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

August 24, 2010

Bob Edwards
Bureau of Land Management
5100 East Winnemucca Blvd.
Winnemucca, NV 89445-2921

Subject: Coeur Rochester Mine Expansion Project Preliminary Environmental Assessment, Pershing County, Nevada

Dear Mr. Edwards:

The U.S. Environmental Protection Agency (EPA) has reviewed the Preliminary Environmental Assessment (PEA) for the Coeur Rochester Mine Expansion Project. Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act (CAA).

The proposed project would expand the existing Rochester pit, create a new heap leach pad, and include backfilling the pit with waste rock. It would involve just over two hundred acres of new disturbance. This is the seventh amendment to the Plan of Operations (POO) since BLM approved the first POO in 1986. No Environmental Impact Statement (EIS) has been conducted regarding the POO nor any of its amendments.

EPA has concerns about the proposed project's potential direct and cumulative impacts on water and air quality. Additional information is needed before it can be determined whether or not these impacts are significant. This includes information on project alternatives and facilities design, water and air quality impacts, monitoring needs, mitigation measures, and financial assurance for closure and post-closure monitoring and management. If this information indicates that the project may result in significant direct, indirect, or cumulative environmental impacts to the human environment, an EIS must be prepared. If BLM determines that, based on the additional information, a finding of no significant impact (FONSI) can be approved, an environmental assessment (EA) may suffice. Our detailed comments are enclosed.

We appreciate the opportunity to review this PEA and are happy to answer any questions you may have about our comments. Please feel free to contact me at

415-972-3521 (goforth.kathleen@epa.gov), or contact Jeanne Geselbracht at 415-972-3853 (geselbracht.jeanne@epa.gov). Please send a copy of the EA or EIS to this office (mail code CED-2) as soon as it becomes available.

Sincerely,

/s/

Kathleen M. Goforth, Manager
Environmental Review Office

Enclosure: EPA Detailed Comments

Cc: David Gaskin, Nevada Division of Environmental Protection

Coeur Rochester Mine Expansion PEA
EPA Comments – August, 2010

Environmental Assessment vs. Environmental Impact Statement

EPA has concerns about the proposed project's potential direct and cumulative impacts on water and air quality. We believe additional information is needed before it can be determined whether or not the proposed project may have significant impacts on environmental resources. If the project may result in significant direct, indirect, or cumulative environmental impacts, an Environmental Impact Statement (EIS) must be prepared. If the Bureau of Land Management (BLM, the Bureau) determines that, based on the additional information, a finding of no significant impact (FONSI) can be approved, an environmental assessment (EA) may suffice.

The Council on Environmental Quality (CEQ) has stated that mitigation measures may be relied upon to make a FONSI only if they are imposed by statute or regulation, or submitted by an applicant or agency as part of the original proposal. An agency should not rely on the possibility of mitigation as a rationale for not preparing an EIS. Even if measures to mitigate significant impacts are developed during the EA stage, the existence of such possible mitigation does not obviate the need for an EIS. If the impacts of the proposed action are found to be significant, the Bureau should proceed with the EIS process and make the proposal and the potential mitigation available for public and agency review and comment, unless the nature of the overall proposal is altered, e.g., by incorporation of mitigation into the proposed project, itself, so that the impacts are rendered less than significant. This is essential to ensure that the final decision is based on all the relevant factors and that the full National Environmental Policy Act (NEPA) process will result in enforceable mitigation measures through the Record of Decision.[1]

Our comments and recommendations below refer to the next iteration of the environmental analysis for the proposed project as an EA because it is unknown at this time whether an EA or EIS will be prepared; however, our recommendations are appropriate for either an EA or an EIS for the proposed project.

Alternatives Analysis

The PEA does not sufficiently describe the existing conditions at the Coeur Rochester Mine nor the alternatives for mine expansion. For example, the document does not include a topographic map and cross-sections depicting the existing in-pit backfilled waste rock and locations of the potentially acid generating (PAG) waste rock cells. Nor does the PEA provide a topographic map and cross-sections of the alternative backfill and buttress areas, including PAG waste rock, under alternatives B, C, and D. Furthermore, the PEA does not indicate whether or how PAG and non-PAG waste rock would be segregated under Alternative C. Therefore, it is not clear from the PEA what

[1] CEQ, Memorandum for Federal NEA Liaisons, Federal, State and Local Officials and Other Persons Involved in the NEPA Process ("Forty Questions"), 1981.

existing backfill material would be rehandled, how it would be rehandled, where and how the existing PAG cells would be situated before and after rehandling, and what the PAG and non-PAG backfill configurations would look like under alternatives B, C and D.

> **Recommendation:** The EA should include topographic maps and cross-sections depicting the *existing* in-pit backfilled waste rock and PAG cells, as well as the *alternative* backfill and buttress areas, including PAG waste rock, under alternatives B, C, and D. The EA should clarify what existing backfill material would be rehandled, how it would be rehandled, where and how the existing PAG cells would be situated before and after rehandling, and what the PAG and non-PAG backfill configurations would look like under alternatives B, C, and D.

The PEA indicates that PAG material would be backfilled above the predicted post-recovery water table and covered with at least ten feet of non-PAG material. The PEA does not indicate how the appropriateness of a ten-foot non-PAG cover was determined, but it does not appear to be based on stoichiometry. Nor does the PEA indicate whether PAG material would be amended with neutralizing material.

> **Recommendation:** The EA should identify the appropriate amount of non-PAG cover over PAG cells, discuss how this was calculated, and clarify whether the appropriate amount will be used. The EA should also describe whether and how PAG material would be neutralized within the backfill.

The PEA (p. 4-18) states that, under Alternative B, precipitation and runoff into the pit would infiltrate through the backfill and recharge the aquifer at a rate of approximately two gallons per minute. It is unclear how this rate was determined and what assumptions were used in the modeling (e.g., thickness of growth medium, snow melt during the non-growing season, etc.). In addition, page 4-19 states that, because of this limited flow through the backfill to the aquifer, any impacts on the underlying groundwater quality would be localized and minimal. This statement is vague and should be clarified. Furthermore, in light of the existing impacts to groundwater quality resulting from past and current operations at the mine, the cumulative impacts on groundwater quality should be more thoroughly assessed.

> **Recommendation:** The EA should discuss more thoroughly the significance of the potential direct and cumulative impacts to groundwater quality in the mine vicinity. The EA should describe how the recharge rate was calculated and discuss the fate and transport of constituents in the aquifer from flow through the backfill under Alternative B, including their concentrations over time and distance from the pit, in addition to the cumulative (past, present, and foreseeable future) impacts to groundwater in the mine vicinity. Measures should be taken to minimize infiltration through the waste rock. The EA should describe these measures and discuss their anticipated effectiveness.

The PEA (pp. 2-9, 2-10) states that 195,000 cubic yards of growth medium would be salvaged, which is sufficient to cover the Stage III heap leach facility to a depth of ten

inches. Elsewhere, the PEA states that all available soil suitable for use as growth medium would be salvaged (p. 2-15) and that 400,000 to 600,000 cubic yards of growth medium exist within the footprint of the proposed Stage III heap leach pad (p. 3-56). The EA should rectify this discrepancy. In addition, it is unclear how the ten-inch depth was determined and whether it is adequate for reclaiming the heap leach pad. It is also unclear whether or how much growth medium would be placed over the backfilled waste rock, and whether the two-gallon per minute aquifer recharge rate from the backfill assumes any growth medium cover on the waste rock.

> **Recommendation:** The EA should discuss how appropriate growth medium depth was determined for both the Stage III heap leach pad and the backfilled waste rock, and clarify how much would be salvaged and used for reclamation.

The PEA does not indicate where on the Stage II heap leach pad the proposed growth medium stockpile would be locatedn or how, when, and where it would be moved during Stage II heap reclamation.

> **Recommendation:** The EA should provide this information and depict the growth medium stockpile(s) on maps for alternatives B, C, and D.

Water Quality

The PEA (p. 3-27) states that elevated or slowly increasing constituent concentrations in American Canyon Spring may be the result of seepage from the existing clay-lined stormwater runoff pond located directly upgradient of the spring or from the process area. However, the PEA does not indicate whether the source of the elevated and/or increasing concentrations has been verified, whether the ponds have been sampled after storm events, how the process area could be contributing to the degradation of the spring, or what is currently being done to determine the source and rectify the problem. EPA is concerned that, if the problem is not rectified first, approval of the proposed project could exacerbate water quality degradation of the spring.

> **Recommendation:** The EA should clarify whether the source of the elevated and/or increasing concentrations has been verified and whether the stormwater ponds have been sampled. If so, the EA should provide the results. The EA should also discuss how the process area could be contributing to the degradation of the spring and what is currently being done to determine the source and rectify the problem. EPA recommends that BLM not approve use of these ponds or the process area for the proposed project unless and until the source of the constituent concentration trends in American Canyon Spring is determined and measures are taken to rectify the problem.

Monitoring

The PEA (p. 2-18) states that Coeur would coordinate the development of the groundwater monitoring program with Nevada Division of Environmental Protection

(NDEP) and BLM for alternatives B, C, and D. The PEA discussion focuses only on monitoring of the pit and not the proposed Stage III heap leach pad. Monitoring and mitigation should be identified and described along with the alternatives in the EA and committed to in the decision record.

> **Recommendation:** Amendment of the Coeur Rochester Mine groundwater and surface water monitoring plan to incorporate the entire proposed project should be completed and included as a commitment in the EA before a decision record is signed. In addition to locations of wells and sampling stations, testing protocols, sampling frequency and analysis, and reporting requirements, the plan should also include action thresholds, enforcement mechanisms, and mitigation measures should action thresholds be exceeded.

Air Emissions

According to the PEA, mercury emissions from the mine would be four to ten pounds per year, based on 2008 and 2009 emissions. It is unclear, however, whether throughput under the proposed project would be the same as 2008 and 2009 throughput and whether mercury concentrations in the ore for the proposed project are similar to those during 2008 and 2009.

> **Recommendation:** The EA should provide this information.

The mercury estimates referenced above are only for the point source facilities at the mine, presumably the melt furnace and retort units. However, the PEA does not provide estimates for fugitive mercury emissions from the existing mine as a whole, nor from the mine under the proposed project. Heap leach pads and tailings can be significant sources of fugitive mercury emissions, and must be included in emissions calculations. The discussion on cumulative mercury emissions accounts for only thermal point source emissions at the Florida Canyon/Standard operations, and does not account for emissions from fugitive sources there nor from wildfires and other sources.

> **Recommendation:** The EA should include mercury emissions estimates from all sources at the existing Coeur Rochester and Packard mines and the proposed project. The EA should estimate the cumulative mercury emissions for the cumulative impact study area and describe the potential impacts to water quality. The EA should identify and describe measures that would be taken to minimize fugitive sources at the existing and proposed expanded mine and discuss the anticipated effectiveness of these measures.

It is unclear how PM2.5 (particulate matter smaller than 2.5 microns) was modeled for this analysis. PM2.5 modeling should be conducted in accordance with EPA's March 23, 2010 memorandum, "Modeling Procedures for Demonstrating Compliance with PM2.5 NAAQS" (available at http://www.epa.gov/ttn/scram/).

Recommendation: The BLM should ensure that PM2.5 modeling was appropriately conducted. The EA should provide a summary of the modeling conducted for this analysis, including the assumptions used.

The PEA does not discuss measures to reduce air pollutant emissions at the mine. We recommend BLM consider including measures to reduce emissions of diesel particulate matter (DPM) from fugitive sources at the mine.

Recommendation: We recommend the following 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;
- Use diesel fuel with a sulfur content of 15 parts per million or less, or other suitable alternative fuel, which substantially reduces DPM emissions, required as of June 2010. (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.

We also wish to alert you that recent guidance on the new 1-hour NO_2 NAAQS is available in a June 29, 2010, EPA memorandum, "Guidance Concerning the Implementation of the 1-hour NO2 NAAQS for the Prevention of Significant Deterioration Program" (available at http://www.epa.gov/ttn/scram/). We recommend BLM refer to this guidance for future NO_2 analyses.

Cumulative Impacts

The PEA addresses cumulative impacts of the alternatives on soils, vegetation, invasive/noxious weeds, and wildlife only in terms of the incremental impacts that the proposed project would have on these resources. It does not assess the level or significance of these impacts when added to other past, present, and reasonably foreseeable future actions, including the impacts from the mine as a whole, which covers 1,568 acres. Cumulative impact analyses are important because they describe the threats to resources as a whole, and understanding cumulative impacts can illuminate opportunities for minimizing those threats.

Recommendation: The EA should thoroughly address the cumulative impacts of each alternative on these resources.

Mine Closure and Financial Assurance

The PEA does not provide detailed information regarding closure of the proposed Stage III heap leach pad. It states that a final permanent closure plan for the facility would be submitted at least two years before final closure. However, the EA should evaluate the entire proposed project, including closure and post-closure activities and potential impacts, and measures to mitigate those impacts. This information is needed before the project is approved so an informed decision can be made, requirements and commitments are clear, and appropriate financial assurance is established while the mine operator still has a strong interest in the property.

> **Recommendation:** The EA should provide a more detailed description of the closure process for the Stage III heap leach pad, including drain down rates over time, disposition and location of drain down fluids, the potential impacts of drain down fluids on environmental resources, measures to avoid adverse impacts, and the costs associated with this closure.

It appears that long-term post-closure monitoring and mitigation may be necessary at the Coeur Rochester Mine to ensure monitoring is conducted and remediation of spills and leaks is completed.

> **Recommendation:** The EA should discuss whether long-term post-closure operations and maintenance or monitoring may be necessary, describe these activities, indicate the projected costs for these activities, and discuss any requirements BLM has imposed or would impose on the mine operator to establish a trust fund or other funding mechanism to ensure post-closure care, in accordance with 43 CFR 3809.552(c). The financial assurance necessary to fund post-closure activities must be kept current as conditions change at the mine, and BLM should ensure that the form of the financial assurance does not depend on the continued financial health of the mine operator or its parent corporation. If a trust fund would be needed, the EA should include a general description of the trust fund. The mechanics of the fund are critical to determining whether sufficient funds would be available to implement the post-closure plan and reduce the possibility of long-term contamination problems.