

## 2.2 RECLAMATION PLAN AND SPECIFICATIONS

Reclamation is a combination of processes that minimize adverse environmental effects of surface mining and return the land to a beneficial end use (Newton 1992). The following plan defines the processes to be used by TMC for reclamation of the proposed mining site in Soledad Canyon. The plan includes reclamation processes that are concurrent with mining operations to minimize adverse effects of surface mining and final reclamation processes to return the land to a beneficial use at the end of mining at the site. Revegetation of the NFSA will be a concurrent permanent reclamation process as the area is filled. Figure 2.2-1 presents a Geographic Information System (GIS) computer simulation of the existing site. Figure 2.2-2 presents conditions after mining is complete. Figure 2.2-3 shows conditions at the site after reclamation is complete.

### 2.2.1 Reclamation Plan

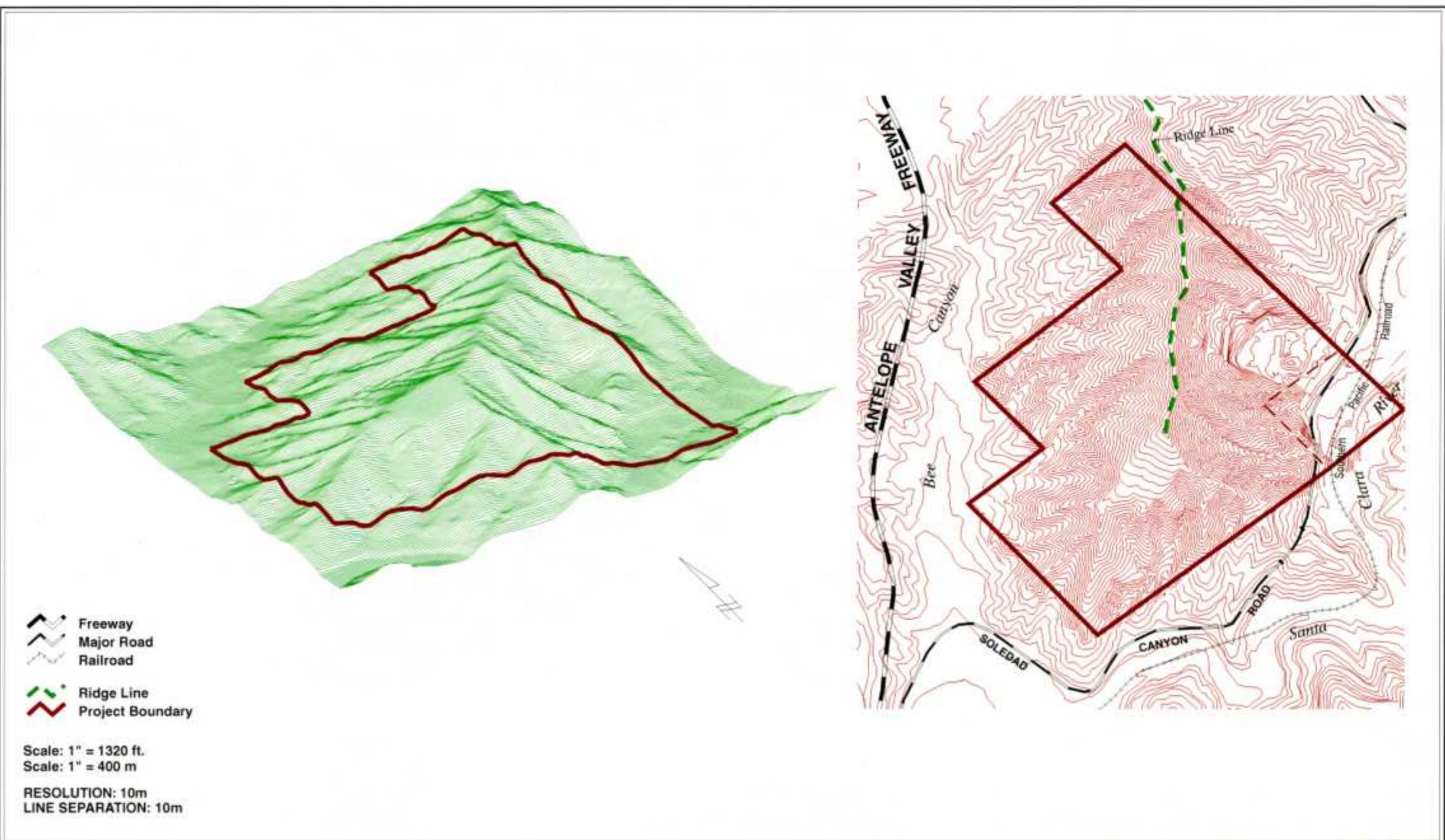
#### 2.2.1.1 Concurrent Reclamation

Concurrent reclamation includes those processes that will occur as mining operations proceed to minimize adverse effects from mining. Measures have already been described in the previous sections that will minimize erosion, provide watershed control, and protect water quality in the Santa Clara River during mining operations. These measures include construction of ditches, dikes, and desilting/debris basins. Surface vegetation at the site will be removed no sooner than necessary for facility construction and mining operations to proceed to minimize erosion.

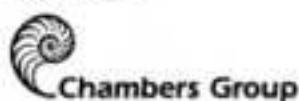
As mineral extraction proceeds, mined slopes will be left devoid of vegetation and will be revegetated as soon as practical. Revegetation of these slopes must occur at that time of the year when planted material has the greatest chance of germinating and becoming established. For the site location and its attendant climate, it is planned that seeding of herbs and shrubs will take place in the period concurrent with initiation of fall rains, usually around mid-October to mid-November. In order to take maximum advantage of winter precipitation, all seeding will take place between October to December, depending on weather patterns for specific years. Therefore, by June 15 of any year after mineral extraction begins, all disturbed areas that are to be reclaimed at that time will be evaluated for revegetation to commence during the above-noted time period.

#### 2.2.1.2 Final Reclamation Plan

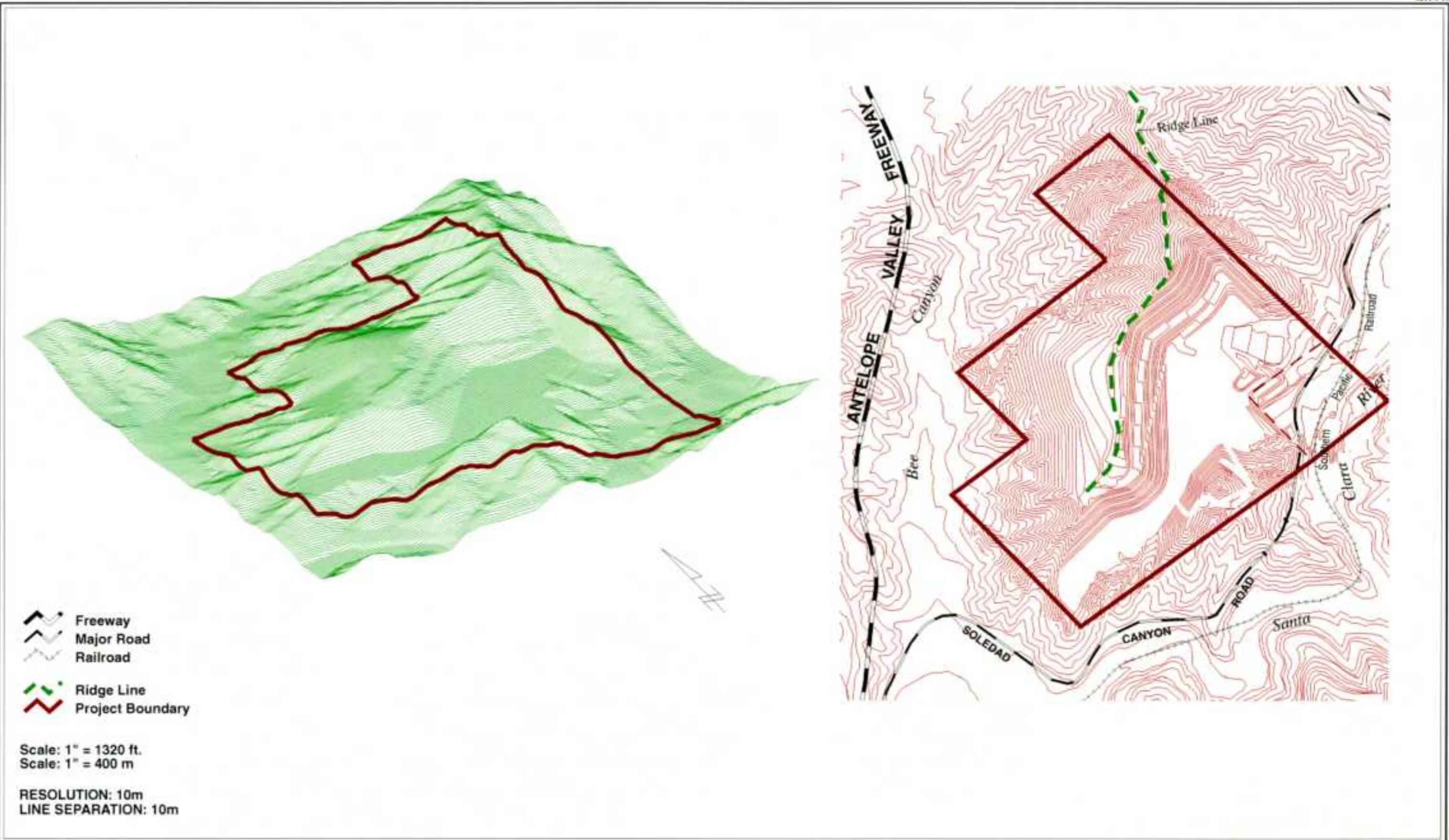
The Project area is scheduled to be reclaimed after TMC's Federal Contracts with the BLM expire. Based on the assumption that BLM does not contract out future mining, final reclamation will occur. In the future, if BLM determines that additional mining is feasible, County, state, and federal approvals would be required, as would modification to this final Reclamation Plan.



SOURCE:



GIS SIMULATION OF EXISTING CONDITIONS  
OF PROPOSED MINING SITE  
Figure 2.2-1

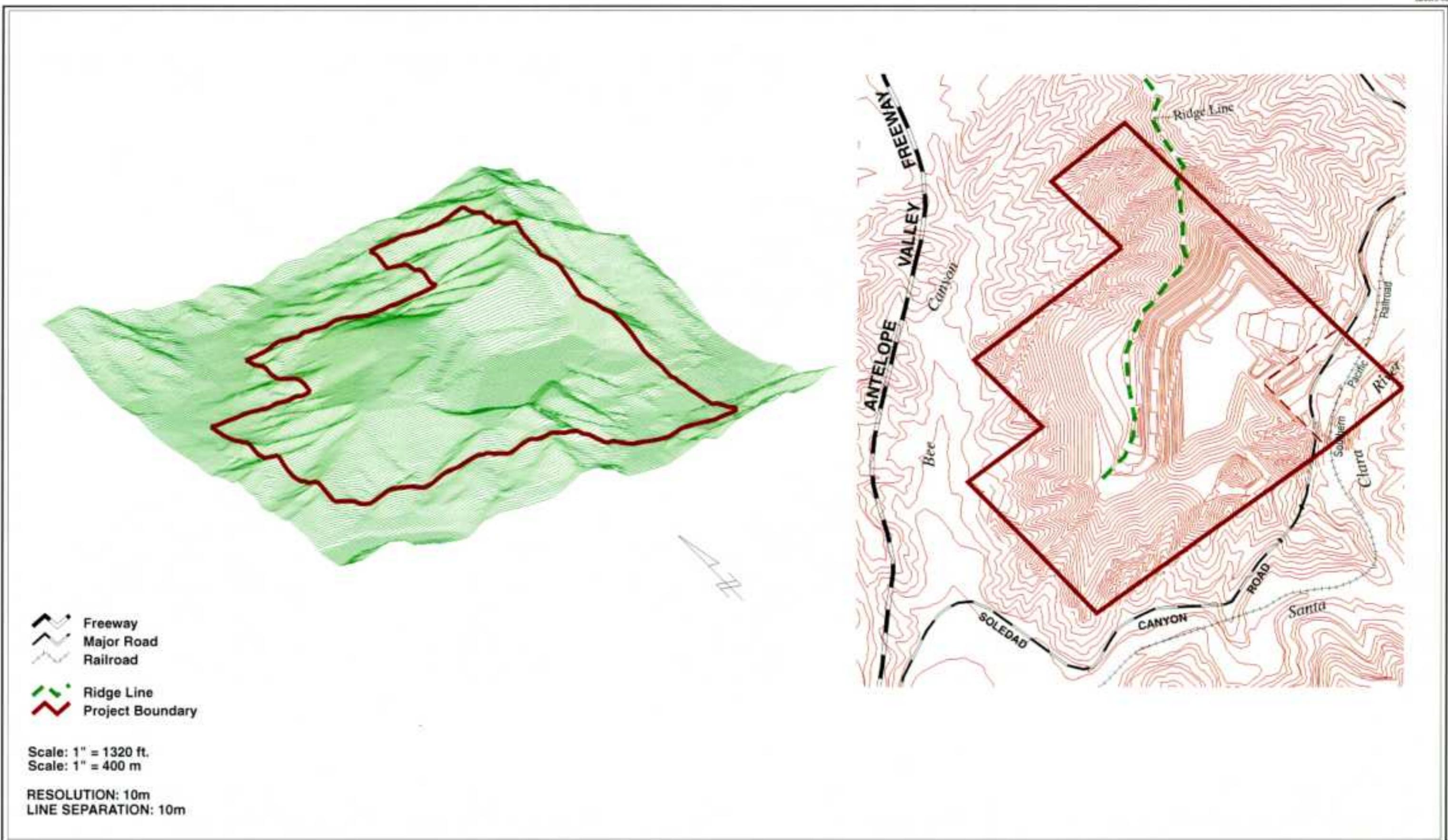


SOURCE:



**GIS SIMULATION OF PROPOSED SITE SHOWING MAXIMUM AREAL EXTENT OF MINING CUTS AND NORTH FINES STORAGE AREA**

Figure 2.2-2



SOURCE:

Chambers Group

GIS SIMULATION OF PROPOSED SITE AT  
THE COMPLETION OF RECLAMATION  
Figure 2.2-3

At the commencement of final reclamation, TMC will remove its plant facilities and all equipment from the site and will reclaim these areas by removing the facilities foundations and roads. The area will be ripped and regraded to conform with the local topography and then revegetated. TMC will also initiate its long-term protection of all mined slopes and disturbed areas that are not already revegetated.

Quarry slopes that remain after 20 years of mining in areas of Cuts 2, 3, and 4 will receive benching as needed so that all slopes will be serrated with 4- by 4-foot steps. The horizontal portion of each bench will be sloped slightly downward, from front to back, to promote water collection and absorption and minimize erosion.

These serrations have been used extensively throughout the state for road cuts and, in many cases, are now revegetating naturally. After the stepping is complete, revegetation will be conducted.

Similar methods are anticipated to be used for the final revegetation as those used for the concurrent Revegetation Plan. Because the final Reclamation Plan takes place after the concurrent Revegetation Plan has been implemented, innovations in reclamation and revegetation will most likely have been incorporated into the plan. Therefore, successful new reclamation and revegetation techniques will be incorporated into the final Reclamation Plan.

As with the concurrent Revegetation Plan, planting of herbs and shrubs will take place in the period concurrent with the initiation of fall rains, usually around mid-October. In order to take maximum advantage of winter precipitation and minimize initial irrigation, all seeding and plantings will take place from October to December, depending on the weather.

Desilting/debris basins and dikes will be reclaimed when they are no longer required. Current planning indicates that they will be required throughout the life of the mine. After year 20, the remaining fines will be removed from the desilting/debris basins, dikes will be removed, and the fines, basins, and diked area will be reclaimed.

#### **2.2.1.3 Reclamation of North Fines Storage Area**

The NFSA will be located on the northern portion of the property. It will consist of backfilled fines to be constructed in 4- to 5-foot lifts, with each successive lift placed 8 to 10 feet back to maintain a 2:1 (horizontal to vertical) slope. Revegetation of the NFSA will be an ongoing process as the lifts are constructed. Therefore, revegetation of the NFSA will be concurrent with mining operations. Fills completed each year will be scheduled for seeding and planting in the following October to December time period.

The material deposited in this area will consist of much finer sediment than that remaining on the mined slopes to the south. The character of the material to be vegetated, the difference in slopes, and the greater availability of moisture associated with the northern slopes allow the use of species for mesic exposure. The use of container plantings in groups will mimic the contouring that presently exists prior to fill deposition on this northern portion of the site. The

plants will be grouped to suggest ravines and gullies. This planting scheme visually contours the slope without changing the compaction specifications for the fines area. The resulting visual appearance of the slope will be similar to the original west-facing slope of Bee Canyon.

## 2.2.2 Revegetation Specifications

Revegetation is defined as establishing vegetation on disturbed land (Newton 1992). The goals of revegetation include erosion control, visual reintegration, return of ecological functions to a site, and mitigation as required by law.

Approximately 130 acres will be disturbed by mining cut faces and 54 acres disturbed by filling the NFSA. An additional 3 acres at the aggregate processing site will be disturbed by the location of the processing plant, and approximately 45 acres are presently disturbed from the existing quarry site. The total area to be reclaimed will be approximately 232 acres, 178 of which will be on the south side of the ridge. When nothing further is planned for the disturbed areas, these areas will be revegetated consistent with the preexisting density of vegetation. This planting will occur during the first wet season after the areas are abandoned. Because TMC's contract with the BLM expires after 20 years, mining will be discontinued and TMC will revegetate all of the disturbed areas that are not already revegetated.

Revegetation plans and species lists have been developed from onsite baseline vegetation studies (see Section 3.1.8). Because the site will be mined and revegetated concurrently over a period of 20 years, there will be an opportunity to evaluate the success of the revegetation effort over time not only for species compatibility but also vegetative cover and degree of erosion control provided, slope stability, and so forth. As appropriate, TMC reserves the right to modify the proposed revegetation effort to maximize its success. However, no significant modifications to the Revegetation Plan will be made without obtaining necessary agency concurrence prior to initiating the change.

### 2.2.2.1 Collection and Propagation of Plant Materials

Wherever possible, plant material for seeding and container planting will be collected from the site before mining proceeds or from areas near the site. Collection of plant material will begin 2 years in advance of any revegetation to ensure that adequate seed and plants are available. The preliminary seed collections for the main species in the plant palette will be tested to determine the purity and germination rates of the specific material collected. The final application rates to be used in seeding will be determined based on the actual amounts and quality of seeds collected and the method of seeding.

Seed collection will be supervised by a qualified commercial seed collector/supplier with experience in native seed collections. To ensure natural genetic diversity in the planting and protect the viability of the donor plants, several distinct areas will be used for seed collection of each species. Collected seed will be cleaned to a commercially acceptable grade, tested, and labeled with species name, weight, purity, and germination rate. Seeds will be stored in a cool,

dry environment until delivery for hydroseeding or to the nursery for sowing of container plants. In areas where sensitive plant species are found, seed and topsoil will be collected and stored separately for reapplication.

Seeds for propagation of container plant materials will be grown by persons with experience in native plant propagation. All container plant materials that support mycorrhizal fungi will be inoculated with mycorrhizae during propagation. Container plants will be grown either onsite or at a nursery in proximity to the site. Container plants will be grown in deep pots or tubes ranging in size from D-40 pots for subshrubs to 24-inch-deep tubes for chaparral species. Cactus plants will be planted as pads or from 1-gallon pots. Based on the species, initiation of container plant propagation will be within 6 months to 1 year from the expected onsite planting date to avoid container plants becoming root bound.

### 2.2.2.2 Site Preparation

Topsoil will be salvaged as mining operations proceed where areas are accessible by equipment. Salvaged topsoil shall be stored in elongated piles no taller, nor wider, than six feet (2 meters). A study of topsoil stockpiles demonstrated that significant biological, chemical, and physical changes occur below two meters depth for soils of sandy texture (Abdul-Kareem and McRae, 1984). Topsoil stockpiles shall be clearly identified and protected from disturbance. Topsoil shall be reapplied in the concurrent (and final) reclamation process in the shortest time possible. Weed growth on or near the topsoil stockpiles shall not be allowed to prevent weed seed contamination. Erosion of the topsoil stockpiles from wind and rain shall be controlled by hydromulching the stockpiles immediately after salvage operations are complete.

If the topsoil stockpiles will be stored through one rainy season (as may be the case in some mining areas), hydromulching with a seed mix is specified to provide erosion control as well as host plants for topsoil microorganism survival. Hydromulching shall consist of a homogenous slurry mixture consisting of water, organic soil stabilizer, and cellulose wood fiber. The following materials will be applied in a one-step hydromulch operation:

- ▶ 2,000 pounds per acre of virgin cellulose wood fiber
- ▶ 160 pounds per acre organic soil stabilizer, and
- ▶ 46 pounds per acre of seed mix consisting of 40 pounds of *Plantago ovata*, 3 pounds of *Eriophyllum confertifolium*, and 3 pounds of *Hemizonia fasciculata*.

If the topsoil will not be stored through a rainy season, it will be adequate to hydromulch with only the wood fiber and soil stabilizer to control wind erosion.

Depth of topsoil application will be determined based on test plots, but it is anticipated that topsoil depth will be between 2 to 6 inches. The following methods will be used to incorporate the topsoil. On fill slopes in the NFSA and reclaimed mined areas, the final layer of soil shall be the salvaged topsoil. The re-soiled areas shall be rolled with a sheepfoot or tracked with a bulldozer with one pass to meld the topsoil to the surface of the slopes. Prior to seeding, the soil surface will be roughed up before revegetation.

Prior to revegetation, the disturbed areas will be cleared of invasive, noxious weeds. It is not anticipated that weeds will be problematic because immediate revegetation is planned for areas after mining abandonment as mining proceeds over the site. However, if weeds become a problem weed removal will be accomplished through mechanical means. Limited use of selected herbicides is specified when no other effective alternative is available to remove and control certain noxious weed species. Herbicide treatment is specified for weed species that may resprout from roots or rhizomes. Only EPA approved, glyphosate base, systemic herbicides (e.g. Round-up Pro or Rodeo) shall be used for prescribed foliar application or cut stump treatment. Rodeo must be used when applying herbicides within 100 feet of the natural waterway. Herbicide preparation shall be allowed only in approved staging areas more than 100 feet from any wetlands or drainages. No pre-emergent herbicides will be used.

A brightly colored dye shall be used in all herbicide applications to aid the applicator in achieving good coverage of the target species. The material shall be a non-toxic material such as Blazon, Turfmark or equivalent. Herbicide treatment shall be conducted only when weather conditions are conducive to effective uptake of the herbicide by the target species (e.g. sunny, dry with ambient temperatures 65 degrees Fahrenheit or greater, and when plants are actively growing), and when wind conditions are such that herbicide drift is minimized (five m.p.h. or less). Treated plants or stumps shall not be disturbed until the glyphosate has had time to take effect per the manufacturer's instruction, approximately two or three weeks after application.

#### 2.2.2.3 Seed and Container Palettes for Revegetation

Species mixes for seed and container planting for revegetation are presented in Tables 2.2-1 through 2.2-5. The species proportions were obtained from the relative cover values determined during the baseline vegetation study (see Section 3.1.8), plus adjustments upward to account for mortality of at least 50 percent (60 percent on xeric exposures). The tables cover all phases (concurrent and final) of site reclamation and all areas. If experience shows that revegetation success or lower mortality rates reduce the requirement for planting density, then seed and container mixes will be adjusted accordingly. Ultimately, revegetation performance standards will be met as detailed in Section 2.2.2.7.

#### Seeding Methods

Tables 2.2-1 and 2.2-2 list species to be used for seeding in the mined areas that have mainly xeric exposure. Table 2.2-3 lists species to be used in seeding the NFSA, which has a mesic exposure.

Mesic exposures include habitats represented by the coastal sage scrub/mixed chaparral, mixed chaparral, and northwest- to east-facing slopes of the coastal sage scrub/semidesert chaparral measured in the baseline vegetation study. Xeric exposures include habitats represented by southeast- to west-facing slopes of coastal sage scrub/semidesert chaparral. Estimates of species proportions in these different seed mixtures are also provided, but the exact amount used in revegetation will depend on availability.

**Table 2.2-1**
**CONCURRENT RECLAMATION  
SEED MIX FOR MINE AREAS**

Common Name	Scientific Name	Pounds per Acre
<b>Xeric Exposures</b>		
Yarrow*	<i>Achillea millefolium</i>	2.0
Crested needlegrass	<i>Achnatherum coronata</i>	3.0
California sagebrush	<i>Artemisia californica</i>	2.0
Evening primrose*	<i>Camissonia californica</i>	3.0
Turkish rugging	<i>Chorizanthe staticoides</i>	1.0
Hairy yerba santa	<i>Eriodictyon trichocalyx</i>	3.0
California buckwheat	<i>Eriogonum fasciculatum</i> ssp. <i>fasciculatum</i>	5.0
Golden yarrow	<i>Eriophyllum confertiflorum</i>	2.0
Tanweed	<i>Hemizonia fasciculata</i>	2.0
Deerweed	<i>Lotus scoparius</i>	8.0
Miniature	<i>Lupinus bicolor</i>	4.0
Desert dandelion	<i>Malacothrix glabrata</i>	1.0
Monkeyflower	<i>Mimulus longiflorus</i>	3.0
Chia	<i>Salvia columbariae</i>	1.0
Small fescue	<i>Vulpia microstachys</i>	4.0
Six-weeks fescue	<i>Vulpia octoflora</i>	4.0
<b>Total</b>		<b>48.0</b>
* For soil stabilization purposes only - not found onsite.		

Table 2.2-2

**FINAL RECLAMATION  
SEED MIX FOR MINE AND FACILITIES AREAS**

Common Name	Scientific Name	Minimum/Maximum Pounds per Acre
<b>Xeric Exposures</b>		
Crested needlegrass	<i>Achnatherum coranatum</i>	2.0 / 3.0
Chamise	<i>Adenostoma fasciulatum</i>	2.0 / 3.0
California sagebrush	<i>Artemisia californica</i>	2.0 / 3.0
Turkish rugging	<i>Chorizanthe staticoides</i>	1.0 / 1.5
Coreopsis	<i>Coreopsis bigelovii</i>	2.5 / 3.0
Brittlebush	<i>Encelia actoni</i>	6.0 / 8.0
Hairy yerba santa	<i>Eriodictyon trichocalyx</i>	1.5 / 3.0
California buckwheat	<i>Eriogonum fasciculatum</i> ssp. <i>fasciculatum</i>	5.0 / 6.0
California buckwheat	<i>Eriogonum fasciculatum</i> ssp. <i>foliosum</i>	3.5 / 4.5
Golden yarrow	<i>Eriophyllum confertiflorum</i>	1.0 / 2.0
Tanweed	<i>Hemizonia fasciculata</i>	1.5 / 2.5
Lupine	<i>Lupinus bicolor</i>	2.0 / 3.0
Desert dandelion	<i>Malacothrix glabrata</i>	1.0 / 1.5
California melic	<i>Melica californica</i>	2.0 / 4.0
Wild canterbury bell	<i>Phacelia minor</i>	3.0 / 5.0
Chia	<i>Salvia columbariae</i>	1.0 / 1.5
Black sage	<i>Salvia mellifera</i>	1.5 / 2.5
Small fescue	<i>Vulpia microstachys</i>	4.0 / 5.0
Our Lord's candle	<i>Yucca whipplei</i>	6.0 / 8.0
<b>Total</b>		<b>48.5 / 70.0</b>

**Table 2.2-3****SEED MIX FOR NORTH FINES STORAGE AREA RECLAMATION**

Common Name	Scientific Name	Minimum/Maximum Pounds per Acre
<b>Mesic Exposures</b>		
Crested needlegrass	<i>Achnatherum coronata</i>	1.0 / 2.0
California sagebrush	<i>Artemisia californica</i>	2.0 / 3.0
Turkish rugging	<i>Chorizanthe staticoides</i>	1.0 / 1.5
Coreopsis	<i>Coreopsis bigelovii</i>	2.0 / 3.0
Whispering bells	<i>Emmenanthe penduliflora</i>	1.0 / 2.0
Brittlebush	<i>Encelia actoni</i>	5.0 / 7.0
Thick-leaf yerba santa	<i>Eriodictyon crassifolium</i>	2.0 / 3.0
California buckwheat	<i>Eriogonum fasciculatum</i> ssp. <i>fasciculatum</i>	5.0 / 6.0
California buckwheat	<i>Eriogonum fasciculatum</i> ssp. <i>foliolosum</i>	2.0 / 3.0
Golden yarrow	<i>Eriophyllum confertiflorum</i>	1.5 / 2.5
Cudweed aster	<i>Lessingia filaginifolia</i>	1.0 / 1.5
Deerweed	<i>Lotus scoparius</i>	4.0 / 6.0
Lupine	<i>Lupinus bicolor</i>	1.0 / 2.0
Desert dandelion	<i>Malacothrix glabrata</i>	1.0 / 1.5
California melic	<i>Melica californica</i>	5.0 / 8.0
Chia	<i>Salvia columbariae</i>	1.5 / 2.5
Black sage	<i>Salvia mellifera</i>	1.5 / 2.5
Small fescue	<i>Vulpia microstachys</i>	4.0 / 5.0
<b>Total</b>		<b>41.5 / 62.0</b>

Table 2.2-4

**CONTAINER PLANT MATERIALS  
FOR NORTH FINES STORAGE AREA RECLAMATION**

Common Name	Scientific Name	Approximate Density per Acre
<b>Mesic Exposures</b>		
Big berry manzanita	<i>Arctostaphylos glauca</i>	30 - 40
Hoary-leaf ceanothus	<i>Ceanothus crassifolius</i>	30 - 35
Chaparral whitehorn	<i>Ceanothus leucodermis</i>	35 - 40
Beavertail cactus	<i>Opuntia basilaris</i> var. <i>basilaris</i>	20 - 25
Scrub oak	<i>Quercus berberidifolia</i>	40 - 50
Holly-leaf redberry	<i>Rhamnus ilicifolia</i>	30 - 40
<b>Total Density per Acre</b>		<b>185 - 230</b>

Table 2.2-5

**FINAL RECLAMATION  
CONTAINER PLANT MATERIALS FOR MINE AND FACILITIES AREAS**

Common Name	Scientific Name	Approximate Density per Acre
<b>Xeric Exposures</b>		
Chamise	<i>Adenostoma fasciulatum</i>	50 - 60
Mountain mahogany	<i>Cercocarpus betuloides</i>	20 - 30
California juniper	<i>Juniperus californica</i>	25 - 30
Our Lord's candle	<i>Yucca whipplei</i>	30 - 40
<b>Total Density per Acre</b>		<b>125 - 160</b>

The overall goal of the species mix is to provide adequate representation of species richness, density, and cover on the reclaimed sites.

The seed mix will be planted in the fall from October to December using an imprinter where possible and/or hydroseeding. Imprinting is useful for pressing seeds into the soil in "safe" pockets for germination. Hydroseeding provides the advantages of holding seed in place on steep and smooth slopes, while covering the seed minimally with mulch. It is effective both in short- and long-term revegetation. Although hydroseeding is considered a suitable method for revegetating the site, other seeding techniques may be evaluated during the initial reclamation

period. Imprinting is a successful seeding method that could be used on the site if a mechanism can be designed to negotiate the slopes. The most successful techniques will be used on the site.

Hydroseeding will consist of hydraulic application of a slurry mixture containing water, organic soil stabilizer, cellulose wood fiber, and seed. It is not anticipated that fertilizer will be added to the mix because native plants have low nutrient requirements and fertilizer application favors the establishment of noxious, weedy species.

The following materials will be applied in a one-step hydromulch operation:

- ▶ 2,000 pounds per acre virgin cellulose wood fiber,
- ▶ 160 pounds per acre organic soil stabilizer, and
- ▶ seed mix as developed for each phase of reclamation and area based on Tables 2.2-1, 2.2-2, and 2.2-3.

### **Container Planting Methods**

Container plantings will be placed in natural-looking patterns to suggest the contouring of the original site. Table 2.2-4 lists species to be used for container planting in the NFSA. Table 2.2-5 lists the species to be used for container planting in the final reclamation of the mine and facilities areas.

Container planting is necessary to maximize the chances of successfully achieving the revegetation standards for plant cover and density, provide soil stabilization early in the revegetation process, and obtain reproduction of the dominant shrub species as early as possible for contributions to the seed bank. The total number of container plants per acre represents approximately 25 percent of the total density of plants per acre observed during the baseline vegetation study, plus an adjustment upward to accommodate mortality. The species selected for container planting are primarily those that grow relatively slowly and are not expected to perform well in competition with species that are hydroseeded. However, some species that grow more quickly and are necessary for early stabilization of subsurface soils are included in the container planting.

Container plants will be set out on the site in the fall under the supervision of a native plant revegetation specialist. Planting holes will be twice as deep and wide as the rootball of the container plant. Prior to planting, the holes will be filled with water, backfilled halfway with soil, and filled again with water. If a temporary irrigation system is used (i.e., "clay pots"), it should be installed at planting.

Plants will be planted with minimal root disturbance in the premoistened holes with the root crown between grade and 0.5 inch above ground level. Soil will be backfilled in the hole and tamped gently around the plant. A watering basin will be constructed around each plant, and the basins will be filled with water.

**2.2.2.4 Irrigation**

No permanent irrigation system will be maintained at the revegetation sites. Any temporary irrigation requirements will be determined by the horticultural monitor. A temporary irrigation system using the "clay pots" or "deep pipe" irrigation techniques may be used.

**2.2.2.5 Maintenance**

All plantings and seeding will be maintained for a period of 5 years or until the revegetation standards have been met. The horticultural monitor will assess the site for health and vigor, and prescribe specific replanting or reseeding requirements if needed. If noxious weeds threaten the success of the revegetation sites, they will be removed using mechanical means and/or EPA-labeled herbicides.

**2.2.2.6 Monitoring**

Monitoring the revegetated site consists of two phases:

1. maintenance monitoring, including installation and establishment monitoring, and
2. performance monitoring.

The following section describes each monitoring phase and the parties responsible for each phase.

**Installation and Establishment**

The success of the revegetation installation is the responsibility of TMC. In order to assure that the revegetation performance standards are met, TMC will monitor the installation process from the beginning of the collection of seeds and plant cuttings through completion of its contractual maintenance period. The monitoring will include verification of plant propagule collection and planting quality, site preparation, and planting techniques.

Horticultural monitoring during establishment is necessary to evaluate the health of the planted material and identify any problems that require remedial action to ensure that revegetation performance standards are met. TMC is responsible for horticultural monitoring. The monitoring should be conducted by a trained professional with expertise in native plant horticulture. Monitoring reports will describe the survival, function, and appearance of the community. The horticultural monitor will provide specific recommendations regarding irrigation, weed control, replanting or reseeding, erosion control, site protection, and pest control. Necessary remedial action will be undertaken at the appropriate time in accordance with the recommendations of the horticultural monitor. All recommendations of the horticultural monitor will be submitted in writing to TMC.

The monitoring schedule is outlined as follows:

- ▶ frequent (ranging from weekly to monthly) during critical periods through the first year of planting, and
- ▶ semiannual monitoring during the spring and summer for the second through fifth years of planting or until performance standards are met.

Additional monitoring will be required for any areas that have not met the performance standards at the end of the 5-year performance monitoring period.

A summary of maintenance recommendations and remedial actions will be documented in annual reports and submitted to TMC and the BLM. The annual report shall include overall site observations, a qualitative evaluation of the plant community (i.e., performance of seedlings and container plants), and whether the revegetation sites require further significant maintenance measures.

### **Performance Monitoring**

The performance monitoring, which is the responsibility of TMC, will quantify development of the revegetation to evaluate whether the sites have met the performance standards. The performance monitoring will begin during the spring after the first year of planting the revegetation sites and continue until performance standards are met.

Monitoring will consist of fixed transects at each revegetation site. The number of transects necessary will be evaluated to ensure statistical confidence based on variation at each site. Data collected will consist of, at a minimum, percentage of cover and frequency of each species encountered along the transect. Photodocumentation of the sites will be conducted. In addition, an aerial photograph will be taken each year to further document restoration progress. Data will be compared to reference data collected from the site prior to mining and existing adjacent communities.

An annual report will be submitted to TMC and the County, Department of Regional Planning. The report will include an introduction to the Project, survey methodology, data analysis, and comparison to the reference data, as well as a discussion of the survey results in relation to the performance standards. The annual summary of the maintenance recommendations and remedial actions, specified in the previous section, will be included as an appendix to this monitoring report.

#### **2.2.2.7 Performance Standards**

#### **Concurrent Reclamation**

The goal of the concurrent Revegetation Plan is to provide erosion control during the life of the mining operation. Revegetation will be considered successful when seeded areas do not require

significant maintenance measures. Significant maintenance measures include planting seeds, irrigation, erosion control, or weed control. Average cover of vegetation shall be 80 percent with no bare areas greater than 10 feet by 10 feet.

### **Final Reclamation**

The goals of the revegetation program are to provide erosion control and approach the patterns of cover and dominant species distribution in the existing community. Performance standards will be based on the progress of the revegetation toward achieving the target vegetation percentage of cover and frequency of distribution. Revegetation sites will be considered successful when the following performance standards are met:

- ▶ The revegetation site does not require significant maintenance measures during the last 2 years of the establishment period as documented in the horticultural monitor's annual reports. Significant maintenance measures include planting seeds or containers, irrigation, erosion control, and weed control.
- ▶ The revegetation site is developing a trend in percent cover, species diversity, and frequency that is comparable to the existing scrub community. After 5 years, there will be a minimum of 70 percent vegetation cover as compared to an existing adjacent reference community. Species diversity will be at least 45 percent of the existing community. The density of the dominant species in the plant palettes (*Encelia actoni*, *Artemisia californica*, *Adenostoma fasciculatum*, *Eriogonum fasciculatum*, and *Salvia mellifera*) conform to the baseline survey as presented in Table F3-4 of Appendix F.

#### **2.2.3 Protection of Fish, Wildlife, and Habitat**

TMC has developed measures that are incorporated into the Reclamation Plan to protect existing wildlife and habitat values. The detailed measures are discussed in Section 4.3 of the Reclamation Plan and are under the relevant mitigation measures subheading in Section 3 of this EIS. It should be noted that these mitigation measures are actually part of TMC's Project. The measures incorporated in the Reclamation Plan are as follows:

**Sensitive Plant Species** - The Reclamation Plan addresses potentially significant impacts on sensitive plant species (such as Pierson's morning glory, slender mariposa lily, Plummer's mariposa lily, and club-haired mariposa lily). Seeds of these sensitive species shall be collected from onsite sensitive populations as fines storage proceeds, or be collected from nearby sites to be incorporated into the reseeding component of the Reclamation Plan in the specific areas where the populations occur (see Mitigation Measure B2).

**Sensitive Wildlife Species** - The impacts on wildlife associated with loss of vegetation communities and habitat on the site, including impacts on sensitive species such as the coastal western whiptail, are mitigated by the concurrent revegetation and restoration activities (see Mitigation Measures B1 and B3).

**Siltation and Erosion Control** - Surface drainage and flood control analyses have been completed for the Project and include controlled mining practices, an extensive system of desilting and debris basins, and specific erosion control features. The control of erosion is detailed in the Project SWPPP (EIS Appendix B1) and is supported through EIS Mitigation Measures B5, F1, F3, WQ1, WQ2, and WQ5.

**Prevention of Toxic Spills** - The Project has been developed with consideration of construction requirements for tanks, secondary containment structures, and inspection and operating procedures that minimize the potential for spills and leaks that could potentially pollute stormwater, groundwater, or surface water. The pertinent features are detailed in the SPCCP (EIS Appendix B2) and are supported through EIS Mitigation Measures B5, F3, and WQ3.

**Surface and Groundwater Monitoring Program, Unarmored Threespined Stickleback** - TMC will implement a multifaceted monitoring program to ensure that no significant impacts will occur to the unarmored threespined stickleback populations inhabiting the Santa Clara River upstream and downstream of the Project site. The program consists of a combination of measures including assessing local rainfall, predicting surface flows based on rainfall amounts, measuring surface flows, measuring subsurface water elevations, monitoring habitat quality, and preparing and submitting annual reports to Responsible Agencies. The monitoring program is detailed in Section 4.3.5 of the Mining and Reclamation Plan and is supported through EIS Mitigation Measures WR1 and B6.

**Invasive Plant Removal** - The Project includes the removal or control of giant reed (*Arundo donax*) from riparian areas adjacent to and downstream of the mining site. TMC will coordinate with the USFWS and Army Corps of Engineers to remove giant reed from non-Forest land along the Santa Clara River. Removal will occur from the Project site to the permanent stickleback habitat, just east of River's End Trailer Park, and from the Project site east to the junction of Agua Dulce Creek and the Santa Clara River. The commitment to remove giant reed is contained in the Mining and Reclamation Plan (Section 4.3.6) and in the Project Biological Assessment.

#### **2.2.4 Financial Assurance Performance Bond**

Financial assurances to assure reclamation of mining sites are required by the Federal Government, the State of California, and the County. Federal regulations regarding performance and reclamation bonds are detailed in 43 CFR at §3610.1-5. California has adopted financial assurance guidelines for use by Lead Agencies such as the County. In conformance with a longstanding state policy designed to "eliminate duplication among agencies and counties serving as lead agencies in implementing State and Federal requirements," and pursuant to a formally adopted Memorandum of Understanding (MOU) entered into by the State of California and the BLM, the State of California has agreed that "Any federally required financial assurance may be used to satisfy local and State surety requirements" (emphasis added) (CDMG et al. 1992).

Therefore, in accordance with the aforementioned MOU, the State of California has already agreed that the Performance and Reclamation Bond submitted by TMC to the BLM with regard

to this Project (Bond Number 526-09-34) may be used to satisfy State of California and County requirements for the financial assurance of the Reclamation Plan. This bond was submitted to the BLM in March 1990. Subsequently, in April 1992, a co-obligee rider was attached to and became a part of Bond 526-09-34, naming the SMGB and the County as additional obligees. In April 1992, this rider was acknowledged and accepted by the authorized officer of the BLM and was submitted by TMC to the County with a request that the County submit the bond to the State for review and approval.

Federal regulations required that a performance bond amounting to 20 percent of the contract value be deposited with the BLM. In this case, the first Federal Contract value (for the first phase of the Project) is equal to \$7,000,000. Therefore, the required bond amount is calculated as  $\$7,000,000 \times .20 = \$1,400,000$ , which is the penal sum of Bond 526-09-34.

State financial assurance guidelines indicate that a financial assurance should be "in an amount sufficient to reclaim, pursuant to the lead agency approved reclamation plan, lands disturbed since January 1, 1976; lands to be disturbed in the next year; and lands not reclaimed successfully pursuant to the approved reclamation plan." Thus, under State guidelines, the amount of financial assurance required is based, not only on the type of facility that exists, but also the amount of past mining and disturbances that would require reclamation. This amount is calculated on a site-specific basis and must be adequate to ensure that the lead agency or the Department of Conservation can reclaim the portion of the land which has been disturbed. Therefore, the amount of financial assurance required for a mining operation may vary from year to year and may increase or decrease in price over the life of the mining operation. The amount of financial assurance is reviewed annually by the lead agency and adjusted if necessary.

The amount of financial assurance for the proposed Soledad Facility has been calculated based on an analysis of the physical activities necessary to implement the approved reclamation plan after the first year of operations has been completed. These activities include cut and fill of slopes, plant structures and equipment removal, revegetation, and a percentage to cover contingency costs. Unit costs for these activities were estimated from Means Heavy Construction Cost Data (1995) and a third party estimate for revegetation costs (Fruit Growers Laboratory, 1996).

Based on the proposed Reclamation Plan, it is estimated that reclamation costs for the first year of the Project will be \$1,144,308. This estimated cost includes reclamation of previously disturbed areas as well as areas which will be disturbed in the first year.

## **2.2.5 Mitigation Monitoring and Enforcement Program**

Table 2.2-6 sets forth the requirements for monitoring and enforcement/verification for all Project mitigation measures. Where BLM is not the lead monitoring agency, they will provide coordination and information to that agency as may be required. Based on monitoring results produced by each lead agency and including Table 2.2-6, the BLM will prepare yearly monitoring reports for public review.

**Table 2.2-6**  
**MITIGATION AND MONITORING AND REPORTING PROGRAM**  
**SOLEDAD CANYON SAND AND GRAVEL MINING PROJECT**

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
G1.	Slope stability in the North Fines Storage Area (NFSAs) will be obtained by constructing 2:1 (horizontal to vertical) slopes at 75 percent relative compaction and compacting the outer 30 feet of material on the slope to 80 percent relative compaction. To mitigate the potential for surficial instability, the outer 10 feet of the proposed fill slopes will be constructed with a soil material having minimum strength characteristics of cohesion equal to 175 pounds per square foot (psf) and angle of internal friction equal to 35 degrees or some other alternative soil strength combination that will result in the minimum factor of safety of 1.5.	During mining	County of Los Angeles Department of Public Works	Site Plan review by Agency. Periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to agency.	At regular intervals throughout Project lifetime after NFSAs construction begins
G2.	Fill slope stability in the Cut 3 fill area will be obtained by constructing 2:1 (horizontal to vertical) slopes and by achieving 75 percent relative compaction. Benches will be constructed at 15-foot-wide and 90-foot vertical intervals. To mitigate the potential for surficial instability, the outer 10 feet of the proposed fill slopes will be constructed with a soil material having minimum strength characteristics of cohesion equal to 175 psf and angle of internal friction equal to 35 degrees or some other alternative soil strength combination that will result in the minimum factor of safety of 1.5.	During mining	County of Los Angeles Department of Public Works	Site Plan review by Agency. Periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to Agency.	At regular intervals throughout Project lifetime after Cut 3 filling begins
G3.	Ultimately, the former gravel pit high walls will be altered to a 1.15:1 (horizontal to vertical) slope using 15-foot-wide benches at 100-foot vertical intervals. The bottom of the pit walls on the west, north, and northeast sides will be buttressed with fill to provide a buffer zone and increase slope stability.	During mining	County of Los Angeles Department of Public Works	Site Plan review by Agency and periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to Agency.	At regular intervals throughout Project lifetime
G4.	To achieve suitable factors of safety for cut slopes, the following mitigation is presented. For the cut slopes at the northeast portion of the mining area, overall inclinations of the slopes will be flattened from 1.15:1 to 1.25:1. For the cut slopes at the far northeast portion of the mining area, the overall inclinations of the slopes will be flattened from 1.15:1 to 1.30:1.	During mining	County of Los Angeles Department of Public Works - Building and Safety	A California-registered engineering geologist shall periodically monitor the cut slope process.	At regular intervals throughout Project lifetime

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No.	Mitigation Measure Description	Time Frame for Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
G5.	Interim mining cuts will be constructed using 35-foot-wide berches over 35-foot elevational changes during the removal of the native material while controlling surface runoff and erosion.	During mining	County of Los Angeles Department of Public Works	A California-registered engineering geologist shall periodically monitor the process.	At regular intervals throughout Project lifetime
G6.	The mining activity will be regularly monitored throughout the life of the Project by a California registered civil engineer or engineering geologist, and periodic testing of the fill materials will be performed to verify strength parameters of the fill soil and relative compaction. The mine operator will maintain all records of correspondence, reports, and designs provided by the registered professional.	During mining	County of Los Angeles Department of Public Works	<p>The following monitoring actions shall be performed under the direction of a California-registered civil engineer or engineering geologist:</p> <ul style="list-style-type: none"> <li>➤ Periodic testing of fill materials to verify strength parameters of fill soil and relative compaction</li> <li>➤ Verification of compliance with Mitigation Measures G1, G2, G3, G4, G5, and G7</li> </ul>	At regular intervals throughout Project lifetime
G7.	Proposed mining and reclamation specifications and procedures will be in accordance with the County of Los Angeles Planning and Zoning Code, Title 22, Part 9, Chapter 22.56 surface mining permits.	Project startup and during mining	County of Los Angeles Department of Public Works	<p>Site Plan and Reclamation Plan review by Agency and approval and periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to Agency.</p>	Site Plan and Reclamation Plan review and approval are a condition of approval prior to construction Periodic testing shall be carried out at regular intervals throughout Project lifetime
<b>Water Resources</b>		Project startup and during mining	State Water Resources Control Board (SWRCB)	Habitat Protection Plan review and approval	Condition of Approval and throughout Project lifetime
WR1.	TMC will conduct a monitoring program for water resources and sensitive ecological habitats in the immediate vicinity of the Project. The Habitat Protection Plan will include the following components:				

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No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
	<p>a) Four existing monitoring wells, as shown on Figure 3.1.2-5, will be maintained to monitor water levels of the Santa Clara River underflow during the life of the Project.</p> <p>b) Surface flows of the Santa Clara River will be monitored during the life of the Project at a location(s) to be determined in conjunction with Responsible Agencies prior to the start of mining.</p> <p>c) The riparian and aquatic habitat in the immediate vicinity of the site will be monitored as detailed in the habitat protection plan presented in Appendix F6.</p> <p>d) The Habitat Protection Plan contains action levels that will trigger adjustments to mining operations to reduce Project water consumption to avoid significant degradation of the ecologically sensitive habitats attributable to the Project. Operational adjustments will include one or more of the following:</p> <ul style="list-style-type: none"> <li>➤ Seasonal sand and gravel production adjustments through stockpiling materials,</li> <li>➤ seasonal management of concrete production, stockpiling fines temporarily to eliminate water used in the compaction process,</li> <li>➤ increased use of dust palliatives for dust control,</li> <li>➤ temporary reduction or cessation of pumping of river underflows, and</li> <li>➤ cessation of mining operations, if necessary.</li> </ul>			Periodic site visits	
Flood	<p>F1. The Project will include construction of seven desilting/debris basins according to the specifications of the Drainage Concept Plan to control surface runoff and sedimentation. During final design, the Applicant shall submit detailed plans for the debris basins including a static and seismic slope study that analyzes all proposed debris basin slopes greater than 3:1 gradient. Plans shall be approved by the DPW prior to the commencement of grading work on the project.</p>	Before project work or mining commences in the catchment area above each watercourse	County of Los Angeles Department of Public Works	Desilting/debris basin design review and approval	Condition of Approval prior to construction

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No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
F2.	A 45-inch culvert will be installed under Soledad Canyon Road to accommodate existing runoff conditions as well as conditions for the Project. Construction of desilting/debris Basin 2E and the addition of the 45-inch-diameter culvert under Soledad Canyon Road are Project design features that result in beneficial impacts by correcting inadequate existing conditions.	Project startup	County of Los Angeles Department of Public Works	Design review and approval	Prior to construction
F3.	Proper maintenance and cleaning of erosion control facilities and desilting/debris basins will be conducted as part of the Project operations. Inspection frequencies and maintenance procedures are required by the Stormwater Pollution Prevention Plan (SWPPP) (see Appendix B1). These procedures are detailed in the Storm Water Management Practices section of that plan. The following provision will be added to the SWPPP: stormwater desilting/debris basins will be inspected after every storm event and every 24 hours during prolonged storm events. Prevention of spills of hazardous materials, such as petroleum fuels and products, is addressed in the Spill Prevention Control and Countermeasures Plan (SPCCP) (see Appendix B2).	During mining	County of Los Angeles Department of Public Works	Monthly inspection of stormwater and erosion control facilities for compliance with SWPPP, by TMC and reported to Agency. Inspections of stormwater desilting/debris basins after every storm event and every 24 hours during prolonged storm events for compliance with SWPPP by TMC and reported to Agency.	Monthly, throughout Project lifetime After every storm event and every 24 hours during prolonged storm events throughout Project lifetime
WQ1.	The proposed Drainage Concept Plan will be implemented by TMC. The drainage concept establishes a drainage plan and facility requirements for the project and provides the design parameters for the location, sizing, and scheduling of the erosion control facilities to handle the runoff, sedimentation, and debris flows generated by the Project. The plan addresses drainage during the premining road construction and grading phase, during the mining operation, and after completion of mining.	Project startup and during mining	County of Los Angeles Department of Public Works - Hydraulic/Water Conservation Division	Desilting/debris basin design review and approval by Agency.	Condition of Approval prior to construction, and throughout Project lifetime
WQ2.	TMC will implement provisions of the SWPPP. The SWPPP (1) identifies potential sources of pollutants that will adversely affect stormwater discharges from the site and (2) describes in detail specific best management practices to reduce the levels of pollutants in stormwater discharges. Key elements of the SWPPP include a preventive maintenance program for vehicles and the stormwater conveyance systems, a system of good housekeeping measures to control contamination of runoff, and a system of desilting/debris basins designed for settling out excess suspended sediments in the site runoff, thus controlling downstream sedimentation.	Project startup and during mining	County of Los Angeles Department of Public Works  CRWQCB - Los Angeles Region	SWPPP review and comment by Agency.  Monthly inspection of stormwater facilities for compliance with SWPPP by TMC and reported to Agency.	Condition of Approval prior to construction and throughout Project lifetime

No.	Mitigation Measure Description	Time Frame for Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
WQ3.	TMC will implement provisions of the SPCCP. Use of secondarily contained aboveground storage tanks (ASTs) to hold dust palliative, diesel fuel, waste oil, fresh motor oil, and hydraulic fluid onsite will minimize exposure of these products to surface water and groundwater. As previously stated, the risk of undetected leaks is much smaller with ASTs than with underground storage tanks (USTs). Additionally, the SPCCP identifies procedures and controls that will be implemented over the life of the Project to prevent and minimize the release of chemicals into the area's surface waters. The SPCCP's main focus is storage of diesel, hydraulic oil, motor oil, and waste oil in all ASTs having capacities of greater than 55 gallons (no USTs are planned for the facility). However, areas of the site designated for storage of smaller volumes of potentially hazardous materials (e.g., solvents and cleaners) are also covered in the SPCCP. General compliance requirements relating to facility operations that are addressed in the SPCCP include spill response, leaks and malfunctions, rainwater accumulation, inspection, changes, training, and recordkeeping.	Project startup and during mining	County of Los Angeles Department of Public Works CRWQCB - Los Angeles Region	SPCCP review and comment by Agency. Annual inspection of ASTs and spill containment facilities for compliance with SPCCP by TMC and reported to Agency.	Condition of Approval prior to construction and throughout Project lifetime
WQ4.	The proposed onsite sanitary septic tank leach field will be built following County review and approval of the location to ensure that there will be no possible impact on water quality. If an appropriate onsite location for the leach field is not found because of the presence of impermeable soils, fractured rock, or other geotechnical limitations, TMC will install a septic tank onsite that is designed for routine pumpout.	Project startup	County of Los Angeles Department of Public Works	Site visit, review and testing for suitable location of septic tank leach field	Prior to construction
WQ5.	Desilting/debris basins will not be removed until disturbed areas have been successfully revegetated.	During mining and following mine closure	County of Los Angeles Department of Public Works	Site visit and review following each reclamation phase/ prior to removal of associated sediment retention basin	Prior to removal of sediment retention basins

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No.	Mitigation Measure Description	Time Frame for Implementation	Monitoring Agency	Verification	Timing of Verification
Noise	<p>N1. The Applicant will conduct blasting operations in general conformance with the federal OSMRE regulations as stated in 30 CFR, Chapter VII, Sections 816.61 through 816.68, and other applicable regulations. Conformance shall be demonstrated through preparation of a detailed Blasting Plan identifying project compliance with the stated requirements (as minimum standards) and through monitoring of blasting activities. The Blasting Plan shall be reviewed and approved by the County prior to conducting any blasting onsite. The Blasting Plan shall provide for the following:</p> <ul style="list-style-type: none"> <li>a. Submission and approval by the County of the specific blast design prior to blasting, where such blasting will occur within 1,000 feet of habitable buildings outside the permit area.</li> <li>b. Conducting a public awareness program, including notification of all residents within <math>\frac{1}{2}</math> mile of any part of the permit area of the opportunity to request a preblast survey. The notification is to be done at least 30 days prior to initiation of blasting. A TMC information officer who can be contacted by telephone for information will be designated.</li> <li>c. Publication of the anticipated blasting schedule at least 10 days prior to the beginning of the blasting program via a newspaper of general circulation in the Project area and by direct mail to residents within <math>\frac{1}{2}</math> mile, and republication at least every 12 months or whenever substantive changes to the schedule are to be implemented.</li> <li>d. Placement of warning signs and access controls to blast areas.</li> <li>e. Incorporation of the provision that blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in course, channel, or availability of surface or groundwater outside of the permit area.</li> </ul>	<p>Project startup and during mining</p>	<p>County of Los Angeles Department of Public Works Office of Surface Mining Reclamation and Enforcement (OSMRE) Mine Safety and Health Administration (MSHA)</p>	<p>The Blasting Plan is subject to review and approval by the LADPW, OSMRE, and MSHA Specific blast designs are subject to LADPW approval</p>	Prior to blasting operations

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
	<p>f. Conducting blasting so that the maximum air overpressure shall not exceed 133 dB (2-Hz minimum) measured directly between the nearest occupied residence and the blast site (ref. U.S. Bureau of Mines Report of Investigations 8485 (1980) "Structure Response and Damage Produced by Airblast from Surface Mining").</p> <p>g. Conducting blasting so that the peak particle velocity generated from any blast shall not exceed 0.5 in/sec for vibration frequencies below 40 Hz, and 2.0 in/sec for vibration frequencies of 40 Hz or more, measured directly between the nearest residence and the blast site (U.S. Bureau of Mines 1980b). Other methods of determining acceptable particle vibration such as the use of scaled-distance equations shall be allowed subject to approval by the County.</p> <p>h. Conducting periodic monitoring offsite to ensure compliance with airblast and vibration standards and provide a seismograph record of each blast. Monitoring shall be conducted at a representative residential receptor and at a representative location adjacent to the Santa Clara River riparian habitat.</p> <p>i. Controlling flyrock at the blast site in accordance with OSMRE regulations. That is, flyrock traveling in the air or along the ground shall not be cast from the blasting site.</p> <p>j. Maintain records as specified by the County of all blasts for a minimum 3-year period.</p> <p>k. Identification of conditions when blasting will be curtailed, including atmospheric conditions that are conducive to transmission and amplification of noise offsite, and/or conditions conducive to the transport of high levels of fugitive dust emissions offsite. The Blasting Plan will identify such conditions where blasting is to be curtailed by the Applicant. The program shall also specify the candidate control measures specifically aimed at reducing blasting fugitive emissions.</p>				

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No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
	<p>1. Identification of other parameters affecting blasting such as the regulatory requirement that blasting be conducted during daylight hours. Blasting shall be prohibited on Sundays and specified holidays.</p> <p>m. Implementing specific measures to prevent nitrate contamination of surface and groundwater due to use of ANFO.</p>				
N2.	Based on the proposed lot configurations of the proposed Bee Canyon Mobile Home Park, trailers located west of the westernmost boundary of the TMC Project may be subject to significant noise during Mining Cut 3 operations. If the Bee Canyon Mobile Home Park is constructed, the noise impact will be reduced to less than significant by constructing berms or cut slopes to shield lots from direct noise exposure as confirmed through acoustic evaluation (based on final grading contours of the Bee Canyon project). It is anticipated that these measures would be applicable only if the Bee Canyon Park were actually constructed. If a soundwall is to be constructed, a detailed study will be conducted by qualified personnel in the fields of structural engineering, environmental noise assessment, and architectural acoustics.	Prior to implementation of Cut 3 if Bee Canyon Mobile Home Park is constructed.	County of Los Angeles Department of Public Works	Berm design review and approval	Once, prior to implementation of Cut 3 if Bee Canyon Mobile Home Park is constructed
N3.	At the River's End Trailer Park and the Bee Canyon Mobile Home Park, if constructed, soundwalls or berms will be constructed adjacent to affected lots to mitigate offsite truck transportation noise.	Prior to Project implementation	County of Los Angeles Department of Public Works	Berm design review and approval	Once, prior to Project implementation
<b>Public Services</b>					
PS1.	Fire prevention training for all employees will be conducted based on Cal-OSHA standards, and fire prevention equipment will be available onsite.	Throughout project	Occupational Safety and Health Administration (OSHA)  Los Angeles County Fire Department (LACFD)	The Project site shall be subject to unscheduled visits by OSHA and/or LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during Project construction and mine operations
PS2.	No explosives will be stored onsite.	During mining	OSHA  LACFD	The Project site shall be subject to unscheduled visits by OSHA and/or LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations

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PS3.	The water storage facilities onsite will be accessible to fire equipment by an all weather road capable of supporting 50,000 pounds. The road width should be a minimum of 26 feet within 25 feet of either side of the tank connection.	During mining	LACFID	The Project site shall be subject to unscheduled visits by LACFID inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS4.	The water storage tanks should have a 4 inch and 2.5 inch outlet with National Standard threads. These outlets should be no more than 6 feet from the road.	During mining	LACFID	The Project site shall be subject to unscheduled visits by LACFID inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS5.	The minimum road width shall be 20 feet throughout the mining operation and must reach to within 150 feet of all buildings and equipment.	During mining	LACFID	The Project site shall be subject to unscheduled visits by LACFID inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS6.	Grades on gravel roads should not exceed 10 percent. If they are paved, then a 15 percent grade is acceptable.	During mining	LACFID	The Project site shall be subject to unscheduled visits by LACFID inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS7.	Turnarounds should be provided on any road that exceeds 300 feet or one every 0.25 mile to 0.5 mile. The minimum radius is 32 feet.	During mining	Los Angeles County Fire Department (LACFD)	The Project site shall be subject to unscheduled visits by LACFID inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS8.	A minimum 200-foot fuel break will be provided around any mining operation.	During mining	LACFID	The Project site shall be subject to unscheduled visits by LACFID inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
Air Quality	Construction Exhaust Emissions. Mitigation for both heavy equipment and vehicle travel is limited. However, the following will be employed to reduce these emissions to the maximum extent feasible:	During mining	County of Los Angeles/BLM	Applicant will maintain maintenance and operating logs of pertinent equipment for agency review	At annual SMARA compliance inspection
AQ1a.					

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No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
	<p>1. maintain equipment in tune per manufacturer's specifications;</p> <p>2. use catalytic converters on gasoline-powered equipment;</p> <p>3. retard diesel engine timing by 4 degrees;</p> <p>4. install high-pressure fuel injectors;</p> <p>5. use reformulated, low-emission diesel fuel;</p> <p>6. substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible;</p> <p>7. where applicable, do not leave equipment idling for prolonged periods; and</p> <p>8. curtail (cease or reduce) construction during periods of high ambient pollutant concentrations (i.e., Stage II smog alerts).</p> <p>9. retard fuel injection timing, resulting in NO<sub>x</sub> reduction of 30 percent (&gt;40 percent in AP-42);</p> <p>10. use high-pressure fuel injectors resulting in PM-10 reduction in excess of 80 percent with a reduction in hydrocarbons; and</p> <p>11. use low-emission fuels resulting in unquantified reductions in all emissions.</p>				

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AQ1b.	<p>Construction Fugitive Dust Emissions. Although dust impacts are not expected to be significant during the construction phase, Project design standard measures will be implemented to control fugitive dust emissions during construction as required by SCAQMD Rules 402 and 403. These rules contain a nuisance provision that gives an SCAQMD inspector wide latitude to enforce dust abatement, particularly in the event of a nuisance complaint. Because of the extreme distances from sensitive receptors, no nuisance complaints are anticipated. Still, typical abatement measures, including daily watering of active construction areas and all traveled dirt roads to minimize dust lofting from vehicular disturbance, will be used.</p> <p>The Project is subject to this Rule 403 and will prepare a fugitive dust plan that will be reviewed and approved by the SCAQMD on an annual basis. The Plan will include Best Available Control Measures (BACM) and the regulation prohibits both visible dust and PM-10 concentrations in excess 50 g/m<sup>3</sup> at the Project boundary. The Project will comply with the Requirements of Rule 403.</p>	During construction	SCAQMD	Review and approval of Fugitive Dust Plan Investigation of complaints	Fugitive Dust Plan will be reviewed annually As required throughout Project lifetime
AQ1c.	<p>Operations Exhaust Emissions. In addition to the mitigation measures presented for onsite operations, TMC has made a commitment to reduce traffic congestion by providing the transit improvements as stated in Section 3.1.7.1 of the EIS. Because most of the trucks will be independently owned and operated, the Applicant has little control over these emissions. Still, the Applicant does have some control over these emissions while the trucks are onsite and in the selection of the owner/operators. Applicable mitigation then includes the following:</p> <ol style="list-style-type: none"> <li>1. Trucking will be performed on a 24-hour-per-day basis. This will reduce emissions by allowing trucks to operate during non-peak hours, increasing truck speeds, and eliminating prolonged idling in traffic, thereby decreasing truck emissions.</li> <li>2. When operating onsite, trucks will not be left idling for prolonged periods.</li> </ol>	During operations	County of Los Angeles/BLM	Applicant will maintain a log demonstrating compliance with this requirement	At annual SMARA compliance inspection

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No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
	<p>3. Applicant-operated trucks that are observed to emit excessive amounts of smoke (particulate matter) will either be tuned up or repaired, as applicable. Private owner-operators will be warned that, if their trucks emit excessive amounts of smoke, they will not be allowed future access to the facility.</p> <p>4. Where applicable, high-pressure fuel injector nozzles will be used, and diesel engine timing will be retarded by 4 degrees. (This includes both trucks and heavy equipment.)</p>			<p>Review and approval of Fugitive Dust Plan Investigation of nuisance complaints</p>	<p>Fugitive Dust Plan will be reviewed annually As required throughout Project lifetime</p>
AQ2.	<p>PM-10 dust emissions are also anticipated to create a significant impact for both Phases 1 and 2.</p> <p>The Project is subject to this Rule 403 and will prepare a fugitive dust plan that will be reviewed and approved by the SCAQMD on an annual basis. The Plan will include Best Available Control Measures (BACM) and the regulation prohibits both visible dust and PM-10 concentrations in excess 50 g/m<sup>3</sup> at the Project boundary. The Project will comply with the requirements of Rule 403.</p>	During mining	SCAQMD		
AQ3.	<p>Mitigation measures and control efficiencies for each dust-generating operation are presented in the following discussion. Tables 3.1.7-14 and 3.1.7-15 in Section 3.1.7 list the PM-10 unmitigated emissions, assumed control efficiency, and mitigated emissions for Phase 1 and 2 operations, respectively. These measures will be incorporated into the Rule 403 Fugitive Dust Plan.</p> <p>To further reduce PM-10 emissions, TMC shall use a semi-stationary "fines" conveyor system to move fines from the mobile crusher, located in the active mining area, directly to the NFSA. This fines conveyor shall extend along the haul road to the NFSA. A mobile conveyor shall be located in the NFSA and will tie in to this stationary fines conveyor thereby allowing fines to be distributed throughout the NFSA without the need for subsequent trucking of this material.</p>	During mining	County of Los Angeles/BLM	<p>Permit Condition, incorporate into approved Plan of Operations</p>	<p>Review and approval of Plan of Operations and annual compliance review as part of the annual SMARA compliance inspection.</p>

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
	<p>The mobile crusher has the ability to remove almost all of the fines during the crushing procedure. This crusher shall be equipped with two separate mobile conveyor systems. One of these mobile conveyor systems will transport fines removed in the initial crushing process to the main (stationary) fines conveyor and subsequently to the NFSAs. The other mobile conveyor will transport excavation products to the main product conveyor which takes it to the rock plant for further processing.</p> <p>Not all of the fines are removed at the mobile crusher and the rock plant also produces a modicum of fines during the processing procedure. These fines will be hauled by dump truck from the rock plant back to the stationary fines conveyor where it meets the haul route. From this point the fines will then travel along the stationary fines conveyor to the NFSAs. Transfer points on the conveyor will be controlled by wet suppression.</p>			<p>Applicant will maintain a log of onsite equipment specifications that demonstrates compliance with this measure.</p>	At annual SMARA compliance inspection
AQ4.	<p>For equipment falling in the appropriate horsepower ranges, the Project will use equipment which meets EPA/CARB standards (see Section 3.1.18 of the EIS).</p> <p>For Phase 1, the minimum standards which would apply would be the 1996 standards for 175-750 hp engines and the 2000 standards for equipment rated &gt;750 hp.</p> <p>Additional equipment purchased for Phase 2 of the Project will meet the year 2001 standards for 175-750 hp.</p> <p>Equipment built to meet EPA/CARB certified engine standards incorporates a number of combustion system improvements. Therefore mitigation measure AQ1 involving retarding diesel engine timing by 4 degrees and installing high-pressure fuel injectors would not be applicable to this equipment.</p>	During mining	County of Los Angeles/BLM		

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AQ5.	<p>Based on currently available technology, TMC proposes to install particulate filters that achieve 95 percent or greater reduction in diesel exhaust particulates on the following equipment:</p> <p>Phase 1: 13 cu. yd. pit loader; two, 100-ton haul trucks; and water truck</p> <p>Phase 2: two, 13-cu.yd. pit loaders; four, 100-ton haul trucks; water truck; two front end loaders; and 35-ton dump truck.</p> <p>Since diesel exhaust has recently begun to receive a high degree of attention, significant advances in control technology for heavy equipment are anticipated in the future. As these advances take place, TMC will review new technologies for their feasibility and applicability. Alternative methods for achieving equivalent or better diesel particulate reductions may be implemented in place of particulate filters. These alternatives may include:</p> <p>Conversion of some equipment to alternative or dual-fuel technology, if this becomes feasible.</p> <p>Purchasing lower emitting equipment, if it becomes available when new purchases are being considered.</p> <p>Use of low sulfur diesel, if it becomes available.</p>	During mining	County of Los Angeles/BLM	<p>Applicant will maintain a monthly log of equipment operating hours and will implement control measures when annual emissions approach the required threshold.</p>	At annual SMARA compliance inspection
Air Conformity Stipulations (not included in AQ mitigation measures)	SCAQMD Permits for onsite stationary sources	Prior to operation at the site	SCAQMD	<p>Obtain valid Permit to Construct or Permit to Operate for all stationary equipment prior to operations</p>	<p>Annual reporting required to and periodic inspections by SCAQMD</p>
RIOTA	B1. The impacts associated with the loss of natural vegetation communities and wildlife habitat in the Project area are less than significant with implementation of the Reclamation Plan. The Reclamation Plan (see Section 2.2) provides for concurrent revegetation of the site with species presently found onsite. The Reclamation Plan outlines revegetation specifications and establishes performance criteria for success of revegetation of the site.	During mining operations and after mine closure	County of Los Angeles Department of Public Works	Onsite verification of completion of performance criteria for successful site revegetation as set forth in the reclamation plan (Section 2.2)	During concurrent mining reclamation processes and completion of the final reclamation plan

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B2.	Significant impacts on the sensitive plant species (Pearson's morning glory, slender mariposa lily, Plummer's mariposa lily, and club-haired mariposa lily) in the northwestern region of the Project site due to fines placement and potentially from placement of desilting/debris Basins B and C will be mitigated by the following actions. Seeds of these sensitive species shall be collected from impacted populations as fines storage proceeds, and the seeds shall be incorporated into the Revegetation Plan for the site. These plant species, especially Pearson's morning glory, are found in areas that have experienced disturbance such as fire or clearing. Therefore, incorporating the seed of these species into the revegetation plan for the site will provide a means to salvage the populations, and impacts on these species will be reduced to less-than-significant levels.	Following mine closure	County of Los Angeles Department of Public Works	Onsite verification of completion of successful sensitive plant species site revegetation as set forth in reclamation plan (Section 2.2)	As required following completion of mining operations and final reclamation (after 20 years)
B3.	Potential significant impact on the coastal western whiptail will be reduced to nonsignificant with the implementation of the Reclamation Plan. This species is often associated with disturbed sites, and implementation of the Project would not result in a permanent loss of its habitat.	Following mine closure (20 years)	County of Los Angeles Department of Public Works	Onsite verification of presence of suitable coastal western whiptail habitat following reclamation	Following completion of mining operations and final reclamation (after 20 years)
B4.	Impacts from stray lighting from facilities and equipment yards will be reduced with the use of low-intensity lighting and direction shields. This will reduce the level of impact to less than significant.	Project construction	County of Los Angeles Department of Public Works	Onsite visit and photic evaluation.	After lighting is installed during Project construction
B5.	Potential impacts on the Santa Clara River biological resources from uncontrolled surface runoff from the site will be mitigated through implementation of project design measures including construction and maintenance of seven desilting/debris basins and implementation of the Project SWPPP and SPCCP.	Project lifetime (20 years).	County of Los Angeles Department of Public Works CRWQCB	SWPPP and SPCCP review and approval Monthly inspection of stormwater facilities for compliance with SWPPP	Condition of Approval prior to construction and throughout Project lifetime

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No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
B6.	Potential impacts on riparian habitat and proposed critical habitat of the unarmored threespine stickleback and regionally sensitive riparian vegetation from uncontrolled pumping of underflows of the Santa Clara River will be mitigated through implementation of the Habitat Protection Plan previously described in water resources (Section 3.1.2.3). The monitoring plan will be a multifaceted program of water resource monitoring and habitat monitoring of the permanent flowing stickleback habitat downstream from the site, as well as seasonal habitat adjacent to and downstream of the site. The habitat protection program is presented in detail in Appendix F6. The monitoring program will contain action levels based on habitat requirements for the unarmored threespine stickleback and riparian vegetation. These action levels will trigger adjustments to mining operations to reduce project water consumption, including the temporary cessation of pumping if necessary. In response to below-seasonal average rainfall, mining operations will be adjusted during the dry season to reduce water consumption. Operational adjustments will include one or more of the following:  a) seasonal sand and gravel production adjustments, b) seasonal management of concrete production, c) temporary stockpiling of fines, d) increased use of dust palliatives, e) temporary reduction or cessation of pumping of river underflows, and f) cessation of mining operations, if necessary.	Project lifetime	U.S. Fish and Wildlife Service (USFWS)	Approval of Habitat Protection Plan and unscheduled regulatory site inspections	Periodically, throughout Project lifetime
BO1.	<b>Biological Opinion Terms and Conditions</b>  The measures proposed by TMC in the biological assessment and summarized in the biological opinion (Appendix F11) are incorporated as terms and conditions of the biological opinion and shall be included by the BLM as conditions of the mining and reclamation plan for the proposed action.	During preparation of the Mining and Reclamation Plan	BLM	Review by Agency of Mining and Reclamation Plan to ensure that biological mitigation measures are included	As required during preparation of the plan
BO2a.	If the water quality and quantity parameters reach the action levels defined in the biological opinion (table titled Comparison of Unarmored Threespine Stickleback Habitat Requirements and Monitoring Plan Action Levels) the BLM shall require TMC to notify the appropriate BLM office and to cease pumping water from the alluvium of the Santa Clara River until the action levels defined in the table are again achieved.	Project lifetime	BLM USFWS	Review by Agency of Mining and Reclamation Plan	As required during Project lifetime

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
BO2b.	If pumping has been suspended until at least the water quality and quantity standards defined by the action levels are once again achieved, the BLM shall limit the amount of water pumped from the alluvium of the Santa Clara River by TMC to a rate and amount that will not result in fluctuations of the water level, water temperature, or oxygen level. This limitation shall remain in effect until the onset of rains during the next wet season.	Project lifetime, after implementation of measure BO2a.	BLM	Review by Agency of Mining and Reclamation Plan	As required from the implementation of measure BO2a to the onset of rains during the next wet season
BO3.	The BLM shall ensure that TMC uses only herbicides approved for spraying in and near aquatic sites, such as Rodeo, within 100 feet of the Santa Clara River when water flow is present in the river. Other herbicides may be used, according to their label restrictions, to control giant reed on upper floodplain terraces.	Project lifetime	BLM	Report of water quality and quantity monitoring data by TMC. Site visits by Agency as required	As required during the preparation of the plan
BO4.	The BLM shall require TMC to prepare an annual report for its review by December 1 of each year the mine is in operation or reclamation phases. After BLM's review, the report shall be forwarded to USFWS by January 15. The report shall document the effectiveness of the monitoring plan proposed by TMC and the terms and conditions, a summary of the information that was collected regarding water quality and quantity from the previous year, a summary of the results obtained from the habitat monitoring, and the results of any work to remove exotic species. If appropriate, the report shall also recommend modifications to the monitoring plan and terms and conditions to enhance the protection on unarmored threespine stickleback while making them more workable for TMC and the BLM.	Project lifetime	BLM USFWS	Site visits by Agency as required Annual Monitoring Report by TMC Review of Annual Monitoring Report by Agencies	Site visits as required during Project lifetime Annually by December 1 (BLM) and January 15 (USFWS)
BO5.	On locating dead unarmored threespine sticklebacks, initial notification must be made in writing to the USFWS Division of Law Enforcement and by telephone and writing to the Ventura Field Office within three working days of its finding. The report shall include the date, time, location of the carcass, a photograph, cause of death, if known, and any other pertinent information. Care shall be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. The remains of unarmored threespine sticklebacks shall be placed with the Los Angeles County Museum of Natural History. Arrangements regarding proper disposition of potential specimens shall be made with the museum by the project monitor prior to implementation of the action.	Project lifetime	BLM USFWS	Report by TMC Review of report by Agencies	Within 3 working days of location of dead unarmored threespine stickleback

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BO6.	The BLM and TMC will remove other exotic species from the habitat of the unarmored threespine stickleback when possible. In particular, any individuals of the African clawed frog that are encountered should be destroyed.	Project lifetime	BLM USFWS	Report by TMC Review of Report by Agencies	Annually by December 1 (BLM) and January 15 (USFWS)
CR1.	Under current construction plans, the historic archaeological site (LAN-1847H) will be avoided. However, to ensure that the site is not disturbed by construction activities, the site will be fenced under the direction of an archaeological monitor. With this measure, the site will be avoided and protected, which is a preferred mitigation measure.	Project Design and Construction	California Office of Historic Preservation	Representative archaeological monitor shall review site plan and direct the manner in which the archaeological site LAN-1847 shall be fenced and avoided	As required during Project construction
CR2.	If under future construction plans the site cannot be avoided and protected, an archaeological test program that includes archival research will be necessary to determine the site's importance. If the site is found to be important, a data recovery program will be implemented to mitigate impacts on a less-than-significant level.	Prior to disturbance of the site	California Office of Historic Preservation	Representative archaeological monitor shall conduct an archaeological test program including archival research to determine significance of site and need for excavation	At such time that avoidance of historic archaeological site LAN-1847H becomes infeasible
VQ1.	Reclamation and revegetation will occur starting every growing season after mining activity has ceased in particular areas.	Project lifetime and following mine closure	County of Los Angeles Department of Public Works	Onsite verification of completion of performance criteria for successful site revegetation as set forth in the reclamation plan (Section 2.2)	During concurrent mining reclamation processes and upon completion of the final reclamation plan
VQ2.	During the final phase of reclamation, the roads will be resloped to conform with the surrounding topography.	Final phase of reclamation (after 20 years)	Los Angeles County Department of Public Works	County Landscape Engineer shall monitor resloping practices	Following mine closure during final phase of reclamation
VQ3.	Reclamation of the NFSA will include grouping of revegetation to mimic existing topography and contouring to add dimension to the filled slopes.	Final phase of reclamation (after 20 years)	Los Angeles County Department of Public Works	County Landscape Engineer shall monitor revegetation practices	Following mine closure during final phase of reclamation
VQ4.	The Project will incorporate modern lighting systems that direct light to specific areas and prevent stray lighting from spilling onto surrounding areas. No lighting will be directed upward.	Project design and stage 4 of construction (1-2 years)	Los Angeles County Department of Public Works	County Engineer shall review the project site plan and inspect lighting following installation	During project design and stage 4 of construction

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No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
Traffic T1.	The TMC Project does not generate significant Project-specific impacts. However, mitigation measures are required for the Soledad Canyon Road/Antelope Valley Freeway NB and SB ramps intersections, and the east approach of Soledad Canyon Road to the Bee Canyon Mobile Home Park's most easterly access road that were determined to have significant cumulative impacts. The roadway improvements and traffic signal controls required to achieve an acceptable LOS are presented in Table 3.1.11-15. These improvements will be required with or without the Project if the other related projects are developed as currently proposed. It is recommended that the intersection traffic volumes be monitored by County Public Works and Caltrans to determine if and when the mitigations are required.	Project lifetime if required	Los Angeles County Department of Public Works - Traffic Division  California Department of Transportation (Caltrans)	Traffic volumes shall be periodically monitored throughout project lifetime to determine need for roadway improvements  If improvements are required, TMC will pay its pro-rata share of the improvements as stated in Mitigation Measure T1	Traffic volumes will be measured throughout Project lifetime  If and when improvements are required TMC shall pay its pro rata share

Pursuant to Los Angeles County Traffic Impact Analysis Guidelines (DPW 1997), the Project's pro-rata percent share of the improvements is 9.1 percent to widen and modify the east approach of Soledad Canyon Road to provide two through lanes and one exclusive right-turn lane (add one westbound through lane). TMC's pro-rata shares of the traffic signal installation costs will be 6.5 percent of the cost for the intersection at SR-14 SB ramp/Soledad Canyon Road, and 9.1 percent of the cost at SR-14 NB ramp/Soledad Canyon Road. This share was determined based on the average of the a.m. and p.m. peak hour traffic volumes entering the interchange.

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No.	Mitigation Measure Description	Time Frame for Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
T2.	<p>Access to the site is proposed to be relocated from its existing location on Soledad Canyon Road to a point opposite of the existing access road for the C.A. Rasmussen mining operations. This would create a conventional four-way intersection on Soledad Canyon Road. The Project will provide one shared left-turn/through lane and one exclusive right-turn lane on the north approach and aligned with the existing access road for the C.A. Rasmussen facility. A left-turn lane and one shared through/right-turn lane on both the east and west approaches on Soledad Canyon Road will be provided. The westbound merging lane will be designed with adequate sight distance to the satisfaction of the County Department of Traffic and Lighting. All striping improvements will also be approved by the Department. Project proposed access improvements are shown on Figure 3.1.11-4. Some trees and shrubs to the east and west of the access road will be cleared, as necessary, to afford an unimpeded view of oncoming traffic.</p> <p>If and when actual traffic conditions would warrant a traffic signal, TMC's pro-rata shares of the traffic signal installation costs for the Project access road/Soledad Canyon Road intersection will be 100 percent.</p>	Project lifetime	LA County Department of Public Works - Traffic Division	<p>County Engineers shall:</p> <ul style="list-style-type: none"> <li>➤ review and approve planned access roadway improvements</li> <li>➤ Monitor traffic volumes to determine need for traffic signal installation</li> </ul> <p>If improvements are required, TMC will pay its pro-rata share of the improvements as stated in Mitigation Measure T2</p>	During project design phase and construction for planned access roadway improvements
T3.	<p>The Applicant will contribute its fair share of costs to resurface the specific section(s) of pavement on Soledad Canyon Road. Paving shall be accomplished prior to the start of Phase 2 or at a later date as substantiated with a revised traffic index analysis which includes trucks generated by other projects.</p>	Prior to Phase 2 mining operations (within 10 years)	LA County Department of Public Works - Traffic Division	The LA County Department of Public Works - Traffic Division will monitor road quality and determine when repaving is necessary	Prior to Phase 2 mining operations (within 10 years)
LUI.	<p>No mitigation measures are required because no significant adverse impacts were identified. However, as a condition of TMC's Project, the County will review and approve the proposed Reclamation Plan to reclaim mined lands to a usable condition. Under the proposed Reclamation Plan, at the conclusion of the Federal Contracts, TMC will reclaim the TMC's Project processing site and/or all inactive disturbed areas. Any areas not used for continued mining will be reclaimed and revegetated for use as open space. Upon approval of all applicable permits and plans, the Project will be deemed consistent with state, regional, and local land use policies and designations.</p>	During project design phase.	LA County Department of Public Works	<p>The LA County Department of Public Works shall review and approve the proposed Reclamation Plan</p>	During project design phase, prior to construction

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Public Health and Safety					
PHS1.	Detailed emergency plans are presented in the SPCCP and will be strictly followed.	Project lifetime	CRWQCB Occupational Safety and Health Administration (OSHA)	Review and comment. The Project site shall also be subject to unscheduled site visits by CRWQCB and OSHA inspectors	During development of SPCCP and throughout Project lifetime
PHS2.	All Mine Safety and Health Administration (MSHA) and other applicable regulations will be strictly enforced.	Project lifetime	MSHA	Project site shall be subject to unscheduled visits by MSHA inspectors to ensure compliance with MSHA regulations	Throughout Project lifetime
PHS3.	Public access will be restricted to reduce the potential for accidents. Active mining areas will be fenced, and signs will be posted restricting access to Project site.	Project lifetime	MSHA	MSHA inspectors shall verify proper public access restriction measures are in place during unscheduled site visits	Throughout Project lifetime
PHS4.	The facility will be gated to control public access.	Project lifetime	MSHA	MSHA inspectors shall verify proper public access restriction measures are in place during unscheduled site visits	Throughout Project lifetime
PHS5.	Compliance with all regulations and requirements of OSHA, MSHA, and all applicable County 1994 Uniform Fire Codes will be observed.	Project lifetime	MSHA OSHA LACFDD	Unscheduled site visits by OSHA, MSHA, and LACFDD to ensure compliance with all applicable safety regulations and fire codes	Throughout Project lifetime
PHS6.	TMC will not remove topsoil on high wind days	Project lifetime	SCAQMD	Periodic review and approval of Fugitive Dust Plan by Agency.	At regular intervals throughout Project lifetime