UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

SEP 14 2009

Thomas Seley, Field Manager
Bureau of Land Management
Tonopah Field Office
P.O. Box 911
Tonopah, NV 89049

Subject: Round Mountain Expansion Project Draft Environmental Impact Statement (EIS), Nye County, Nevada [CEQ # 20090256]

Dear Mr. Seley:

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced document. Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) NEPA Implementation Regulations at 40 CFR 1500-1508, and our NEPA review authority under Section 309 of the Clean Air Act.

We have appreciated the opportunity to work closely with you during the preparation of this Draft EIS consistent with the draft Memorandum of Understanding between the Nevada Bureau of Land Management and EPA on mining-related NEPA projects. We believe this process was helpful in early resolution of some issues during the EIS preparation process. Several outstanding issues remain, however, and we recommend they be addressed in the Final EIS. We have, therefore, rated this Draft EIS as EC-2 (see enclosed "Summary of Rating Definitions and Follow-Up Action"). Our rating of this document is based on our concerns regarding the project's potential impacts to groundwater and surface water quality and quantity, riparian areas, air quality, and the potential need for long-term financial assurance to protect groundwater quality. We recommend the Final EIS provide additional information regarding these issues, and include additional mitigation measures as well as financial assurance for reclamation and post-closure monitoring and mitigation.

We request a copy of the Final EIS when it is filed with our Washington, D.C. office. If you have any questions, please call me at (415) 972-3521, or have your staff call Jeanne Geselbracht at (415) 972-3853.

Sincerely,

Kathleen M. Goforth, Manager
Environmental Review Office

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Enclosures: EPA's Summary of Rating Definitions and Follow-Up Action
EPA's Detailed Comments

Cc: David Gaskin, Nevada Division of Environmental Protection
Kristine Hansen, U.S. Army Corps of Engineers

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

Round Mountain Expansion Project Draft EIS
EPA Detailed Comments – September, 2009

Water Quality and Quantity

The long-term drain-down solution from the Round Mountain heap leach pads would be collected and managed through evaporation and evapotranspiration cells that may be designed with an overflow system to a subsurface infiltration basin. However, the drain-down solution has the potential to exceed Nevada water quality standards for aluminum, arsenic, and antimony. While the Draft EIS indicates the alluvium has significant attenuation capacity for aluminum and arsenic, attenuation is not predicted for antimony. It is unclear how drain-down activities will be monitored and managed to ensure non-degradation of groundwater.

> **Recommendation:** The Final EIS should identify the water quality criteria or non-degradation standards that would need to be met and discuss how the drain-down solution and groundwater would be monitored and managed to ensure non-degradation of groundwater in the project area.

Storm water would be diverted around mine facilities. However, it is unclear from the Draft EIS (e.g., in Figures 2.3-3 and 2.4-1) how drainage from Kelsey Canyon, the unnamed canyon to the south of it, Shoshone Canyon, and the drainages flowing toward the Gold Hill facilities will be diverted around mine facilities. It is also unclear how these diversions will be stabilized during reclamation to ensure long-term protection of tailings, leach pads, and waste rock facilities from surface water flows in channels that have been diverted from their natural drainages.

> **Recommendation:** The Final EIS should clearly depict all storm water diversion channels on maps of the existing mine and proposed project, and describe in more detail how the project site will be reclaimed to ensure long-term protection of mine facilities from diversion channels.

The Draft EIS does not discuss the potential cumulative impacts of climate change on groundwater recovery, spring and stream flows, and riparian vegetation in the project area (e.g., shorter or longer recovery times, lower or higher predicted flows, reduced or expanded riparian areas, etc.).

> **Recommendation:** The cumulative impacts section of the Final EIS should address potential impacts of climate change on groundwater recovery, spring and stream flows, and riparian vegetation, and discuss whether additional measures may be needed to mitigate for the potential range of project area impacts associated with climate change.

Clean Water Act Section 404

EPA has received for review the U.S. Army Corps of Engineers' (Corps) jurisdictional delineation for the Round Mountain Expansion Project. A final decision on whether surface waters in the project area are jurisdictional waters of the U.S. will be made by the Corps by September 15. If a Clean Water Act Section 404 permit is required, the Final EIS should demonstrate the project complies with Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the Clean Water Act. Pursuant to 40 CFR 230, any permitted discharge into waters of the U.S. must be the least environmentally damaging practicable alternative available to achieve the project purpose. If any of the surface waters in the project area are determined to be waters of the U.S., it is unclear whether the project, as proposed, is the least environmentally damaging practicable alternative.

Streams, springs, and riparian areas are extremely valuable in the desert environment and should be protected by avoiding direct, indirect, and cumulative impacts. Regardless of the outcome of the jurisdictional delineation, even if impacts cannot be avoided or minimized, we strongly recommend they be mitigated.

We note that, under the proposed project, Jefferson Creek would be culverted at the transportation/haul road crossing. According to the Draft EIS, Jefferson Creek provides limited riparian habitat and is likely a valuable water resource to local wildlife when flowing (p. 3.17-1). The stream is also probably a wildlife corridor and supports a greater species diversity and density than the surrounding area.

> **Recommendation:** We recommend a bridge or conspan be seriously considered for the road crossing over Jefferson Creek to allow for better wildlife access along the stream and a more natural flowing stream.

Other intermittent and ephemeral streams also provide valuable water resources within the project boundary and larger cumulative effects area when they flow, which appears to be highest in winter and spring, according to Table 3.3-4. However, the Draft EIS does not provide information on how valuable these resources are, what wildlife is supported, how these resources will be affected, or how loss of these resources within the project area will be replaced.

> **Recommendation:** The Final EIS should provide more information on existing values and functions of these streams and how those values and functions would be affected by the project. If values and functions could be adversely affected, the Final EIS should identify measures to avoid, minimize, or mitigate these impacts. For all streams and springs in the project area, the Final EIS should also provide the following information.

- Will diversion channels be designed to provide wildlife connectivity where possible?

- Will diversion channels be designed to properly transport sediment, avoid upstream head-cutting and downstream erosion or aggradation?
- How will influent/effluent stream effects be modified by the project? How will flows be interrupted?
- What will happen to the streams downstream of the diversions? How would these streams be filled and/or diverted?
- What are the existing average dimensions of the channels, diversions, and affected downstream areas?
- What are the acreages and linear feet of affected resources?

Vegetation Resources

The project would result in a long-term loss of riparian vegetation along seeps, springs, and perennial streams from groundwater drawdown impacts. In addition, 0.05 acre of Jefferson Creek riparian vegetation would be removed or disturbed and other small drainages would be affected by filling and excavation. Riparian vegetation losses would be mitigated by the compensatory enhancement of existing riparian areas at off-site locations at a 2:1 ratio (Draft EIS, p. 4.14-4).

> **Recommendation:** The Final EIS should include a detailed riparian habitat compensation plan. Mitigation should be successfully implemented before habitat losses occur to ensure continuity of this rare regional resource. The discussion should include the following information.

- Acreage and habitat type that would be restored or enhanced;
- Water sources to maintain the mitigation area;
- The revegetation plans including the numbers and age of each species to be planted;
- Maintenance and monitoring plans, including performance standards to determine mitigation success;
- The size and location of mitigation zones;
- The parties that would be ultimately responsible for the plan's success; and
- Contingency plans that would be enacted if the original plan fails.

Air Quality

It is unclear whether Table 4.7-1 in the Draft EIS represents the Potential to Emit stationary source pollutants from the existing mine or the proposed project. In addition, with the exception of mercury, the Draft EIS does not identify or estimate emissions of hazardous air pollutants (HAP) from the existing mine or proposed project. Furthermore, only pollutants from stationary sources are estimated in the Draft EIS. Estimated fugitive emissions of both criteria pollutants and HAPs appear to be missing.

> **Recommendation:** The Final EIS should provide the projected emissions for both criteria pollutants and HAPs from the existing mine as well as the proposed project. Construction and operation emissions should be included.

Recommendation: We recommend the following diesel particulate matter (DPM) emission reduction measures.

- Use particle traps and other appropriate controls to reduce emissions of DPM and other air pollutants. Traps control approximately 80 percent of DPM, and specialized catalytic converters (oxidation catalysts) control approximately 20 percent of DPM, 40 percent of carbon monoxide emissions, and 50 percent of hydrocarbon emissions;
- After June 2010, use diesel fuel with a sulfur content of 15 parts per million or less, or other suitable alternative fuel, which substantially reduces DPM emissions (see http://www.clean-diesel.org/nonroad.html);
- Minimize construction-related trips of workers and equipment, including trucks and heavy equipment;
- Lease or buy newer, cleaner equipment (1996 or newer model);
- Employ periodic, unscheduled inspections to ensure that construction equipment is properly maintained at all times and does not unnecessarily idle, is tuned to manufacturer's specifications, and is not modified to increase horsepower except in accordance with established specifications.

Financial Assurance

The Draft EIS does not address the closure and reclamation bond that will be required by BLM and the State of Nevada for this project. EPA believes this information is important in the EIS because the adequacy of the bond affects the efficacy of the reclamation plan, which is critical to long-term protection of environmental resources.

Recommendation: We recommend that the Final EIS identify the estimated bond amounts for each closure and reclamation activity. Also discuss how BLM can modify the bond during the course of operations if temporary, long-term, or perpetual treatment and/or remediation needs are discovered during operations. The costs of implementing contingency measures (e.g., needs discovered in infiltration field pilot tests at Gold Hill) should be addressed. Identify who would be responsible for any post-closure cleanup actions should they be necessary.

It is possible that the Gold Hill pit could become a flow-through pit lake starting about 200 years after mine closure (Draft EIS, p. 4.3-45). However, potential mitigation measures are not proposed in the Draft EIS to protect against degradation of waters of the State. It appears a long-term trust fund may need to be established to cover the costs of potential mitigation. In addition, the Draft EIS (pp. ES-7 and 4.3-45) states that any required monitoring or mitigation measures associated with the pit lake would be implemented by the BLM. It is unclear whether the mine operator would be financially responsible for these activities.

Recommendation: The Final EIS should identify how groundwater adjacent to the Gold Hill pit would be monitored, and describe the potential mitigation measures that may be needed to protect waters of the state. If a long-term post-closure monitoring and management plan is needed, it should be included in the

Final EIS, and a long-term trust fund or other funding mechanism should be established to ensure adequate funding will be available to implement the post-closure plan. The Final EIS should identify who would be financially responsible for funding the trust fund and implementing the post-closure monitoring and management plan; the projected costs of each long-term monitoring and management activity; the financial assumptions used to estimate the funding level; the projected trust fund growth rate; and the mechanics of the trust fund.