

Environmental Checklist Form

1. **Project title:**
Delta Slope Stabilization Project
2. **Lead agency name and address:**
California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
3. **Contact person and phone number:**
Chris Stetler, (530) 542-5461
4. **Project location:**
The project is located on the eastern slope of the Sierra Nevada Mountains in Alpine County, California, on property owned by the State of California and commonly referred to as the Leviathan Mine (there are no tax assessor parcel numbers tied to this land). The property encompasses approximately 450 acres with mining disturbance on approximately 231 acres. The project location is inside the boundaries of Leviathan Mine, in Sections 15 and 22 in Township 10 north of Range 21 east of the Mount Diablo Meridian, Alpine County, Mineral Survey Nos. 6365A and 6365B. Leviathan Mine is approximately six miles east of Markleeville, California, and five miles west of Topaz Lake, Nevada.
5. **Project sponsor's name and address:**
California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
Attn: Chris Stetler
6. **General plan designation:**
Open Space
7. **Zoning:**
AG
7. **Description of project:**
See attached.
8. **Surrounding land uses and setting:**
The United States Department of Agriculture, Forest Service, Humboldt-Toiyabe National Forest (USFS) owns the majority of surrounding land, with the exception of ten private parcels adjacent to the south end of the state-owned property.
9. **Other public agencies whose approval is required:**
United States Environmental Protection Agency

PROJECT BACKGROUND:

Leviathan Mine (see Figure 1) is an inactive sulfur mine, at which underground mining commenced in 1863. Various mining activities have been conducted at the site since that time. Most recently, Anaconda Mining Company conducted open pit mining from 1951-1962. The State of California took title to the property to help effectuate the cleanup of the property commonly described as Leviathan Mine. The site comprises approximately 450 acres with mining disturbance on approximately 231 acres. The United States Department of Agriculture, Forest Service, Humboldt-Toiyabe National Forest (USFS) owns the majority of surrounding land, with the exception of ten private parcels adjacent and south of the state-owned property.

Mining activities at the site resulted in the exposure of pyrite, contained in the native soil and rock, to air and water. Such exposure can lead to the generation of acidic drainage, also referred to as acid mine drainage (AMD). As AMD travels through the ground or mine tailings, it dissolves and carries metals contained in the native soil and rock. If left unabated, metal-rich AMD discharges to nearby creeks (Leviathan and Aspen).

Leviathan and Aspen Creek flow across the mine site and merge downstream of the mine. The combined flow of Leviathan and Aspen Creek merges with Mountaineer Creek approximately one mile below the mine property. The confluence of Leviathan and Mountaineer Creek is considered the starting point of Bryant Creek. Bryant Creek flows across the Nevada state line and into the East Fork Carson River. There is an irrigation structure located on Bryant Creek approximately five miles downstream from the confluence of Leviathan and Mountaineer Creek. The irrigation structure is used during certain times of the year to divert flow out of Bryant Creek. The diverted flow is carried by an irrigation ditch to ranch lands located adjacent to the East Fork Carson River. The diverted flow is applied as irrigation water to pasture land.

The State of California acquired Leviathan Mine in 1984 to secure funding for, and to implement a pollution abatement project. In 1985, the California Regional Water Quality Control Board, Lahontan Region (RWQCB) completed a pollution abatement system at the site. The RWQCB completed an Environmental Impact Report (EIR) for the 1985 abatement project. The 1985 pollution abatement system captures and diverts surface runoff as a means to prevent the generation of AMD and erosion. In addition, the abatement system captures and evaporates AMD from underground mine workings in a series of lined evaporation ponds. The 1985 abatement project reduced the volume of AMD that is generated and discharged and the amount of sediment that is discharged to receiving waters; however, the project did not completely eliminate the discharge of pollutants from the site.

In May 2000, the United States Environmental Protection Agency (USEPA) placed Leviathan Mine on the National Priorities List, thus making Leviathan Mine a federal Superfund site. Because the State of California is the present property owner, USEPA has identified the State as a Potentially Responsible Party. USEPA has also identified Atlantic Richfield Company (successor to Anaconda Mining Company) as a Potentially Responsible Party for Leviathan Mine.

USEPA may direct Potentially Responsible Parties to take certain actions to characterize and abate pollution at Superfund sites. On July 19, 2000, pursuant to its authority under the Comprehensive Environmental Response, Compensation, and Liability Act, USEPA issued an Administrative Abatement Action (AAA) to the RWQCB and, thereby, directed the RWQCB to implement certain pollution abatement activities (including site maintenance) at Leviathan Mine. With only slight modification, USEPA reissued the AAA in 2001, 2002, and 2003 and, thereby, directed the RWQCB to maintain the 1985 pollution abatement project (including the evaporation ponds, Leviathan Creek Channel, access routes, etc.). It is expected that USEPA will continue to direct the work of RWQCB at Leviathan Mine through annual reissue of AAAs, or by some other mechanism, until a remedy addressing all releases of hazardous substances at Leviathan Mine has been implemented.

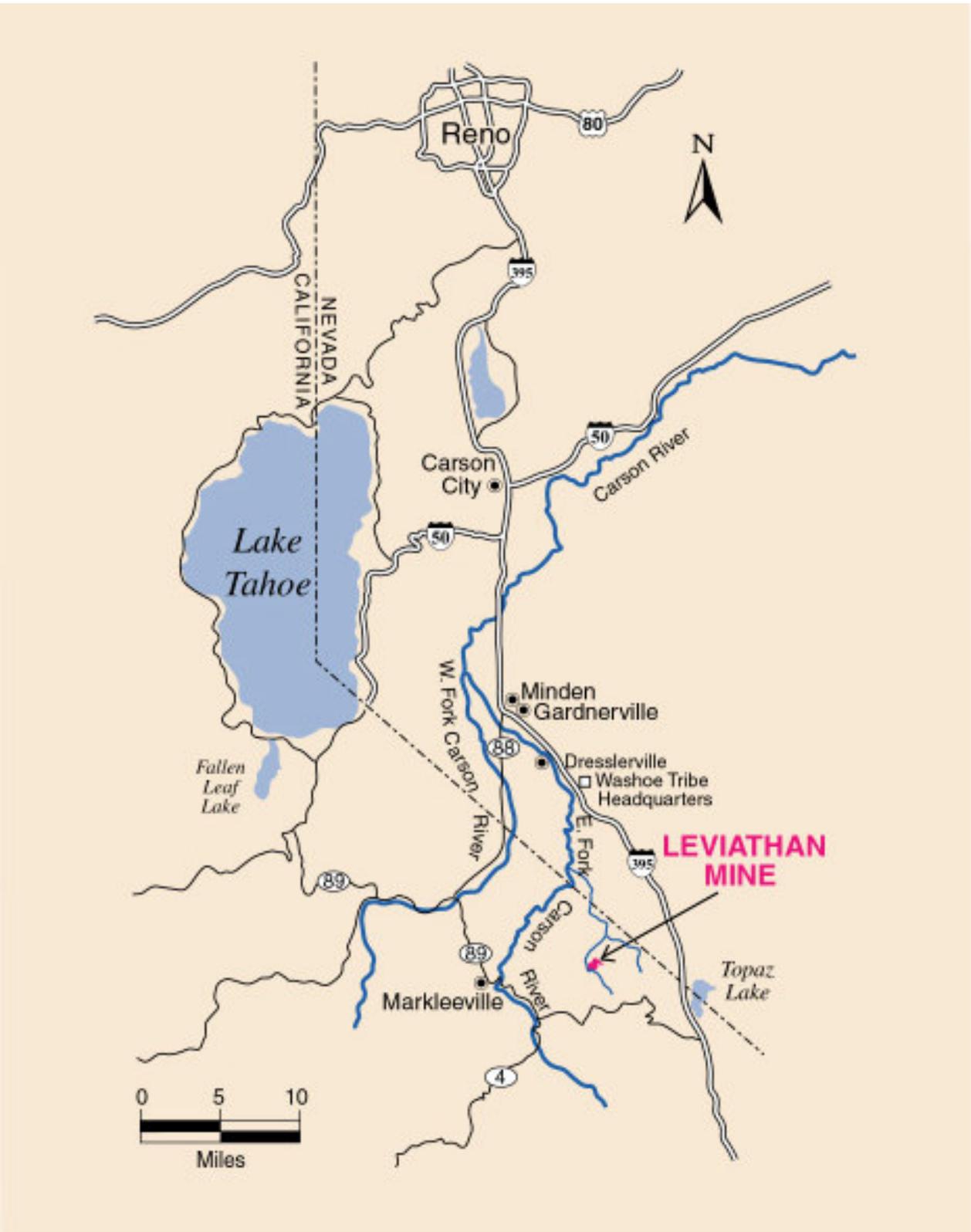
PROJECT DESCRIPTION:

An unstable slope, referred to as the Delta Slope, is located in the northwestern area of the mine site, directly north of evaporation Pond 4 (see Figure 2). The slope is composed of unconsolidated mine waste that was placed in the area while open pit mining was underway. An acidic seep, named the Delta Seep, emanates from several locations along the toe of the Delta Slope. The toe of the slope is approximately 80 ft from Leviathan Creek.

In the spring of 2000, RWQCB staff noted signs of instability on the Delta Slope, including saturation, toe bulging, and a head scarp. In January 2001, the RWQCB contracted Kleinfelder, Inc. to conduct an emergency slope stability assessment on the Delta Slope and, if necessary, to develop alternatives for a long-term solution. Kleinfelder, Inc. determined that the Delta Slope did not present an imminent threat, but recommended taking actions that would increase slope stability. Kleinfelder, Inc. produced two reports documenting the condition of the slide area; these reports may be obtained by contacting the RWQCB. The area of instability covers about two acres and is approximately 250 feet in length in a north-south direction and a maximum of about 120 feet in width in an east west direction, with a well defined but erosion-modified scarp over 200 feet in length along the top of the slope.

In 2002, the RWQCB contracted with the California Department of General Services (DGS) to design a slope stabilization project for the Delta Slope. In consultation with Kleinfelder, Inc., DGS prepared grading plans for the Delta Slope Stabilization Project. DGS proposes to stabilize the Delta Slope through the removal of slope materials, re-grading the area to decrease slope of the terrain, installation of surface and subsurface drainage structures, and revegetation of the newly constructed slope area. Revegetation of the area will provide improved erosion control and aesthetic value. The material removed from the Delta Slope will be placed onsite as shown in Figure 2. The fill areas will also be revegetated as part of the proposed project. Upon completion, surface runoff will be routed around the slide area and seepage from the Delta Slope will be collected by underground collection trenches and routed to a collection basin. The proposed seepage collection system will enhance the delivery of AMD from the Delta Slope to a collection basin.

USEPA has ordered Atlantic Richfield Company to treat AMD from the Delta Slope. The project is considered maintenance work, in that site facilities, including Pond 4 and the Nevada access route to the site, are dependent upon the stability of the Delta Slope. Complete project and grading plans may be obtained by contacting the RWQCB directly. A copy of the RWQCB's Leviathan Mine Health and Safety Plan may also be obtained by contacting the RWQCB. Project construction is scheduled to occur during late summer and early fall to coincide with low groundwater elevations.



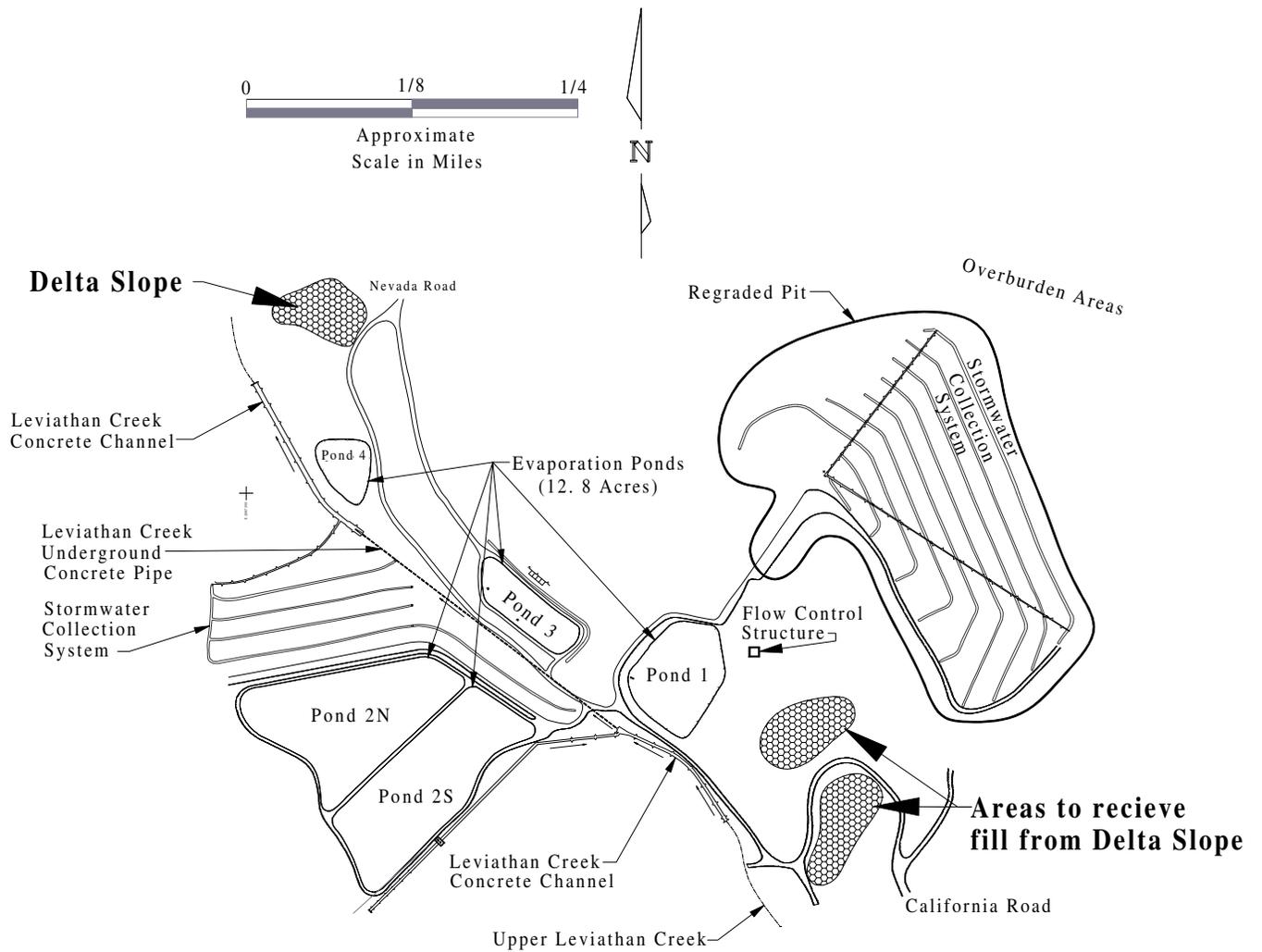


Figure 2: Delta Slope Area

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION:

On the basis of this initial evaluation:

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

Signature

Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the

statement is substantiated.

- 7) **Supporting Information Sources:** A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project' s environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X
IV. BIOLOGICAL RESOURCES -- Would the project:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.57?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.		X		
ii) Strong seismic ground shaking?		X		
iii) Seismic-related ground failure, including liquefaction?		X		
iv) Landslides?		X		
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X

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

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

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XI. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X
XIV. RECREATION --				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?		X		
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X		
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
XVI. UTILITIES AND SERVICE SYSTEMS Would the project:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
XVII. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

IMPACT ANALYSIS AND MITIGATION:

I. Aesthetics

Mining disturbance at Leviathan Mine significantly diminished the aesthetics of the project area by removing vegetation, creating waste piles, and establishing unnatural grades. This is particularly evident on the Delta Slope. Vegetation is sparse in this area and current grades, among other things, prevent long-term establishment of vegetation. The proposal to stabilize the Delta Slope will not have a substantial adverse effect upon existing aesthetics. In addition, the project includes grading to reduce slopes in the project area and revegetation to further reduce erosion and enhance aesthetics.

II. Agriculture Resources

During the summer months there is open range cattle grazing in the immediate vicinity of Leviathan Mine, and there is an irrigation structure located on Bryant Creek several miles downstream from mine site. The irrigation structure is used during the summer and fall months to divert flow from Bryant Creek. The diverted flow is carried via by an irrigation ditch to ranch lands located adjacent to the East Fork Carson River. The diverted flow is applied as irrigation water. The project area is located within a barbed-wire fence that encircles the disturbed mine area and prevents cattle from entering the mine site. The project includes a component to collect acidic waters from the Delta Slope at a central collection point. Under a separate project, Atlantic Richfield Company has been given the task of pumping acidic water from the central collection point to a treatment system somewhere on site. The project will enhance collection and conveyance of acidic waters from the Delta Slope to a treatment system. Treatment of acidic waters from the Delta Slope will improve the quality of water that eventually reaches the irrigation ditch. The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Agricultural Resources.

III. Air Quality (Impact b))

No long-term air quality impacts will occur from the proposal to stabilize the Delta Slope; however, related construction activities will create temporary, localized air quality impacts through the use of heavy equipment, generators, and associated equipment. Increases in dust from trucks on the dirt roads and soil disturbance will also decrease ambient air quality.

The following mitigation measures will reduce the potential impacts to air quality to less than significant. A speed limit of 15-mph (miles per hour) will be enforced on all site access roads. In addition, access to Leviathan Mine from Highway 89 will be identified as the primary access route (as a means to reduce traffic on unpaved roads in populated areas near Highway 395). Water must be applied to the project area as necessary for dust suppression. The contractor conducting the construction activities will include air monitoring in its site-specific Health and Safety Plan. As mitigated, the proposal to

stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Air Quality.

IV. Biological Resources (Impact b))

The Delta Slope area is composed of unconsolidated mine waste that was placed in the area while open pit mining was underway. The toe of the slope is located near Leviathan Creek and the area just north of the slope was not significantly disturbed by mining activities. Leviathan Creek in this section is impaired by heavy metals, sulfate, and total dissolved solids resulting from historic mining activities and releases of acid mine drainage.

The project is limited to areas that have been significantly altered by previous mining activities. Onsite vegetation in the project area is sparse, and is mostly a result of revegetation efforts on the part of the RWQCB. The project requires removal of some vegetation; however, most the vegetation affected by the project is of poor quality, and is not likely to survive many years (due to unstable slope and acidic soil conditions). The project includes intensive revegetation work, including re-grading to reduce slopes, incorporation of alkalinity and compost to improve soil conditions, and seeding and planting of native vegetation.

There are no known endangered species that would be adversely affected by the project. There are no known critical habitats for threatened, endangered, rare, or sensitive species that would be adversely affected by the project. Leviathan Creek is devoid of fish from below the mine to the confluence of Leviathan and Mountaineer creeks.

Alpine County provides a summer range for most of the Carson interstate deer herd and a small portion of the winter range for the Carson and West Walker deer herds. Deer herds have been observed outside the Leviathan Mine property and their tracks have been observed onsite. The disruption of natural topography, the lack of vegetation, and the poor quality of Leviathan Creek as a wildlife drinking water source are deterrents to many wildlife species. A 4-foot-high barbed wire fence surrounds the mine property and helps to keep out grazing cattle and other migrating wildlife. It is expected that, periodically, wildlife species may come into the project area.

The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Biological Resources because of the lack of vegetation in the project area. When completed, the project will improve the overall condition of the soil and increase the amount of vegetative cover.

V. Cultural Resources

The project is expected to have no effect on cultural resources. The project is located on disturbed areas. As the Delta Slope is composed of mine wastes, it is unlikely that any prehistoric resources are present, nor have any been found there to date. In the event that

any archeological, cultural, or paleontological resources are found, site work in the vicinity of the find will cease and activities will proceed pursuant to Section 15064.5 of the CEQA Guidelines. If there is a discovery of human remains, activities will proceed pursuant to Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. In the event of any discoveries, the Washoe Tribe Cultural Resources Coordinator will be contacted (775-888-0936). Given that the project is located on previously disturbed mine waste, the proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Cultural Resources.

VI. Geology and Soils (Impacts a)i, a)ii, a)iii, a)iv, b), c))

Information on geology, seismicity, and faulting in the Leviathan Mine area was taken from the 1983 Leviathan Mine Pollution Abatement Project Environmental Impact Report. This data suggests that there are two north-northwesterly trending unnamed faults, each approximately 12 to 14 miles in length, south of the mine on the eastern flank of the Sierra Nevada but within several miles of the mine. Seven smaller faults have been identified onsite. Much of the faulting appears to predate the mineralization of the area. Recent earthquakes with magnitudes greater than 4.0 were centered in Double Springs Flat (September 1994) and Markleeville (February 1995).

Investigations during 2001 and 2002 by Kleinfelder, Inc. determined that the area of instability on the Delta Slope is approximately 250 feet in length in a north-south direction and a maximum of about 120 feet in width in an east west direction. There is a well-defined but erosion-modified scarp over 200 feet in length along the top of the slope. Strong seismic ground shaking could result in more rapid movement of the slope. Substantial rain events during construction could cause soil erosion and lessen the stability of the slope. Recent geologic activity in the area, such as the earthquakes mentioned above, has not caused any catastrophic failure or rapid landslide movement in the project area.

There is another large landslide that is moving northerly across the northern portion of the mine property. This landslide occupies approximately 100 acres and is historic, existing prior to mining activities. Anaconda mining company placed fill on the landslide during open-pit mining. The suggested maximum long-term rate of movement has been about 3 feet per year. The project on the Delta Slope will not occur in the large landslide area.

The following measures will mitigate potential effects from seismic activity or landslides: 1) a project-specific Health and Safety Plan will be implemented to assure safe handling of emergency situations, including earthquakes and landslides, 2) employee facilities (office trailer, restroom, etc.) will be staged a safe distance from geologic and project structures that might break loose during an earthquake, and 3) signs and barriers will be installed to prevent access to areas below unstable slopes in the Open Pit area of the mine. In addition, the construction will be conducted during the summer and early fall months, when there are fewer rain events and when the soil is the least saturated with water. Appropriate staging of soil movement and excavation will also reduce risks posed

to workers. To mitigate the potential for substantial soil erosion, temporary and permanent best management practices will be installed as necessary to minimize the discharge of sediment from the project area.

The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Geology and Soils. When completed, the project will help to stabilize the northwest area of the mine site and the infrastructure nearby.

VII. Hazards and Hazardous Materials (Impact h)

The project includes activities, such as operation of heavy equipment on unstable slopes, which will pose some hazard to site workers. The general public will not be exposed to hazards from the project. Site workers will be required to adhere to the RWQCB's site Health & Safety Plan, and to their own company's project-specific Health & Safety Plan, as a means to mitigate exposure to hazardous working conditions. Hazardous materials will not be generated, handled, transported, or disposed of as part of the project.

Leviathan Mine is in a remote location surrounded by forested mountainous terrain and there exists a potential for wildfire. If unsafe wildfire conditions exist in the area, site access will be curtailed. The mine site itself is sparsely vegetated and would likely act as a firebreak and safe area if a fire ignited in the area. The proposal to stabilize the Delta Slope will not have a substantial adverse effect upon Hazards and Hazardous Materials.

VIII. Hydrology and Water Quality (Impacts a), f))

The project will require temporary soil disturbance of approximately ten acres. The Delta Slope is near and immediately up hill from Leviathan Creek. In its present state, the Delta Slope is a significant source of sediment to Leviathan Creek. Soil disturbance associated with project construction could increase sedimentation in Leviathan Creek, especially during rainfall events.

During project construction, the installation and maintenance of temporary best management practices (including silt fences, straw bales, and temporary sediment basins) to prevent the discharge of pollutants (including sediment, construction waste materials, stockpiled materials, petroleum products, etc.) to surface waters will mitigate potential effects to Hydrology and Water Quality. Additional mitigation measures include timing the construction during the drier summer and early fall months, and creating zones immediately adjacent to Leviathan Creek from which access by heavy equipment will be prevented. Under separate order from USEPA, Atlantic Richfield Company is required to pump and treat water from the Delta Seep during the project construction. Discharge to Leviathan Creek from Atlantic Richfield Company's treatment facility is required to comply with water quality standards enforced by USEPA.

Permanent improvements related to water quality include reduced erosion of acid generating soils from re-grading, amending the soil, and revegetation, and installation of

improved drainage collection and conveyance structures (including rock-lined ditches, seepage collection trenches, and pipeline conveyances). The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Hydrology and Water Quality. All potential short-term impacts will be mitigated, and the project will cause a long-term improvement.

IX. Land Use Planning

The project is remotely located, and, as such, is physically isolated from an established community. In addition, the project will not conflict with any applicable land use plans, policies, regulations, or habitat or natural community conservation plans. The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Land Use Planning.

X. Mineral Resources

The project will not result in the loss of availability of a known mineral resource, or in the loss of a locally important mineral resource. The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Mineral Resources.

XI. Noise (Impacts a), d))

The projects will result in temporary increases in noise while construction work is underway. The noise created will be mostly caused by the use of heavy equipment and system equipment (such as a generator). Given the remote location of the site, impacts to a community will not exist. Impacts from noise will be limited to the immediate vicinity of the project area. The project area is within the boundaries of mining disturbance and at least several hundred feet from undisturbed land areas where wildlife is expected.

Therefore, impacts from noise will be limited to the personnel working on the project. The following measures will mitigate potential impacts related to the temporary creation of noise: 1) all site workers and visitors in the project area use personal protection equipment (ear plugs and ear muffs) to reduce level of risk and exposure to loud noises, 2) loud equipment, such as generators, will be located away from worker areas to reduce exposure to noise hazards, 3) loud equipment will be restricted to the project area. As mitigated, the proposal to stabilize the Delta Slope will not have a substantial adverse effect upon Noise.

XII. Population and Housing

The project will not induce substantial growth in the area, nor will it displace existing housing or people. The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Population and Housing.

XIII. Public Services

The project will not require substantial changes in public services or governmental facilities. The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Public Services.

XIV. Recreation

The project will in no way alter the use of existing parks or other recreation facilities, nor does it include recreational facilities. The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Recreation.

XV. Transportation/Traffic (Impacts a), d))

During construction, the project will result in an increased number of vehicles traveling to Leviathan Mine. The expected increase in traffic, however, is well within the capacity of the existing roadways, including National Forest System Road 31052, and the increase in traffic will not be substantial.

The project will increase large truck and equipment traffic on Leviathan Mine road, which connects Highways 89 and 395. A speed limit of 15 mph will be enforced on all access roads. Arrival and departures of large trucks and equipment will be staged so that large vehicles will not have to pass one another on the road.

Highway 89 will be designated as the primary access route as it is located closer to the mine site and has no private houses along the road. Large trucks turning from Highway 89 onto Road 31052 can create a hazard on Highway 89, especially when turning from an easterly route on Highway 89. To mitigate this hazard, large trucks traveling from Highway 89 (Monitor Pass) to Leviathan Mine Road will be instructed to NOT turn left (across traffic) on to Leviathan Mine Road. Instead, large trucks will be instructed to go past Leviathan Mine Road, continue on Highway 89 another 2-3 miles, turn around near the top of Monitor Pass on a large flat area, then double back and make a right hand turn onto Leviathan Mine Road. Some very large vehicles may have to access the site from Hwy 395 due to their inability to negotiate the tight turns on the Hwy 89 access road. As mitigated, the proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Transportation/Traffic.

XVI. Utilities and Service Systems

The project will not require expansion of existing, or construction of new, utility services (such as wastewater treatment facilities, water supply facilities, stormwater conveyance/treatment facilities, landfill facilities). Utility water (non-potable) for the project will be provided via onsite diversions from Leviathan Creek. Portable, self-contained restroom facilities will be provided for onsite workers. Bottled water is supplied to serve as drinking water for site workers. The volume of garbage generated by the project will be less than 20 cubic yards and will not require expansion of existing

facilities. The proposal to stabilize the Delta Slope at Leviathan Mine will not have a substantial adverse effect upon Utilities and Service Systems.

XVII. Mandatory Findings of Significance (Impact a))

Potentially significant impacts associated with this project are temporary in nature, occurring during the construction phase of the project and are have been reduced to less than significant through mitigation measures. The completed project will benefit the quality of the environment by reducing erosion of acid generating materials, provide stability to mine site infrastructure, provide improved capture of an acidic seep, and improve vegetation cover.

MITIGATION MEASURES and MITIGATION MONITORING:

The RWQCB must comply with Section 21081.6 of the CA Public Resources Code by adopting the mitigation monitoring program shown in Table 2, below. RWQCB staff must designate a Leviathan Mine Site Manager for the duration of the proposed project. The duties of the RWQCB Site Manager must include daily monitoring of, and weekly reporting on, the implementation of the mitigation measures put forth in Table 2, below.

**Table 2
Schedule for the Implementing Mitigation Measures and
Procedures for Monitoring and Reporting**

Impact	Mitigation Measure	Implementation Schedule	Monitoring and Reporting
III. Air Quality			
Would the project:			
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<ol style="list-style-type: none"> 1. Imposition of 15 mile/hour speed limit on site and on all access roads to prevent dust. 2. Application of water on project area as necessary to prevent dust. 3. Collection of air monitoring data by the contractor to assure safe working conditions for site workers (required by Contractors' Health and Safety Plan). 	<ol style="list-style-type: none"> 1. Throughout duration of project construction. 2. As needed. 3. At least once during construction. 	<ol style="list-style-type: none"> 1. While construction is underway, the RWQCB Site Manager must conduct daily inspections of the project area, and must prepare weekly mitigation reports documenting the implementation of mitigation measures. The weekly mitigation reports must be kept on file in the RWQCB's South Lake Tahoe office, and available for public review both during and following project construction. 2. Same as No. 1, above. 3. Same as No. 1, above.
IV. Geology and Soils			
Would the project:			
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			

<p>i) Rupture of a known earthquake fault, as delineated on the most recent...</p>	<ol style="list-style-type: none"> 1. Implementation of the RWQCB's Leviathan Mine Site Health and Safety Plan to assure safe handling of emergency situations, including earthquakes. 2. Provide safety and orientation meeting to all site workers to alert them to unstable areas, and areas that might become unstable during an earthquake, as well as on-site first aid supplies and communication options for local emergency response agencies. 3. Locate employee facilities (office trailer, restroom, etc.) a safe distance away from geologic and project structures that might break loose during an earthquake. 4. Install signs and barriers to prevent access to unstable slopes where landslide may occur. 	<ol style="list-style-type: none"> 1. Daily when work is occurring at the site. 2. Provide site safety orientation to all new site workers on their first day at the site. 3. Locate employee facilities prior to construction. 4. Install signs and barriers at the beginning of the construction season. 	<ol style="list-style-type: none"> 1. While construction is underway, the RWQCB Site Manager must conduct daily inspections of the project area, and must prepare weekly mitigation reports documenting the implementation of mitigation measures. The weekly mitigation reports must be kept on file in the RWQCB's South Lake Tahoe office, and available for public review both during and following project construction. Same as No. 1, above. 2. Same as No. 1, above. 3. Same as No. 1, above. 4. Same as No. 1, above.
<p>ii) Strong seismic ground shaking?</p>	<p>See mitigation for a)i) above.</p>	<p>See schedule for a)i) above.</p>	<p>See Monitoring and Reporting for a)i), above.</p>
<p>iii) Seismic-related ground failure, including liquefaction?</p>	<p>See mitigation for a)i) above.</p>	<p>See schedule for a)i) above.</p>	<p>See Monitoring and Reporting for a)i), above.</p>
<p>iv) Landslides?</p>	<p>See mitigation for a)i) above.</p>	<p>See schedule for a)i) above.</p>	<p>See Monitoring and Reporting for a)i), above.</p>
<p>b) Result in substantial soil erosion or the loss of topsoil?</p>	<ol style="list-style-type: none"> 1. Installation of temporary and permanent best management practices to minimize the discharge of sediment from the project area. 2. Revegetation of the re-graded slope and fill areas to provide long-term erosion control. 	<ol style="list-style-type: none"> 1. During project construction. 2. At the end of the construction season. 	<ol style="list-style-type: none"> 1. While construction is underway, the RWQCB Site Manager must conduct daily inspections of the project area, and must prepare weekly mitigation reports documenting the implementation of mitigation measures. The weekly mitigation reports must be kept on file in the RWQCB's South Lake Tahoe office, and available for public review both during and following project construction. 2. Same as No. 1, above.
<p>c) Be located on a geologic unit or soil that is unstable....</p>	<p>See mitigation for a)i) above.</p>	<p>See schedule for a)i) above.</p>	<p>See Monitoring and Reporting for a)i), above.</p>

VIII. Hydrology and Water Quality			
a) Violate any water quality standard or waste discharge requirements.	<ol style="list-style-type: none"> 1. Re-grading to reduce erosion. 2. Installation of improved drainage collection and conveyance structures (including rock-lined ditches, seepage collection trenches, pipeline conveyances) to reduce erosion and infiltration. 3. Installation and maintenance of temporary and permanent best management practices (including silt fences, straw bales, temporary sediment basins, etc.) to prevent the discharge of pollutants (including sediment, construction waste materials, stockpiled materials, petroleum products, etc.) to surface waters. 4. Revegetation throughout the re-graded slope and fill areas to provide long-term erosion control. 5. AMD from the Delta Seep will be pumped and treated using the existing treatment system for the Delta Seep. 	<ol style="list-style-type: none"> 1. During project construction. 2. During project construction. 3. Temporary best management practices to be installed prior to start of earth moving and maintained for duration of project construction. 4. At the end of the construction season. 5. Continuous during project construction. 	<ol style="list-style-type: none"> 1. While construction is underway, the RWQCB Site Manager must conduct daily inspections of the project area, and must prepare weekly mitigation reports documenting the implementation of mitigation measures. The weekly mitigation reports must be kept on file in the RWQCB's South Lake Tahoe office, and available for public review both during and following project construction. 2. Same as No. 1, above. 3. Same as No. 1, above. 4. Same as No. 1, above. 5. Same as No. 1, above. Violations of USEPA orders will be reported by RWQCB staff to USEPA, and recorded in RWQCB files.
f) Otherwise substantially degrade water quality?	See mitigation for a), above.	See schedule for a), above.	See Monitoring and Reporting for a), above.
XI. Noise			
a) Exposure of persons to or generation of noise levels in excess of standards established...	<ol style="list-style-type: none"> 1. All site workers and visitors in the project area use personal protection equipment (earplugs and/or earmuffs) to reduce level of risk and exposure to loud noises. 2. Locate loud equipment, such as generators, away from worker areas to reduce exposure to noise hazards. 3. Restrict loud equipment to the project area. 	<ol style="list-style-type: none"> 1. Daily throughout project construction. 2. During project setup. 3. Daily throughout project construction. 	<ol style="list-style-type: none"> 1. While construction is underway, the RWQCB Site Manager must conduct daily inspections of the project area, and must prepare weekly mitigation reports documenting the implementation of mitigation measures. The weekly mitigation reports must be kept on file in the RWQCB's South Lake Tahoe office, and available for public review both during and following project construction. 2. Same as No. 1, above. 3. Same as No. 1, above.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity...	See mitigation for a) above.	See schedule for a) above.	See Monitoring and Reporting for a), above.
XV. Transportation/Traffic			
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	1. Highway 89 will be designated as the primary access road as it is located closer to the mine site and has no private houses along the mine road.	1. Throughout project construction.	1. While construction is underway, the RWQCB Site Manager must conduct daily inspections of the project area, and must prepare weekly mitigation reports documenting the implementation of mitigation measures. The weekly mitigation reports must be kept on file in the RWQCB's South Lake Tahoe office, and available for public review both during and following project construction.

<p>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?</p>	<ol style="list-style-type: none"> 1. Highway 89 will be designated as the primary access road as it is located closer to the mine site and has no private houses along the mine road. 2. Arrival and departure of large truck and equipment traffic will be staged so large vehicles will not pass on the road. 3. Large trucks traveling from Highway 89 (Monitor Pass) to Leviathan Mine Road will be instructed to NOT turn left (across traffic) on to Leviathan Mine Road. Instead, large trucks will be instructed to go past Leviathan Mine Road, continue on Highway 89 another 2-3 miles, turn around near the top of Monitor Pass on a large flat area, then double back and make a right hand turn onto Leviathan Mine Road. 4. Imposition of 15-mile/hour speed limit on site and on all access roads to prevent accidents. 	<ol style="list-style-type: none"> 1. Throughout project construction. 2. Daily throughout project construction. 3. Daily throughout project construction. 4. Daily throughout project construction. 	<ol style="list-style-type: none"> 1. While construction is underway, the RWQCB Site Manager must conduct daily inspections of the project area, and must prepare weekly mitigation reports documenting the implementation of mitigation measures. The weekly mitigation reports must be kept on file in the RWQCB's South Lake Tahoe office, and available for public review both during and following project construction. 2. Same as No. 1, above. 3. Same as No. 1, above. 4. Same as No. 1, above.
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