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

August 1, 2013

Amy Lueders
Bureau of Land Management
1340 Financial Boulevard
Reno, Nevada 89520

Subject: Hollister Underground Mine Project Final Environmental Impact Statement, Elko County, Nevada [CEQ # 20130190]

Dear Ms. Lueders:

The U.S. Environmental Protection Agency has reviewed the above referenced document. Our review and comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality's NEPA Implementation Regulations at 40 CFR 1500-1508, and our review authority under Section 309 of the Clean Air Act, as well as the May 21, 2008 Memorandum of Understanding between the Bureau of Land Management and EPA.

On July 16, 2012, EPA rated the Hollister Underground Mine Project Draft EIS as "EO-3 – Environmental Objections - Inadequate Information," based primarily on the likelihood that groundwater and surface water resources – including jurisdictional Waters of the United States – would be significantly and adversely affected by the proposed Project. The Draft EIS was rated Inadequate because it did not disclose information regarding long-term post-closure monitoring, maintenance, or cost estimates. EPA recommended that BLM develop a long-term mitigation and management strategy, including appropriate financial assurance commitments to ensure that sufficient funds will be available for post-closure obligations for as long as needed.

The Final EIS was prepared in an abbreviated format, to be used in conjunction with the Draft EIS. We will hereafter refer to the combined Draft EIS and Final EIS as the "EIS" unless otherwise noted.

Although we appreciate BLM's response to our comments on the Draft EIS, the EIS is unresponsive to our primary concerns related to protection of water resources and the need for financial assurance. Incomplete site characterization and discrepancies within the document make it difficult to understand the complex hydrogeology at the proposed site. As a result, we are unable to determine many of the potential impacts associated with the proposed action. The EIS does not provide adequate contingency measures to address the range of potential impacts. While current modeling efforts show that contamination will eventually disperse, contaminants

of potential concern will likely be present in groundwater for hundreds of years. Given the long-term nature of the expected contamination and the wide range of possible outcomes, we continue to recommend that BLM develop a long-term mitigation and management strategy with appropriate financial assurance commitments to ensure that sufficient funds will be available for post-closure obligations for as long as they may be needed. The remainder of this letter elaborates on the bases for this recommendation.

Groundwater and Geochemical Models have not Addressed the Range of Potential Impacts

The EIS does not discuss the uncertainties associated with the groundwater or geochemical models, nor the range of potential effects these uncertainties might have on model predictions. Many aspects of the hydrogeologic system are, as yet, unknown. According to the Draft EIS (pg. 3.5-6), water in both the Vinini Formation and the Tertiary volcanic aquifer comes mostly from fractures, joints, and faults. Consequently, groundwater contamination may travel more quickly and further than anticipated. We also note the sensitivity of the groundwater model to the hydraulic conductivity of the clay interface between the aquifers. The extent of that clay interface is not adequately characterized, particularly southwest of the proposed Project – the direction the plume is expected to travel. In short, current modeling efforts, alone, do not adequately identify the range of potential impacts that could occur, given the complexity of the hydrogeologic system.

Discrepancies in the EIS further contribute to uncertainty regarding the likely impacts of the proposed Project. For example, according to the Draft EIS, modelers predict an increased flux of up to 1.8 gallons per minute of contaminated groundwater flowing towards Little Antelope Creek at seep MA-1 in conjunction with backfilling the West Pit (pgs. 3.5-34; 3.6-25); however, Appendix B4 concludes that that there is not a direct geochemical pathway from the West Pit area to the MA-1 seep and that the direction of groundwater flow from the West Pit area is not toward Little Antelope Creek. Furthermore, the Draft EIS acknowledges that, as the West Pit is backfilled, changes in groundwater flow pathways are likely to occur that cannot be anticipated with certainty at this point in time (pg. 3.5-37).

Mine Site Characterization does not Consider the Contamination from Past Mining Operations

The modeling efforts completed thus far have not adequately addressed the existence of analogous contamination from past mining operations. The Newmont-reclaimed East and South Waste Rock Storage Facilities continue to produce seepage that has flowed, at times, into Little Antelope Creek. Existing water quality in the creek has been affected by this seepage, as evident by elevated concentrations of arsenic, sulfate and total dissolved solids (pg. 3.6-24). Elevated levels of contaminants from past mining operations are also seen at the reclaimed heap leach field (pg. 3.5-24). Geochemical modeling studies conducted thus far have focused on the proposed Project, without determining or taking into account the extent of the existing contamination. The presence of existing contamination provides strong evidence that there is significant potential for exceedances of water quality standards from the proposed underground mining operations at the Hollister Mine.

Unpermitted Discharge of Seep to Waters of the U.S.

According to the U.S. Army Corps of Engineers, approximately 15.76 acres of waters of the United States are present within the survey area (letter dated June 19, 2013 from Jason A Gipson, Chief, Nevada-Utah Regulatory Branch, Sacramento District, U.S. Army Corps of Engineers to Ms. Teresa Conner, Rodeo Creek Gold, Inc). These waters, including Little Antelope Creek and its tributaries, are regulated under Section 404 of the Clean Water Act. A discharge of a pollutant through a point source to a water of the U.S. (WUS) is subject to Section 402 of the CWA and is required to obtain an NPDES permit. A seep is a point source and, if the discharge from the seep reaches WUS, an NPDES permit is required. The discharge of a seep does not meet the definition of "stormwater" and is, therefore, not addressed under the Nevada Division of Environmental Protection's (NDEP) permit for Stormwater Discharges associated with Industrial Activity from Metals Mining Activities (NRV300000 MSW389), nor is the discharge of seeps addressed in NDEP's individual permit for the Hollister Mine (NV0024171). No existing permits address the discharges of seeps from the Project area. EPA reiterates its previous recommendation to provide a description of the ongoing and proposed mitigation efforts to either eliminate the seeps or to seek permit coverage.

Monitoring and Mitigation for the Proposed Project

The Final EIS contains a Monitoring and Mitigation Plan in Appendix C which further elaborates on monitoring, mitigation, and conservation measures referenced in the EIS. According to this plan, Rodeo Creek Gold, Inc. would recalibrate the groundwater model and provide the results to the BLM at least every 5 years and as frequently as every 2 years, if warranted. Most of the groundwater and surface water sampling and monitoring efforts, however, will only be conducted during the life of the mine or through reclamation, which is expected to be completed within three years after operations cease.

The EIS indicates that there is a "high potential" for reduction in flow rates at up to 15 seeps, springs, and spring complexes located on private land, and along two perennial stream reaches along Alkali Creek and Squaw Creek. In addition, reduced flows may impact up to 11.8 acres of associated riparian and wetland habitat along Antelope Creek. In lieu of monitoring for impacts to seeps, springs, and wetlands and then establishing mitigation to address such impacts, Rodeo Creek Gold, Inc. would mitigate for any such impacts through a Riparian Mitigation Fund of $120,000, to be established within 120 days of Project Approval. Funds would be available to the BLM to fund on-the-ground improvements such as site assessments, studies, and other enhancement measures for riparian habitats on public or private lands. Based on the information provided, EPA is unable to determine whether this amount will be adequate to offset potential project-related impacts. We recommend that the Applicant commit to specific on-the-ground upfront mitigation for impacts to these springs and seeps.

We note that the BLM plans to establish a Long Term Trust Fund for a new monitoring well to be installed in the southwest corner of the Project boundary when BLM deems funding such a well to be appropriate (estimated in the Final EIS to be approximately 100 years post mining). Sampling in that well would be required to begin 100 years after cessation of mining. According

to the EIS, this well would enable BLM (or other managing authority) to monitor the attenuation of the groundwater, or implement other measures that become treatment options due to advances or improvements in technology over time. Aside from this measure, the Final EIS does not discuss long-term maintenance and management activities at the site, nor does it provide any projection or estimate of costs for post-closure obligations. No provisions have been made for long-term water treatment in the event that contamination warranting treatment is detected.

Given the fact that the maximum extent of impact due to drawdown (10 foot drawdown contour extending radially approximately 8 miles from the mine) is expected to occur 40 years post-mining and the fact that potential contaminants of concern will likely be present for hundreds of years, we believe that monitoring and sampling should continue post-closure – indefinitely, if necessary. Based on EPA's experience with groundwater remediation, we also anticipate that more than one monitoring well at the Project boundary will be needed to ensure that the direction and extent of any plume is accurately determined. The geochemical and groundwater models should also be updated periodically after the cessation of mining, in order to verify the accuracy of predicted outcomes. We recommend that BLM establish some means of sampling in-situ mine water in the underground mine workings area and the Hatter Expansion while the groundwater table is rebounding so that this information can be incorporated into the groundwater and geochemical models, accordingly. Furthermore, we suggest that it would be prudent to establish a series of monitoring wells to the southwest of the proposed Project in order to track the contaminant plume.

Long-Term Treatment Methods for Groundwater Contamination

In our comments on the Draft EIS, we recommended that post-closure management strategy may require source controls such as a pump-and-treat system in order to maintain an inflow condition for groundwater into the closed underground workings. BLM responded by indicating that it would be impractical to pump and treat for 130 years and not feasible for 400 years. While the need for a pump and treat system is not desirable as an outcome, such systems are employed at some mining sites undergoing remediation where it has been determined to be technically feasible to pump and treat for as long as necessary to address any exceedances of applicable water quality standards. EPA continues to recommend that an Adaptive Management Plan be developed that would require additional contingency measures, including mine pumping and water treatment, as appropriate.

Financial Assurance for Post-Closure Obligations

Based on the information provided in the EIS, EPA continues to believe that, following closure of the proposed Hollister Underground Mine, long-term post-closure monitoring and treatment may be necessary to protect groundwater and surface water resources. For this reason, we recommend that the Record of Decision require, as a condition of project approval, the establishment of a Long Term Trust Fund to ensure that funds would be available as long as they are needed in order to implement post-closure obligations, including long-term treatment and other mitigation measures, in the event that monitoring reveals that such measures are necessary. EPA also continues to recommend that an Adaptive Management Plan be developed that would

require additional contingency measures, including mine pumping and water treatment, as appropriate.

We appreciate the opportunity to review this Final EIS and look forward to working with BLM to resolve the issues outlined in this letter. Please send one hard copy of the ROD to the address above (mail code CED-2). If you have any questions, please call me at (415) 972-3311 or have your staff contact Ann McPherson, the lead NEPA reviewer for this project. Ann can be reached at (415) 972-3545 or mcpherson.ann@epa.gov.

Sincerely,

/s/

Angeles Herrera for
Jeff Scott, Director
Communities and Ecosystem Division and Waste Division

Enclosures: EPA Detailed Comments

cc: Ken Miller, BLM Elko District Office
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Colleen Cripps, Nevada Division of Environmental Protection
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