SAN BERNARDINO COUNTY
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
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:

APNs:	0551-181-03 through 13; 0551-191-15, 16, 17, 24, and 25	***USGS Quad:***	Ludlow 7.5
Applicant:	The Bagdad Chase Mining Company, LLC	***T, R, Section:***	T6N, R8E; Sections 4, 5, and 8 T7N, R8E; Section 32
Location	Approximately 7 miles south of Ludlow, California in central San Bernardino County, California	***Thomas Bros***	Map D, San Bernardino and Riverside Counties (2013)
Project No:	MRP-2021-00002	***Community Plan:***	N/A
Rep	Lilburn Corporation	***LUC:*** ***Zone:***	Open Space (OS); treated as Resource Land Management (RLM) Resource Conservation
Proposal:	Re-opening of a historic gold mine to produce precious metal ore for 30 years	***Overlays:***	Biological Resources

PROJECT CONTACT INFORMATION:

Lead agency: County of San Bernardino
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PROJECT DESCRIPTION:

Summary

The Bagdad Chase Mining Company LLC (Bagdad Chase) submitted a Reclamation Plan (Plan) for the Bagdad Chase Mine. The Bagdad Chase Mine (project or mine site) has been explored and mined intermittently since the late 1800s and is located on patented (private) lands owned by Bagdad Chase. It was a major gold source in the County of San Bernardino (County) in the period from 1903 to 1953 with an estimated 340,000 ounces of gold produced.

Under the Surface Mining and Reclamation Act of 1975 ("SMARA", Cal. Public Resources Code Section 2710 et seq.), to operate a mine, a site must have: (1) a vested right or a conditional use permit; (2) a reclamation plan; and (3) a financial assurance. (Cal. Public Resources Code Section 2770.) This site has a vested right.

In July 2011, the County of San Bernardino approved a Certificate of Land Use Compliance and Conditional Approval to certify legal use of the site (vested right) for mineral resource development. This vested right is consistent with the vested right definition in the Surface Mining and Reclamation Act of 1975 under ("SMARA", Cal. Public Resources Code Section 2776). In addition, along with its long history of mining and mineral exploration, the County approved a Reclamation Plan (84M-022) for the mine in June 1984 demonstrating recognition of the surface and underground mineral resource development activities as an existing vested right. The Certificate further states *"Mineral resource development to the fullest extent at the subject properties shall not require a mining Conditional Use Permit approval under the County's Development Code, as the pre-existing use was a permitted use by right, enacted at the time the subject properties underwent development and subsequent approval by the County (ref. Reclamation Plan 84M-022 dated May 30, 1984)."* [pages 1 & 2)]

While the recognition of the mine's vested rights allows mineral resource development onsite, a Reclamation Plan must be submitted and approved by the County per its Development Code (Chapter 88.03) and SMARA.

Bagdad Chase plans on reopening the historic gold mine within the Stedman / Buckeye Mining District located about 50 miles east of Barstow and seven miles south of Ludlow and Interstate 40 (I-40). The proposed mining, processing, and exploration activities will consist of approximately 244 acres within 511.75 acres of private lands in portions of Sections 4, 5, and 8, Township 6 North, Range 8 East and Section 32 in Township 7 North, Range 8 east, San Bernardino Base and Meridian (SBBM). The Bagdad Chase Mine is located within the Assessor Parcel Numbers (APNs): 0551-181-03 through 13; 0551-191-15, 16, 17, 24, and 25. Bagdad Chase also holds unpatented mining claims on approximately 4,000 acres surrounding the private lands. Refer to Figures 1 and 2 for Location and Vicinity Maps.

Bagdad Chase plans on excavating the former mining area defined as the Main Pit (47 acres) to extract precious metal ore. The run-of-mill ore will be crushed in-pit, graded, and then crushed, screened, separated, and concentrated in a ball mill and concentrator onsite, then transported in super-sacks to an offsite refinery. No chemicals or leaching of gold ore will be conducted onsite. The mine and reclamation plan boundary is on privately held lands totaling approximately 511.75 acres with a mining and exploratory disturbance area to be reclaimed consisting of approximately 244 acres. Approximately 53 acres are disturbed from past mining and exploration activities. In addition, aggregate and decorative rock will be produced from non-ore bearing rock or overburden based on demand. Bagdad Chase is planning an operational period of 30 years followed by 5 years of reclamation with revegetation monitoring continuing until success criteria achieved. Therefore, the overall reclamation plan will be 35 years.

The site is accessed from I-15 at the Community of Ludlow onto National Trails Highway. There are two underpasses under the rail lines in either side of Ludlow that connect with the unpaved Bagdad Chase Road which has been utilized to access the Bagdad Chase Mine and other mines and former small mining towns since the early 1900s. This road is shown on County Assessor Parcel Maps and all USGS topographic maps from the past to present.

The proposed Reclamation Plan was prepared with the following objectives:

- To reopen an historic and vested precious metal ore mine to produce gold and other precious metals that can be economically processed with current processing methods;

- To develop the precious metal resource in compliance with the State's and County's SMARA requirements;
- To make available overburden to produce secondary products including construction aggregate and decorative rock on a contractual basis;
- To operate the mine in a safe and environmentally friendly manner with respect to open desert resources;
- To provide reclamation in the form of backfilling the pits with overburden and revegetation to the disturbed areas to reduce visual, biological, and safety impacts; and
- To reclaim the site for open space end use.

Mining Operations

The Bagdad Chase Mine will consist of a 47-acre Main Pit with two overburden stockpiles of 28.5 acres. The mine is estimated to contain approximately 8 million cubic yards or 19.5 million short tons (2.43 short tons/cubic yard) of ore and rock (overburden). For start-up years 1 to 4, the site will be mined at an average rate of 800,000 tons annually; approximately 50,000 tpy of ore, 250,000 tpy of aggregate/rock, and 500,000 tpy of overburden. Note that substantially less overburden is expected in the initial year or two as mining will remove existing and near surface ore previously stockpiled and exposed.

For years 5 to 20, excavations are planned at an average rate of approximately 1,020,000 tpy; approximately 100,000 tpy of ore, 100,000 tpy of aggregate/rock available to outside contractors, and 820,000 tpy of overburden (see Table 1). Bagdad Chase is planning a 30-year operating plan due to variations in ore quality, ore volumes, economic conditions, and overall annual production. Therefore, Bagdad Chase is requesting a 35-year reclamation plan.

Table 1
Estimated Bagdad Chase Mine Production

Main Pit	Estimated Years	Precious Metal Ore (tons)	Potential Aggregate Available (tons)	Overburden (varies year-to-year) (tons)	Total Excavated (tons)
Annual Production	1 – 4[1] 5 - 20	50,000 100,000	100,000 100,000	650,000 820,000	800,000/yr. 1,020,000/yr.
Totals for Life of Mine	20 – 30[2]	1.8M	2M	15.7M	19.5M

Source: Bagdad Chase Reclamation Plan 2021
[1] – Substantially less overburden is expected in the initial years as mining will remove existing and near surface ore previously stockpiled and/or exposed.
[2] - Planning 30 years of operations due to variations in ore quality, volumes, and production followed by 5 years for reclamation.
Volumes are estimated based on drilling data, mine design, and computer modeling. Material density is 2.43 per cubic yard. Tons rounded to tens of thousands. Totals may be slightly different due to rounding.

The Plan proposes to initiate mining within the existing Main Pit and previous underground mining area creating an oval-shaped pit to an average depth of 250 feet below ground surface. The pit depth will be excavated from about 2,500 feet above mean sea level (amsl) on the hillside to the east to a floor depth of approximately 2,125 feet amsl. A total of about 19.5M tons will be excavated with an estimated 1.8M tons of ore. Overburden will initially be placed in the East

Overburden Stockpile; as mining progresses west, overburden will be placed in the West Overburden Stockpile. As soon as feasible, overburden will be placed back into a completed section of the east pit concurrent with mining. Eventually, mining will be conducted under the East Overburden Stockpile and overburden in both stockpiles will be used to backfill the Main Pit in accordance with SMARA regulations.

Table 2 lists the planned operational areas for the mine, overburden stockpiles, operations, exploration areas, and roads. Refer to Figure 3 for the Mine Plan.

Table 2
Planned Operational Areas (estimated acres)

Bagdad Chase Mine Areas	**Existing Mine & Disturbed Areas (acres)**	**Planned Mine & Reclamation Areas (acres)**
Bagdad Chase Main Pit	34	47
Ore & Aggregate Stockpiles	1.0	1.0 & within pits or OB stockpile areas
Overburden Stockpile East (to be pushed back into eastern portion of completed Main Pit; years 16 - 35)	4.0	12.5
Overburden Stockpile West (to be pushed back into pit during final reclamation; years 31 – 35)	6.0	16.0
Operations Area & Access/Haul Roads (portable crushing /screening/milling and loading)	6.5	6.5
Topsoil Stockpiles (& north sides of OB stockpiles and within pit)	---	6.0
Channel Diversion	--	3.5
Test Plots	0.5	0.5
Totals (planned mine activities)	53	93*
Buffer Areas (not to be disturbed) (mainly around SW, south, & SE of pit)	3.0*	53
Exploration Areas (to north)	5*	98 (estimate less than 10% or 10* acres of new disturbance)
Total Reclamation Plan Area (93 + 53 + 98)	53	244
Total Area to Be Reclaimed (93 + 3 + 5 + 10)	53	111

Source: Bagdad Chase Reclamation Plan, August 2021
* - Areas to be reclaimed. Total areas to be reclaimed approx. 111 acres.
Note: Totals may be slightly different due to rounding.

Mining operations for the Main Pit will consist of the following:

- Drilling and blasting;
- Excavating by excavators and loaders;
- Primary crushing with a tracked crusher within the pit;
- Loading of crushed ore and potentially aggregate onto 70-ton capacity off-road trucks (typical) at excavation site for transport to temporary onsite ore and aggregate stockpiles for grading and sorting (low, medium, and high grade ore) or directly to the onsite secondary crushing /screening plant; and
- Loading overburden onto 70-ton off-road haul trucks by an excavator or loader for transport to one of the two overburden stockpiles or directly backfilled into another portion of pit previously mined.

The Main Pit will be excavated by excavators and loaders with benches 25 feet in height with an inter-slope angle of 79° (about 5-foot offset) with a horizontal bench of a total of 25 feet sloped slightly towards the slope. Mine haul roads will be 60 feet wide with a typical grade of 10% or less depending on locations and conditions. Bench heights and widths may slightly vary with deposit geometry as determined in the field. The overall slope for operations and reclamation is approximately 45° or 1H:1V. See Figure 4 for the Mine Cross Sections and Sheet 4 for detailed cross-sections.

Based on the geologic field observations and results of the slope stability analysis prepared by Terracon, slope configurations analyzed for the worst case scenario (no backfilling of the quarry) are feasible with respect to slope stability from a geotechnical standpoint. Sufficient static factors of safety (FS) in excess of 1.5 and seismic (pseudo-static) factors of safety at or greater than 1.1, which are in conformance with Division of Mine Reclamation (DMR) criteria, were indicated for the modeled scenario rock slopes configurations. Slopes utilizing overall slope angles lower than 51 degrees have higher factors of safety by inference and are not calculated for this evaluation. Final reclamation requires all remaining overburden and other materials to be backfilled into the pit, thus eliminating most pit slopes.

Mining and onsite stockpiling will produce from 200 to 400 tons/day of ore by year 5 and if needed approximately 400 tons/day of aggregate for an 8 to 10-hour day on approximately 250 days per year. Approximately 3,280 tons/day of overburden on average will be removed and stockpiled and/or used as backfill. The approximate total of onsite off-road haul truck trips would be approximately 56 utilizing 70-ton capacity trucks.

Overburden material is estimated to be approximately about 15.7 million short tons over the life of the plan. During the initial 1 to 4 years, overburden production will be limited due to the removal of stockpiled and exposed ore currently onsite. Overburden will be stored temporarily into the East and West overburden stockpiles. The stockpiles will have slopes of 2H:1V during operations and all overburden will be used to backfill the pit concurrently as feasible with backfilling completed during final reclamation. Note that during the initial clearing of the pit areas, the top 0.5 feet or more of growth media “topsoil” (mostly alluvium) will be pushed and hauled to the southwest side of the West Overburden Stockpile and along the north and west sides of the East Overburden Stockpile where it will be stored until final reclamation. The “topsoil” stockpiles will be clearly marked and covered with larger material to limit wind and water erosion.

East Overburden Stockpile – Overburden stockpile for the Main Pit with an area of 12.5 acres (will extend into Main Pit footprint at times) and a maximum height of about 125 feet above the surface (approximately 2,550 feet amsl). As mining progresses westward and is completed in the east side of the Main Pit, overburden from new mining and from this stockpile will be backfilled into the pit until it is exhausted and will be compacted by equipment rollover suitable for the end use of open space.

West Overburden Stockpile – Overburden stockpile for the Main Pit with an area of 16 acres and a maximum height of about 100 feet above the surface (approximately 2,550 feet amsl). As mining progresses westward and is completed in the west side of the Main Pit, overburden from this stockpile will be backfilled into the pit until exhausted and compacted by equipment rollover.

Ongoing Exploration

Based on past drilling and years of mining data, additional resources are likely to occur within the property and reclamation plan boundary. Over the life of the Reclamation Plan, Bagdad Chase will continue to evaluate its onsite resources with exploratory boreholes and trenching based on geologic information within the mine area but also within about 98 acres in the northern half of the site as shown on Figure 3. This exploration will mainly be within or on past disturbed areas and graded roads and will comply with operational and environmental protection conditions. It is expected that about 10 acres may be newly disturbed in this area. Any disturbed areas will be reclaimed per the Reclamation Plan.

Ore Processing

Ore will be crushed and blended by a tracked primary crusher in the pit and then will be hauled to the onsite processing plant. This stockpiled material will then be loaded into the secondary cone crusher/screening plant by a wheel loader. Once through the secondary crusher, the ore will be sent to the ball mill and crushed to -50 mesh. Crushed material will be sent through a Falcon concentrator to then be bagged into super sacks. Super Sacks of approximately 1.5 tons will be loaded onto flatbed trailers (approximately one flatbed truck/day) to then be transported by truck to an offsite refinery. No chemicals will be used or leaching will take place onsite.

Per specific contracts, some processing of aggregate and decorative rock may be undertaken onsite by an outside contractor. All portable processing plants and generators brought onsite must be in compliance with Mojave Desert Air Quality Management District (MDAQMD) rules and permits.

Dust control measures must be in compliance with MDAQMD Rules 401 (limiting visible emissions); 402 (avoid nuisance emissions to people or businesses or property); and 403 (prohibits visible dust from crossing property lines and controlling fugitive dust). The main dust control method is the water spraying of roads, operational mine areas, and active overburden stockpiles. A 4 to 5,000-gallon water truck would be used for dust control. Water for dust control will be obtained from private sources in the Ludlow area (will serve letter from water supplier) which can be augmented by the operator's private well approximately 8 miles to the east, trucked in water from other sources, or a well that could be drilled onsite. A portable construction type water tank will be used onsite as needed. Haul roads and the Bagdad Chase Road will be improved with a 6 to 8-inch gravel base produced onsite to reduce dust and erosion. Bagdad Chase will also utilize magnesium chloride or other approved dust suppressant as recommended by the manufacturer to further reduce road dust.

The estimated water usage is eight to ten truckloads or about 50,000 gallons/day; 39 acre-feet per year based on 250 operational days per year. Water used for dust control will evaporate and therefore, the project will not produce any run-off water.

Public Safety

No hazardous materials will be used onsite with the exception of fuel and oil for mobile equipment. Equipment maintenance and re-fueling will take place utilizing mobile maintenance trucks and portable onsite fuel tanks up to 10,000 gallons and conducted at the mine with appropriate required safeguards and best management practices (BMPs). Any used oil generated at the mine site will be collected and transported for off-site recycling or disposal by approved methods and by properly trained and licensed personnel.

The Hazardous Materials Division of the San Bernardino County Fire Department is designated as the Certified Unified Program Agency (CUPA) for the County to focus the management of specific environmental programs at the local government level. Bagdad Chase will prepare a Business Emergency/ Contingency Plan to include operations for the site. The Business Plan includes a hazardous materials inventory and Spill Prevention Control and Countermeasure Plan (SPCC) to ensure that on site materials are stored appropriately and contained in the event of uncontrolled release utilizing BMPs. Fuel storage specifications apply to all above ground fuel containers. A Hazardous Materials Business Plan (HMBP) for the mine site that addresses any hazardous materials stored and used at these facilities will be prepared. The HMBP describes methods and procedures to minimize the potential for hazardous material and waste releases including an emergency response and contingency and spill response procedures.

Mine areas will have warning signs every 500 feet, dirt roads not used will be blocked or closed, and safety berms six feet in height will be constructed along the pit rims where the public could access during operations. Any unauthorized roads will be blocked or closed permanently at the property boundary.

Blasting operations involve drilling along the mining face, placement of charges, and detonation of the charges by a blaster licensed through the Bureau of Alcohol, Tobacco, Firearms, and Explosives (BATF&E) for handling explosive materials. The transporting, handling, storage, and use of explosive materials, blasting agents, and blasting equipment shall be directed and supervised by a qualified blasting contractor. The blasting contractor and the explosive delivery company must be licensed in accordance with all Federal, State, and local agencies and regulations, U.S. Department of Transportation hazardous materials (HAZMAT) Certificate of Registration, California HAZMAT Transportation License, and general liability insurance policy for explosive transportation and permitted under the San Bernardino County Fire Department pursuant to Uniform Fire Code adopted by the Department.

Erosion Control

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

- Limiting surface disturbance to the minimum area required for active operations;
- Diverting drainages and runoff from flowing into the mine pit and into natural drainages down gradient; and

- Stabilizing disturbed areas through backfilling, regrading, replacement of soils, revegetation, re-establishing drainages, and erosion control practices.

All operations onsite will comply with a SWPPP to be updated periodically with mine site development and implementation of storm water BMPs. The mine will be cut into bedrock and precipitation falling within the mine will be allowed to flow into the mine and percolate or evaporate during operations. After backfilling the pit, drainages will be re-established to flow through the site to natural drainages down gradient.

Reclamation and Revegetation

Bagdad Chase proposes to reclaim the site to meet SMARA requirements implemented by the County that will minimize impacts to the surrounding environment and provide public safety. Reclamation will include the following (se Figure 5):

- Pre-development plant surveys to mark specific plants and cacti for salvaging;
- Salvaging seeds and re-locatable plants and cuttings for re-planting to available reclamation areas during clearing of areas to be developed;
- Stockpile available surface material for future revegetation in separate identified stockpiles seeded with an erosion control ground cover, water sprayed to create a crust, and/or covered with a larger rock material to limit wind and water erosion;
- Using a portion of the mine pit footprint for overburden placement;
- Backfill the Main Pit in a phased manner during operations with available overburden and complete backfill after termination of mining; overburden stockpiles will be completely removed.
- Ripping of compacted areas and roads to be reclaimed prior to revegetation;
- Covering disturbed areas with salvaged soil and alluvium overburden to aid in revegetation;
- Removal of all equipment, any structures, and debris from the site. Any remaining overburden or aggregate stockpiles will be backfilled into the pit and graded for positive drainage.
- Revegetation – imprinting seeds and broadcast seeding followed by covering seed with layer of soil or alluvium by pulling chains or screens over the broad cast seeded area;
- Upon completion of mining, remaining equipment, any structures, and internal roads not needed for site access will be reclaimed,
- Monitoring and remediation until success criteria achieved;
- Any future on-site wells will be closed in accordance with the California Department of Water Resources Bulletin 74-91 as revised in 1988 or the latest revision and with the San Bernardino County Department of Environmental Health (DEHS) regulations unless deemed at that time to be useful for continued use or monitoring. The wells will be closed in such a manner that will no longer be a hazard to the health and safety of people and wildlife; and
- If any portals, shafts, tunnels or openings remain on the reclamation site after mining and backfilling, they will be either closed, or gated and protected from public entry but preserved for bat and other wildlife if appropriate with County consultation.

Surrounding Land Uses and Setting

The surrounding areas are public lands designated as the Mojave Trails National Monument in 2016. It is administered by the Bureau of Land Management (BLM). The area consists of vacant desert lands within the historic Steadman/Buckeye Mining District with numerous historical mine workings and former town sites (ghost towns). There are no adjacent or nearby sensitive land uses with the nearest residences located seven miles north in Ludlow.

The property is situated in the foothills of the Bullion Mountains, in the upper Mojave Desert at an elevation averaging 2,400 feet above mean sea level (amsl). The Marine Corps 29 Palms Base is located about 1 to 2 miles to the south and west. The plant community within the boundary of the project site and adjacent open space areas is creosote desert scrub.

Existing Land Use and Land Use Category			
Location	**Existing Land Use**	**Land Use Category**	**Zoning**
Project Site	Historic gold mine; vacant	Open Space	Resource Conservation
North	Undeveloped and vacant; isolated mine workings	Open Space	Resource Conservation
South	Undeveloped and vacant; Marine Corps 29 Palms Base 1 – 2 miles	Open Space	Resource Conservation
East	Undeveloped and Vacant	Open Space	Resource Conservation
West	Undeveloped and vacant; Marine Corps 29 Palms Base 1 – 2 miles	Resource/Land Management	Resource Conservation

Project Site Location, Existing Site Land Uses and Conditions

The Project Site is located in a remote vacant area of central San Bernardino County, 7 miles south of Ludlow. The area consists of desert lands within the historic Steadman/Buckeye Mining District with numerous historical mine workings and former town sites (ghost towns). The Bagdad Chase Mine has been explored and mined intermittently since the late 1800s and is located on patented (private) lands owned by Bagdad Chase. Approximately 53 acres of the site's 511 acres to be developed are disturbed by past mining operations. It was a major gold source in the County of San Bernardino (County) in the period from 1903 to 1953 with an estimated 340,000 ounces of gold produced.

ADDITIONAL APPROVAL REQUIRED BY OTHER PUBLIC AGENCIES

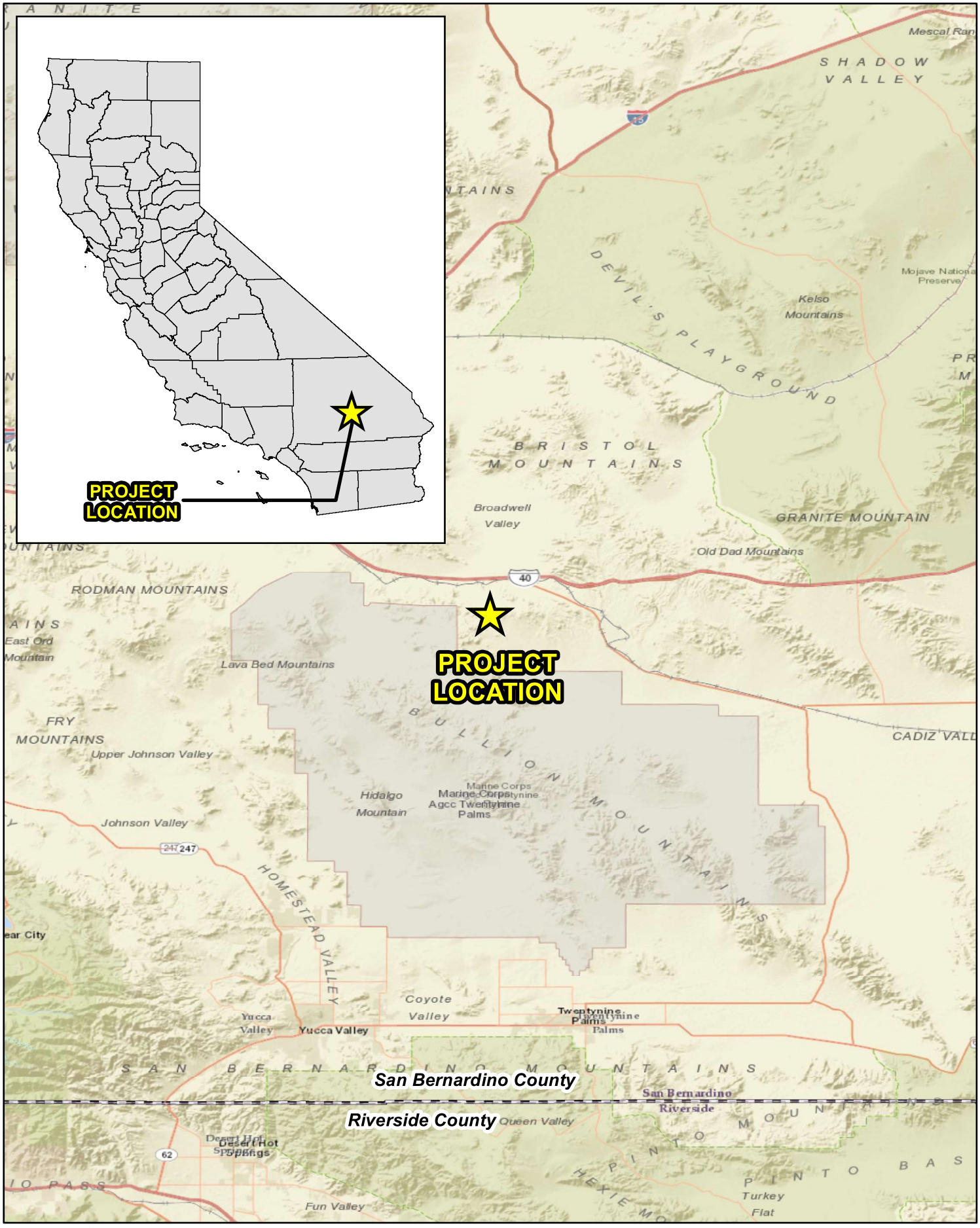
Federal: Potential compliance with Federal Endangered Species Act – U.S. Fish and Wildlife Service.

State of California: California Department of Fish and Wildlife (CDFW) - 1602 Streambed Alteration Agreement and potential compliance with the California Endangered Species Act; and Dredge and Fill Waste Discharge Permit with Colorado Regional Water Quality Control Board (RWQCB) District 7 (if applicable).

County of San Bernardino: Land Use Services Department - Building and Safety, Public Health-Environmental Health Services, and Public Works.

Regional: Mojave Desert Air Quality Management District (air quality permits)

Local: None



Source: ELMT Consulting, Inc., June, 2021.

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LILBURN CORPORATION

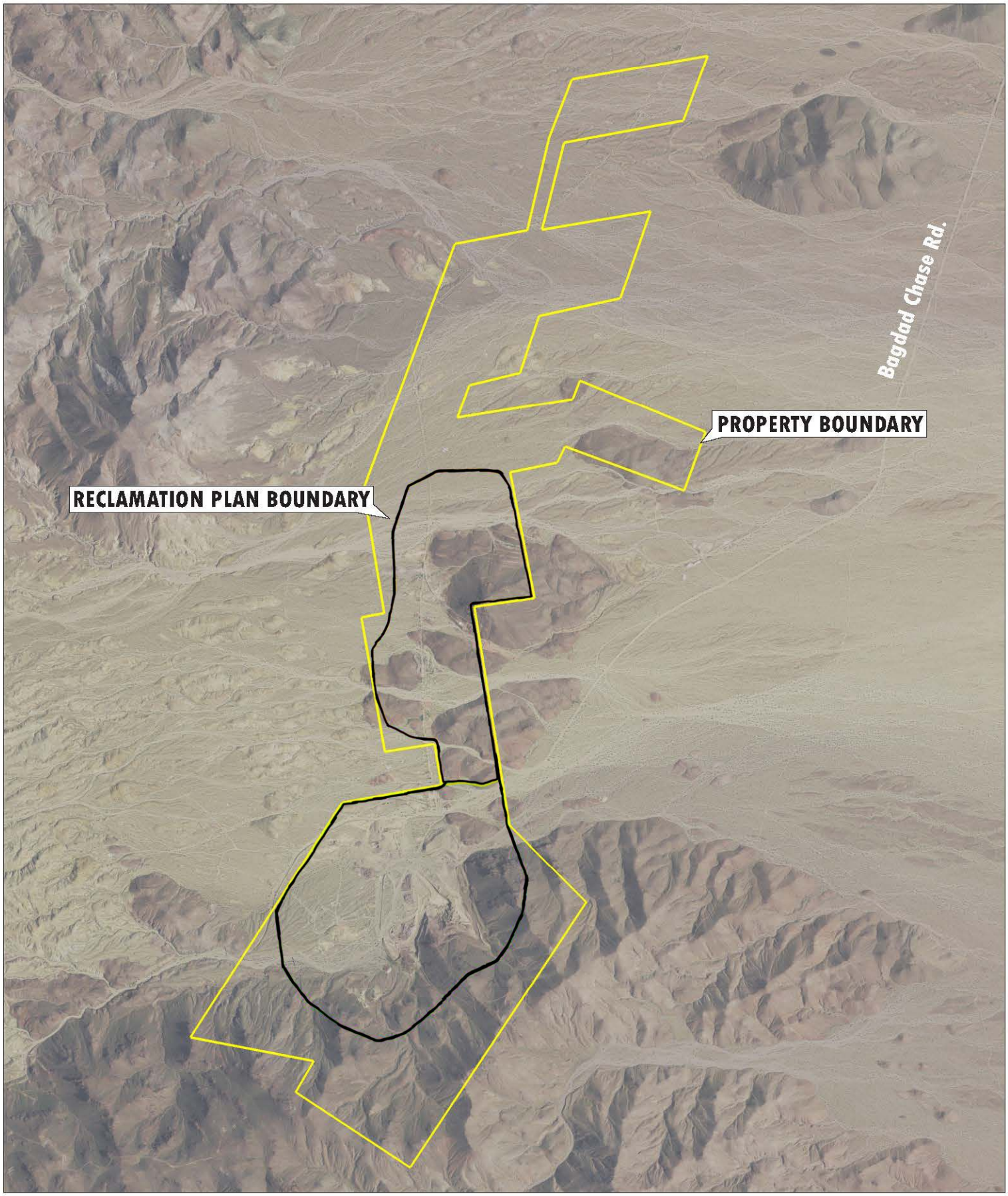
THE BAGDAD CHASE MINING COMPANY

REGIONAL MAP

Bagdad Chase Mine

Reclamation Plan

FIGURE 1



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Source: Lilburn Corp., August, 2021.

LILBURN CORPORATION

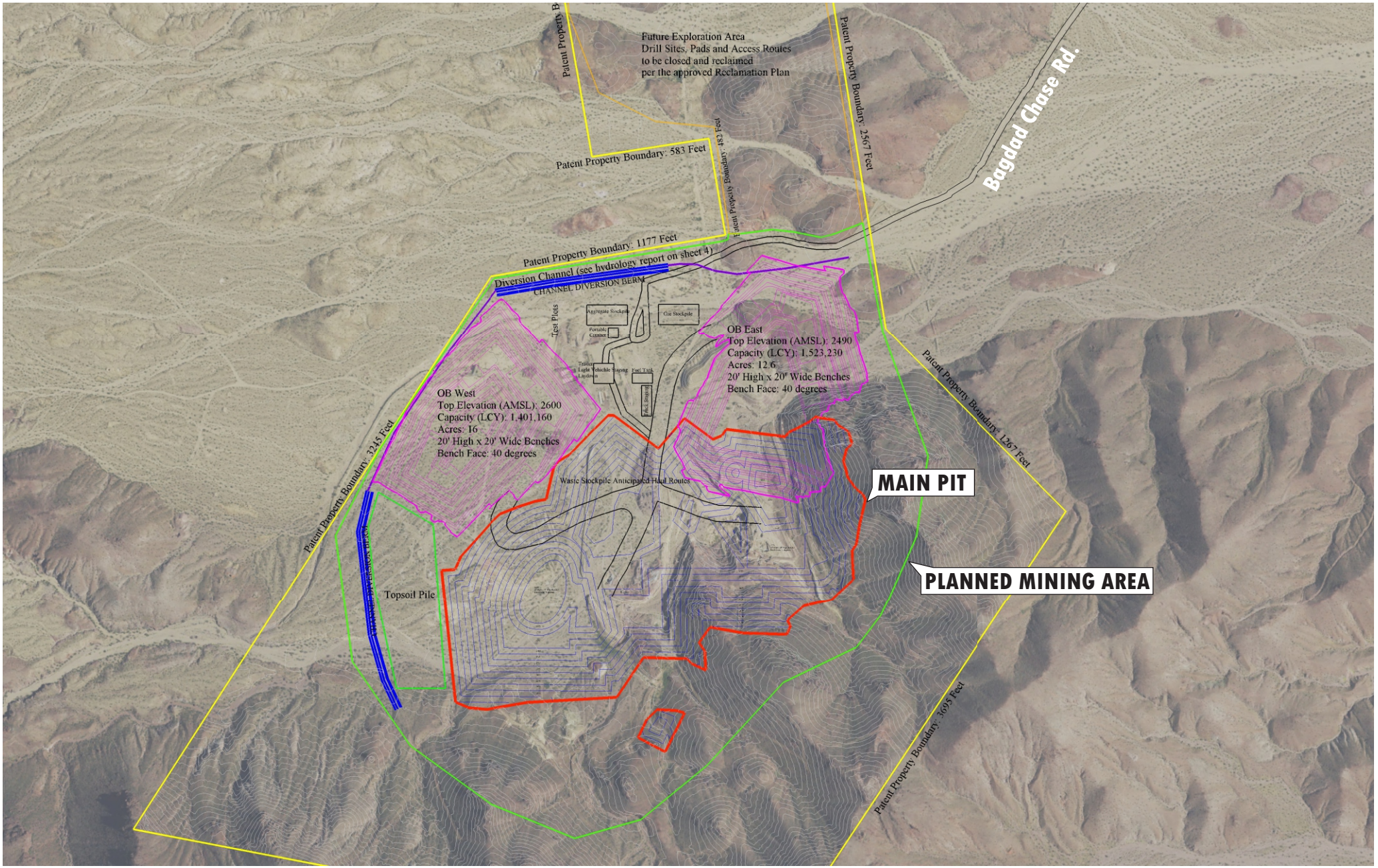
THE BAGDAD CHASE MINING COMPANY

VICINITY MAP

Bagdad Chase Mine

Reclamation Plan

FIGURE 2



See Sheet 2

MINE PLAN

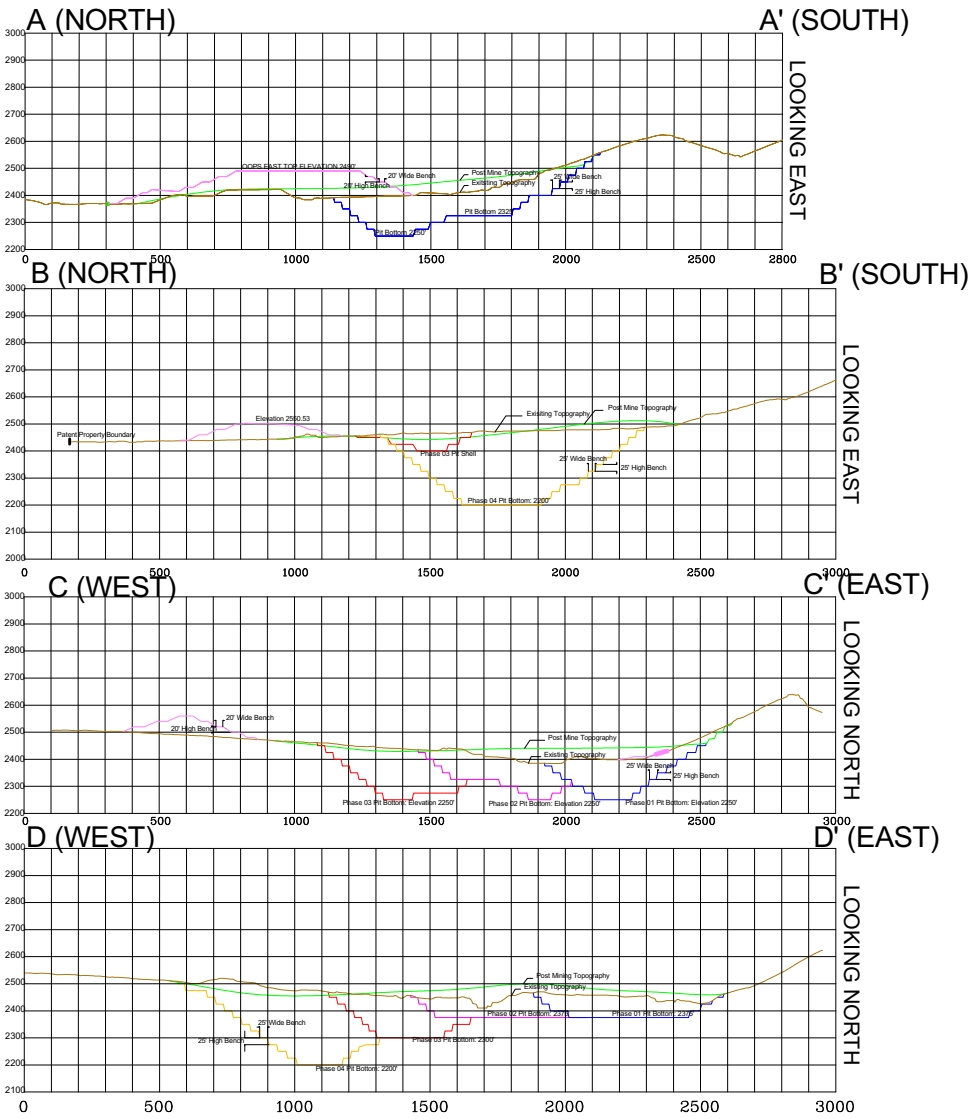
Bagdad Chase Mine

County of San Bernardino, California

LILBURN CORPORATION

THE BAGDAD CHASE MINING COMPANY

FIGURE 3



See Sheet 4

CROSS SECTIONS

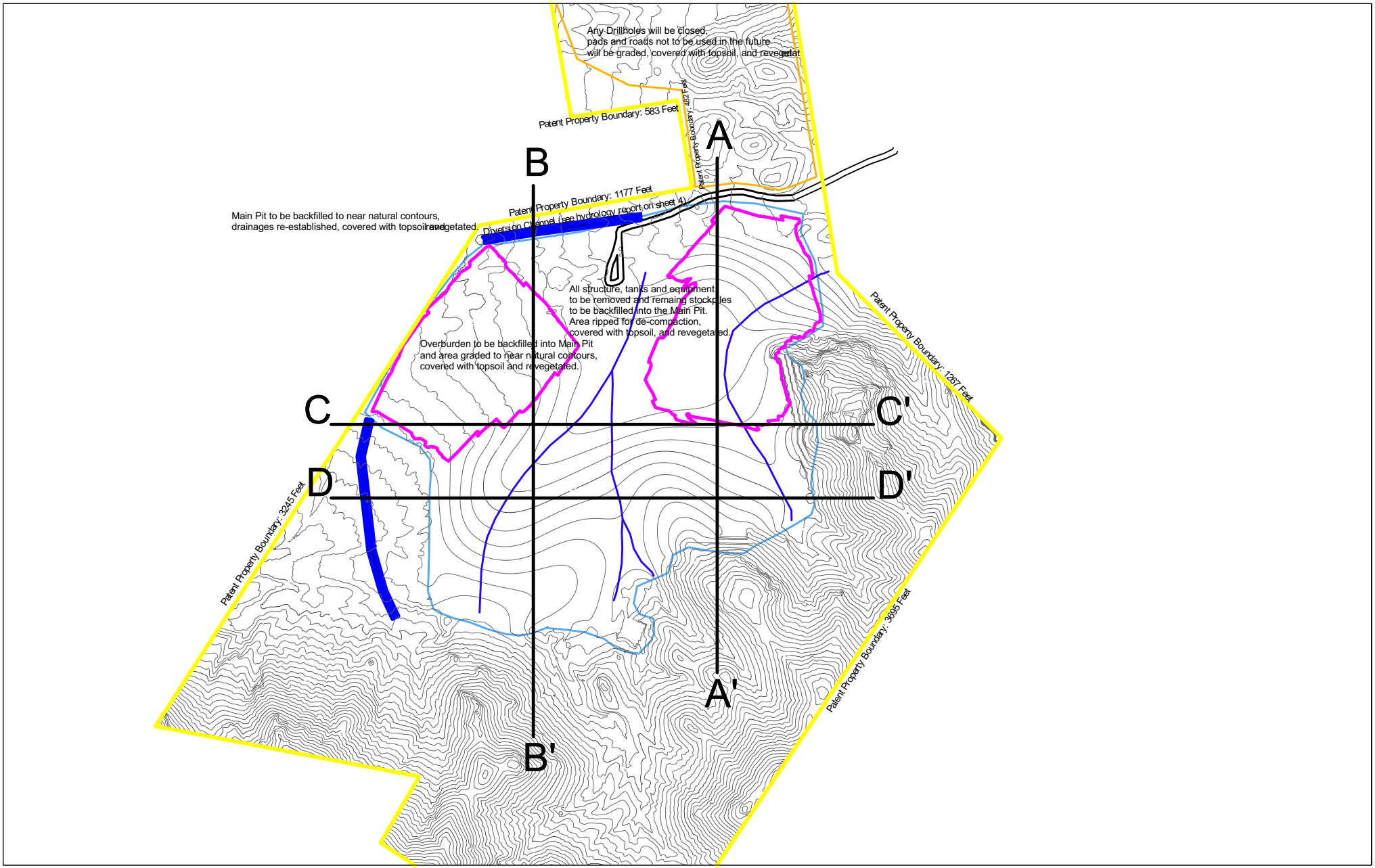
Bagdad Chase Mine

County of San Bernardino, California

LILBURN CORPORATION

THE BAGDAD CHASE MINING COMPANY

FIGURE 4



See Sheet 3

RECLAMATION PLAN

Bagdad Chase Mine

County of San Bernardino, California

LILBURN CORPORATION

THE BAGDAD CHASE MINING COMPANY

FIGURE 5

Photograph 1: Looking southeast across the middle portion of the project site.

Photograph 2: Looking northeast across the middle and northern portions of the project site.

CONSULTATION WITH CALIFORNIA NATIVE AMERICAN TRIBES

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentially, etc.

On January 3, 2022, the County of San Bernardino mailed notification pursuant to AB52 to the following tribes:

- Colorado River Indian Tribes
- Twenty-Nine Palms Band of Mission Indians
- Fort Mojave Indian Tribe
- Morongo Band of Mission Indians
- Soboba Band of Luiseno Indians
- Gabrieleńo Band of Mission Indians - Tongva Nation and
- San Manuel Band of Mission Indians.

Requests for consultations were due to the County by or around February 7, 2022. The County received comment from the San Manuel Band of Mission Indians Tribes via email dated January 7, 2022, which included preferred mitigation measures for the Cultural Resources (Section V) and the Tribal Cultural Resources (Section XVIII). The preferred mitigation measures are incorporated in Mitigation Measures CR-1, 2, and 3 and in TCR-1 and 2

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

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 on its effect on 20 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).

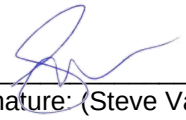
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below will 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	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

DETERMINATION: Based on 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.



_____ 1/6/2023

Signature: (Steve Valdez, Senior Planner) Date

_____ _____

Signature: (David Prusch, Supervising Planner) Date

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
I.	***AESTHETICS*** – Except as provided in Public Resources Code Section 21099, 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)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare, which will 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 Countywide Plan):*

San Bernardino Countywide Policy Plan 2020; San Bernardino Countywide Plan EIR; Reclamation Plan for the Bagdad Chase Mine

a) Have a substantial adverse effect on a scenic vista?

The Project Site is located in the North Desert region of the County. There are a number of large blocks of public/government-owned lands in the North and East Desert regions of the County that provide aesthetic and conservation value, including the Mojave Trails National Monument (MTNM).[1] The area surrounding the Project Site is public land designated as the MTNM in 2016 administered by the BLM.

The property is situated to the west and south of the foothills of the Bullion Mountains in the upper Mojave Desert. The mine and reclamation plan boundary is on privately held lands totaling approximately 512 acres of which the Reclamation Plan boundary

[1] Placeworks. San Bernardino Countywide Plan Draft EIR. Aesthetics.

totals 244 acres. Overburden will be stored temporarily in two stockpiles; the East and West overburden stockpiles, on approximately 29 acres to heights of 100 to 125 feet above the surface.

Approximately 53 acres of the 111-acre reclamation area are disturbed from past mining and exploration activities. The general area consists of vacant desert lands within the historic Steadman/Buckeye Mining District with numerous historical mine workings and former town sites (ghost towns). The mining area is situated on the north and west side of a ridge blocking views from any travelers in the MTNM mainly to the north and is not visible from the National Trails Highway (Route 66) due to the seven miles distance and intervening topography. There are no receptors to the south and west.

In addition, the eventual reclamation of the pit is required to backfill the pit with overburden and to revegetate the site. Required reclamation will aid in blending the site with the surrounding topography and vegetation. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

The Project Site is located approximately seven miles south of Interstate 40 (I-40) and the National Trails Highway. I-40 is a County Scenic Route and State Scenic Highway.[2] The National Trails Highway is a County Scenic Route.[3] The mine site would not be visible from either of these highways due to the seven mile distance and intervening topography. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impacts to visual resources are based on changes to the existing character of the landscape, viewer sensitivity, and the number of viewers that may view the project activities. The Proposed Project is consistent with the zoning of Resource Conservation. In addition, the County approved a Certificate of Land Use Compliance and Conditional Approval to certify legal use of the site (vested right) for mineral resource development based on its historical and use for mining since the 1900s and more recent development of the site.

[2] San Bernardino Countywide Policy Plan Map NR-3 “Scenic Routes and Highways”
[3] San Bernardino Countywide Policy Plan Map NR-3 “Scenic Routes and Highways”

The Project Site is surrounded by vacant and undeveloped land. The mine site is not viewed by significant numbers of viewers or visible from any prominent viewpoints as the site is very remote with limited views due to intervening ridges. No residences or recreational areas besides historical mine sites are in the area. The mining operations would not be visible from I-40 and the National Trails Highway. The eventual reclamation and revegetation of the site will aid in blending the site with the surrounding topography and vegetation. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

d) Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area?

The Proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area as no permanent new light sources are proposed. No lighting is proposed except for security and emergency needs, however, in the event temporary lighting is needed, the operator shall comply with the requirements outlined by County Development Code Section 83.07.040, Glare and Outdoor Lighting – Mountain & Desert Regions. This includes fully shielding lights as required to preclude light pollution or light trespass on adjacent property, other property (directly or reflected), and members of the public on adjacent roads. Proposed light sources are anticipated to be local in nature and would not impact the region's overall light environment. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

Therefore, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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):*

San Bernardino Countywide Policy Plan 2020; San Bernardino County Agricultural Resources GIS Map; Submitted Project Materials

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*

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?

No prime farmland, unique farmland, or farmland of statewide importance occurs at the Project Site or within the immediate vicinity.[4] The Proposed Project would not convert farmland to a non-agricultural use. No impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Project Site is not under or adjacent to any lands under a Williamson Contract.[5] It has a current zoning of Resource Conservation. The Proposed Project would be consistent with the Countywide Plan and would not conflict with existing zoning for agricultural uses or a Williamson Contract. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

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))?

The Project Site is currently zoned Resource Conservation. Implementation of the Proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned for Timberland Production. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

d) Result in the loss of forest land or conversion of forest land to non-forest use?

The Project Site does not support forest land. Implementation of the Proposed Project would not result in loss of forest land or conversion of forest land to non-forest use. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

[4] San Bernardino Countywide Policy Plan Map NR-5 “Agricultural Resources.”
[5] San Bernardino Countywide Policy Plan Map NR-5 “Agricultural Resources.”

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*

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?

The Project Site contains no agricultural resources or farmland that would be converted as a result of the Proposed Project. The Project Site is currently zoned Resource Conservation; it is not zoned for agriculture or considered Farmland. Therefore, no impacts involving other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agriculture use would occur. No impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

No impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
III.	**AIR QUALITY -** Where available, the significance criteria established by the applicable air quality management district or air pollution control district might be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b)	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?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☐	☒

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

San Bernardino Countywide Policy Plan 2020; Submitted Project Materials

a) Conflict with or obstruct implementation of the applicable air quality plan?

The Project site is located within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD) and is located in the Mojave Desert Air Basin (MDAB).

The Air Quality Management Plan (AQMP) provides a program for obtaining attainment status for key monitored air pollution standards, based on limiting existing and future air pollution emissions resulting from development, traffic, employment and residential growth projections. The AQMP is developed using input from various agencies' General Plans and other projections for population and employment growth. The MDAB is a designated nonattainment basin for ozone. Equipment usage would result in emission of PM_{10} and ozone precursors, including NO_x and volatile organic compounds (VOC).

Generally, a project may be inconsistent with the AQMP or attainment plan if it could generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The Countywide Policy Plan Land Use Map shows that the project site is within Land Use Category Open Space (OS) and within Resource Conservation (RC) zoning which allow mine projects with the approval of a CUP for mining and a reclamation plan. The County approved a Certificate of Land Use Compliance and Conditional Approval to certify legal use of the site (vested right) for mineral resource development based on its historical and use for mining since the 1900s and more recent development of the site. Therefore, no changes or amendments to land use, land use categories, or zoning are proposed; only the continuation of activities previously allowed on-site consistent with the Countywide Policy Plan. The Proposed Project is a new Reclamation Plan to re-start mining on a historical and vested mining area and will not generate any substantial increases to housing, employment, or population. In addition as discussed below, criteria emissions associated with mining and reclamation are estimated below MDAQMD CEQA thresholds.

Therefore, the emissions associated with the Proposed Project have already been taken into account in the AQMP and approval of the Proposed Project would not conflict with the AQMP. Applicable MDAQMD rules and regulations will be complied with. No significant impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

b) 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?

The Proposed Project was screened for emissions to be generated from mining and processing operations and reclamation activities by Lilburn Corporation and included in the *Air Quality Emissions Inventory for the Bagdad Chase Reclamation Plan* (December 2021). Emissions were estimated using the latest emission factors from the following sources:

- MDAQMD's "Emissions Inventory Guidance for Mineral Handling and Processing Industries" (April 2000);
- CARB EMFAC2017 Emission Rates;
- SCAQMD "Air Quality Handbook" as updated (2019);
- EPA's AP-42 Section 13.2.2 unpaved roads (November 2006);
- SCAQMD Particulate Matter Emission Factors (July 2010);

- CARB Carl Moyer Program Guidelines for In-Use Off-Road Diesel-Fueled Emissions (2017); and
- Haul trucks and diesel equipment compliance with California Air Resources Board's (CARB) off-road diesel vehicles regulation and CalPortland's fleet averaging requirements to reduce diesel pollutants.

Stationary Emission Sources

Raw ore will be crushed and blended by a tracked primary crusher in the pit and then will be hauled to the onsite processing plant. This stockpiled material will then be loaded into the secondary cone crusher/screening plant by a wheel loader. Once through the secondary crusher, the ore will be sent to the ball mill and crushed to -50 mesh. Crushed material will be sent through a Falcon concentrator to then be bagged into super sacks. Super sacks of approximately 1.5 tons will be loaded onto flatbed trailers to then be transported by truck to an offsite refinery. The daily truck trip(s) and employees would utilize the existing Bagdad Chase Road to an east-west access road south of the rail lines, and then utilize one of two rail line underpasses, If trucks are too large, they would travel 2.25 miles east to National Trails Highway, would access I-40 at the Ludlow intersection 2.5 miles west and utilize the I-40 for transportation of materials to customers. The I-40 is a designated truck route.[6]

The refinery is located in the Las Vegas area; however other refineries may be utilized. No leaching or chemical processes would be undertaken onsite, only mechanical crushing and concentrating.

Per specific contracts, some processing of aggregate and decorative rock may be undertaken onsite for or by an outside contractor. The crushing-screening plant and diesel powered generators are required to be fully permitted with the MDAQMD with appropriate processing limits and dust control measures. Typical annual emissions for the plant and generators are included in Table 3.

Mobile Equipment Exhaust Emissions

Mobile pollutant sources are regulated at the state level by CARB, not through the MDAQMD or local counties. CARB is responsible for developing statewide programs and strategies to reduce smog-forming pollutants, toxics, and climate changing emissions from diesel-fueled vehicles. CARB implements a comprehensive Diesel Reduction Plan to reduce particulate matter (PM) and oxides of nitrogen (NOx) emissions from in-use (existing) and new off-road and on-road heavy-duty diesel vehicles in California by the following measures:

- Imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles;

[6] San Bernardino County Policy Plan web maps. TM-5 Goods Movement Network. Accessed August 31, 2021.

- Requires all vehicles to be reported to CARB in the online reporting system DOORS and labeled;
- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies, VDECS (i.e., exhaust retrofits).

Planned Mining Operations

The operations, the production rates, and shipping plans are listed below for the planned project.

- Ore Production – starting at 50,000 tons/day for first 4 years increasing to 100,000 tons/year (100,000 tons/year assessed below). Material transported by 70-ton off-road haul trucks; 6 truck trips/day.
- Aggregate production – up to 100,000 tons/year available to outside contractors depending on market demand. If processed by Bagdad Chase, material transported by 70-ton off-road haul trucks; 6 truck trips/day.
- Hours of Operation – one shift; 8 - 10 hours/day, 5 days/week; equipment hours will vary depending on active mining area and demand)
- Ore production - primarily crushed in pit and secondary crushing and screening on-site in plant area, followed by further crushing and concentrating in ball mill and concentrator, then loaded into super sacks and transported by on-road 25-ton capacity flatbed trucks to an offsite refinery; 5 days/week, average one truck/day.
- Aggregate production – crushed/screened on-site and transported by on-road 25-ton capacity haul trucks by outside contractors to offsite customers based on market demand.
- Overburden – approx. 820,000 tons/year of OB will be excavated depending on quarry excavation location; 70-ton capacity haul trucks will move OB directly to the overburden stockpile areas or to backfill areas; 70-ton trucks, 5 days/week; 44 truck trips/day.
- Portable aggregate plant and generator with two crushers, two screens, and 10 conveyors and/or stackers (typical); must be permitted through MDAQMD or permitted by contractor with MDAQMD.

Fugitive Dust

Fugitive dust is generated by mining excavations, dozing, loading and dumping material, wind erosion of active stockpiles and active quarry areas and on-site and off-site unpaved road dust. Dust equations in EPA AP-42, the MDAQMD Guidance Handbook, and/or the SCAQMD guidelines were utilized to estimate dust emissions (see Table 3). Dust control measures must be in compliance with MDAQMD Rules 401 (limit visible emissions); 402 (avoid nuisance emissions to people or businesses or property); and 403 (updated October 2020), which requires the owner/operator of a mining facility to implement measures to

reduce PM_{10} entrained in the ambient air and to meet air quality standards. The dust control requirements for mining facilities are listed in Rule 403 (C)(8) and are required to be in place and operative with approval and periodic monitoring by MDAQMD and mine personnel ensuring that the regulatory standards are met. Rule 403 requires that the Facility obtain and implement a District-approved Dust Control Plan which includes control measures to prevent, mitigate, or reduce Fugitive Dust.

A 4,000 to 5,000-gallon water truck (typical) will be used to water spray operational areas, active stockpiles, and roads at least twice per day and as needed to control blowing dust. Water spray systems will be required on the crushers and screens per MDAQMD permit requirements; about 8 to 10 water trucks will be required per day. On occasion, if deemed a more effective method for road dust, approved dust will be sprayed on active roads and areas.

The following measures will be implemented to reduce fugitive dust:

1. *Water will be sprayed on unpaved haul and access roads, active operational areas, and material stockpiles.*
2. *Roads will be covered with up to 6 to8-inches of gravel to limit dust emissions and erosion.*
3. *Roads will are treated with EPA approved dust suppressants to prevent dust as needed.*
4. *Speed limits on unpaved roads shall be 25 mph.*
5. *All loaded trucks leaving from the site shall be properly trimmed with a 6-inch freeboard height and/or covered and sprayed with water so as to minimize dust and prevent spillage onto a public roadway per California Vehicle Code 23114.*
6. *Mining and processing activities shall be suspended when winds exceed 25 miles per hour.*

Air Quality Assessment

Table 3 summarizes the total emissions for the planned mining operations as compared to the MDAQMD CEQA thresholds. The anticipated operational emissions are less than the MDAQMD thresholds and would be considered less than significant. However, compliance with MDAQMD rules and CARB's Off-Road Diesel Vehicle regulations would maintain limitations and further reduce future emissions.

Table 3
Bagdad Chase Mine
Planned Operations (Onsite & Offsite)
Estimated Annual Air Pollutant Emissions (tons/year)

	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
EMISSIONS SOURCES	**Planned Operations**	**Planned Operations**	**Planned Operations**	**Planned Operations**	**Planned Operations**
ONSITE					
Drilling & Blasting	---	2.125	8.375	2.13	0.82
Mobile Equip., Haul Trucks & Generator (Exhaust) (Onsite)	0.31	4.93	9.04	0.08	0.07
Fugitive Dust Processing Plant	---	---	---	0.22	0.05
Fugitive Dust (Operations)	---	---	---	7.49	1.54
Fugitive Dust (haul truck travel)	---	---	---	2.12	0.424
Emission Totals Onsite	**0.31**	**7.06**	**17.42**	**12.04**	**2.904**
MDAQMD CEQA Thresholds	25	25	100	15	12
Significant	**No**	**No**	**No**	**No**	**No**

Source: *Air Quality Emissions Inventory for the Bagdad Chase Reclamation Plan.* Lilburn Corporation December 2021

These measures include the dust control measures above and the following measures to limit criteria emissions:

7. *Production shall be scheduled to minimize daily equipment operations;*
8. *Trucks in loading queues will have their engines turned off when not in use for more than 5 minutes to reduce idling and vehicle emissions in compliance with Title 13, California Code of Regulations, Section 2485 (Anti-Idling Policy);*
9. *All equipment used for mining and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.*
10. *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.*
11. *The operator shall obtain permits to construct and annually renew permits to operate the generator from the MDAQMD and be in compliance with such permits.*

Reclamation Emissions

Unlike many mining projects in which reclamation activities are generally final grading and revegetation, the proposed project is required to backfill any remaining overburden or other mined material into the pit per SMARA. Tables 6 and 7 in the *Air Quality Emissions Inventory* estimates the equipment, hours and emissions to conduct the backfilling and final reclamation. The reclamation schedule, equipment hours, and backfill rates are listed below for the planned reclamation activities.

Amount of backfill – Approximately 2.95 million cubic yards (mcy) of overburden is expected to remain in stockpiles after the completion of mining. The majority of the overburden will be backfilled during the final years of mining operations.

Amount of topsoil – Approximately 80,000 cy of topsoil based on 50 acres of topsoil one-foot thick to be re-covered over the pit area.

Equipment – 2 - 988 loader, 3 – CAT 775 70-ton off-road haul trucks, grader, dozer and water truck. Approx. backfill of 6,650 cy/day.

Schedule - 250 days/year; 1 shift/day; up to 10 hours/day; 1.86 years (465 working days); 450 days @ 6,750 cy/day for OB and 15 days for top soil.

Table 4 summarizes the total emissions for the planned mining operations as compared to the MDAQMD CEQA thresholds. The anticipated operational emissions are less than the MDAQMD thresholds and would be considered less than significant. However, compliance with MDAQMD rules and CARB's Off-Road Diesel Vehicle regulations would maintain limitations and further reduce future emissions.

Table 4
Bagdad Chase Mine
Planned Reclamation
Estimated Annual Air Pollutant Emissions (tons/year)

	ROG	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
EMISSIONS SOURCES	**Reclamation**	**Reclamation**	**Reclamation**	**Reclamation**	**Reclamation**
ONSITE					
Mobile Equip. & Haul Trucks (Exhaust) (Onsite)	0.16	4.75	5.31	0.05	0.04
Fugitive Dust (Reclamation)	---	---	---	11.87	2.46
Fugitive Dust (haul truck travel)	---	---	---	0.9	0.17
Emission Totals Onsite	**0.16**	**4.75**	**5.31**	**12.01**	**2.67**
MDAQMD CEQA Thresholds	25	25	100	15	12
Significant	**No**	**No**	**No**	**No**	**No**

Source: *Air Quality Emissions Inventory for the Bagdad Chase Reclamation Plan.* Lilburn Corporation December 2021. Annual emissions for approx. two years of reclamation activities.

Therefore, the criteria and dust emissions estimated for the mining operations and shipping and for reclamation are less than the CEQA thresholds. Therefore, air quality impacts will be less than significant with implementation of MDAQMD rules and regulations and project design measures and no mitigation measures are required.

Less Than Significant Impact

c) *Expose sensitive receptors to substantial pollutant concentrations?*

The Proposed Project is located in a remote area of San Bernardino County with no residences or recreational areas in the vicinity. No sensitive receptors are located within the project vicinity. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Bagdad Chase plans on excavating the former mining area defined as the Main Pit to extract precious metal ore. 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 impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

Therefore, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*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 Wildlife 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 Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒

c)	Have a substantial adverse effect on state or federally protected wetlands (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 ☒):*

San Bernardino Countywide Policy Plan 2020; Submitted Project Materials; ELMT Consulting, Inc., Biological Resources Report, Delineation of State and Federal Jurisdictional Water Report, Revegetation Plan, June 2021

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 Wildlife or U.S. Fish and Wildlife Service?*

A Biological Resources Report was prepared by ELMT Consulting, Inc. (ELMT) in June 2021 (report available at County office). The biology report provides an in-depth assessment of the suitability of the on-site habitat to support special-status wildlife species, in particular desert tortoise (*Gopherus agassizii*) and burrowing owl (*Athene cunicularia*) as well as special-status plant identified by the California Natural Diversity Data Base (CNDDB), the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, and other electronic databases to identify species with the potential for occurring in the vicinity of the Project Site. Additionally, a desert tortoise presence/absence survey and special-status plant survey were conducted in conjunction with the habitat assessment to document the presence/absence of desert tortoise and special-status plants within the boundaries of the survey area.

Wildlife

Reptilian species observed during the field investigation included western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), common side-blotched lizard (*Uta stansburiana elegans*), desert tortoise (*Gopherus agassizii*), and common chuckwalla (*Sauromatus ater*). Additional reptilian species that could be expected to occur on-site include, horned lizard (*Phrynosoma platyrhinos calidiarum*), Great Basin collard lizard (*Crotaphytus bicinctores*), Great Basin whiptail (*Aspidoscelis tigris tigris*), southwestern speckled rattlesnake (*Crotalus mitchellii yrrhus*), northern Mohave rattlesnake (*Crotalus scutulatus scutulatus*) and Great Basin gopher snake (*Pituophis catenifer deserticola*).

Avian species observed during the field investigation include American raven (*Corvus corax*), black-throated sparrow (*Amphispiza bilineata*), and house finch (*Haemorhous mexicanus*). Common avian species expected to occur on-site include lesser goldfinch (*Spinus psaltria*), American crow (*Corvus brachyrhynchos*), cactus wren (*Campylorhynchus brunneicapillus*), rock wren (*Salpinctes obsoletus*), and Say's phoebe (*Sayornis saya*).

Mammalian species observed or detected during the field investigation were black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), coyote (*Canis latrans*), kangaroo rat (*Dipodomys* sp.), and desert woodrat (*Neotoma lepida*). Additional common mammalian species that have potential to occur on-site include desert cottontail (*Sylvilagus audubonii*) and bat species (*Myotis*, *Lasiurus*, and *Antrozous* sp.). The southern portion of the site supports rock faces and steep cliffs that provide potential roosting habitat for local bat species.

Nesting Birds

The creosote bush scrub plant community occurs throughout the survey area, outside of the areas that have been subject to historic mining activities. No active nests or nesting behaviors were observed during the field investigation. However, the creosote bush scrub plant community provides suitable foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that have adapted to conditions in the Mojave Desert. Therefore, Mitigation Measure BIO-1 shall be implemented to ensure no impacts to nesting birds occur with project implementation.

Special-Status Plants

Alverson's foxtail cactus was the only special-status plant species observed on-site. There are no western Joshua trees (*Yucca brevifolia)* (CDFW candidate species) located on the site as it is outside the range of this species. Based on habitat requirements for the identified special-status species, and known distributions, it was determined that the creosote bush scrub plant community onsite has a moderate potential to support Emory's crucifixion thorn (*Castela emoryi*), Torrey's box-thorn (*Lycium torreyi*), and white-margined beartongue (*Penstemon albomarginatus*). Further, it was determined that the Project Site does not have potential to support any of the other special-status species documented as occurring within the vicinity of the site. None of the aforementioned special-status plant species are federally or State listed as endangered or threatened and have only been listed by the CNPS as Rare Plant Rank species. These species are not regulated under the federal or state Endangered Species

Acts. These species, therefore, do not rise to the level of a species of concern under CEQA.

Special-Status Wildlife

No special-status wildlife species were observed on-site during the field surveys. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the Project Site has a moderate potential to support desert tortoise and burrowing owl, and a low potential to support golden eagle, prairie falcon and loggerhead shrike. With implementation of Mitigation Measure BIO-1, impacts to burrowing owl, golden eagle, prairie, falcon, and loggerhead shrike will be less than significant.

Desert Tortoise

The undeveloped portions of the Project Site are dominated by creosote bush scrub plant communities that have the potential to provide suitable habitat for desert tortoise. Focused presence/absence surveys were conducted on October 29, 2020 and May 14, 2021. No live tortoises or signs were observed on the Project Site during the surveys. Based on the results of the focused survey, desert tortoise is presumed absent from the Project Site. It should be noted that there are eight (8) known locations of desert tortoise in the area that have been relocated in the vicinity of the Project Site from the 29 Palms Military Base, located outside of the project boundaries. However, to ensure no impacts to desert tortoise occur within the limits of disturbance, Mitigation Measure BIO-2 shall be implemented.

Mitigation Measure BIO-1:

Pre-construction Surveys for Nesting and Sensitive Bird Species

All construction activities shall comply with the federal Migratory Bird Treaty Act of 1918 (MBTA) and California Fish and Game Code Sections 3503, 3511 and 3513. The MBTA governs the taking and killing of migratory birds, their eggs, parts, and nests and prohibits the take of any migratory bird, their eggs, parts, and nests. Compliance with the MBTA shall be accomplished by completing the following:

Construction activities involving vegetation removal shall be conducted between September 1 and January 31. If construction occurs inside the peak nesting season (between February 1 and August 31), a pre-construction survey by a qualified Biologist shall be conducted within 72 hours prior to construction activities to identify any active nesting locations. If the Biologist does not find any active nests, the construction work shall be allowed to proceed. The biologist conducting the clearance survey shall document a negative survey with a report indicating that no impacts to active avian nests shall occur.

If the Biologist finds an active nest within the pre-construction survey area and determines that the nest may be impacted, the Biologist shall delineate an appropriate buffer zone around the nest. The size of the buffer shall be determined by the Biologist and shall be based on the nesting species, its sensitivity to disturbance, expected types of disturbance, and location in relation to the

construction activities. These buffers are typically 300 feet from the nests of non-listed species and 500 feet from the nests of raptors and listed species. Any active nests observed during the survey shall be mapped on an aerial photograph. Only construction activities (if any) that have been approved by a Biological Monitor shall take place within the buffer zone until the nest is vacated. The Biologist shall serve as a Construction Monitor when construction activities take place near active nest areas to ensure that no inadvertent impacts on these nests occur. Results of the pre-construction survey and any subsequent monitoring shall be provided to the Property Owner/Developer and the City. The monitoring report shall summarize the results of the nest monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area without jeopardizing the survival of the young birds.

Mitigation Measure BIO-2: Desert Tortoise

- *A pre-construction clearance survey be conducted thirty (30) days prior to ground disturbing activities in undeveloped areas to confirm the absence of desert tortoise within the boundaries of the survey area. Survey transects shall be spaced at 5-meter (16-foot) intervals throughout the undeveloped portions of the project area to provide 100 percent visual coverage and increase the likelihood of locating desert tortoise and/or sign. All burrows, if present, will be thoroughly inspected for the presence of desert tortoise or evidence of recent use using non-intrusive methods (i.e., mirror, digital camera).*
- *Although not anticipated, if desert tortoise are found on-site during the pre-construction clearance survey, coordination will need to occur with the USFWS and CDFW to determine if avoidance and minimization measures can be implemented to avoid any direct or indirect impacts to desert tortoise, or if "Take" permits will need to be prepared and approved by the USFWS and CDFW.*
- *A Workers' Education and Awareness Program (WEAP) for desert tortoise protection shall be completed by all workers/drivers/employees prior to working on-site and reviewed annually; the WEAP is included below;*
- *Disturbance shall be confined to the smallest practical areas within the planned disturbance areas;*
- *Vehicle speeds shall not exceed 25 miles per hour on-site and on the access road;*
- *Vehicles must remain on established roads at all times outside the project site and cross-country travel with motorized vehicles outside of the Project Site by project personnel is prohibited;*
- *Vehicles and equipment parked shall be inspected immediately prior to being moved;*
- *To the extent possible, new disturbances on undisturbed areas shall be scheduled when tortoises are inactive (November 1 – February 28);*
- *All trash and food items shall be promptly contained within closed, common raven-proofed containers; and*
- *Firearms, dogs, or other pets shall be prohibited at the work site.*

Workers Education and Awareness Program

Specific Desert Tortoise Protection Measures:

- Require drivers' education on desert tortoise impacts and restrictions on the access road.
- Trucks must remain on the main road at all times; no cross country travel allowed.
- Trucks shall not leave or turn off road except in existing turnouts and unless for emergency.
- Drivers shall inspect for desert tortoise under vehicles prior to moving the vehicle.
- No littering; all trash and food items shall be stored within the trucks and only disposed of within closed, common raven-proofed containers.
- Establish a speed limit of 25 mph for trucks and vehicles.
- Install speed limit and desert tortoise habitat signs along road as directed by the BLM.
- Any routine maintenance required and allowed by the BLM shall be conducted between November 1 and February 28 when desert tortoise are hibernating. If emergency repairs required during March 1 through October 31, then pre-construction tortoise survey and on-site monitoring will be required during repair work.

Desert Tortoise Education for Drivers

- Desert tortoise training will include a signed acknowledgment of training and repeated annually.
- Personnel shall be trained to watch for desert tortoise so harm desert tortoise or any other sensitive species is avoided.
- Training will not authorize personnel to handle tortoises.
- Signed acknowledgment shall include the understanding that *"desert tortoises may be encountered at any time of year, any time of day and anywhere within their range"*…
- Copies of training sign-in sheets will be available at the mine site.
- Tortoise training will include procedures to follow in the event a tortoise or suspected tortoise sign is encountered. An encounter procedures guide will be retained by each driver with all contact information, to include the Designated Biologist, BLM, SB County, US Fish & Wildlife Service and CA Dept. of Fish & Wildlife;
- Any tortoise encountered and its location to the nearest mile post will be noted on the daily log;
- The Designated biologist will have the authority to restrict activities if a tortoise or other sensitive species is encountered and could be harmed. *"Harm" is further defined as significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns including breeding, feeding or sheltering."*

Less than Significant with Mitigation

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 Wildlife or US Fish and Wildlife Service?

There are no riparian habitats and no other sensitive natural communities located on the Project site. Implementation of the Proposed Project would not result in impacts to riparian habitat or to other sensitive natural communities in the vicinity. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

A Delineation of State and Federal Jurisdictional Water Report (delineation report) was prepared for the Proposed Project by ELMT in June 2021 (report available at County office).

Several unnamed ephemeral drainage features were observed within the boundaries of the Project Site during the field delineation. All of the onsite drainage features generally flow in a west to east direction across the project site and south to north across the 25-acre processing site. These features only convey surface flow in direct response to precipitation, and do not support riparian vegetation. All of the onsite drainage features, after flowing offsite, eventually infiltrate into dry lakebeds. The drainages will be diverted around the pit and through the operations area as shown in the mine plans.

The onsite drainage features do not have a surface hydrologic connection to downstream waters of the United States. Any impacts to on-site jurisdictional areas will likely require a Regional Board Report of Waste Discharge permit and CDFW Section 1602 Lake or Streambed Alteration Agreement prior to project implementation. With issuance of the permit and Alteration Agreement, less than significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

U.S. Army Corps of Engineers (Corps)

Based on the Corps' April 2020 regulations, the on-site drainage features are ephemeral features that flow only in direct response to precipitation and are not considered perennial or intermittent tributaries that contribute surface water flows to downstream waters. Further, the on-site drainage features do not have a surface hydrologic connection to downstream waters. As a result, the on-site drainage features do not fall under the regulatory authority of the Corps.

Federal Wetland

An area must exhibit all three wetland parameters described in the Corps Arid West Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field delineation, it was determined that no areas within the Project Site met all three wetland parameters. Therefore, no jurisdictional wetland features exist within the Project Site.

State Wetland

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

Based on the results of the field delineation, it was determined that no areas within the Project Site meet the State Wetland Definition. Therefore, no state wetland features exist within the Project Site.

RWQCB and CDFW

The onsite drainage features exhibit characteristics consistent with the Regional Board's methodology and would be considered jurisdictional waters of the State. Likewise, even though there will be no impact to existing fish and wildlife resources, the onsite drainage features exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed. The Regional Board and CDFW streambed areas and lengths are the same. approximately 7.2 acre (6,430 liner feet) of potential impacts will occur within Regional Board waters of the State and CDFW jurisdictional streambed.

Potential impacts to on-site Regional Board waters of the State and CDFW jurisdiction streambed will likely require a Regional Board Report of Waste Discharge permit prior to project implementation and a CDFW Section 1602 Streambed Alteration Agreement. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements. Therefore, the following mitigation measure shall be implemented to ensure that less than significant impacts occur:

Mitigation Measure BIO-3: *Jurisdictional Delineations*

A formal jurisdictional delineation shall be forwarded to the Regional Board and CDFW for their review, and if onsite drainages are determined to be Regional Board waters of the State and/or CDFW jurisdictional streambed, regulatory permits will need to be obtained through the Regional Board and/or CDFW prior to initiating new mining within a jurisdictional area and appropriate protective measures implemented and compensation provided as applicable.

The following are general protective measures that may be required to be determined by the agencies:

- Worker environmental awareness program;
- Avoidance of waters of the State and jurisdictional streambeds as much as possible;
- Demarcation of jurisdictional streambeds to prevent unnecessary impacts;
- Avoiding impacts to undisturbed areas and to wildlife and sensitive species through pre-clearance surveys, establishing buffer areas, and temporary fencing;

- Implementation of BMPs to prevent erosion and sediment discharge;
- Invasive weed control;
- Maintaining areas free of trash, debris, hazardous materials, and spills; and
- Compensation as applicable to be determined which may include a combination of on-site and/or off-site compensation and/or re-habitation.

With adherence to the regulatory permitting requirements including mitigation and compensation as applicable, the Proposed Project is not anticipated to have a significant effect on any waters of the State.

Less than Significant with Mitigation

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?

As stated in the biology report, proposed conditions will allow wildlife movement across portions of the site and within adjoining large blocks of habitat. Therefore, wildlife movement will not be significantly affected by the Proposed Project. In addition, in the long-term, the site will be backfilled and revegetated to return the area to open space. Less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

A Revegetation Plan was prepared as part of the Reclamation Plan for the Proposed Project by ELMT in June 2021 (report available online and at County office). San Bernardino County Development Code, Section 88.01.060 Desert Native Plant Protection, provides regulations for the removal of specified desert native plant species in order to preserve and protect the plants and to provide conservation and wise use of desert resources. This section applies to both publicly owned lands and privately owned lands. Only Creosote bush scrub community is found within the proposed mining areas. The following desert native plants occur or have the potential to occur within the Project Site (there are no western Joshua trees onsite as the project area is outie this species range):

- Smoke tree (*Psorothamnus spinosus*)
- Mesquites (*Acacia* sp.)
- Creosote (*Larea tridentata*) rings
- Mojave yucca (*Yucca schidigera*)
- Desert ironwood (*Olneya tesota*)
- Palos verdes (Cercidium sp.)
- Cholla (*Cylindropuntia* sp.)
- Beavertail cactus (*Opuntia basilaris*)

- Barrel cactus (*Echinocarpa* sp.)
- Hedgehog cactus (*Echinocereus engelmannii*)

The revegetation effort will focus on the perennial pioneer shrubs, herbs, and annuals that aid in providing organic material, holding moisture, and breaking up the surface. To implement revegetation, it is recommended that all native seeds be used during the revegetation effort.

Revegetation monitoring will be conducted: 1) to ensure that the site preparation, seeding and weed eradication follows the Revegetation Plan (implementation monitoring), 2) to evaluate native plant establishment and vigor, and to identify and make recommendations for correcting problems (qualitative monitoring) and 3) to quantitatively measure development of the creosote bush scrub habitat (quantitative monitoring) to determine its progress with respect to the established success criteria. The success of the revegetation effort will be measured primarily by the analysis of the quantitatively collected data compared to the success criteria. The Annual Revegetation Report will be prepared to summarize revegetation and monitoring efforts over the past year and to assess the results of revegetation on the disturbed areas of the site. Monitoring will continue until success criteria have been achieved.

With implementation of the Revegetation Plan, less than significant adverse impacts are anticipated and no mitigation measures are required.

Less Than Significant Impact

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?

The Project Site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan. Therefore, impacts to any local, regional, or state habitat conservation plans are not expected to occur from development of the Proposed Project, and mitigation is not required.

No Impact

Therefore, less than significant impacts are anticipated with the implementation of mitigation measures.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
V.	**CULTURAL RESOURCES** - Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those 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):

San Bernardino Countywide Policy Plan 2020; BCR Consulting LLC, Cultural Resources Assessment, July 20, 2021

a,b) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

A Cultural Resources Assessment, dated July 21, 2021, was prepared for the Proposed Project by BCR Consulting LLC (report available at County office). The assessment was completed pursuant to CEQA, the Public Resources Code (PRC) Chapter 2.6, Section 21083.2, and California Code of Regulations (CCR) Title 14, Chapter 3, Article 5, Section 15064.5. The pedestrian cultural resources survey was intended to locate and document previously recorded or new cultural resources, including archaeological sites, features, isolates, and historic-period buildings, that exceed 45 years in age within defined project boundaries.

Prior to fieldwork, an archaeological records search was conducted at the South Central Coastal Information Center (SCCIC). This included a review of all recorded historic and prehistoric cultural resources, as well as a review of known cultural resources, and survey and excavation reports generated from projects completed within one half-mile of the Project Site. In addition, a review was conducted of the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and documents and inventories from the California Office of Historic Preservation including the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and Inventory of Historic Structures as listed in the Built Environment Resources Directory (BERD).

Findings were negative during the Sacred Lands File search with the Native American Heritage Commission (NAHC). Data from the SCCIC revealed that two cultural resource studies have taken place within one half-mile of the Project Site, neither of which assessed any portion of the Project Site. Four historic cultural resources have been identified within a one half-mile radius of the project site. Of these, two historic-period mining resources (P-36-3598 and 3599) were previously identified within the Project Site during BLM efforts for which no report was filed.

One concentration of historic period materials and prospect pits, temporarily designated EMT2102-H-1, was identified during the field survey. This resource is a collection of eight concentrations of historic and modern refuse, two of which are adjacent to prospect pits, and one of which has been burned and is deposited on top of a tailings pile. The California Register also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association. The California Register evaluation is provided below:

- Criterion 1: The refuse concentrations and prospect pits identified represent brief use areas and single-episode dump sites. They are not significantly associated with important events related to the development of the region. This site is therefore not eligible for the California Register under Criterion 1.
- Criterion 2: Research has not linked the resource with individuals who have been notable in local, state, or national history. It is therefore not eligible for the California Register under Criterion 2.
- Criterion 3: Refuse scatters and prospect pits do not embody distinctive characteristics or methods of construction. They do not represent the work of an important creative individual or possess high artistic values. The site is therefore not eligible for the California Register under Criterion 3.
- Criterion 4: These single episode dump sites and small prospect pits have not and are not likely to yield information important in prehistory or history. The site is therefore not eligible for the California Register under Criterion 4.

This site is therefore recommended not eligible under any of the four criteria for listing on the California Register, and as such is not recommended a historical resource under CEQA.

P-36-3598 was originally recorded by C. Stevens in 1978 as a circa 1930s mill foundation of the Bagdad Chase Mine. BCR Consulting revisited the site and were unable to relocate the foundation. It is presumed destroyed and has no integrity. This site is therefore recommended not eligible under for listing on the California Register, and as such is not recommended a historical resource under CEQA.

P-36-3599 was originally recorded by C. Stevens in 1978 as a “combination of historic Chase Bagdad [also known as Bagdad Chase] Mine and modern mining operations”. BCR Consulting revisited the site on February 18, 2021. The entire area is highly disturbed by clearing associated with modern mining activities and no evidence of historic-era use was identified at the claim area plotted in SCCIC maps. The surrounding

area contains numerous mine shafts and sinkholes many of which may be historic in age but specific association with the original Bagdad Chase Mine would be speculative. The California Register Evaluation is as follows:

- Criterion 1: The Bagdad Chase mine produced more copper and gold than any other mine in San Bernardino during the 20th century. As such, the mine is significantly associated with important events related to the development of the region. It is therefore eligible for the California Register under Criterion 1.
- Criterion 2: Research has linked the Bagdad Chase mine to Chauncey M. Depew, John N. Beckley, Benjamin E. Chase, J.H. Stedman, and John Jays Hammond. These men were influential in their respective fields but were not particularly well known for their association with the subject property. Therefore, the subject property is not eligible for the California Register under Criterion 2.
- Criterion 3: No evidence of intact structural remains have been identified on the Project Site. The Project Site therefore does not embody distinctive characteristics or methods of construction. It does not represent the work of an important creative individual or possess high artistic values. It is therefore not eligible for the California Register under Criterion 3.
- Criterion 4: There is evidence of historic use on the fringes of the Bagdad Chase Mine, but these are single episode dump sites outside the mining area and as such cannot be connected to the mine. Furthermore, although the surrounding area contains numerous mine shafts and sinkholes that may be historic in age, specific association with the original Bagdad Chase Mine would be speculative. Therefore, data potential is considered low and the site is recommended not eligible for the California Register under Criterion 4.

Although the site is recommended eligible for its association with important events (Criterion 1), it does not retain historical elements sufficient to convey its eligibility through integrity of setting, design, materials, workmanship, feeling, and association. Since it retains its historic name in the same area it does retain a measure of integrity of location. Due to diminished integrity, the site cannot convey its eligibility and it is recommended not eligible for listing on the California Register. It is therefore not recommended a historical resource under CEQA.

Due to a lack of historical resources located within the Project Site combined with a high level of disturbance, BCR Consulting recommends that no additional cultural resources work or monitoring is necessary for any proposed project activities. However, the possibility of discovering an unanticipated find remains and Mitigation Measures CR-1 and CR-2, defined below, shall be implemented to ensure that less than significant impacts to historical and/or archaeological resources occur.

Mitigation Measure CR-1:

In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered

area may continue during this assessment period. Additionally, the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed within TCR-1, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.

If the discovery proves to be significant under CEQA, additional work such as data recovery excavation may be warranted and will be reported to the County of San Bernardino.

Mitigation Measure CR-2:

If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to SMBMI and County for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

Less than Significant with Mitigation

c) Disturb any human remains, including those outside of formal cemeteries?

Mining activities could potentially disturb human remains outside of a formal cemetery. Thus, the potential exists that human remains may be unearthed during implementation of the Proposed Project. Therefore, Mitigation Measure CR-3, defined below, shall be implemented to ensure that less than significant impacts regarding human remains occur.

Mitigation Measure CR-3:

If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

The County of San Bernardino and the Project Proponent shall also be informed of the discovery. The Coroner will determine if the bones are historic/archaeological or a modern legal case. The Coroner will immediately contact the Native American Heritage Commission (NAHC) in the event that remains are determined to be human and of Native American origin, in accordance with California Public Resources Code Section § 5097.98.

All discovered human remains shall be treated with respect and dignity. California state law (California Health & Safety Code § 7050.5) and federal law and regulations ([Archaeological Resources Protection Act (ARPA) 16 USC 470 & 43 CFR 7], [Native American Graves Protection & Repatriation Act (NAGPRA) 25 USC 3001 & 43 CFR

10] and [Public Lands, Interior 43 CFR 8365.1-7]) require a defined protocol if human remains are discovered in the State of California regardless if the remains are modern or archaeological.

With implementation of Mitigation Measure CR-3, the Proposed Project would not have a significant impact on human remains.

Less than Significant with Mitigation

Therefore, less than significant impacts are anticipated with the implementation of mitigation measures.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
VI.	**ENERGY** – Would the project:				
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

SUBSTANTIATION: San Bernardino Countywide Policy Plan 2020; Submitted Project Materials

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2018). California consumed 292,039 gigawatt-hours (GWh) of electricity and 2,110,829 million cubic feet of natural gas in 2017 (California Energy Commission [CEC] 2019; EIA 2018). In addition, Californians consume approximately 18.5 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2019). The single largest end-use sector for energy consumption in California is transportation (39.8 percent), followed by industry (23.7 percent), commercial (18.9 percent), and residential (17.7 percent) (EIA 2018).

Most of California's electricity is generated in-state with approximately 30 percent imported from the Northwest and Southwest in 2017. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources such as wind, solar photovoltaic, geothermal, and biomass (CEC 2018). Adopted on

September 10, 2018, SB 100 accelerates the State's Renewables Portfolio Standards Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from in-state refineries. Gasoline is the most used transportation fuel in California with 15.3 billion gallons sold in 2019 and is used by light-duty cars, pickup trucks, and sport utility vehicles (California Department of Tax and Fee Administration 2018). Diesel is the second most used fuel in California with 3.14 billion gallons sold in 2019 and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2020). Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including CO2 and NOX. The transportation sector is the single largest source of GHG emissions in California, accounting for 40 percent of all inventoried emissions in 2018 (California Air Resources Board [CARB] 2020).

Building Energy Efficiency Standards

The CEC adopted Title 24, Part 6, of the California Code of Regulations; Energy Conservation Standards for new residential and nonresidential buildings in June 1977 and standards are updated every three years. Title 24 (now called the Building Energy Efficiency Standards) ensures building designs conserve energy by requiring the use of new energy efficiency technologies and methods into new developments. Currently, the CEC Title 24 2019 Building Energy Efficiency Standards are in effect to be updated in 2022. The Building Energy Efficiency Standards state that nonresidential buildings will use about 30 percent less energy compared to the 2016 standards due mainly to lighting upgrades.

Senate Bill 350

Senate Bill (SB) 350 (de Leon) was signed into law in October 2015 and established new clean energy, clean air, and greenhouse gas reduction goals for 2030. SB 350 establishes periodic increases to the California Renewables Portfolio Standard (RPS) Program with the target to increase the amount of electricity generated per year from eligible renewable energy resources to an amount that equals at least 33% of the total electricity sold annually to retail customers, by December 31, 2020. The SB 350 specifically calls for the quantities of eligible renewable energy resources to be procured for all other compliance periods reflecting reasonable progress in each of the intervening years to ensure that the procurement of electricity products from eligible renewable energy resources achieves 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030.

Senate Bill 100

Senate Bill 100 (SB 100) was signed into law September 2018 and increased the goal of the California RPS Program to achieve at least 50 percent renewable resources by 2026, 60 percent renewable resources by 2030, and 100 percent renewable resources

by 2045. SB 100 also includes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Energy use would be primarily fuel consumption to operate generators, heavy equipment and trucks during mining, loading, and trucking operations. The estimated energy consumption from the generators, equipment and vehicles, is approximately 262,700 gallons of diesel fuel per year. No electricity or natural gas consumption is used onsite or is proposed.

In comparison, County retail sales of diesel fuel was about 159 million gallons in 2019 with a state-wide total of taxable diesel fuel usage of over 3 billion gallons in 2019 (California Energy Commission 2019 Annual Report (CEC-A15; September 2020). The CEC estimates that retail sales account for about 47.2% of the total diesel sales; 52.8% is non-retail sales. Therefore total diesel sales in the County are estimated to be around 337 million gallons/year and 6.6 billion gallons/year statewide.

Energy use would be typical of similar-sized long-term construction-type and mining projects in the region. In the interest of cost efficiency, operations are not anticipated to utilize fuel in a manner that is wasteful or unnecessary. In addition, all off-road and on-road equipment and trucks will be meet fleet averaging requirements and compliance with MDAQMD rules and CARB's Off-Road Diesel Vehicle regulations. Therefore, project impacts would not result in a potential impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and less than significant energy impacts would occur.

Less Than Significant Impact

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

As stated, the Proposed Project would not require implementation of new or expanded electric power or natural gas facilities as it will not be using electricity, natural gas, or any other energy resources. Therefore, the Proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
VII.	**GEOLOGY AND SOILS** - Would the project:				
a)	Directly or indirectly cause 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 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect 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?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

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

Countywide Plan; Submitted Project Materials; Terracon Consultants, Inc. Slope Stability Investigation Report, May 28, 2021; BCR Consulting LLC; BCR Consulting LLC, Cultural Resources Assessment, July 20, 2021

a) Directly or indirectly cause 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?

The Project Site is not located within an area designated by the Alquist-Priolo Special Studies Zone Act of 1972.[7] Moreover, the Project Site is located in an area with relatively low earthquake shaking potential.[8] There are no permanent structures or residences proposed on-site. As such, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

Less Than Significant Impact

iii) Seismic-related ground failure, including liquefaction?

Liquefaction is a process in which cohesion-less, saturated, fine-grained sand and silt soils lose shear strength due to ground shaking and behave as fluid. Areas overlying groundwater within 30 to 50 feet of the surface are considered susceptible to liquefaction hazards. The Project Site is not located in an area susceptible to liquefaction.[9] Moreover, the Project Site is located in an area with relatively low earthquake shaking potential.[10] Groundwater conditions during mining and at completion of mining (reclamation stage) may include water seepage and ponding of limited extent. Groundwater is not anticipated to significantly affect the stability of the proposed reclamation slopes.[11] Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

iv) Landslides?

Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. The Project Site is located in the eastern foothills of the Bullion Mountains, an area of moderate to steep slopes and moderate relief formed in Tertiary age volcanic and sedimentary rocks. The Project Site is neither located in an

[7] San Bernardino Countywide Policy Plan Map HZ-2 "Earthquake Fault Zones."
[8] San Bernardino Countywide Plan Draft EIR. Geology and Soils. Figure 5.6-2 "Earthquake Shaking Potential."
[9] San Bernardino Countywide Policy Plan Map HZ-2 "Liquefaction and Landslide Hazards." Accessed March 2, 2021.
[10] San Bernardino Countywide Policy Plan Map HZ-2 "Liquefaction and Landslide Hazards"
[11] Terracon Consultants, Inc. Slope Stability Investigation Report.

area with mapped, existing landslides nor is it located in an area susceptible to landslides.[12] Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

b) Result in substantial soil erosion or the loss of topsoil?

Due to the hard bedrock material and low rainfall (less than 4 inches/year) the site has little potential for erosion and sedimentation. Control of surface drainage, erosion, and sedimentation of the operations involves the following primary components:

- Limiting surface disturbance to the minimum area required for active operations;
- Diverting drainages and runoff from flowing into the mine pit and into natural drainages down gradient; and
- Stabilizing disturbed areas through backfilling, regrading, replacement of soils, revegetation, re-establishing drainages, and erosion control practices.

All operations onsite will comply with a Storm Water Pollution Protection Plan (SWPPP) to be updated periodically with mine site development and implementation of storm water best management practices (BMPs). The mine will be cut into bedrock and precipitation falling within the mine will be allowed to flow into the mine and percolate or evaporate during operations. After backfilling the pit, drainages will be re-established to flow through the site to natural drainages down gradient. With implementation of a SWPPP and associated BMPs, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

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?

The potential for liquefaction at the Project Site is very low. The Project Site has relatively low earthquake shaking potential. The Project Site is neither located in an area with mapped, existing landslides nor is it located in an area susceptible to landslides.[13] Although the Project Site's susceptibility to lateral spreading and subsidence is unknown at this time, reclamation of the mine with backfilling of the pit will be undertaken at the completion of mining operations. State and County Building Codes establish engineering and construction criteria designed to mitigate potential impacts associated with unstable soils, landslides, lateral spreading, subsidence, liquefaction, soils collapse and expansive soils. Compliance with building codes would ensure that effects of these hazards are reduced to the extent feasible. Less than significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

[12]San Bernardino Countywide Policy Plan Map HZ-2 "Liquefaction and Landslide Hazards."
[13]San Bernardino Countywide Policy Plan Map HZ-2 "Liquefaction and Landslide Hazards."

Less Than Significant Impact

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils (shrink-swell) are fine-grained clay silts subject to swelling and contracting in relation to the amount of moisture present in the soil. Structures built on expansive soils may incur damage due to differential settlement of the soil as expansion and contraction takes place. A high shrink-swell potential indicates a hazard to structures built on or with material having this rating. No habitable structures are proposed. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

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?

Septic tanks and/or alternative wastewater supply systems are not proposed as part of the proposed project. Portable toilets will be supplied for use by employees and will be located onsite at the operations area. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As stated in the Cultural Resources Assessment report, the geologic units underlying the Project Site are mapped as andesite porphyry volcanic rock dating to the Miocene along the southern half of the site and Holocene alluvial fan deposits along the northern half of the Project Site (Dibblee, 2008). Miocene andesite is considered to be of low paleontological sensitivity, and while Holocene alluvial units are considered to be of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Late Pleistocene alluvial sediments could increase. If excavation activity disturbs deeper alluvial sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material could be scientifically significant. Excavation activity associated with the development of the project area is unlikely to be paleontologically sensitive, but caution during development should be observed. Therefore, the following mitigation measure shall be implemented to ensure that less than significant impacts occur:

Mitigation Measure GEO-1:

Should fossil specimens be encountered during site preparation and excavation activities, a qualified paleontologist shall monitor and oversee excavations within these fossil-sensitive areas to ensure paleontological specimens are identified,

recovered, analyzed, reported, and curated in accordance with CEQA and the San Bernardino County policies and guidelines.

Less than Significant with Mitigation

Therefore, less than significant impacts are identified or anticipated and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
VIII.	**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:
Countywide Plan; Submitted Project Materials; Greenhouse Gas Emissions (GHG) Reduction Plan (September 2011)

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

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."

In September 2011, San Bernardino County adopted the Emissions Reduction Plan (GHGRP), which outlines a strategy to use energy more efficiently, harness renewable energy to power buildings, enhance access to sustainable transportation modes, and recycle waste. The 2015 update of the GHG Emissions Development Review Process updated the language the performance standard bringing it up to date with current code. In September 2021, the County adopted its GHGRP Update. Since the adoption of the County's GHGRP in 2011 and its update in 2015, the State has enacted new climate change regulations, most notably the Senate Bill (SB) 32, which provides statewide targets to reduce GHG emissions to 40 percent below 1990 levels by 2030. To ensure conformity with the latest State climate change regulations, the County has updated its

2011 and 2015 GHGRP. This 2021 GHGRP Update serves as a comprehensive roadmap to outline strategies that the County will implement to continue achieving its GHG emissions reductions into the year 2030 and beyond, thereby ensuring sustainable and healthy growth.

The 2021 GHGRP Update summarizes the County's historic and future GHG emissions and the reduction targets the County has established; the local reduction strategies that will be implemented and benefit at the community level to meet the reduction targets; and the implementation of the measures, potential funding sources, and how the GHGRP Update will be monitored and updated over time.

However, specific requirements for mining projects to reduce emissions of GHGs have not been adopted and so the Amended Plan would not conflict with the County's Greenhouse Gas Reduction Plan.

GHG is inherently a cumulative issue, because no single project would be expected to result in a measurable change in global climate. The cumulative nature of GHG is considered by agencies in adopting significance thresholds and adopted significance thresholds represents levels at which a project is considered cumulatively significant.

The GHG emissions were calculated (*Air Quality and GHG Inventory,* Lilburn Corp. December 2021) and compared to the MDAQMD's 100,000 $MTCO_2e$ screening threshold to determine if potentially significant to anticipated global warming. GHG emissions were estimated using the following models: CARB - SCAQMD's Off-road Model - Mobile Source Emission Factors (http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html); Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (CARB EMFAC 2017); and U.S. EPA Office of Transportation and Air Quality. These factors are state-wide factors and are appropriate for the Proposed Project.

Annual operational GHG emissions will amount to approximately 3,061 $MTCO_2e$, and for Reclamation activities (two years only) approximately 2,074 $MTCO_2e$. Table 5 shows that GHG emissions associated with proposed project operations and final reclamation. the Proposed Project is not anticipated to exceed the quantitative significance CEQA thresholds of either 100,000 $MTCO_2e$ (MDAQMD threshold) or 10,000 $MTCO_2e$ (SCAQMD threshold). Therefore, the Proposed Project would not generate GHG emissions that may have a cumulative considerable or significant effect on the environment. Additionally, the Proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Less than significant impacts are identified or are anticipated, and no mitigation measures are required.

Table 5
Bagdad Chase Mine
Greenhouse Gases Annual Emissions ($MTCO_2e$)
Mining and Reclamation Operations

	Proposed Project Operations (30 years)		Reclamation Operations (2 years)	
Sources	**CO_2**	**CH_4**	**CO_2**	**CH_4**
On-site Diesel Equipment	1,971	0.9	733	1.0
Generator	859	0.9	NA	NA
On-site Haul Trucks	1,116	1.2	1,339	1.4
Total Per Year	3,058	3.0	2,072	2.4
Total $MTCO_2e$	**3,061**		**2,074.4**	
MDAQMD GHG Screening Threshold ($MTCO_2e$)	100,000		100,000	
Exceeds Threshold?	No		No	
SCAQMD Industrial GHG Screening Thresholds ($MTCO_2e$)	10,000		10,000	
Exceeds Threshold?	No		No	

Source: *Air Quality Emissions Inventory for the Bagdad Chase Reclamation Plan*, Lilburn Corp. December 2021
CO_2e factors: CH_4 x 25

Note that measures to reduce air pollutant emissions as discussed under Air Quality (Section III above) also reduce GHG emissions. These measures include the following:

1. Production shall be scheduled to minimize daily equipment operations;

2. Trucks in loading queues will have their engines turned off when not in use for more than 5 minutes to reduce idling and vehicle emissions in compliance with Title 13, California Code of Regulations, Section 2485 (Anti-Idling Policy);

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

4. 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.

5. The operator shall obtain permits to construct and annually renew permits to operate the generator from the MDAQMD and be in compliance with such permits.

As shown in Table 5, the reclamation GHG emissions are not anticipated to exceed the GHG emissions threshold; therefore, a less than significant impact is anticipated.

Less Than Significant Impact

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The state and local regulatory programs for GHG emissions and climate change are described above. There are no existing GHG plans, policies, or regulations that have been adopted by California Air Resources Board (CARB) or MDAQMD that would apply to project emissions. If CARB does develop performance standards, these performance standards would be implemented and adhered to, and there would be no conflict with any applicable plan, policy, or regulation; therefore, impacts would be less than significant, and no mitigation would be required.

Less Than Significant Impact

Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
IX.	**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 or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

SUBSTANTIATION:

Submitted Project Materials; EnviroStor Database; Reclamation Plan for Bagdad Chase Mine

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No hazardous materials will be used on-site with the exception of fuel and oil for mobile equipment. Equipment maintenance and re-fueling will take place utilizing mobile maintenance trucks and portable onsite fuel tanks up to 10,000 gallons and conducted at the mine with appropriate required safeguards and best management practices (BMPs). Any used oil generated at the mine site will be collected and transported for off-site recycling or disposal by approved methods and by properly trained and licensed personnel. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

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?

The Hazardous Materials Division of the San Bernardino County Fire Department is designated as the Certified Unified Program Agency (CUPA) for the County to focus the management of specific environmental programs at the local government level. Bagdad Chase will prepare a Business Emergency/ Contingency Plan to include operations for the site. The Business Plan includes a hazardous materials inventory and Spill Prevention Control and Countermeasure Plan (SPCC) to ensure that on-site materials are stored appropriately and contained in the event of uncontrolled release utilizing BMPs. Fuel storage specifications apply to all above ground fuel containers. A Hazardous Materials Business Plan (HMBP) for the mine site that addresses any hazardous materials stored and used at these facilities will be prepared. The HMBP describes methods and procedures to minimize the potential for hazardous material and waste releases including an emergency response and contingency and spill response procedures.

Blasting operations involve drilling along the mining face, placement of charges, and detonation of the charges by a blaster licensed through the Bureau of Alcohol, Tobacco, Firearms, and Explosives (BATF&E) for handling explosive materials. The transporting, handling, storage, and use of explosive materials, blasting agents, and blasting equipment shall be directed and supervised by a qualified blasting contractor. The blasting contractor and the explosive delivery company must be licensed in accordance with all Federal, State, and local agencies and regulations, U.S. Department of Transportation hazardous materials (HAZMAT) Certificate of Registration, California HAZMAT Transportation License, and general liability insurance policy for explosive transportation and permitted under the San Bernardino County Fire Department pursuant to Uniform Fire Code adopted by the Department.

Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

The Proposed 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 reclamation of the site. During operations and reclamation, 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, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

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?*

The Project Site was not found on the list of hazardous materials sites complied pursuant to Government Code Section 65962.5 by the California Department of Toxic Substances Control's EnviroStor data management system.[14] EnviroStor tracks cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known or suspected contamination issues. No hazardous materials sites are located within or in the immediate vicinity of the Project Site. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

[14]California Department of Toxic Substances Control. EnviroStor. Accessed March 3, 2021.

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 or excessive noise for people residing or working in the project area?*

The Project Site is not located within an Airport Runway Protection Zone, Airport Noise Contours or an Airport Safety Review Area.[15] However, the Project Site is located within the low-altitude/high speed military airspace (Airport Safety Review Area 4 [AR4]). An Avigation Easement shall be granted to the appropriate military agency and recorded before the issuance of a building permit for those uses established within an AR4.[16] Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Project Site is approximately seven miles south of I-40, which is an evacuation route.[17] The site is accessed via the National Trails Highway and the unpaved Bagdad Chase Road utilized to access the area's mines and former small mining towns since the early 1900s. This road is shown on County Assessor Parcel Maps and all USGS topographic maps from the past to present. Currently the northern 0.6 miles of the road is utilized by a communications site and the northern 3 miles are also used for access to a west to east utility corridor. Roads will be graded and improved with an 8-inch gravel road base which will be sourced from the Bagdad Chase mine. Mine areas will have warning signs every 500 feet, dirt roads not used will be blocked or closed, and safety berms six feet in height will be constructed along the pit rims where the public could access. Any unauthorized roads will be blocked or closed permanently at the property boundary.

All vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Implementation of operational activities would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

[15] San Bernardino Countywide Plan Map HZ-9 "Airport Safety & Planning Areas"
[16] San Bernardino County. Development Standards. Chapter 82.09 "Airport Safety (AR) Overlay." https://codelibrary.amlegal.com/codes/sanbernardino/latest/sanberncty_ca/0-0-0-70651#JD_82.09.060
[17] San Bernardino Countywide Policy Plan Map PP-2 "Evacuation Routes."

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Project Site is not located within a High or Very High Fire Hazard Severity Zone.[18] Therefore, the Proposed Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. No impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
X.	**HYDROLOGY AND WATER QUALITY -** Would the project:				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;	☐	☐	☒	☐
	iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff; or	☐	☐	☒	☐

[18] San Bernardino Countywide Policy Plan Map HZ-5 “Fire Hazard Severity Zones.”

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	iv. impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

SUBSTANTIATION:

San Bernardino Countywide Plan 2020; Submitted Project Materials; Reclamation Plan for Bagdad Chase Mine; CASC Engineering and Consulting, Drainage Report for Bagdad Chase Mine, August 6, 2021

a) *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

e) *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

All operations onsite will comply with a SWPPP to be updated periodically with mine site development and implementation of storm water BMPs. The mine will be cut into bedrock and precipitation falling within the mine will be allowed to flow into the mine and percolate or evaporate during operations. After backfilling the pit, drainages will be re-established to flow through the site to natural drainages down gradient. Mandatory compliance with the Proposed Project's SWPPP would ensure that all potential pollutants of concern are minimized or otherwise appropriately treated prior to being discharged from the Project Site. Therefore, implementation of the Proposed Project would not violate any water quality standards or waste discharge requirements or otherwise degrade surface or ground water quality. Less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

b) *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

The site is outside of the adjudicated Mojave River Groundwater Basin and not within a designated groundwater basin as it is located in a mountainous area between basins. The Broadwell Valley Groundwater Basin is located to its north including the Town of Ludlow and the Bristol Valley Groundwater Basin is located to its east (https://data.cnra.ca.gov/dataset).

Water will be used onsite for dust control by water spraying of roads, operational mine areas, and active overburden stockpiles and within the ore processing. A 4 to

5,000-gallon water truck would be used for dust control and water supply. Water will be obtained from private sources in the Ludlow area (will serve letter from water supplier) which can be augmented by the operator's private well approximately 8 miles to the east, trucked in water from other sources, or a well that could be drilled onsite. A portable construction type water tank will be used onsite as needed.

The estimated water usage is eight to ten truckloads or about 50,000 gallons/day; up to 39 acre-feet per year based on 250 operational days per year. Water used for dust control will evaporate and therefore, the project will not produce any run-off water. The Ludlow wells are located in the Broadwell Groundwater Basin covering 92,100 acres and is designated as "very low" priority basin per the Sustainable Groundwater Management Act (SGMA – CA Dept. of Water Resources). The SGMA website states that there are 18 wells , 4 public supply wells, no groundwater monitoring wells, total groundwater use is less than 2,000 acre-feet/year, a population of 10 with no growth forecast, no irrigated areas. Based on the above information, water use from existing wells in the Ludlow are not expected to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin

The site is within a designated groundwater basin or aquifer as it is located in a mountainous area between basins. If a well is drilled and used onsite, it would not impact any designated groundwater basin.

To reduce water use, the final ore milling will be within enclosed tanks with water recycled and haul roads and the Bagdad Chase Road will be improved with a 6 to 8-inch gravel base produced onsite to reduce dust and erosion. Bagdad Chase will also utilize magnesium chloride or other approved dust suppressant as recommended by the manufacturer.

Less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would**:***

i) Result in substantial erosion or siltation on- or off-site;

Due to the hard bedrock material and low rainfall (less than 4 inches/year) the site has little potential for erosion and sedimentation. Control of surface drainage, erosion, and sedimentation of the operations involves the following primary components:

- Limiting surface disturbance to the minimum area required for active operations;
- Diverting drainages and runoff from flowing into the mine pit and into natural drainages down gradient; and
- Stabilizing disturbed areas through backfilling, regrading, replacement of soils, revegetation, re-establishing drainages, and erosion control practices.

All operations onsite will comply with a SWPPP to be updated periodically with mine site development and implementation of storm water BMPs. The mine will be cut into bedrock and precipitation falling within the mine will be allowed to flow into the mine and percolate or evaporate during operations. After backfilling the pit, drainages will be re-established to flow through the site to natural drainages down gradient. As a result, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff; or

iv) Impede or redirect flood flows?

A *Drainage Report*, dated August 2021, was prepared for the Proposed Project by CASC Engineering and Consulting (report available at County office). Topographically, the Main Pit drainage area ranges from approximately 3,400 feet to 2,330 feet amsl. The Proposed Project's drainage area is mainly comprised of flows from the nearby hills, where natural rills and gullies have captured, concentrated, and conveyed runoff from the hills towards the Project Site.

A western portion of the Project Site is located on what was once gently sloping alluvium traversed by a wash system while the east side is mainly rocky slopes. The site has been historically disturbed by previous mining activities which have realigned the wash channels and diverted storm flows into the dumps and pits of the historical mining area. There are three Drainage Areas (A, E and F), that make up the mine site drainage area, that confluence and eventually discharge at a point to the northeast of the site into the existing natural drainage. The Hydrology Study Map (*Drainage Report*, Appendix D, Exhibit A) shows the drainage areas and flow paths used for the analysis and the proposed diversion channel to divert flows around the north site of the pit and operations area and return said flow back into its natural drainage to the east. A berm will be constructed on the southwest side of the pit to restrict flows from entering the pit.

There is one major Drainage Area (A) within the southern Main Pit drainage area, that currently discharges at a point at the eastern end of the Main Pit disturbance area. Drainage Area B makes up the northern Main Pit drainage area where it discharges north of Drainage Areas A at a point on the northeastern end of the Main Pit disturbance area. Drainage Area E includes the hillside areas to the south and east of the pit. Peak discharge and velocity for the associated drainage areas for the 100-year, 1-hour storm event are shown below in Table 6.

Two trapezoidal drainage channels were sized to carry runoff from the 100-year, 1-hour storm event. Because of expected supercritical velocities in the channels, two feet of freeboard and extra width has been provided for the placement of the rip-rap along the

bottom and sides of the channels up to the Project Site's 100-year water surface elevation.

Table 6
Total Discharge Summary

Drainage Area(s)	Acres	Peak Discharge (cfs)	Velocity (ft/s)
A	406.5	434.9	10.8
A & B	594.7	614.4	14.6

Source: Drainage Report, CASC August 2021.

A safety berm five feet high and 10 feet wide will be constructed around the pits during operations, which will also serve to restrict any run-on from flowing down the quarry slopes. The overburden stockpile slopes will be developed at a slope of 2H:1V and developed in lifts to reduce potential run-off. The tops of the overburden stockpiles will be designed with inward drainage with an up to 5-foot-deep depression to catch precipitation which will percolate and evaporate and avoid runoff down the stockpile slopes or haul roads and potential erosion. Concurrently as feasible and during final reclamation, the overburden stockpiled material will be used to backfill the two pits. The footprint of the stockpiles will be ripped and revegetated.

Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

d) *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Due to the inland distance from the Pacific Ocean and any other significant body of water, tsunamis and seiches are not potential hazards in the vicinity of the Project Site. Additionally, the site is not within a 100-Year Federal Emergency Management Agency (FEMA) flood zone, 100-year Department of Water Resources Awareness Zone, or a 500-year FEMA flood zone.[19] The Proposed Project would not risk release of pollutants due to project inundation. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Therefore, less than significant adverse impacts are anticipated and no mitigation measures are required.

[19] San Bernardino Countywide Policy Plan Map HZ-4 'Flood Hazards"

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XI.	**LAND USE AND PLANNING** - Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

SUBSTANTIATION:

Countywide Plan; Submitted Project Materials; Reclamation Plan for Bagdad Chase Mine

a) Physically divide an established community?

The physical division of an established community is typically associated with construction of a linear feature, such as a major highway or railroad tracks, or removal of a means of access, such as a local road or bridge, which would impair mobility in an existing community or between a community and an outlying area. Bagdad Chase plans on reopening the historic gold mine within the Stedman / Buckeye Mining District. In July 2011, the County approved a Certificate of Land Use Compliance and Conditional. The site is surrounded by vacant, open desert lands. There are no established communities in the vicinity of the Project Site. Therefore, the Proposed Project would not physically divide an established community. No impacts are identified or anticipated, and no mitigation measures are required.

No Impact

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Proposed Project is consistent with the Countywide Plan zoning of Resource Conservation the site holds a County approved Certificate of Land Use Compliance and Conditional Approval to certify legal use of the site (vested right) for mineral resource development. While the recognition of the mine's vested rights allows mineral resource development on-site, a Reclamation Plan must be submitted and approved by the County per its Development Code (Chapter 88.03) and SMARA, which is the subject of this CEQA document. Therefore, the Proposed Project would not cause a significant environmental impact due to conflict with any land use plans or policies. No impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XII.	**MINERAL RESOURCES** - Would the project:				
a)	Result in the loss of availability of a known mineral resource that will 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):*

Countywide Plan; Submitted Project Materials;

a) *Result in the loss of availability of a known mineral resource that will 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?*

In July 2011, the County approved a Certificate of Land Use Compliance and Conditional Approval to certify legal use of the site (vested right) for mineral resource development. This vested right is consistent with the vested right definition in the SMARA. In addition, along with its long history of mining and mineral exploration, the County approved a Reclamation Plan (84M-022) for the mine in June 1984 demonstrating recognition of the surface and underground mineral resource development activities as an existing vested right. While the recognition of the mine's vested rights allows mineral resource development onsite, a Reclamation Plan must be submitted and approved by the County per its Development Code (Chapter 88.03) and SMARA. The proposed mining and exploration activities will consist of approximately 244 acres within 511.75 acres of private lands.

Bagdad Chase plans on excavating the former mining area defined as the Main Pit (47 acres) to extract precious metal ore. The run-of-mill ore will be graded and separated onsite, then transported to an off-site processing facility. The proposed Reclamation Plan was prepared with the following objectives:

- To reopen a historic and vested precious ore mine to produce gold and other precious metals that can be economically processed with current processing methods;
- To develop the precious metal resource in compliance with the State's and County's SMARA requirements;
- To utilize overburden to produce secondary products including construction aggregate and decorative rock;

Therefore, the Proposed Project would not result in the loss of availability of mineral resources; rather, it would provide a mineral resource that would be of value to the region and the residents of the State. No impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XIII.	**NOISE** - Would the project result in:				
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	For a project located within the vicinity of a private airstrip or 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?	☐	☐	☐	☒

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

Countywide Plan; Submitted Project Materials; Reclamation Plan for Bagdad Chase Mine

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Approval of the Proposed Project would require operational and reclamation activities to conform to all applicable noise control regulations. Noise will be produced from the on-site equipment and trucks. There are no nearby noise sensitive receptors or land uses within the vicinity of the Project Site. Therefore, less than significant impacts are identified or are anticipated, and no mitigation measures are required.

Less Than Significant Impact

b) *Generation of excessive groundborne vibration or groundborne noise levels?*

Blasting operations involve drilling along the mining face, placement of charges, and detonation of the charges by a blaster licensed through the Bureau of Alcohol, Tobacco, Firearms, and Explosives (BATF&E) for handling explosive materials. Blasting shall only be conducted by a licensed blaster under the Office of Surface Mining (OSM) Blasting Performance standards (30 CFR Section 816.61-68). Prior to blasting activities, employees working in the area will be notified, and a visual search of the area is done prior to blasts to verify that no one is present in the area. Standard horn signals are used to notify personnel before and after blasts (all clear). A blast design is required if conducted within 1,000 feet of any building used as a dwelling, public building, school, church, or community or institutional building outside the permit area and pre-blasting surveys are required for all residents or owners of dwellings or other structures located within 1/2 mile of the permit area (30 CFR Section 816.61-62). No such dwellings or residents exist within these distances to blasting operations. Blasting activities will take place between the hours of 10:00 a.m. and 4:00 p.m. on weekdays (Monday through Friday). No blasting shall be allowed after dark. Therefore, less than significant impacts from excessive groundborne vibration or groundborne noise levels would result.

Less Than Significant Impact

c) *For a project located within the vicinity of a private airstrip or 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?*

The Project Site is not located within an Airport Runway Protection Zone, Airport Noise Contours or an Airport Safety Review Area.[20] However, the Project Site is located within the low-altitude/high speed military airspace (Airport Safety Review Area 4 [AR4]). An Avigation Easement shall be granted to the appropriate military agency and recorded before the issuance of a building permit for those uses established within an AR4.[21] No impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Therefore, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XIV. POPULATION AND HOUSING - Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for	☐	☐	☐	☒

[20] San Bernardino Countywide Policy Plan Map HZ-9 "Airport Safety & Planning Areas"
[21] San Bernardino County. Development Standards. Chapter 82.09 "Airport Safety (AR) Overlay." https://codelibrary.amlegal.com/codes/sanbernardino/latest/sanberncty_ca/0-0-0-70651#JD_82.09.060

	example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION:

Countywide Plan; Submitted Project Material; Reclamation Plan for Bagdad Chase Mine

a) *Induce substantial unplanned 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)?*

Approximately 15 employees are expected to work on-site. Because of the low employment demand, the Proposed Project would not induce substantial unplanned population growth by creating new jobs. No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

No Impact

b) *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The proposed uses would not displace substantial numbers of existing housing units, or require the construction of replacement housing, as no housing units are proposed to be demolished. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XV.	**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:

Countywide Plan; Submitted Project Materials; Reclamation Plan for Bagdad Chase Mine

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?

The Project Site is located within a Federal Responsibility Area.[22] The federal government is responsible for providing fire protection for most nonurban areas in the County. The Project Site is not located within a High or Very High Fire Hazard Severity Zone.[23] Therefore, the Proposed Project is not anticipated to result in the need for new or physically altered fire protection facilities. Less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

Police Protection?

The Project Site is located within the North Desert Region of the County. It is within the jurisdiction of the Barstow Sheriff Service Agency. Given the rural nature of the Project Site and that the operations that would occur on-site are not crime-inducing, the

[22] San Bernardino Countywide Plan Draft EIR: Public Services. Figure 5.14-2 “Fire Responsibility Areas.”

[23] San Bernardino County. Policy Plan web maps. HZ-5 “Fire Hazard Severity Zones.” Accessed March 3, 2021.

Proposed Project is not anticipated to require police protection. Therefore, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

Schools?

The Proposed Project would not create a direct demand for public school services as it does not include any type of residential use or other land use that may induce substantial population growth. As such, the development would not generate any new school-aged children requiring public education. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Parks?

The Proposed Project would not induce residential development nor significantly increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of any facilities would result. Operation of the Proposed Project would place no demands on parks because it would not involve the construction of housing and would not involve the introduction of a permanent human population into the area. Moreover, there are no parks near the Project Site that would be impacted by implementation of the Proposed Project. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Other Public Facilities?

The Proposed Project would not result in a substantial increase in residential population. Implementation of the Proposed Project would not adversely affect other public facilities or require the construction of new or modified facilities. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Therefore, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVI.	**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 will 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:

Submitted Project Materials; Reclamation Plan for Bagdad Chase Mine

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 will occur or be accelerated?*

Approximately 15 employees would work on-site. The Proposed Project does not include development of residential housing or other uses that would lead to substantial population growth. Moreover, there are no neighborhood or regional parks near the Project Site. Therefore, the Proposed Project would not result in an increase in the use of existing neighborhood or regional parks, or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. No impacts are identified or anticipated, and no mitigation measures are required.

No Impact

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?*

The Proposed Project does not include the construction or expansion of recreational facilities. No recreational facilities would be removed, and the addition of employees would not create the need for additional facilities. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

No Impact

Therefore, no adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVII.	**TRANSPORTATION** – Would the project:				
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d)	Result in inadequate emergency access?	☐	☐	☒	☐

SUBSTANTIATION:

Countywide Plan; Submitted Project Materials; Reclamation Plan for Bagdad Chase Mine

a) *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

There are no existing or planned transit, bicycle and pedestrian facilities in the vicinity of the Project Site.[24] The nearest planned facility is a Class III bicycle path approximately six miles north of the Project Site (along the National Trails Highway). Bagdad Chase Road would be utilized for access into the Project Site It is proposed to be graded and improved with an 8-inch gravel base. However, improvements to Bagdad Chase Road are not anticipated to interfere with development of the planned Class III bicycle path. There are no proposed bus routes for the area of the Project Site.[25]

The following details how the Proposed Project would be consistent with the applicable Countywide Plan goals and policies:

Goal TM-2: Roads designed and built to standards in the unincorporated areas that reflect the rural, suburban, and urban context as well as the regional (valley, mountain, and desert) context.

[24] San Bernardino County. Policy Plan web maps. TM-5 "Bicycle and Pedestrian Planning." Accessed March 3, 2021."
[25] San Bernardino County. Policy Plan web maps. TM-5 "Bicycle and Pedestrian Planning." Accessed March 3, 2021."

Policy TM-2.2: We promote new development that will reduce household and employment Vehicle Miles Travelled (VMT) relative to existing conditions.

Consistent: The Proposed Project would require approximately 15 employees on-site that would most likely come from nearby towns. Although it would not reduce VMT, any increase in VMT would be insignificant given the low employment demand.

Goal TM-5: A road, rail, and air transportation system that supports the logistics industry and minimizes congestion in unincorporated areas.

Policy TM-5.5: We support San Bernardino County Transportation Authority's establishment of regional truck routes that efficiently distribute regional truck traffic while minimizing impacts on residents. We support funding through the Regional Transportation Plan to build adequate truck route infrastructure.

Consistent: The project will utilize one 25-ton flatbed truck to haul concentrated ore from the mine site to an off-site refinery and up to ten water trucks at full operations. In addition, if an out-side contractor wants to utilize on-site aggregate depending on the market for construction aggregate, transportation plans would need to be determined by the contractor.

The daily truck trip and employees would utilize the existing Bagdad Chase Road to an east-west access road south of the rail lines, and then utilize one of two rail line underpasses, If trucks are too large, they would travel 2.25 miles east to National Trails Highway, would access I-40 at the Ludlow intersection 2.5 miles west and utilize the I-40 for transportation of materials to customers. The I-40 is a designated truck route.[26]

Policy TM-5.6: We may establish local truck routes in unincorporated areas to efficiently funnel truck traffic to freeways while minimizing impacts on residents. We establish routes where trucks are prohibited in unincorporated environmental justice focus areas and to avoid overlaps or conflicts with safe routes to schools.

Consistent: The flatbed truck would transport the concentrated ore to an off-site refinery seven miles north on the existing Bagdad Chase Road through a rail line underpass and then on National Trails Highway and I-40. The Project Site is located in a remote area, with the nearest and only residence located seven miles north of the Project Site and approximately 0.2 mile south of the I-40. The Project Site is not located in or near an environmental justice focus area.[27]

Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

[26] San Bernardino County Policy Plan web maps. TM-5 Goods Movement Network. Accessed August 31, 2021.
[27] San Bernardino County Policy Plan web maps. HZ-10 Environmental Justice & Legacy Communities. Accessed August 31, 2021.

b) *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?*

Senate Bill 743 (SB 743) approved in 2013, endeavors to change the way transportation impacts will be determined according to CEQA. In December 2018, the Natural Resources Agency finalized updates to CEQA Guidelines to incorporate SB 743 (i.e., Vehicle Miles Traveled [VMT]).

Reclamation activities would not result in additional truck trips beyond approved mining activities. The Proposed Project would require approximately 15 employees on-site that would most likely come from nearby towns. Although it would not reduce VMT, any increase in VMT would be less than significant given the low employment demand and rural setting. Mining operations would take place on-site and on Bagdad Chase Road. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

On-site haul roads and the existing Bagdad Chase Road will be improved with an 8-inch gravel base produced on-site to reduce dust and erosion. Mine areas will have warning signs every 500 feet, dirt roads not used will be blocked or closed where the public could access. Any unauthorized roads will be blocked or closed permanently at the property boundary. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

d) *Result in inadequate emergency access?*

The site is accessed from Ludlow, I-40, and the National Trails Highway via the unpaved Bagdad Chase Road utilized to access the area's mines and former small mining towns since the early 1900s. The 2011 County Certificate of Land Use Compliance certified the "legal use of the properties and may support a protective measure for existing access routes by giving priority of use over other proposed future lands uses in the immediate area."

Haul roads and Bagdad Chase Road will be improved with an 8-inch gravel base. Haul roads onsite will maintain a maximum width of 60 feet at its widest point. The Bagdad Chase Road will be maintained at its existing widths which vary. All vehicles and stationary equipment would be staged off public roads and would not block evacuation routes, including the I-40.[28] Therefore, the Proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Less than significant impacts are identified or anticipated, and no mitigation measures are required.

[28] San Bernardino County Policy Plan web maps. PP-2 Evacuation Routes. https://www.arcgis.com/apps/webappviewer/index.html?id=f54aff8f279449b8a6591ed4a8b1198c

Less Than Significant Impact

Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVIII. TRIBAL CULTURAL RESOURCES				
a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

SUBSTANTIATION:

Class III Cultural Resources Inventory, BCR Consulting LLC, Cultural Resources Assessment, July 20, 2021; AB52 Consultation

California Assembly Bill (AB-52) related to Tribal Cultural Resources (TCRs), requires the Lead Agency to notify California Native American tribes to conduct consultation for all projects. On January 3, 2022, the County of San Bernardino mailed notification pursuant to Assembly Bill 52 (AB-52) to the following Tribes:

- Colorado River Indian Tribes
- Twenty-Nine Palms Band of Mission Indians
- Fort Mojave Indian Tribe
- Morongo Band of Mission Indians
- Soboba Band of Luiseno Indians
- Gabrieleńo Band of Mission Indians - Tongva Nation and
- San Manuel Band of Mission Indians.

Requests for consultations were due to the County by or around February 7, 2022. The County received comment from the San Manuel Band of Mission Indians Tribes via email dated January 7, 2022, which included preferred mitigation measures for the Cultural Resources (Section V) and the Tribal Cultural Resources (Section XVIII). The preferred mitigation measures are incorporated in Mitigation Measures CR-1, 2, and 3 and in TCR-1 and 2 below.

a) *i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)**;***

A Cultural Resources Assessment, dated July 21, 2021, was prepared for the Proposed Project by BCR Consulting LLC (report available at County office). The assessment was completed pursuant to CEQA, the Public Resources Code (PRC) Chapter 2.6, Section 21083.2, and California Code of Regulations (CCR) Title 14, Chapter 3, Article 5, Section 15064.5. The pedestrian cultural resources survey was intended to locate and document previously recorded or new cultural resources, including archaeological sites, features, isolates, and historic-period buildings, that exceed 45 years in age within defined project boundaries. The entire area is highly disturbed by clearing associated with modern mining activities and no evidence of historic-era use was identified at the claim area plotted in SCCIC maps. The surrounding area contains numerous mine shafts and sinkholes many of which may be historic in age but specific association with the original Bagdad Chase Mine would be speculative.

Per the report's findings as included under Section V, Cultural Resources above, one previously recorded and one newly identified historic sites were identified. The sites are recommended not eligible under criteria for listing on the California Register, and as such is not recommended a historical resource under CEQA. listing on the California Register. It is therefore not recommended a historical resource under CEQA. However, the possibility of discovering an unanticipated find remains and Mitigation Measures CR-1 and 2 in Section V and TCR-1 and 2, defined below, shall be implemented to ensure that less than significant impacts to historical and/or archaeological resources occur.

Mitigation Measure TCR-1:

The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed in CR-1, of any pre-contact and/or historic-era cultural resources discovered during project implementation and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site.

Mitigation Measure TCR-2:

Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to SMBMI. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI throughout the life of the project.

Less than Significant with Mitigation

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

No Tribal Cultural Resources (TCRs) were identified within the project area during AB-52 consultation or by the cultural resources field survey. Findings were negative during the Sacred Lands File search with the Native American Heritage Commission (NAHC). The Proposed Project would not result in significant impacts to known TCRs and Mitigation Measures CR-1, 2 and 3 and TCR-1 and 2 shall be implemented to ensure that less than significant impacts to TCRs and to human remains occur.

With implementation of mitigation measures, the Proposed Project would not have a significant impact on TCRs or on human remains.

Less than Significant with Mitigation

Therefore, less than significant impacts are anticipated with implementation of the applicable mitigation measures.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XIX.	**UTILITIES AND SERVICE SYSTEMS -** Would the project:				
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b)	Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
c)	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?	☐	☐	☐	☒
d)	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

SUBSTANTIATION:

Countywide Plan; Submitted Project Materials; California Energy Commission Energy Report; Reclamation Plan for Bagdad Chase Mine

a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

The proposed project is located in an isolated desert area with no public utilities or services. As such, the Proposed project will not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Water will be used for dust control measures and within the enclosed ball mill and concentrator. Water for dust control will be obtained from private sources in the Ludlow area (will serve letter from water supplier) which can be augmented by the operator's private well approximately 8 miles to the east, trucked in water from other sources, or a well that could be drilled onsite if needed.

Portable toilets will be supplied for use by employees and will be located onsite at the operations area. The Proposed Project would not require sewer collection or treatment services and therefore no off-site discharge of treated wastewater would occur.

Proposed drainage channels are planned to be constructed by the operator and are sized to carry runoff from the 100-year, 1-hour storm event. The proposed diversion channel would divert and adequately carry flows to the north around the pit and return

into its natural drainage course to the northeast. Therefore, the Proposed Project would not require the relocation or construction of new storm water drainage facilities.

Most equipment will run on diesel fuel and electricity. Power will be produced by diesel fueled generators. The Proposed Project would not require natural gas. Mobile phones would be used for telecommunication. Therefore, the Proposed Project would not require the relocation or construction of electric power, natural gas, or telecommunications facilities.

Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

b) *Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?*

The site is outside of the adjudicated Mojave River Groundwater Basin and is not within a designated groundwater basin as it is located in a mountainous area between basins. The Broadwell Valley Groundwater Basin is located to its north including the Town of Ludlow and the Bristol Valley Groundwater Basin is located to its east (https://data.cnra.ca.gov/dataset).

Water will be used onsite for dust control by water spraying of roads, operational mine areas, and active overburden stockpiles and within the ore processing. A 4 to 5,000-gallon water truck would be used for dust control and water supply. Water will be obtained from private sources in the Ludlow area (will serve letter from water supplier) which can be augmented by the operator's private well approximately 8 miles to the east, trucked in water from other sources, or a well that could be drilled onsite. A portable construction type water tank will be used onsite as needed.

The estimated water usage is eight to ten truckloads or about 50,000 gallons/day; up to 39 acre-feet per year based on 250 operational days per year. Water used for dust control will evaporate and therefore, the project will not produce any run-off water. The Ludlow wells are located in the Broadwell Groundwater Basin covering 92,100 acres and is designated as "very low" priority basin per the Sustainable Groundwater Management Act (SGMA – CA Dept. of Water Resources). The SGMA website states that there are 18 wells , 4 public supply wells, no groundwater monitoring wells, total groundwater use is less than 2,000 acre-feet/year, a population of 10 with no growth forecast, no irrigated areas. Based on the above information, water use from existing wells in the Ludlow area are expected to have sufficient water supplies and for the reasonably foreseeable future.

The site is not within a designated groundwater basin or aquifer as it is located in a mountainous area between basins. If a well is drilled and used onsite, it would not impact any designated groundwater basin.

To reduce water use, the final ore milling will be within enclosed tanks with water recycled and haul roads and the Bagdad Chase Road will be improved with a 6 to 8-inch

gravel base produced onsite to reduce dust and erosion. Bagdad Chase will also utilize magnesium chloride or other approved dust suppressant as recommended by the manufacturer.

These water supplies are anticipated to sufficiently serve the Proposed Project. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

c) *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?*

All human waste is removed via a professional porta-john service. The Proposed Project would not require sewer collection or treatment services and therefore no off-site discharge of treated wastewater would occur. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

d) *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

e) *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

All refuse shall be disposed of in approved trash bins and removed by the County or a commercial vendor as necessary. Monitoring will include both site monitoring to assess control, trash dumping and other forms of human disturbances. Site monitoring of human use (access, trash dumping and off-road vehicle use) includes monthly inspection by Bagdad Chase personnel to check access control and signs and to schedule removal of illegal dumping. As such, less no impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

Therefore, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XX.	**WILDFIRE:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

SUBSTANTIATION:

County of San Bernardino Countywide Plan; Submitted Project Materials; Reclamation Plan for Bagdad Chase Mine

a) *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

The Project Site is approximately seven miles south of I-40, which is an evacuation route.[29] Haul roads and Bagdad Chase Road will be improved with an 8-inch gravel base. Haul roads will maintain the current maximum width of 60 feet at its widest point. All vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Therefore, the Proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Less than significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

Less Than Significant Impact

[29] San Bernardino County Policy Plan web maps. PP-2 Evacuation Routes. https://www.arcgis.com/apps/webappviewer/index.html?id=f54aff8f279449b8a6591ed4a8b1198c

b) *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from wildfire or the uncontrolled spread of a wildfire?*

The Project Site is not located within a High or Very High Fire Hazard Severity Zone.[30] Therefore, risks associated with exposing project employees to pollutant concentrations from wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors, exacerbate wildfire risks is unlikely. Furthermore, the Proposed Project does not include construction of habitable structures. Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

c) *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

The Proposed Project will not require the construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, the Proposed Project is not anticipated to require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary ongoing impacts to the environment. No impacts are identified or are anticipated, and no mitigation measures are required.

No Impact

d) *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The Project Site is not located within a High or Very High Fire Hazard Severity Zone.[31] Additionally, the site is not within a 100-Year Federal Emergency Management Agency (FEMA) flood zone, 100-year Department of Water Resources Awareness Zone, or a 500-year FEMA flood zone.[32] The Project Site is neither located in an area with mapped, existing landslides nor is it located in an area susceptible to landslides.[33] Therefore, less than significant impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

Therefore, less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

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[30] San Bernardino County. Policy Plan web maps. HZ-5 “Fire Hazard Severity Zones.” Accessed March 3, 2021.

[31] San Bernardino County. Policy Plan web maps. HZ-5 “Fire Hazard Severity Zones.” Accessed March 3, 2021.

[32] San Bernardino County. Policy Plan web maps. HZ-4 ‘Flood Hazards” web map. Accessed March 3, 2021.

[33] San Bernardino County. Policy Plan web maps. HZ-2 “Liquefaction and Landslide Hazards.” Accessed March 3, 2021.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XXI.	**MANDATORY FINDINGS OF SIGNIFICANCE:**				
a)	Does the project have the potential to substantially 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, substantially 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 would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) *Does the project have the potential to substantially 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, substantially 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?*

The results of the Initial Study show that there are potentially significant impacts to Biological and Cultural / Paleontological Resources, including jurisdictional waters of the State. Potential biological impacts to nesting birds, desert tortoise, and jurisdictional streambeds will be reduced to less than significant levels after incorporation of mitigation measures BIO-1 through BIO-3 and compliance with existing rules and regulations. Therefore, the Proposed Project will not substantially degrade the quality of the environment and impacts to habitat, wildlife populations, plant and animal communities, rare and endangered species, jurisdictional waters of the State; no additional mitigation is warranted. The County contacted local Native American Tribal representatives and the San Manuel Band of Mission Indians requested that preferred mitigation measures

by included. The preferred mitigation measures are incorporated in Mitigation Measures CR-1, 2, and 3 and TCR-1 and 2 and are included in Sections V and XVIII. Potentially significant impacts are identified or anticipated, and mitigation measures are required to reduce impacts to less than significant.

No significant cultural resources were identified. However, in case of unanticipated finds, mitigation measures listed above shall be implemented to ensure no adverse impacts to cultural resources occur.

Less than Significant with Mitigation

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)?*

Cumulative impacts are defined as two or more individual affects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The CEQA Guidelines, Section 15130 (a) and (b), states:

(a) Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

The County has approved a Certificate of Land Use Compliance and Conditional Approval to certify legal use of the site (vested right) for mineral resource development. This vested right is consistent with the vested right definition in the SMARA. In addition, along with its long history of mining and mineral exploration, the County approved a Reclamation Plan (84M-022) for the mine in June 1984 demonstrating recognition of the surface and underground mineral resource development activities as an existing vested right. The reclamation of the site at the completion of mining will be a beneficial activity to restore the site to an open space land use.

Air and greenhouse gas emissions resulting from the Proposed Project would not exceed County thresholds and potential biological and cultural impacts have been mitigated. Development of the Proposed Project will be conditioned to comply with current MDAQMD rules and regulations to minimize impacts to air quality. Therefore, impacts are not cumulatively considerable.

Cumulative impacts identified in this Initial Study are anticipated to be less than significant. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

Less than Significant with Mitigation

c) *Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?*

All potential impacts have been thoroughly evaluated and have been deemed to be neither individually significant nor cumulatively considerable with mitigation in terms of any adverse effects upon the region, the local community, or its inhabitants. The proposed project will be required to meet the conditions of approval, rules and regulations, and mitigation measures for the project to be implemented. It is anticipated that all such conditions of approval, rules and regulations, and mitigation measures will further ensure that no potential for significant adverse impacts will be introduced by planned mining and reclamation activities as allowed by the project approval. Less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Less Than Significant Impact

Therefore, potentially significant impacts are identified or anticipated, and mitigation measures are required to reduce impacts to less than significant.

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