

CACA 40779
CAMC 52684
3809 (CA-068.27)
CA-068-9-52
1791 (CA-068)

INTRODUCTION

The site, 3 miles west of Barstow and south of Interstate Highway 15, has been mined for landscaping rock since the mid 1950's. In September 2008, the Barstow Field Office (BFO) received a modified plan of operations from Janet Auxier of THE ROCK YARD – TRI, INC. for mining “gold” colored landscaping rock for the remaining years left on the previously submitted plan of operations from Adolf Han of ANLEX Rock and Minerals, Inc.

On February 18, 1999 the Barstow Field Office (BFO) received an incomplete plan of operations from Adolf Han of ANLEX Rock and Minerals, Inc. for mining “gold” colored landscaping rock for 20 years on the Haney Brown Rock placer claim. The east part of the quarry overlaps onto the Haney Brown #2 mining claim. Mining at the site was previously authorized under Notice CACA 31427 approved on February 26, 1993 as a temporary (6 month) operation until a longer term notice or plan could be submitted and authorized.

On November 3, 1994, the BFO received a plan of operations serialized as CACA 35521 from Cortland Hooper of Calico Rock Products for mining 5,000 tons per year. The draft environmental assessment (EA) was not completed due to 1) a question about noncompliance issues regarding dust control at the mill site which is on private land and 2) default of the operator with the mining claim owner, Sanwa Bank. Calico Rock Products ceased to exist sometime in 1997.

On August 22, 1995, the BFO received a copy of a letter from the Mojave Desert Air Quality Management District (MDAQMD) stating that the milling facility no longer has a valid MDAQMD permit to operate, and has been operating without valid permits since November 18, 1994. The letter also stated that mining operations have the potential to generate significant adverse environmental impacts due to dust generation, made recommendations for fugitive dust control measures and a Dust Control Plan to ensure compliance with District Rule 403.

Prior to 1993, Calico Rock Products strayed beyond the west boundary of the claim and conducted mining operations in an unauthorized area. In 1993 BLM attempted to resolve the trespass issue by requesting the operator to submit an application for purchase of the rock removed. Because a material sale application was never submitted, reclamation of that area will be addressed in this document.

During the biological assessment for the Notice in 1993, evidence for desert tortoise habitat was inconclusive. Although small burrows were found, none were distinctive enough to draw conclusions. In 1994 diagnostic evidence of tortoise burrows and habitat were found in the vicinity of Haney Brown rock quarries (see photo of Exhibit L). In 2008, evidence of tortoise burrows and habitat were found in the vicinity of Haney Brown Rock quarries (see Exhibit C-1).

THE ROCK YARD – TRI, INC. had a biological assessment and desert tortoise survey completed on November 10, 2008 which found tortoise signs inside the project area. It was recommended that the site be entirely enclosed in tortoise exclusion fencing, rather than improving or extending the berms.

A clearance survey was performed on December 4, 2008 which included an entire site survey and the proposed alternative access from the west along the existing road (Exhibit C-2). Based upon the formal clearance survey, it was concluded that no tortoises were currently found within the 7.0 acre+/- reclamation area that was surveyed on December 4, 2008.

Data collection and windshield survey of the proposed alternative access road revealed that the existing road is a slightly winding 18-to-20 foot wide unimproved route, approximately 1.8 miles long from the pit gate to Soap Mine Road. No tortoise burrows were observed with 20 feet of the road. Likely occupied

caliche caves are common in adjacent washes, though again, not in the immediate vicinity of the road. This quick assessment reveals that tortoise habitat occurs along both sides of the access road, that tortoises very likely cross the road during their activity period, but that none has at this time excavated burrows within approximately 20 feet of the road.

On March 28, 1999 the field representative for ANLEX pointed out flagging for the proposed expansion area. On June 1, 1999, the BFO received from ANLEX a copy of the Reclamation Plan and financial assurance cost estimate that were submitted to the San Bernardino County Planning Department. The Reclamation Plan is considered by BLM to be a modification to and part of the plan of operations under 43 CFR 3809. The plan of operations became complete on June 3, 1999 with receipt of the information that expansion beyond the existing tortoise barrier would occur in about 3 years.

In September 2008, THE ROCK YARD – TRI, INC. submitted to BFO a copy of the modified Reclamation Plan and financial assurance cost estimate that were submitted to the San Bernardino County Planning Department. An amendment to the reclamation plan was submitted for usage of the alternative access road off of Soap Mine Road.

Need for the Proposed Action:

The applicant is one of two major producers supplying landscaping rock for a market spread over Southern California and including parts of Arizona and Nevada. Demand fluctuates along with economic conditions. The subject site is valued because of its abundance of gold to gold-brown rock (volcanic felsite and some limestone) and proximity to I-15. The name “California Gold” and “Bark Brown” are used for the same rock depending on what the customer asks for.

The subject site represents one out of a dozen different colors of stone sold by the producers. An average of 18,500 tons per year of the subject “California Gold” and “Bark Brown” stone were sold by Calico Rock Products. During high demand periods, the quantity exceeds 20,000 tons per year. Over the years, customers have built up a reliance and expectation of being able to obtain rock of specific colors from the local producers. Landscaping rock offers a viable substitute for lawns in an area where the cost of water can be expected to increase.

Consistent with Section 2 of the Mining and Mineral Policy Act of 1970 and section 102(a), (8), and (12) of the Federal Land Policy and Management Act, it is the policy of the Department of Interior to encourage the development of Federal mineral resources and reclamation of disturbed lands. Under the mining laws a person has a statutory right, consistent with Department regulations, to go upon the open (unappropriated and unreserved) Federal lands for the purpose of mineral prospecting, exploration, development, extraction and other use reasonably incident there to.

Location and Status of Affected Land:

The site is located 3 miles west of Barstow and south of Interstate Highway 15 in T.9 N., R.1 W.(SBM), Section 2, Lot 1 (NE 1/4) (see Exhibits A through C).

After on-site screening, and possibly some crushing, the excavated rock would be further processed at the nearby mill site previously owned by ANLEX in the Lane Mountain area, now owned by THE ROCK YARD – INC.

The Master Title Plat, dated December 5, 1997, shows the surface and all subsurface minerals are owned by the United States, Department of Interior. This placer claim was located prior to 1953.

The Act of October 21, 1976, designates the land as within the California Desert Conservation Area (CDCA).

Adjoining Land Uses:

Mining is the chief use of the site and surrounding land. More recently, the area has been recognized for its wildlife potential with the confirmation of the presence of the desert tortoise.

Conformance With Land Use Plan:

The proposed action is subject to the 1980 California Desert Conservation Area (CDCA) Plan. This plan has been reviewed to determine if the proposed action conforms with the land use plan terms and conditions as required by 43 CFR 16105.

The subject site is within a Multiple Use Class U (unclassified) area of the CDCA which designates the area as suitable for disposal. This classification allows for a variety of uses. The proposed site is not within an ACEC, WSA., or designated Wilderness. There are no grazing allotments near the application area.

Under CDCA Plan guidelines for locatable minerals, “Locations of mining claims is nondiscretionary.” “Operations on mining claims are subject to the 43CFR 3809 Regulations and applicable State and local law.” “In most instances, plans of operation shall be required and treated as specified in the above regulation.” The disturbed area, current and proposed, amounts to about 13 acres as can be seen by the sketch map of Exhibit C and Mine Plan of Exhibit E. Therefore, the operator is subject to a plan of operations (43 CFR 3809.1-4).

Relationship to Statutes, Regulations or Other Plans:

The General Mining Law of 1872 gives the claimant the right to pursue a mining operation on Federally managed land as long as it does not cause unnecessary or undue degradation of Federal lands (43 CFR 3809.0-6), or impairment of wilderness values (43 CFT 3802.0-6).

The proposed sites are within an area zoned as RC (rural conservation) in the San Bernardino County General Plan. The primary emphasis in the RC category is on the protection and preservation of natural resources.

In accordance with the state Surface Mining and Reclamation Act (SMARA), a Reclamation Plan is required of all mining operations conducted after December 31, 1975, unless specifically exempted by the exclusions in Section 2714B, or the exemptions in Section 3506. Because the proposal would produce 25,000 tons (16,500 cubic yards) per year, it does not qualify for exemption. Under SMARA, mining operations producing in excess of 1,000 cubic yards are subject to a Reclamation Plan.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Alternative A: Proposed Action:

Janet Auxier of THE ROCK YARD – TRI, INC. filed an amendment to the original mining plan filed by Adolf Han of ANLEX Rock and Minerals, Inc with the BLM that outlines his proposal to continue quarry excavation of mineral deposits of “gold” decorative stone from the existing quarry on the Haney Brown #1 and Haney Brown #2 mining claims. In addition, he proposed to expand by 3 to 4 acres onto undisturbed land to the south (see maps of Exhibits B, C & E. The term would be for 20 years. When the plan of operations expires, the operator may apply for a plan modification subject to environmental review.

An established dirt road accesses the site and a motor grader is proposed for road maintenance. Public access would be limited by locked gates where the access road enters the site. THE ROCK YARD – TRI, INC. is proposing an alternative access off of Soap Mine Road located west of the quarry. (Exhibit B-1 & B-2). The proposed production rate stated in the Reclamation Plan is 25,000 tons per year. It will be extracted by drilling and blasting hard rock drill holes averaging 24 feet in depth and 12 foot spacing. Approximately 100 holes would be blasted at a time. A portable compressor and track drill is used. Once blasted, the rock is pushed together in a load-out pile by a large bulldozer. A 6 yard bucket, wheel front-end loader transfers the stockpiled material to the portable, self powered crushing/screening plant anticipated to be on site for a week at a time. The coarse material would be trucked to the mill on private land. The material passing through the screen, estimated to be about 10 percent or 2,500 tons per year, would be stockpiled at the east end of the site as soil for reclamation. Dust control would be provided by the operator’s water truck brought on site for each blast/load-out cycle. Stockpiles of lighter material susceptible to wind erosion would be shaped, contoured and wetted as necessary. All stockpiles on site

would have slope angles of 2:1 (H:V) and contour graded to blend in with the surrounding topography to the extent possible and prevent water erosion.

No new surface disturbance is anticipated under this plan of operations during the first 3 years as mining operations would be confined to the area previously disturbed over the last 40 years. The site is confined within a tortoise fence and barrier completed originally in March 1996. In December 2008 the tortoise fence was expanded to include the entire quarry area (Exhibit C-1). When expansion occurs to the south, overburden/topsoil removal involves use of a bulldozer to remove up to one foot of weathered rock and alluvium from the ground surface. It is anticipated that up to 5 acres would be fenced and surveyed for the tortoise and that about 2/3 acres would be mined per year. When the fenced area has been mined, another phase would be surveyed and fenced off for future mining.

Operations are anticipated to be continuous throughout the year. The operation may require as many as 9 truckloads per day operating 21 days per month, but probably averaging 14 days per month. The anticipated average number of round trip truck hauls per month is 80. Operations would be during daylight hours. The final bench design is a 24 foot face and 12 foot wide bench with a final pit slope angle of 1 ½:1 (H:V). The existing quarry consists of a quarry floor and three partially mined benches. Exhibit E shows the current configuration of the quarry area. There would be no open trenches on the site.

Reclamation Plan (Proposed by the Operator):

As provided by BLM Manual 3042.1 A, Reclamation plans shall be an integral part of plans that propose surface disturbance. Requirements are met by the Reclamation Plan submitted to San Bernardino County on June 1, 1999. Reclamation proposed by the operator:

Reclamation of the site would be undertaken concurrently with the mining operation. As portions of the mined area are depleted and no longer mined, they would be recontoured and covered with a soil growth medium. Final reclamation would occur within 4 years of the end of mining activities.

As mining progresses, the final rock quarry wall would be left with 24-foot-high and 12-foot-wide benches with slopes of 1 ½:1 (H:V). The benches would be cut to slope toward the back wall at a 2 percent grade. The ends of the benches would be contoured to blend into the natural topography and secured from public access. The bottom bench at the pit floor would be back-filled with mine waste to 2:1 (H:V) slope. And would be part of the revegetation program. Preparation of each phased mining area for reclamation would occur annually and generally during the months of October through January, when the tortoise is relatively inactive. The general steps to be taken are:

1. Slopes would be stabilized and drainage courses maintained. Benches would be cleared of large rocks and blasted or modified as necessary to conform to Federal or State standards.
2. Contaminants, such as spilled diesel or crankcase oil, would be removed and disposed of at an authorized waste facility.
3. Any equipment, the tortoise fence and all trash would be removed or relocated from the site. The portion of the tortoise barrier consisting of rocks and boulders would be spread out.
4. Compacted areas would be scarified by ripping; this included mined areas and access roads.
5. Stockpile fines and weathered rock would be spread out on benches and quarry floor as a growth medium. It is anticipated that three would be sufficient medium to spread a 2-inch-thick even layer on the benches and floor.

The following was the time table for reclamation proposed by ANLEX Rock and Minerals, Inc.:

<u>TIME</u>	<u>TASK DESCRIPTION</u>
1999 – 2000	Reclaim the area (1.2 acres +/-) of unauthorized disturbance and rock removal bordering and just west of the site. This would consist of pulling in the road berm, pushing piles onto disturbed areas and scarifying per BLM standards.
2000 – 2019	Continue grading and finalize benches as possible as each phased tortoise barrier is moved.
2019	Finalize revegetation activities.
2019	Commence final monitoring.
2023	Complete monitoring.

The following is the updated timetable for reclamation proposed by THE ROCK YARD – TRI, INC.

<u>TIME</u>	<u>TASK DESCRIPTION</u>
2008 - 2009	Reclaim dozer access trails that are outside of the proposed disturbance area.
2009 - 2021	Continue grading and finalize benches as each phased tortoise barrier is moved. Continuous reclamation as each acre portion of the mined area is depleted and no longer mined.
2022	Finalize all revegetation activities
2023	Commence final monitoring
2028	Complete monitoring

Revegetation in conformance with BLM Reclamation Seeding Recommendations for BFO requiring native species plants would be followed. The purpose would be to re-establish native species plants, reduce visual impacts and control potential surface erosion.

Areas to be re-vegetated would include the pit floor, benches, 2:1 (H:V) side slopes, access ramps and roads. Two methods of revegetation would be used.

1. TRANSPLANTING

During each phasing step, prior to disturbing a new area, a survey by qualified BLM personnel would be made to determine if any plant species exist worthy of being transplanted to a reclamation site. This would provide a source of natural reseeding for cactus and yucca species.

2. BROADCAST SEEDING

Commercially available seed of native species is proposed. Seed collection from undisturbed areas of the site would also occur, under the supervision of BLM personnel, if deemed necessary. Seeding would take place between October 15 and January 15. The following seed mix was proposed by ANLEX Rock and Minerals, Inc.:

1.	Grass	<u>Stipa speciosa</u> , desert needles grass	4 lbs./ac.
2.	Shrubs	<u>Antriplex hymenelytra</u> , desert holly <u>Larea tridentate</u> , creosote bush	5 lbs./ac. 5 lbs./ac.
3.	Forbs	<u>Phacelia tanacetifolia</u> , Lacy-leaved Phacelia	3 lbs./ac.

The following seed mix is proposed but could change as a result of new data becoming available.

1.	Grass:	<u>Hilaria rigida</u> , galletta grass	4 lbs./ac.
2.	Shrubs:	<u>Encelia farinose</u> , brittlebush <u>Larea tridentate</u> , creosote bush	5 lbs./ac. 5 lbs./ac.
3.	Forbs:	<u>Coreopsis bigelovii</u> , tickseed	10 lbs./ac.

The above mentioned species would be broadcast at the listed rates. Seeding would be conducted during the period extending from October 15 to January 15.

The seed mix would be tacked into the growth medium with a sheep's foot or other implement to help germination and prevent blowing away. Irrigation is not anticipated to be part of the revegetation plan. Seeding during the October – January period would take advantage of the rain season for germination purposes. Assurance of plant growth is covered under the Monitoring and Maintenance Section of the SMARA Reclamation Plan.

For cleanup, all materials including remaining tortoise fences, dozers, drilling equipment and trash would be removed off-site as mining occurs, except for large boulders too big to crush. They would be sold as riprap or decorative boulders if possible. Otherwise, they would be spread out over the reclaimed area and used as wildlife habitat. No equipment would be permanently stored at the site. All necessary equipment would be trucked in and removed upon completion of the drilling and excavation campaign.

Upon completion of final reclamation, the site will appear as a rough, steeply inclined series of benches with a base area that is flat and vegetated. The end use will be open space and wildlife habitat suitable for future mining. Reclamation to open space and wildlife habitat will not affect the possibility of future mining on the site. The decorative rock resource extends beyond the proposed grading boundaries; the current plan will not exhaust the on site mineral resources.

Alternative B: No Action Alternative:

The No Action alternative is a continuation of present management with no quarry mining or mineral extraction at the proposed location. This alternative has been analyzed in comparison with the anticipated impacts associated with the proposed action.

Alternative C: Proposed Action Further Environmentally Mitigated:

This is the same as Alternative A with additional mitigation measures applied by BLM to further protect critical elements identified as affected by the proposed activity, including: the threatened desert tortoise.

AFFECTED ENVIRONMENT

General Setting:

The proposed work site is located 3 miles east-northeast of Barstow, CA in the Elephant Mountain vicinity of Mojave Desert (T9N, R1W, NE ¼ Sec. 2; SBBM; Nebo 7.5 minute USGS quad.). ANLEX Rock and Minerals, Inc. proposed access on a maintained dirt road that accesses the existing rock quarry on the Haney Brown #1 and Haney Brown #2 mining claims from the junction of Ft. Irwin Road and I-15. THE ROCK YARD – TRI, INC. is proposing an alternative access on a maintained dirt road that accesses the existing rock quarry on the west side of the Haney Brown #1 and Haney Brown #2 mining claims from Soap Mine Road crossing parcel #3 (see Exhibit B-2). As shown by the sketch of Exhibits C and E, the east part of the site has an inactive quarry which has been declared in inactive status by the operator since it is near depletion. Two thirds of the proposed plan of operations work area is an extensive decorative rock quarry which is 99 percent disturbed by previous mining activities. A tortoise-proof fence and barrier with gate surrounds the quarry site. Several additional decorative rock quarries, vegetation denuded areas and numerous roads occur adjacent to this site on private and public lands (see Exhibit J).

Occasional unauthorized shooting, trash dumping and OHV use occurs in the vicinity.

Terrain at the site consists of the northern and eastern slopes of a moderate-sized rocky hill composed of limestone and volcanic felsite. Soils are predominantly shallow alluvium on the lower slopes. Areas of high clay content from hydrothermal alteration are known to occur within the affected area. One moderate sized blue-line wash is located between quarries on the Haney Brown #2 placer claim, immediately adjacent to (cast off) the subject plan of operations area.

Although this area was not classified for Visual Resource Management, it is bordered by VRM Class IV, and scenic quality C (fair) with a sensitivity level of M (moderate) in the foreground.

<u>Critical Element</u>	<u>Affected</u>	
	<i>Yes</i>	<i>No</i>
Air Quality	_____	_____
ACEC's	_____	_____
Cultural Resources	_____	_____
Farmland, Prime / Unique	_____	_____
Floodplains	_____	_____
Nat. Amer. Rel. Concerns	_____	_____
T & E Species	_____	_____
Wastes, Hazardous / Solid	_____	_____
Water Quality	_____	_____
Wetlands / Riparian Zones	_____	_____
Wild & Scenic Rivers	_____	_____
Wilderness	_____	_____
Hazmat	_____	_____

Climate and Air Quality:

The climate in the area is semi-arid with total annual precipitation over the past 30 years average 3 inches with a range of 1 to 14 inches. The rainfall occurs generally between the months of October and April. An occasional thunderstorm may occur in August, but does not account for much of the annual precipitation. Winter months are mild with temperatures average 20 degrees F to 50 degrees F. Summers are harsh and dry with temperatures ranging from 60 degrees F to over 100 degrees F. The topography of the area has a relief of 100 feet. All actions authorized by BLM for activities on public land shall conform with the State Implementation Plan (SIP) regarding assessing impacts and specifying mitigation for dust control.

The site is not located within a Flood Plain Safety Overlay District or Dam Inundation Overlay. There are no blue line streams or major washes crossing the site. An ephemeral stream crosses from north to south just east of the site. The site is located on the side of a hill. There are not major drainage channels on the site. The natural existing channels divert the water around the site.

Ground water is more than 300 feet deep. There are no wells on site. All water used will be transported in by truck. The operation will not introduce any toxic substances, contaminate or otherwise degrade the quality of stream runoff or ground water on or near the site.

Vegetation

Vegetation is characteristic of a sparse, low diversity creosote bush scrub plant community dominated by desert holly (Atriplex hymenoclytra), cottontop cactus (Echinocactus polycephalus), Mojave yucca (Yucca schidigera), creosote bush (Larrea tridentate) and burrobush (Ambrosia dumosa). Additional plant species occurring within the affected area include calico cactus (Echinococcus engelmannii), beavertail cactus (Opuntia basilaris), golden cholla (Opuntia echinocarpa), brittlebush (Encelia farinose), Anderson boxthorn (Lycium andersonii), and desert senna (Cassia armata). The latter two species occur predominantly within wash influence areas. The majority of native vegetation has been stripped off or buried with sidecasted waste minerals within the existing quarry disturbance area. The area proposed for expansion contains a normal cover of soil and vegetation. No T&E or BLM designated sensitive plant species are known to occur within the affected area.

Wildlife

Wildlife of the affected area is primarily reptilian, though several desert mammals also frequent the area. Commonly observed reptiles include western whiptail lizards (Cnemidophorus tigris), zebratail lizards (Callisaurus draconoides), desert collared lizards (Crotaphytus insularis), sideblotched lizards. Representative mammals of the vicinity include (Utastansburiana), pocket mice (Perognathus spp.) kangaroo rats (Dipodomys spp.), desert wood rats (Neotoma lepida), antelope ground squirrels (Ammospermophilus leucurus), black-tailed jack rabbits (Lepus californicus), kit fox (Vulpes macrotis) and coyotes (Canis latrnas). No avian species are known to nest at the site. Threatened and endangered species known to occur within the area are the desert tortoise (Xwrobates agassizi), which is a state/federally listed threatened species. The site is located within Category III habit area for the desert tortoise.

T & E Species:

The only threatened or endangered wildlife species known to occur within the affected area is the desert tortoise (*Xerobates agassizi*), a species State and Federal listed as threatened. Until recently, the area was designated non-categorized tortoise habitat, as tortoise sign had not been observed in the vicinity. However, with the discovery of tortoise sign in the vicinity (see below), the affected area has been designated as BLM Category III desert tortoise habitat, with an estimated 1994 density of 0-20 tortoises per square mile. The area is considered to have low tortoise management value, due to the surrounding urban and mineral development as well as tortoise travel barriers imposed by the Mojave River on the west, the Marine Corps Supply Center on the east, I-15 on the north and I-40 on the south.

Previous site surveys (02/15/93) did not locate desert tortoise sign or obviously suitable tortoise habitat in the immediate vicinity of the proposed mine work area or access road off of Ft. Irwin Rd. Zone of influence surveys were not completed at this time based on office records, indicating no documented use of the affected area by tortoises. However, additional private consultant surveys on adjacent private land discovered a low degree of tortoise activity, a vehicle-caused tortoise mortality was noted by BLM (1994) on I-15 adjacent to the affected area and an additional BLM survey (12/16/94) of the affected area recorded tortoise scat on the rocky top of the mountain on which Haney #2 is located, approximately 150 feet uphill and southeast from the proposed quarry expansion area (see photo of Exhibit L). Additional tortoise sign (scat at several scattered locations, four inactive burrows, one active burrow) was discovered 1/10/95 within 300 feet to the west, to the south and to the east of the subject Haney Brown #1 (gold stone) Rock Quarry. One active tortoise burrow was also noted on the eastern berm of the access road 0.5 miles northeast of the proposed Haney #2 expansion area in the 1994 survey. During a site visit with the claimant's field representative on April 28, 1999 a tortoise was spotted in a shallow rock shelter 8 feet south of one of the flags on the southern boundary of the proposed expansion area. The rock cavity was located about 50 feet west from the top of the hill.

On November 10, 2008 THE ROCK YARD – TRI, INC. had Circle Mountain Biological Consultants, Inc. (CMBC) determine if there were and breaches in the existing tortoise barriers / fencing. CMBC found that only western and southern portions of the reclamation area were fenced with tortoise-exclusion mesh, that other areas to the north were bermed with the expectation that tortoises would be unable to enter the site, and that the eastern boundary of the site was neither bermed nor fenced (see Exhibit K). Seven fresh tortoise scat were found inside the fenced mine area during 2008. The fresh scat of an adult tortoise was also found just west of the site, on the outside of a large boulder pile along the west boundary. The presence of the recently deposited scat was clear evidence that the fence – berm combination was insufficient to preclude tortoises from the proposed reclamation area. It was recommended the entire site be enclosed in fencing since it was apparent that the berms were not functioning to preclude tortoises.

The entire site was fenced. A clearance survey was conducted by CMBC on 12/4/08 (see Exhibit C-1) which found onsite three fresh adult scat approximately 100 feet west of the main access gate; five older scat in the vicinity of the fresh scat found inside the fence along the southern boundary; and a recently-used coversite with four fresh adult scat located on the west side of the boulder-berm approximately 200 feet west of the main access gate. As in November, all signs were those of adult tortoises.

No tortoise or active coversites were found within the fenced reclamation area. Based on this formal clearance survey, CMBC concluded that no tortoises are currently found within the 7.0 acre +/- reclamation area that was surveyed on December 4, 2008.

Data collection and windshield survey of the proposed alternative access road (off of Soap Mine Road across parcel #3) revealed that the existing road is a slightly winding 18-to-20 foot wide unimproved route, approximately 1.8 miles long from the pit gate to Soap Mine Road. No tortoise burrows were observed within 20 feet of the road. Likely occupied caliche caves are common in adjacent washes, though again, not in the immediate vicinity of the road. This quick assessment reveals that tortoise habitat occurs along both sides of the access road, that tortoises very likely cross the road during their activity period, but that none has at this time excavated burrows within approximately 20 feet of the road.

Of particular note is the unusual habitat use favored by tortoises in this vicinity. The majority of scat recorded and all but one burrow recorded were located on steep rocky terrain, contrary to typical alluvial fan and wash habitat used by tortoises. This could imply that: 1) tortoises may have once occurred throughout the affected area and habitat quality has decreased (or all lower elevation tortoises have been eliminated) on the lower flat terrain and washes where considerable habitat impact has occurred, necessitating tortoise habitat use of higher elevation, steep habitat; or 2) tortoises have always utilized only the higher elevation, steeper terrain rather than all suitable tortoise habitat lands in this vicinity (an unlikely scenario).

As tortoise habitat within the existing Haney #1 quarry has been degraded to the point of being unsuitable for tortoise use, no suitable tortoise habitat would be affected by mining within the existing tortoise barrier. However, as tortoises are known to reside on the hillside above the active mining area, any uphill expansion or explosive use in the upper bench of the quarry could result in a loss of suitable tortoise habitat. Additionally, tortoise travel / burrowing / foraging activities know to occur in the area surrounding the quarry and a potential exists for tortoises to travel into, and perhaps establish burrows within, active mining areas associated with the proposed action. A low degree of tortoise activity is suspected to also occur along the original (Ft. Irwin Rd) or proposed alternative (Soap Mine Road) road accessing the mining quarry.

Cultural Resources:

A records search and field check was conducted on the mining claim on December 21, 1992. Results of the records search and field assessment were negative. Consequently, no further mitigation of Section 106 consultation with the State Historic Preservation Officer is necessary for the currently disturbed area (within the tortoise barrier). A cultural survey has not been conducted within the area proposed for expansion.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Proposed Action:

Approximately 9 acres of public land administered by the BLM have already been disturbed over the last 40 years. Impacts within the existing disturbed area would include very little additional soil disturbance (soil compaction, topsoil loss, drainage alteration, reduction of water capture / release capability, stockpiles and overburden covering of soil), possible trail proliferation, permanent small mammal / reptile displacement, possible small mammal / reptile injury / mortality and minimal vegetation loss at the proposed mining plan work site.

Regarding the proposed expansion area of 3 to 5 acres, in addition to soil and vegetation removal (habitat loss), there would be a visual modification in the shape of the landscape and hillside as new benches are created or old benches extended. The overall effect would be to convert the natural hill slope, or what is left of it, into vertical and horizontal cuts.

Dust would be produced from road maintenance, blasting, screening, loading and hauling. The estimated amount of dust that would be generated by the proposed operation exceeds the SIP threshold of 15 tons per year as shown by the spreadsheet of Exhibit I. Therefore, reasonably available control measures must be applied. Impacts from fugitive dust would be reduced by the operator's proposal to bring water to the site in a water truck to be used on the access road, stock piles and quarry floor. This is estimated to be up to 900 gallons per day or 20,000 gallons per month. Water would also be used on the portable crushing / screen plant. A separate water tank would be used for this purpose. It is estimated the 2,000 gallons per day would be required for the week the plant is on site.

Fugitive dust would be reduced by the operator's proposal to: 1) have a water truck brought on site for each blast/load-out cycle, 2) contour, shape, and wet stockpiles of lighter material susceptible to wind erosion as necessary. All stockpiles on site will have slope angles of 2:1 (H:V) and shall be contour graded to blend in with the surrounding topography to extent possible and prevent water erosion. Keeping the piles at a low profile, contour graded and wetted as necessary will minimize wind erosion of stockpile material.

In the past, overburden or waste rock stockpiling at the site has posed an additional impact of entrapment of animals as well as loss of desert habitat as this overburden was progressively pushed out of the main quarry onto adjacent public lands. The recently installed fence will prevent animals from entering the work area in the future, with the exception of access roads outside of the quarry.

Little reclamation has occurred at existing quarries on both public and private lands in the vicinity, effective bench quarry reclamation has yet to be demonstrated in the area, disturbed areas, for the most part, are not naturally revegetating and the area is likely difficult to artificially revegetate due to a very thin soil layer. Due to these conditions, the 12 to 13 acre project area is anticipated to be lost as wildlife habitat for a majority of native species, if the proposed action is authorized. Three to five acres of tortoise habitat would be lost for use by tortoises as a result of the proposed action. Any tortoise burrows would be destroyed in the proposed expansion area and the possible take of 1-3 tortoises is anticipated at the quarry site as the results of the vehicle-related mortality and/or tortoise entrapment related to blasting. The potential for additional vehicle-related tortoise mortality also exists as tortoises are known to travel in the vicinity of the access road. Additionally, because final quarry bench height would be 24 feet, an artificial "cliff" wall would be created that could function as suitable raven nesting substrate. Any increase in ravens, particularly nesting ravens, could impact the tortoise population in the area as this species is known to prey upon juvenile tortoises.

When expansion occurs to the south, overburden / topsoil removal involves use of a bulldozer to remove up to one (1) foot of weathered rock and alluvium from the ground surface. This material would be stockpiled on the east side of the quarry and would be used during reclamation efforts.

All domestic refuse will be collected in bins and disposed of at permitted landfills. No hazardous materials, other than diesel fuel, will be stored on-site. The fuel tanks to be used will be kept on mobile trucks and used only as equipment is being fueled. Any fuel soaked material will be placed in DOT17H drums, labeled and removed to an approved disposal site. Contaminates such as spilled diesel or crankcase oil would be removed and disposed of at an authorized waste facility.

No explosives will be stored on site. Blasting company personnel will drill with a drill rig and compressor. Blasting will be accomplished by a licensed blaster. Explosives will only be on site the day of the blast. No off site structures or residences exist near the site.

Mitigation proposed below would reduce the potential for tortoise take. However, a potential exists for tortoise injury / mortality even with implementation of mitigation proposed below. Consequently, the proposed action would affect threatened species and formal ESA Section 7 consultation would be required. The proposed action meets criteria for the BLM's programmatic small mine ESA Section 7 consultation and terms/conditions specified in the respective biological opinion should be applied as mitigation for the proposed action. Further, Section 7 consultation would not be necessary if the mitigation measures proposed below are implemented and the proposed action is logged on the Annual Small mine Biological Opinion Programmatic Report.

Alternative B: No Action Alternative:

No new environmental impacts to the subject site would be expected as a result of the no action alternative. No reclamation would occur. A quarry with benches would remain. No additional loss of tortoise habitat would occur. The site would not contribute to fugitive dust. No extraction of mineral product would occur, resulting in possible shortages and price increase in the market place.

Alternative C: Proposed Action Further Mitigation:

Mitigation proposed below would reduce impacts to the desert tortoise by providing for a tortoise education program and other measures. The requirement to wet down or cover loaded trucks would reduce fugitive dust (PM₁₀).

Mitigation Measures:

1. The mine operator would be required to designate a field contact representative (FCR) who would be responsible for overseeing compliance with protective stipulations for the desert tortoise and

for coordination on compliance with BLM. The FCR would have the authority to halt all mining activities that are in violation of the stipulations. The FCR would be required to have a copy of all stipulations when work is being conducted on the site. The FCR may be the mine operator, the mine manager, any other mine employee, or a contracted biologist.

2. An employee education program would be received, reviewed, and approved by the BLM at least 15 days prior to the presentation of the program. The program may consist of a class or video presented by a qualified biologist (BLM or contracted) or a video. All mine employees would be required to participate in the tortoise education program prior to initiation of mining activities. The operator would be responsible for ensuring that the education program was developed and presented prior to conducting activities. Anyone working on the site would be required to participate in the education program and receive the "Hands Off Partner" handout and Desert Tortoise Reminder Cards. The program would cover the following topics at a minimum and which are included in the information sheet:
 - a. Distribution of the desert tortoise
 - b. General behavior and ecology of the tortoise
 - c. Sensitivity to human activities
 - d. Legal protection
 - e. Penalties for violations of State or Federal laws
 - f. Reporting requirements
 - g. Project protective mitigation measures
3. Only biologists authorized by the USFWS and the BLM would be permitted to handle desert tortoises. The BLM or mine operator should submit the name(s) of the proposed authorized biologist(s) to the USFWS for review and approved at least 15 days prior to the onset of activities. No mining activities would be allowed to begin until an authorized biologist is approved. Authorization for handling would be granted under the auspices of the Small Mine Programmatic Biological Opinion.
4. A qualified biologist or tortoise fencing technician would be required on-site during the initial fencing work and prior to ground disturbance. This biologist / technician would have authority from the operator to halt any action that might result in harm to a tortoise.
5. The area of disturbance would be required to be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Work area boundaries would be determined with flagging or other marking to minimize surface disturbance associated with vehicle straying. Special habitat features, such as burrows, identified by the qualified biologist would be avoided to the extent possible. To the extent possible, previously disturbed areas within the mining site would be required to be utilized for the stockpiling of excavated materials, storage of equipment, and parking of vehicles. The qualified biologist, in consultation with the project proponent, would ensure compliance with this measure.

Except when absolutely required by the operation and as explicitly stated in the mining plan cross-country vehicle use by mine employees would be prohibited during work and non-work hours.

6. The gate for the tortoise-proof fence / rock berm barrier would be required to remain closed except for the immediate passage of vehicles. The fence /barrier would be required to be checked at least monthly and maintained when necessary by the mine operator to ensure its integrity.

All tortoise-proof fencing would be required to be removed after site rehabilitation.

7. Should a desert tortoise be observed in the vicinity of the fenced work area, project work would be required to cease, the BLM would be required to be immediately notified, and an appropriate course of action would be initiated by the BLM.

Upon locating a dead or injured tortoise, the operator would be required to notify the BLM. The BLM would then notify the appropriate field office (Carlsbad or Ventura) of USFWS by telephone within three days of the finding and written to the Division of Law Enforcement in Torrance. The information provided would include the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death (if known), and other pertinent information. Injured animals would be required to be transported to a qualified veterinarian for treatment at the expense of the project proponent. If an injured animal recovered, the USFWS would be contacted for final disposition of the animal.

8. If it is necessary for a worker to park temporarily outside of the cleared enclosure, the worker would be required to inspect for tortoises under the vehicle prior to moving it. If a tortoise was present, the worker should carefully move the vehicle only when necessary and only when the tortoise would not be injured by moving the vehicle or should wait for the tortoise to move out from under the vehicle.
9. All dogs would be required to be restrained either by enclosure in a kennel or by chaining to a point within the tortoise-proof enclosure.
10. All trash and food items would be required to be promptly contained within closed, raven-proof containers. These should be regularly removed from the project site to reduce the attractiveness of the area to ravens and other tortoise predators. Structures that may function as raven nesting or perching sites would not be authorized except as specifically stated in the plan of operation or notice. The project proponent should describe anticipated structures to the BLM during initial project review.
11. Access would be confined to a.) the single, authorized haul road previously approved, or b.) proposed alternative access haul road (from Soap Mine Road crossing parcel #3), and c.) existing trails within the quarry area to reduce habitat loss and impacts brought about by road proliferation.
12. The ore stockpile would be confined within the tortoise fence or barrier to eliminate habitat loss or possible impacts to tortoises.
13. Following soil scarification and replacement of topsoil or stockpiled waste (exclusive of boulders), all surface disturbance areas would be seeded with an appropriate native vegetation seeding mix. An appropriate mixture for the affected area would include at a minimum (unless the operator can show that a particular seed is unavailable or prohibitively expensive):
 - Creosote Bush (Larrea tridentate) – 10 lbs. / acre
 - Desert Needlegrass (Stipa speciosa) – 4 lbs / acre
 - Tickseed (Coreopsis bigelovii) – 10 lbs. / acre
 - And
 - Brittlebush (Encelia larinosa) – 5 lbs. / acre
14. Prior to expanding to the south beyond the existing tortoise fence, the operator would be required to:
 - a. provide compensation land or money to the authorized officer for loss of habitat prior to disturbing desert tortoise habitat. Current requirements are based on a formula presented in **Recommendations for Management of the Desert Tortoise in the California Desert** (BLM 1988). For the purposes of this consultation, changes to the compensation formula would be reviewed and approved by the USFWS. The project proponent would either 1) acquire the compensation lands and deliver the deed to the BLM; 2) provide adequate funds, to be determined by the BLM, to the BLM for the acquisition of compensation lands or for other activities approved by the USFWS; or 3) make permanent improvements to tortoise habitat upon agreement of USFWS and BLM. Lands to be acquired would be within Category I or II of the same tortoise management

unit. The mine operator would be required to work closely with the BLM in selecting the lands most benefiting the conservation and recovery efforts. Compensation requirements would be met prior to mining activities.

The compensation ratio for habitat at the subject site is 1 to 1. The compensation cost per acre is currently set at \$700.00 per acre and there is a 15 percent acquisition fee. The amount of compensation payment for expansion would be calculated after the phase one expansion area has been determined, flagged, and surveyed by BLM resource personnel.

- b. Provide 12 months advanced notice to the BFO so the BLM Archaeologist has adequate time to conduct a field survey and determine whether consultation with the State Historic Preservation Office is required.
15. After fence installation, the authorized biologist would be required to conduct a thorough survey for tortoises within the mine site. All tortoises found would be marked and removed from the enclosure and placed outside the nearest fence. If the removal was during the season of above-ground activity, the tortoises shall be placed beside a nearby burrow of appropriate size. If the removal was not in the season of above-ground activity, the tortoise would be moved (dug out of burrow if necessary) on a seasonably warm day and placed at the mouth of a nearby burrow of appropriate size. If the tortoise did not enter the burrow, an artificial burrow may be needed. The authorized biologist would be allowed some judgment and discretion to ensure that survival of the tortoise is likely.

Desert tortoises moved from within a fenced site would be marked for future identification. An identification number using the acrylic paint/epoxy covering technique would be placed on the fourth left costal scute as described in Handling Protocol sections of the "Protocols for Handling Live Tortoises" prepared by the Arizona Game and Fish Department and others in 1990. 35-mm slide photographs of the carapace, plastron, and fourth costal scute would be taken. No notching would be authorized.

Desert tortoises would be handled only by the authorized biologist and only when necessary. In handling desert tortoises, the authorized biologist would be required to follow the General Handling Protocol sections of the "Protocols for Handling Live Tortoises" prepared by the Arizona Game and Fish Department and others in 1990. New latex gloves would be used when handling each tortoise to avoid the transfer of infectious diseases between animals. Replacement of lost fluids with a syringe would not be authorized. Aside from the initial site clearance, any tortoise moved would be placed in the shade of a shrub in the direction in which it was facing when found or at the entrance to a burrow if hibernating. In general, desert tortoises would be moved the minimum distance possible to ensure their safety.

If a desert tortoise needs to be moved at a time of the day when ambient temperatures are extremely low (i.e., less than 40 degrees Fahrenheit) or extremely high (i.e., greater than 90 degrees Fahrenheit) and could result in harm to the tortoise, it would be held overnight in a clean cardboard box. The tortoise would be kept in the care of the authorized biologist under appropriate controlled temperatures and released the next day when temperatures are favorable. All cardboard boxes would be properly discarded after one use.

The authorized biologist would be required to maintain a record of all desert tortoises handled. This information would include for each tortoise:

- a) the locations (narrative and maps) and dates, of observations;
- b) general condition and health, including injuries and state of healing and whether animals voided their bladders;
- c) location moved from and location moved to;
- d) diagnostic markings (i.e., identification numbers or marked lateral scutes).
- e) Slide photograph of each handled desert tortoise.

No later than 90 days after completion of mining activities, the FCR and authorized biologist would be required to prepare a report for the BLM. The report would be required to document the effectiveness and practicality of the mitigation measures, the number of tortoises excavated from burrows, the number of tortoises moved from the site, the number of tortoises killed or injured, and the specific information for each tortoise as described in this measure. The report would make recommendations for modifying the stipulations to enhance tortoise protection or to make it more workable for the operator.

The report would provide an estimate of the actual acreage disturbed by various aspects of the operation.

Should desert tortoise be observed in the vicinity of the fenced work area, project work would be required to cease, the BLM must be immediately notified, and an appropriate course of action would be initiated by the BLM.

Upon locating a dead or injured tortoise, the operator would be required to notify the BLM. The BLM would then notify the appropriate field office (Carlsbad or Ventura) of USFWS by telephone within three days of the finding and written to the Division of Law Enforcement in Torrance. The information provided would include the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death (if known), and other pertinent information. Injured animals would be required to be transported to a qualified veterinarian for treatment at the expense of the project proponent. If an injured animal recovered, the USFWS would be contacted for final disposition of the animal.

16. Except on county-maintained roads, vehicle speeds would be required to not exceed 15 miles per hour through desert tortoise habitat. This requirement would also reduce fugitive dust production. The maximum speed could be increased to 20 miles per hour only if a waiver is obtained from the MDAQMD.
17. For the control of fugitive dust (PM₁₀) the operator would be required to spray down or cover loaded aggregate rocks.
18. No later than 90 days after completion of mining activities, the FCR and authorized biologist would be required to prepare a report for the BLM. The report would be required to document the effectiveness and practicality of the mitigation measures, the number of tortoises excavated from burrows, the number of tortoises moved from the site, the number of tortoises killed or injured, and the specific information for each tortoise as described in this measure. The report would make recommendations for modifying the stipulations to enhance tortoise protection or to make it more workable for the operator. The report should provide an estimate of the actual acreage disturbed by various aspects of the operation.
19. Upon termination of the plan of operations and final reclamation of the site, the quarry area would be either fenced or signed at regular intervals with an appropriate warning regarding steep sides. A waiver to this requirement would be considered if bench faces are re-sloped so as not to exceed 1 ½:1 (H:V).

RESIDUAL IMPACTS:

Alternative A: Proposed Action.

Even with reclamation measures, benches of portions of benches would probably remain. Although the SMARA requires that reclaimed benches have an overall slope of 1 ½:1 (H:V), it must be assumed that individual 24-foot-high vertical faces would remain. Due to the limitations of reclamation success in rock quarries, the visual impact would remain and would be visible from I-15, less than ½ miles to the north.

In this alternative and in Alternative C, 3 to 4 acres of suitable tortoise habitat would be lost. Even with the proposed soil replacement, scarification, and seeding, revegetation could take a decade to be successful in some areas and would never occur in others because of the rocky terrain. Without a tortoise education

program and other protective measures, a slight amount of tortoise mortality from vehicular travel is anticipated.

Without additional control measures, excessive dust would likely result from loaded haul trucks traveling at high speed on paved highways.

Alternative B: No Action:

There would be no additional adverse residual impacts from this alternative. No reclamation would occur. A quarry with benches would remain. No additional loss of tortoise habitat would occur. The site would not contribute to fugitive dust. No extraction of mineral product would occur, resulting in possible shortages and price increases in the market place.

Alternative C: Proposed Action Mitigated:

As an Alternative A, steep benches and a pronounced visual impact would remain. Adherence to the proposed mitigation coupled with the above prescribed measures would provide reasonable and prudent measures to minimize potential harm to desert tortoises and their habitat. Mitigation proposed above would reduce potential project related impacts to the desert tortoise to an acceptable level. The reclaimed quarry would provide excellent places for tortoise burrows but would have limited foraging value. Although dust will be produced, dust control measures, including keeping piles at a low profile, contour graded and wetted as necessary, coupled with spraying down or covering loaded trucks would minimize fugitive dust and wind erosion, and would not be regionally significant.

CUMULATIVE IMPACTS:

Alternative A: Proposed Action:

As shown on Exhibit J, other mining actions in the same general area include the past operations by Calico Rock Products at the Haney Brown #2 claim which is a recent quarry under previous Notice CACA 35462, about 1,000 feet southeast of the proposed action. This quarry will expand, now that ANLEX is completed a plan of operations for the site. The ROCK YARD – TRI, INC. has submitted a completed plan of operations mirroring the approved ANLEX plan of operations.

Cumulative impacts also come from mining on private land by Brubaker-Mann on adjacent Section 2 where they mine bentonite and “gold”, “lilac”, and “bark brown” landscaping rock. Additional mining impacts to the area occur in Section 11 to the south (see Exhibit J) where past exploration and bulk sampling was done for white clay on the Grottoes and Lone Adit placer claims under patent application by Jesse Collins. Potential impacts to the tortoise and air quality from haul trucks would result from the operations of THE ROCK YARD – TRI, INC. and Brubaker-Mann in this area. Visual impacts are also a factor from all sites mentioned above. For the most part, these impacts will remain as a permanent part of the landscape.

There are other substantial impacts to this general area as a result of urban expansion and the Marine Corps Logistic Base activities in the area. In general, the area does not retain substantial natural character but does provide some habitat values.

Alternative B: No Action Alternative:

There would be no additional impacts from this alternative.

Alternative C: Proposed Action Mitigated:

Same as A (Proposed Action) except that more tortoise protection from mitigation would occur and possible adverse impacts to the desert tortoise would be reduced as explained under Residual Impacts above. The County is aware that the general area is habitat for the desert tortoise. As site permits and reclamation plans are approved, BLM will have an opportunity to comment and recommend mitigation for protection of the threatened tortoise. As these measures are implemented, impacts to the desert tortoise would be minimized on private land as well as public land. The requirement for compensation for lost habitat would tend to reduce the cumulative impacts on a regional scale.

LIST OF PREPARERS

Ken Schulte

Anthony Chavez

Sally Cunkelman

Tanya Egan

Edward LaRue, M.S.

Sharon Dougherty

Geologist and team leader

Soil, Air, Water Specialist

Environmental Coordinator & Archaeologist

Natural Resource Specialist

Field, Tortoise Biologist

Field Biologist