sensitive receptors within the project vicinity. Therefore, no impact is anticipated.

	ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant	No Impact
IV.	**BIOLOGICAL RESOURCES** - Would the project:				
a)	Have substantial adverse effects, 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?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc...) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☒	☐	☐

SUBSTANTIATION (Check if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database): ☒

IV a)

The following analysis is based in part on the *Biological Resources Assessment and Focused Survey for the Desert Tortoise, Sigma Clay Mine, August 27, 2010 by* Leatherman Bioconsulting and the *Update to the Sigma Clay Mine Biological Resources Assessment and Focused Survey for Desert Tortoise, by Hernandez Environmental Services, June 23, 2014.*

Less Than Significant with Mitigation Incorporated. Biological surveys were completed on the 40-acre project site to evaluate potential impacts to biological resources. Vegetation on the project site includes a disturbed and sparse saltbush scrub community, and two non-native communities

dominated by tamarisk trees and Russian thistle. One special status species (loggerhead shrike) is known to occur on the project site and several other special status species have the potential to occur on the project site, at least occasionally. Adverse impacts to most of these species would not meet CEQA mandatory findings of significance criteria, but impacts to potentially occurring species covered under the Western Mojave Plan (WMP) could be considered significant without mitigation. It should be noted that use of the West Mojave Plan as mitigation for proposed project impacts to existing disturbed habitat may not be adequate at this time. The West Mojave Plan has not been implemented by state and federal agencies as June 2014.

The *Update to the Sigma Clay Mine Biological Resources Assessment and Focused Survey for Desert Tortoise, by Hernandez Environmental Services* determined that the conclusions reached by the *Biological Resources Assessment and Focused Survey for the Desert Tortoise, Sigma Clay Mine, August 27, 2010* by Leatherman Bioconsulting have not changed and that adverse impacts to most of these species would not meet CEQA mandatory findings of significance criteria

In order to mitigate proposed project impacts to 40 acres of non-native vegetation in the dry lake bed due to fact that the West Mojave Plan has not yet being implemented, the following mitigation measure is recommended:

BIO-1-Pre-Construction Survey. Utilizing accepted protocols, within 30 days prior to initiating mining activities, a pre-construction survey shall be conducted for sensitive species identified in the Biological Resources Assessment and Focused Survey for the Desert Tortoise, Sigma Clay Mine, August 27, 2010 by Leatherman Bioconsulting and the Update to the Sigma Clay Mine Biological Resources Assessment and Focused Survey for Desert Tortoise, by Hernandez Environmental Services, June 23, 2014. that may have established themselves on the project site. A clearance letter shall be provided to the Planning Department/ County's Mining and Engineering Geologist prior to initiating mining activities,

The desert tortoise is not expected to occur on the project site at this time, but may wander onto the site at some time in the future, and may occur along the access road and Johnson Road to the north. Limited take of the desert tortoise is permitted within the WMP coverage area as long as the project is in compliance with relevant sections of the WMP and associated take permits from resource agencies. Potential impacts would be reduced to less than significant levels through compliance with the WMP and associated permit conditions.

BIO-2-Desert Tortoise. The following measures shall be implemented:

a. ***The Applicant shall provide an information sheet to all persons who will work on-site during mining activities.***

b. ***A litter control program shall be instituted. The program includes the direction to all workers to eliminate food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area and to maintain covered trash containers that are regularly removed from the project site. All trash and food items should be promptly enclosed in raven proof containers (i.e. metal or solid plastic trash cans) and disposed of in a licensed disposal facility on a regular basis.***

c. ***Any desert tortoises observed during any phase of the project should be left to move out of the way on its own. Handling of desert tortoises is not authorized.***

d. ***Workers should inspect for desert tortoises under vehicles and equipment prior to moving them. If a desert tortoise is present, the worker should carefully move the***

vehicle or equipment only when necessary or should wait for the desert tortoise to move out from under the vehicle or equipment.

e. ***Only an Authorized Biologist(s) shall be allowed to handle tortoises. The Authorized Biologist(s) shall have a Memorandum of Understanding (MOU) with the CDFW for handling tortoises.***

f. ***Upon discovery of a Desert Tortoise in a work area, all work in that area shall stop until the Desert Tortoise is relocated. An Authorized Biologist shall be on site or on call to relocate any desert tortoise found during work activities. The desert tortoise shall be monitored until the Authorized Biologist arrives.***

IV b-c) **Less Than Significant Impact With Mitigation Incorporated.** Based on the *General Biological Resources Assessment,* No observable washes or similar features occur on the mine site, except for small ruts that have formed on the slopes at the margins of the borrow pits. Several small unnamed intermittent "blue line" streams are depicted on the quadrangle map as tributaries to the dry lake bed, but none are in the vicinity of the project site, and none would be altered as part of the proposed project. As such, there is no surface runoff from the project site, which is an intrastate lake under the U.S. Army Corps of Engineers definitions.

However, the location of the project site on a dry lake bed may be subject to permitting requirements by the California Department of Fish and Wildlife (CDFG) under Section 1601-03 of the California Fish and Game Code or under the Porter-Cologne Act through the Regional Water Quality Control Board. Concurrently or following the County's approval of the project, a formal jurisdictional delineation of the washes on the project is recommended to determine if these features meet the criteria for jurisdictional waters or streambeds by the Regional Water Quality Control Board or the California Department of Fish and Wildlife. Results of the delineation should be provided in permit applications to see what (if any) regulatory jurisdiction will apply.

In addition, according to the *Preliminary Hydrology Study*, the project site is located within the Fairview Dry Lake and is impacted by several significant blue line streams/washes.

Mitigation Measure BIO-3 is required to address potential impacts to jurisdictional waters:

BIO-3- Riparian Habitat/Wetlands: Prior to commencing mining activities or earth disturbing activities within any drainage courses, the project applicant shall prepare a Jurisdictional Delineation by a qualified biologist. Impacts to jurisdictional areas that are regulated by the CDFW and the RWQCB shall be mitigated at a 2:1 ratio through an off-site mitigation bank or the contribution of in-lieu fee program acceptable to the County of San Bernardino, CDFW, and RWQCB.

IV d) **Less Than Significant Impact With Mitigation Incorporated.** To avoid impacts migratory and nesting birds, the following measures shall be implemented.

BIO-4- Nesting Birds. Vegetation and habitat grading and removal shall not be scheduled during the bird nesting season (generally February 15 through August 1). If clearing of vegetation occurs within the nesting season, a pre-construction survey for nesting birds shall be conducted before any vegetation or ground disturbance activities occur. A minimum buffer of 250 feet should be placed around active nests within which construction activities would be restricted. When the nest is no longer active, either because the nest is abandoned or the young fledges have flown (as determined by a qualified biologist), construction activities could resume.

IV e) **No Impact:** Based on the *General Biological Resources Assessment,* most of the project site and surrounding area is devoid of perennial vegetation, due in part to the inhospitable nature of the dry lake bed and in part to habitat disturbance and degradation resulting from sheep grazing and off-highway vehicle use.

IV f) **Less Than Significant Impact With Mitigation Incorporated.** The project area is located in the Western Mojave Plan. Compliance with Mitigation Measures BIO-1 ensures that the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
V.	**CULTURAL RESOURCES** - Would the project				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

SUBSTANTIATION (Check if the project is located in the Cultural ☐ or Paleontologic ☐ Resources overlays or cite results of cultural resource review):

V a-d **Less Than Significant Impact with Mitigation Incorporated.** The project is not expected to have an impact on cultural or paleontological resources. However, the following Mitigation Measure shall be implemented in the event that potentially sensitive cultural resources are uncovered during earthmoving.

CR-1: The developer/property owner shall submit a letter to County Planning agreeing to adhere to the following requirements and shall include a note on the grading plans and in all construction contracts/subcontracts a provision that the project contractors shall also adhere to the following requirements:

- ***In the event archaeological, paleontological and/or historical resources, including pottery, middens or human remains, are uncovered during earthmoving activities, all work in that area shall cease immediately and 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) and the County of San Bernardino Museum, determines the resources are recovered to their satisfaction.***

- ***If possible human remains are encountered during any earthmoving activities, all work shall stop in the area in which the find(s) are present, and the San Bernardino County Coroner must be notified. State law dictates that the Native American Heritage Commission (NAHC) shall be notified in the event that remains are determined to be human and of Native American decent, in accordance with California Public Resources Code Section 5097.98.***

	ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant	No Impact
VI.	**GEOLOGY AND SOILS** - Would the project:				
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map Issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42	☐	☐	☒	☐
	ii. Strong seismic ground shaking?	☐	☐	☒	☐
	iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv. Landslides?	☐	☐	☒	☐
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil, as defined in Table 181-B of the California Building Code (2001) creating substantial risks to life or property?	☐	☐	☐	☒
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

SUBSTANTIATION (Check ☐ if project is located in the Geologic Hazards Overlay District):

VI a) ai) **Less Than Significant Impact.** A portion of the site is traversed by an active fault according to information obtained from the County's GIS system and the USGS Fault Maps. Fault rupture can be a potential hazard to structures and infrastructure but are not generally considered to be hazardous to open-pit mines.

aii) **Less Than Significant Impact**. Seismic ground shaking is influenced by the proximity of the site to an earthquake fault, the intensity of the seismic event, and the underlying soil composition. Although the State Lands Commission Expansion Area Is located in the vicinity of an earthquake fault and the project site is to be used for a mining operation are seismic ground shaking is not generally considered to be hazardous to open-pit mines.

aiii) **Less Than Significant Impact**. According to the County General Plan Hazards Overlay Map the site is not located in an area susceptible to liquefaction. As noted, the proposed project would not build permanent structures or construct facilities with foundations that could fail as a result of liquefaction during an earthquake. Therefore, this impact is considered less than significant.

aiv) **Less Than Significant Impact**. According to the County General Plan Hazards Overlay Map the site is not located in an area susceptible to landslides. The proposed project would involve excavation to depths no greater than forty (40) feet below the existing ground elevation. In addition, the side slopes of the excavated area would not be steeper than 4:1 (H:V). Therefore, the project site would not be exposed to landslide hazard, and this impact would be less than significant.

VI b) **Less Than Significant Impact.** Run-off resulting from direct precipitation and uncontrolled run-off from surrounding areas have the potential to cause minor erosion and deposition. All storm water discharge is regulated by the Colorado River Basin Regional Water Quality Control Board pursuant to site specific Storm Water Pollution Prevention Plans to manage soil erosion.

Control of surface drainage, erosion, and sedimentation of planned operations involves the following typical components:

- Limiting surface disturbance to the minimum area required for active operations.
- Diverting run-off from undisturbed areas around the active mining area as necessary.
- Using berms, ditches, sediment basins, and localized control and maintenance measures to intercept and control disturbed area drainage as necessary.
- Stabilizing disturbed areas through grading or revegetation.

Due to the low precipitation, flat gradient of the topography, and sandy nature of the soil, drainage control does not present a significant impact. The revegetation program is designed to reestablish a self-sustaining native plant community upon the conclusion of mining. As excavations are finished they will be revegetated with a combination of transplanted plants, growth media and native plant seeds collected from adjacent areas or purchased from commercial suppliers. All disturbed area drainage would be retained within the project site; therefore, impacts are anticipated to be less than significant.

VI c) **Less Than Significant Impact.** For the reasons stated in the response to Question VIa, land sliding is not anticipated. Mudflows are uncommon in the desert environment and are not anticipated.

VI d) **No Impact**. The project site is not located in an area which has been identified by the County Building and Safety Geologist as having the potential for expansive soils. No impact is anticipated.

VI e) **No Impact.** Septic tanks and/or alternative water supply systems are not proposed as part of the project. Therefore, no impacts are anticipated.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
VII	**GREENHOUSE GAS EMISSIONS** - Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

SUBSTANTIATION

VII a) **Less Than Significant Impact.** In December 2011, the County of San Bernardino adopted the "*Greenhouse Gas Emissions Reduction Plan*" ("GHG Plan"). The purpose of the GHG Plan is to reduce the County's internal and external GHG emissions by 15 percent below current (2011) levels by year 2020 in consistency with State climate change goals pursuant to AB32. The GHG Plan has been designed in accordance with Section 15183.5 of the State CEQA Guidelines which provides for streamline review of climate change issues related to development projects when found consistent with an applicable greenhouse gas emissions reduction plan.

Section 5.6 of the GHG Plan identifies the procedures for reviewing development projects for consistency with the GHG Plan. The GHG Plan includes a two-tiered development review procedure to determine if a project could result in a significant impact related greenhouse gas emissions or otherwise comply with the Plan pursuant to Section 15183.5 of the State CEQA Guidelines. The initial screening procedure is to determine if a project will emit 3,000 metric tons of carbon dioxide equivalent ($MTCO_2E$) per year or more. Projects that do not exceed this threshold require no further climate change analysis but are required to implement mandatory reducing measures in the project's conditions of approval.

Projects exceeding this threshold must meet a minimum 31 percent emissions reduction in order to garner a less than significant determination. This can be met by either (1) achieving 100 points from a menu of mitigation options provided in the GHG Plan or (2) quantifying proposed reduction measures. Projects failing to meet the 31 percent reduction threshold would have a potentially significant impact related to climate change and greenhouse gas emissions.

According to CEQA Guidelines section 15064.4, when making a determination of the significance of greenhouse gas emissions, the "lead agency shall have discretion to determine, in the context of a particular project, whether to (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use". "Moreover, CEQA Guidelines section 15064.7(c) provides that "a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts" on the condition that "the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

A GHG emissions inventory was conducted for the project utilizing the California Emissions Estimator Model (CalEEMod) based on the equipment mix and number of haul trips associated with mining activities. GHG emissions will be released by equipment used for loading, grading, and compacting activities. CalEEMod estimates that the estimated annual emissions from mining activities would be 232.39 metric tons of carbon dioxide equivalent ($MTCO_2E$) per year which is less

than the initial screening threshold of 3,000 $MTCO_2E$ per year Projects that do not exceed this threshold require no further climate change analysis.

Table 5. Project Greenhouse Gas (GHG) Emissions

Source		GHG Emissions MT/yr		
	N2O	CO2	CH4	CO2e
Operations	0.00	230.98	0.07	232.39
TOTAL				*232.39*
County Screening Threshold				**3,000**
Exceed Threshold?				**NO**

The following Performance Standards apply to all projects, including those that emit less than 3,000 MTCO2E/YR, and will be included as Conditions of Approval for the Project.

The following are the Performance Standards (Conditions of Approval) that are applicable to the project:

1. *The developer shall implement the following as greenhouse gas (GHG) mitigation during the operation of the approved project:*

   a) Waste Stream Reduction. The "developer" shall provide to all project employees County-approved informational materials about methods and need to reduce the solid waste stream and listing available recycling services.

   b) Vehicle Trip Reduction. The "developer" shall provide to all project employees County approved informational materials about the need to reduce vehicle trips and the program elements this project is implementing. Such elements may include: participation in established ride-sharing programs, creating a new ride-share employee vanpool, designating preferred parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles with benches in waiting areas, and/or providing a web site or message board for coordinating rides.

   c) Select construction equipment based on low-emissions factors and high-energy efficiency. All diesel/gasoline-powered construction equipment shall be replaced, where possible, with equivalent electric or CNG equipment.

   d) All construction equipment engines shall be properly tuned and maintained in accordance with the manufacturers specifications prior to arriving on site and throughout construction duration.

VII b) **Less Than Significant Impact.** The state and local regulatory programs for GHG emissions and climate change are described in the response to Question VIIa above. The Performance Standards described above will ensure that there would be no conflict with any applicable plan, policy, or regulation; therefore, impacts will be less than significant, and no mitigation would be required.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
VIII.	**HAZARDS AND HAZARDOUS MATERIALS** - Would the project:				
a)	Create a significant hazard to the public or the Environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d)	Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

SUBSTANTIATION

VII a-b) **Less Than Significant Impact with Mitigation Incorporated.** Mining and reclamation activities for the proposed project would involve the use of heavy equipment and vehicles containing fuel, oil, and grease. These fluids could leak from construction vehicles or be inadvertently released in the event of an accident, potentially releasing petroleum compounds and metals. Unless properly managed, such releases could result in adverse health effects, present an increased risk of fire or

explosion or contaminate exposed soil. This analysis assumes the routine use, storage, and disposal of hazardous materials during mining and reclamation would be in compliance with applicable regulations and codes.

Additional site-specific controls are recommended to ensure hazardous materials are not inadvertently released to the environment. This impact is considered less than significant with mitigation incorporated. Implementation of the following mitigation measure would reduce reclamation-related hazardous materials impacts to a less-than significant level:

HAZ 1. All spills or leakage of petroleum products during mining or reclamation activities shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at an appropriately licensed disposal or treatment facility.

VIII c) **Less Than Significant Impact.** The project involves the use of materials common to the mining industry and includes the transport, storage and use of fuels, and lubricants. The operator would continue to comply with all applicable federal and state safety rules and regulations regarding hazardous materials. During operation, diesel exhaust would be generated by heavy construction equipment; however, no school facilities or proposed school facilities are located within one-quarter mile radius of the project site. Therefore, less than significant impact is anticipated.

VIII d) **Less than Significant Impact.** The project site is not identified on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The operator would comply with all applicable federal and state safety rules and regulations regarding hazardous materials. Therefore, less than significant impact is anticipated.

VIII e) **No Impact.** As shown on San Bernardino County General Plan, Hazards Overlay Map the project site is not located within 2 miles of a public use airport or within the Airport Safety Review Area of a public use airport. Therefore, the project would not result in safety hazard impacts to or from aircraft-related uses. No impact is anticipated.

VIII f **Less Than Significant Impact.** The project site is located within one (1) mile of the Holiday Ranch Airport which is located southeast of the project site. The Holiday Ranch Airport is a private use airport not open to the public. The dirt runway runs in a north-south direction and take off and landings take place east of the project site. As such, a safety hazard does not exist for people residing or working in the project area.

VIII g) **No Impact.** Activities associated with the project would not impede existing emergency response plans for the project site and/or other land uses in the project vicinity. All vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Therefore, implementation of the project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. No impact is anticipated.

VIII h) **No Impact.** As shown on San Bernardino County General Plan, Hazards Overlay Map, the project site is not located within a Fire Safety Overlay District. No impact is anticipated.

	ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorp.	Less than Significant	No Impact
IX.	**HYDROLOGY AND WATER QUALITY** - Would the project:				
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level, which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e)	Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g)	Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structure that would impede or redirect flood flows?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

SUBSTANTIATION

The following analysis is based in part on the *Preliminary Hydrology Study and Flood Analysis, Sigma Clay Mine, October 2010 by Jay Gunther.*

IX a) **Less Than Significant Impact.** Run-off resulting from direct precipitation and uncontrolled run-off from surrounding areas have the potential to cause minor erosion and deposition. All storm water discharge is regulated by the Colorado River Basin Regional Water Quality Control Board pursuant to site specific Storm Water Pollution Prevention Plans to manage soil erosion.

Control of surface drainage, erosion, and sedimentation of planned operations involves the following typical components:

- Limiting surface disturbance to the minimum area required for active operations.
- Diverting run-off from undisturbed areas around the active mining area as necessary.
- Using berms, ditches, sediment basins, and localized control and maintenance measures to intercept and control disturbed area drainage as necessary.
- Stabilizing disturbed areas through grading or revegetation.

Due to the low precipitation, flat gradient of the topography, and sandy nature of the soil, drainage control does not present a significant impact. The revegetation program is designed to reestablish a self-sustaining native plant community upon the conclusion of mining. As excavations are finished they will be revegetated with a combination of transplanted plants, growth media and native plant seeds collected from adjacent areas or purchased from commercial suppliers. All disturbed area drainage would be retained within the basins and low-lying areas; therefore, impacts are anticipated to be less than significant.

IX b **Less Than Significant Impact.** Sigma Clay Mine project only requires water for dust suppression. No on-site water production wells exist or are planned for the future and water will be imported to the site via 4,000 gallon over-the-road water trucks. Drinking water will be supplied to employees for consumption. No contaminants such as processing chemicals, detergents, acid drainage, fuel. Oil or gasoline will be exposed to water flows on site throughout the life of the project.

IX c-f) **Less Than Significant Impact.** The project site is located near the low point of the existing Fairview Dry Lake Bed which acts as a large regional basin for the watershed. This basin has a total capacity of approximately 7,879 acre-feet, and fills to a natural spillway water surface elevation of approximately 3,196 feet prior to discharging to the south. As such, 100% of the total 100-year, 24-hour runoff volume of 3,795 acre-feet, and 100% of the total 100-year, 5-day runoff volume of 6,740 acre-feet, is contained within the basin. Therefore, less than significant impact is anticipated.

IX g/h) **No Impact.** The project site does not occur within a 100-year flood plain, nor does it include the construction of housing or would place housing within a flood plain. No impacts are anticipated.

IX i) **No Impact.** The project site and surrounding area is located outside of any designated dam inundation area. The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, as no levee or dam is proposed as part of the this project. Therefore, no impacts are anticipated.

IX j) **No Impact**. A seiche is an oscillating surface wave in a restricted or enclosed body of water generated by ground motion, usually during an earthquake. Inundation from a seiche can occur if the wave overflows a containment wall or the banks of a water body. As the project site is not located adjacent to any body of water that has the potential of seiche or tsunami, no impacts are anticipated.

X.	**LAND USE AND PLANNING** - Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

SUBSTANTIATION

X a) **No Impact.** The project site is surrounded by vacant desert land. The proposed project is consistent with the County General Plan and would not physically divide an established community. No impact is anticipated.

X b) **Less Than Significant Impact with Mitigation Incorporated.** The analysis contained in this Initial Study Checklist addressed the potential conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect. Based on this analysis, it was determined that the project could potentially have significant impacts on the following:

- Biological Resources (migratory birds, desert tortoise, jurisdictional waters) Mitigation Measures BIO-1 through BIO-4 are required to ensure that the project impacts to these biological resources are less than significant.
- Cultural Resources. Mitigation Measure CR-1 is required to ensure that the project impacts to cultural resources is less than significant.
- Hazardous Materials (vehicle lubricants). Mitigation Measure HAZ-1 is required to ensure that the project impacts to from spills is less than significant.

Based on the above, it can be determined that the project is not in conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

X c) **Less Than Significant Impact.** The project area is located in the Western Mojave Plan. Compliance with Mitigation Measures BIO-1 through BIO-4 ensures that the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XI.	**MINERAL RESOURCES** - Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

SUBSTANTIATION (Check ☒ if project is located within the Mineral Resource Zone Overlay):

XI a-b) **No Impact.** The California Geological Survey (formerly the Division of Mines and Geology) has mapped the site as MRZ-2 for clay mineral resources. MRZ-2 are areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence. Classification is based on geologic and economic factors without regard to existing land use and land ownership. Within the classifications, "MRZ-2" is defined as areas that contain identified mineral resources. The project would supply clay to the region. Therefore, the project would not result in the loss of availability of a mineral resource that would be of value to the region and the residents of the State. Therefore, no impacts are anticipated.

Once mined, a measurement of this resource will be depleted; however, the proposed project is consistent with the County's policy that protects the current and future availability of mineral resources. The primary goal in evaluating a land use that does not include mineral extraction activities is to ensure that the mineral potential of land is recognized and that decision-makers do not preclude the conservation, potential for development and use of the valuable mineral resources including water. Regulation and reclamation of the proposed project site as required by the Surface Mining and Reclamation Act of 1975 (SMARA) will permit the continued availability of the mineral resources and provide for the protection and subsequent beneficial use of those mineral resources while minimizing impacts on the public and the environment.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XII.	**NOISE** - Would the project:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

SUBSTANTIATION (Check if the project is located in the Noise Hazard Overlay District ☐ or is subject to severe noise levels according to the General Plan Noise Element ☐):

XII a,c,d) **No Impact.** Approval of the project would require operations to conform to all applicable noise control regulations. There are no nearby noise sensitive land uses within the vicinity of the project Site. Therefore, no impacts are anticipated.

XII b) **Less Than Significant.** Approval of the project would require operations to conform to all applicable noise control regulations. There are no nearby noise sensitive land uses within the vicinity of the project Site. Mining activities would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. Therefore, less than significant impact is anticipated.

XII e/f) **No Impact.** The project site is not located within an airport land use plan nor within two miles of a public airport or public use airport, or within the vicinity of a private airstrip, that would expose people at the project Site to excessive noise levels. Therefore, impacts from airport-related noise are not anticipated.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XIII.	**POPULATION AND HOUSING** - Would the project:				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION

XIII a) **No Impact.** The project would not induce substantial population growth in the area either directly or indirectly because the project consists of a mining operation that will operate with a minimal amount of employees. In addition, the duration of the operation is approximately 40 years after which time the site will be reclaimed and returned to open space use. No impacts are anticipated.

XIII b) **No Impact.** The proposed use would not displace substantial numbers of existing housing units, or require the construction of replacement housing, as no housing units exist on the site.

XIII c) **No Impact.** Implementation of the project would not displace substantial numbers of people necessitating the construction of replacement housing elsewhere, as no housing exists on the project site.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XIV.	**PUBLIC SERVICES**				
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	Fire Protection?	☐	☐	☐	☒
	Police Protection?	☐	☐	☐	☒
	Schools?	☐	☐	☐	☒
	Parks?	☐	☐	☐	☒
	Other Public Facilities?	☐	☐	☐	☒

SUBSTANTIATION

XIV a) **No Impact.** The project would not result substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, or hinder acceptable service ratios, response times or other performance objectives for any of the public services, including fire and police protection, schools, parks or other public facilities because the project consists of a mining operation with no permanent improvements proposed. After mining operations, the site would consist of vacant land. Therefore, no impacts are anticipated.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XV.	**RECREATION**				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

SUBSTANTIATION

XV a/b) **No Impact.** Approval of the project would not generate the need off new jobs or housing which would induce population growth in adjacent areas, and ultimately increase the use of park facilities or other recreational facilities in the region. No impacts are anticipated.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XVI.	**TRANSPORTATION/TRAFFIC** - Would the project:				
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit)?	☐	☐	☒	☐
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e)	Result in inadequate emergency access?	☐	☐	☐	☒
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

SUBSTANTIATION

XVI a-b) **Less Than Significant Impact**. Because the project is forecast to generate less than 50 Peak Hour Trips it is not forecast to reduce the Level of Service on the surrounding street network. Impacts would be less than significant.

XVI c) **No Impact.** Mining activities would not affect air traffic patterns at any airport or airstrip. No impacts are anticipated.

XVI d) **No Impact**. The project does not involve any road improvements or design features that could substantially increase hazards on public roads. Primary access will remain off Johnson Road. Therefore, a less than significant impact is anticipated.

XVIe/g) **No Impact**. Activities associated with the project would not impede existing emergency response plans for the project site and/or other land uses in the project vicinity. All vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. In addition, no road closures would be required. The project would not involve any long-term increase in traffic that would conflict with adopted policies, plans, or programs supporting alternative transportation. No impacts would result.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XVII.	**UTILITIES AND SERVICE SYSTEMS** - Would the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e)	Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f)	Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

SUBSTANTIATION

XVII a/e) **No Impact.** The project would not require sewer collection or treatment services and therefore no off-site discharge of treated wastewater would occur. No impacts related to wastewater treatment are anticipated.

XVII b **No Impact**. Water will be imported to the project site. Up to 4,000 gallons per day will be used for dust suppression. Therefore, no impacts related to expanding a water treatment or distribution system would occur

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XVII c) **Less Than Significant Impact**. Natural drainage flow consists of dry lake sheet flow generally from north to south. The active excavation will provide for complete storm water retention during storm events. Erosion will be managed by the installation of a swale, berm, and culvert system. The drainage system will not cause significant environmental effects as shown in the analysis in this Initial Study Checklist

XVII d,e) **Less Than Significant Impact.** Water will be imported to the site. Approximately 4,000 gallons per day is used for dust suppression and will permeate into the water table. Therefore, water supplies will not be adversely impacted.

XVII f, g) **Less Than Significant Impact.** Mining activities would result in waste generation of waste materials. These materials will be used to reconstruct slopes. Any waste material not used will be re-contoured and/or spread over the site as part of the reclamation process. Equipment maintenance will be done onsite. Waste oil, lubricants and solvents will be removed from the site and disposed of at permitted facilities. All solid refuse will be kept in closed containers and removed from the site to permitted facilities as needed. The amount of solid waste is minimal and is not forecast to impact nearby landfills.

	ISSUES	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorp.*	*Less than Significant*	*No Impact*
XVIII.	**MANDATORY FINDINGS OF SIGNIFICANCE:**				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c)	Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

SUBSTANTIATION

a) **Less Than Significant Impact With Mitigation Incorporated.** Based on the analysis contained in this Initial Study, impacts to Aesthetics, Agriculture and Forestry Resources, Air Quality, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Transportation and Traffic, are considered as having a less than significant or no impact on the environment.

The results of the Initial Study show that there are potentially significant impacts to Biological Resources, Cultural Resources, and Hazardous Materials. These impacts will be reduced to less than significant after incorporation of mitigation measures. Therefore the project will not degrade the quality of the environment and no habitat, wildlife populations, or plant and animal communities would be impacted.

b) **Less Than Significant Impact**. The analysis in this Initial Study Checklist demonstrated that the project is in compliance with all applicable regional plans including but not limited to, water quality control plan, air quality maintenance plan, and plans or regulations for the reduction of greenhouse gas emissions. Compliance with these regional plans serves to reduce impacts on a regional basis so that the Project would not produce impacts, that considered with the effects of other past, present, and probable future projects, would be cumulatively considerable.

c) **Less Than Significant Impact With Mitigation Incorporated.** As discussed this Initial Study Checklist, the project would not expose persons to adverse impacts related to Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Land Use and Planning, Population and Housing, or Transportation/Traffic hazards. These impacts were identified to have no impact or a less than significant impact.

The implementation of the Mitigation Measures identified in this Initial Study Checklist would result in a less than significant impact and there would be no substantial adverse effects on human beings, either directly or indirectly.

XVIII MITGATION MEASURES. Include mitigation measures here.

(Any mitigation measures which are not 'self-monitoring' shall have a Mitigation Monitoring and Reporting Program prepared and adopted at the time of project approval)

AQ-1: The Project proponent shall ensure that any portion of the site to be graded shall be pre-watered prior to the onset of grading activities.

AQ-2: Project proponent shall ensure that watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading and mining activity on the site. Portions of the site that are actively being mined shall be watered to ensure that a crust is formed on the ground surface, and shall be watered at the end of each workday.

AQ-3: The Project proponent shall ensure that all disturbed areas are treated to prevent erosion.

AQ-4: The Project proponent shall ensure that all mining and processing activities are suspended when winds exceed 25 miles per hour.

AQ-5: During operation, street sweeping will be conducted at least daily, and as needed, along site access roadways to remove dirt dropped by vehicles. Site access driveways and adjacent streets will be washed if there are visible signs of any dirt track-out at the conclusion of any work day.

AQ-6: All equipment used for mining and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.

AQ-7: The operator shall maintain and effectively utilize and schedule on-site equipment and on-site and off-site haul trucks in order to minimize exhaust emissions from truck idling.

AQ-8: The operator shall comply with all existing and future CARB and MDAQMD regulations related to diesel-fueled trucks, 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.

AQ-9: This facility must handle all material (raw, byproducts, and finish materials) so as not to cause a Nuisance (odors) per District Rule 402.

AQ-10: A Blue Smoke Control filter cartridge will be used in this project to mitigate for the blue smoke.

BIO-1- Pre-Construction Survey. Utilizing accepted protocols, within 30 days prior to initiating mining activities, a pre-construction survey shall be conducted for sensitive species identified in the Biological Resources Assessment and Focused Survey for the Desert Tortoise, Sigma Clay Mine, August 27, 2010 by Leatherman Bioconsulting and the Update to the Sigma Clay Mine Biological Resources Assessment and Focused Survey for Desert Tortoise, by Hernandez Environmental Services, June 23, 2014. that may have established themselves on the project site. A clearance letter shall be provided to the Planning Department/ County's Mining and Engineering Geologist prior to initiating mining activities,

BIO-2- Desert Tortoise. The following measures shall be implemented:

a. The Applicant shall provide an information sheet to all persons who will work on-site during mining activities.

b. A litter control program shall be instituted. The program includes the direction to all workers to eliminate food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area and to maintain covered trash containers that are regularly removed from the project site. All trash and food items should be promptly enclosed in raven proof containers (i.e. metal or solid plastic trash cans) and disposed of in a licensed disposal facility on a regular basis.

c. Any desert tortoises observed during any phase of the project should be left to move out of the way on its own. Handling of desert tortoises is not authorized.

d. Workers should inspect for desert tortoises under vehicles and equipment prior to moving them. If a desert tortoise is present, the worker should carefully move the vehicle or equipment only when necessary or should wait for the desert tortoise to move out from under the vehicle or equipment.

e. Only an Authorized Biologist(s) shall be allowed to handle tortoises. The Authorized Biologist(s) shall have a Memorandum of Understanding (MOU) with the CDFW for handling tortoises.

f. Upon discovery of a Desert Tortoise in a work area, all work in that area shall stop until the Desert Tortoise is relocated. An Authorized Biologist shall be on site or on call to relocate any desert tortoise found during work activities. The desert tortoise shall be monitored until the Authorized Biologist arrives.

BIO- 3- Riparian Habitat/Wetlands. Prior to commencing mining activities or earth disturbing activities within any drainage courses, the project applicant shall prepare a Jurisdictional Delineation by a qualified biologist. Impacts to jurisdictional areas that are regulated by the CDFW and the RWQCB shall be mitigated at a 2:1 ratio through an off-site mitigation bank or the contribution of in-lieu fee program acceptable to the County of San Bernardino, CDFW, and RWQCB.

BIO- 4- Nesting Birds. Vegetation and habitat grading and removal shall not be scheduled during the bird nesting season (generally February 15 through August 1). If clearing of vegetation occurs within the nesting season, a pre-construction survey for nesting birds shall be conducted before any vegetation or ground disturbance activities occur. A minimum buffer of 250 feet should be placed around active nests within which construction activities would be restricted. When the nest is no longer active, either because the nest is abandoned or the young fledges have departed (as determined by a qualified biologist), construction activities could resume.

CR-1 Cultural Resources: The developer/property owner shall submit a letter to County Planning agreeing to adhere to the following requirements and shall include a note on the grading plans and in all construction contracts/subcontracts a provision that the project contractors shall also adhere to the following requirements:

- ***In the event archaeological, paleontological and/or historical resources, including pottery, middens or human remains, are uncovered during earthmoving activities, all work in that area shall cease immediately and 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) and the County of San Bernardino Museum, determines the resources are recovered to their satisfaction.

- ***If possible human remains are encountered during any earthmoving activities, all work shall stop in the area in which the find(s) are present, and the San Bernardino County Coroner must be notified. State law dictates that the Native American Heritage Commission (NAHC) shall be notified in the event that remains are determined to be human and of Native American decent, in accordance with California Public Resources Code Section 5097.98.***

HAZ 1. All spills or leakage of petroleum products during mining or reclamation activities shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at an appropriately licensed disposal or treatment facility.

GENERAL REFERENCES

CEQA Guidelines, Appendix G.

County of San Bernardino General Plan, 2007

County of san Bernardino Development Code, 2007

County of San Bernardino Greenhouse Gas Emissions Reduction Plan, September 2011

Mojave Desert Air Quality Management District *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, August 2011*.

PROJECT SPECIFIC REFERENCES

Biological Resources Assessment and Focused Survey for the Desert Tortoise, Sigma Clay Mine, August 27, 2010 by Leatherman Bioconsulting

Update to the Sigma Clay Mine Biological Resources Assessment and Focused Survey for Desert Tortoise, by Hernandez Environmental Services, June 23, 2014.

Preliminary Hydrology Study and Flood Analysis, Sigma Clay Mine, October 2010 by Jay Gunther.

Revegetation Plan for the Sigma Clay Mine, January 2013, by Regulatory Permitting Specialists