DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 28TH MISSION SUPPORT GROUP (AFGSC)
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA

5 February 2020

Colonel Sara B. Deaver
Commander, 28th Mission Support Group
1000 Ellsworth St., Suite 2100
Ellsworth AFB SD 57706-4946

James Gubbels
District Ranger, Mystic District
Black Hills National Forest
8221 S. Mount Rushmore Rd
Rapid City, SD 57702

Subject: Comments F3 Jenny Gulch Exploration Project
Due Date: 5 February 2020
Email: comments-rocky-mountain-black-hills-mystic@usda.gov

Dear Mr. Gubbels,

The purpose of this letter is to submit comments on the F3 Jenny Gulch Exploration Project on behalf of Ellsworth Air Force Base (EAFB). EAFB has permitted water rights to 3,000 acre-feet of water from the Pactola Reservoir per annum. The Black Hills National Forest (BHNF) is evaluating a permit application to allow a mining company to drill 42 test cores for gold exploration in the immediate upstream watershed of the reservoir. The BHNF is preparing an Environmental Assessment for the action. EAFB has concerns about threats to surface waters and groundwater from the proposed action. This is a situation where EAFB has equities that could be directly impacted by the action (granting the permit to allow exploratory drilling) of BHNF. Additionally, EAFB has significant expertise in surface water and groundwater contamination and monitoring and inquires about cooperating agency status.

Specifically, we are interested to know details about significant material storage locations, materials to be stored, waste characterization and storage, structural controls and pollution prevention practices, monitoring for contaminant migration, and reports. We think the proposed action underestimates the extent of disturbance. The proposal indicates industrial or municipal water will be used, but is silent as to where that water will come from or how it will be delivered. Additionally, a 6,000 ft. borehole to extract a core is likely to produce a significant quantity of drilling mud. To our knowledge, no provisions for containment or disposal of drilling byproducts have been discussed.

Our main concern will be mitigating the high level of risk posed by failures of mining structural controls and practices within geologic formations. Such failures have been known to generate acid drainage and migration of heavy metals into water sources. Integrating Air Force Operational Risk Management principles, we consider that the probability of failure, for most types of structural controls and practices, is in the "Likely" category. The Severity of Impact, to

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consider degradation of our primary drinking water resource as either temporary or permanent, can be categorized as "Critical" to "Catastrophic." As a result, the risk of mishap could be categorized as "High" to "Extremely High."

In our view, any proposal or study involving mining within the Pactola basin would have to identify robust practices that mitigate mishap probability, such as permanent and temporary structural controls, a storm water pollution prevention plan, routine inspection and monitoring, routine and emergency reporting, Spill Prevention Control and Countermeasures plans, adequate coverage for mishap cleanup, and site restoration (esp. how to plug wells), and off-site disposal or treatment of waste.

We appreciate the opportunity to comment on this project. We would like to discuss opportunities for EAFB to be involved in the process as a cooperating agency or to explore what role we can play as a coordinating agency. If you have questions, please contact our Water Quality Program Manager, Mr. Kevin Goyer, at (605) 385-2662, kevin.goyer@us.af.mil.

Sincerely

DEAVER.SARA.B.1048019796 Digitally signed by DEAVER.SARA.B.1048019796 Date: 2020.02.05 16:31:28 -07'00'

SARA B. DEAVER, Colonel, USAF
Commander

From: GOYER, KEVIN B GS-12 USAF AFGSC 28 CES/CEIEC
To: FS-comments-rocky-mountain-black-hills-mystic
Cc: Gubbels, James -FS; Eggers, Jessica -FS; BRUNDIGE, GARY C GS-12 USAF AFGSC 28 CES/CEIEC; JOHNSON, GREGORY D GS-12 USAF AFGSC 28 CES/CEIE
Subject: Jenny Gulch Gold Exploration Drilling Project
Date: Wednesday, October 13, 2021 1:59:42 PM
Attachments: Tab1_USFS_F3Gold_DraftEACommentSubmittal_Col Vaira 13Oct21.pdf
Final_ATCH1_USFS_F3Gold_DraftEACommentSubmittal_Col Vaira 13Oct21.docx

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Dear Ranger Gubbels,
Please find attached a letter and list of comments from Ellsworth Air Force Base regarding the draft EA, Jenny Gulch Gold Exploration Drilling Project. We didn't use the comment form provided on the weblink; please let me know if the format we used is not acceptable.

You or your staff may contact me, Gary and or Greg for questions or concerns. We sincerely appreciate the opportunity to work with you on this project.

V/R
Kevin

Kevin B. Goyer, GS-12, BS EnvE
Water Quality Prog. Engr.

2125 Scott Drive, Ste 2128
Ellsworth AFB, SD 57706-4711
(605) 385-2662
(DSN 675)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 28TH MISSION SUPPORT GROUP (AFGSC)
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA

Colonel Brady J. Vaira
Commander, 28th Mission Support Group
1958 Scott Drive; Ste 1
Ellsworth AFB SD 57706-4710

Mystic Ranger District
Jenny Gulch Gold Exploration Drilling Project
Attention: District Ranger Mr. Jim Gubbels
8221 S. Mt. Rushmore Road
Rapid City, SD 57702

Dear Ranger Gubbels

This letter is provided with comments on the draft Environmental Assessment (EA) for the proposed Jenny Gulch Gold Exploration Drilling Project.

Thanks very much for meeting with our environmental media managers on this important study. As you know, EAFB has a 3,000 acre-ft per year allotment to water stored in the Pactola Reservoir; we value highly your invitation to comment upon the protection measures being considered. Working with your team, our managers found they shared similar concerns with project aspects and impacts, giving us greater confidence in the determinations we now share with you and proponents.

Generally, in the instances where vital water quality concerns weren't well recognized, the draft EA failed to establish acceptable and clear mitigation measures. Most importantly, we objected to the on-site dispersal or burial of sulfide and metal bearing drill cuttings due to long-term degradation threats to Pactola Reservoir. Secondarily, the EA lacked detail on and for implementing common surface water protection practices. We've identified ten aspects which could, if not resolved, result in acceptance of faulty or incomplete mitigation of risks to water quality for this and similar projects in the Basin.

If you have questions on our comments, please contact Mr. Kevin Goyer at 605-385-2662.

Sincerely

VAIRA.BRADY.J.1151648130 Digitally signed by VAIRA.BRADY.J.1151648130 Date: 2021.10.13 11:24:22 -06'00'

BRADY J. VAIRA, COLONEL, USAF
COMMANDER

Attachment:

EAFB Comments on draft EA, Jenny Gulch F3 Gold Proposal

Attachment 1. EAFB Comments on draft EA, Jenny Gulch F3 Gold Proposal

Comment 1. Incomplete analysis within the draft EA results in no estimate of the maximum cuttings volume as either a portion of the disturbed area or for the proposed dispersal. Reclamation (para. 2.2.5) proposes to regrade the drilling pads to pre-project contours and return trails to pre-existing conditions. The cuttings were roughly estimated by us to be over 12 cubic yards per site. The reclamation, as described (Appendix A. Reclamation Plan, Drill Plans and Laydowns Reclamation), doesn't mention cuttings as part of the grading plan. Under the Operations section following Drill Pads and Laydowns Reclamation, cuttings and fines are just going to be dispersed.

Comment 2. Analysis within the draft EA inadequately addresses mitigation for the release of sulfide and metal bearing deposits (para 3.6.3.2) due to dispersal of cuttings. Paragraph 3.7.3.2 describes the problem exactly as "extracted mineralized cuttings could ... release acidity and/or metals to runoff or infiltration water." The EA, including Table 2-1, lists only on-site dispersal for drill cuttings and fines. In addition, paragraph 2.2.1 and Table 2-1 completely ignore the disposal of drilling wastewater (an industrial effluent which also must be characterized and classified for proper disposal). Clean up actions at similar sites, such as Gilt Edge mine, left South Dakota and US EPA with a tremendous and ongoing responsibility for mine waste cleanup and treatment of acidic drainage after closure.

Comment 3. On-site burial with native cover as proposed (Appendix A. Reclamation Plan, Operations) is not a feasible or effective water quality protection measure. Burial should require landfill permits, air- and water-impermeable caps and long-term site monitoring. The types and amounts of soil available on location would be unsuitable for use as cover. A feasible and effective measure would be to move the wastes to a burial site that would prevent exposure as described in paragraph 3.7.3.2--as the wastes are generated. This practice would provide a measurable compliance objective, reduce sizing of on-site protective features, reduce reclamation efforts and, ultimately, minimize the migration of pollutants to water resources. Disposal of cuttings needs to be an operational cost, not a reclamation cost.

Comment 4. The Reclamation Plan should provide clear expectations for the appearance of reclaimed sites. The ambiguity of the language used in the Reclamation Plan "as directed by the USFS and State of South Dakota," "as necessary," "regular basis" and "open and regular communication with the State of South Dakota" does not constitute acceptable performance standards. The reclamation needs to cite a cost.

Comment 5. The draft EA doesn't cite the design and costs for reclamation, or present a discussion on bonds. The reclamation bond is likely to be based upon a percentage of the costs for the designed reclamation. The setting of bonds for the purpose of reclamation must be high enough to provide incentive to recover the bond and, in case of insolvency on the part of the operator, provide USFS with funding to implement the reclamation plan. Cost estimates are complicated by unclear objectives and measures of completion and, in South Dakota, lawful monetary limits. We

recommend a bond for 110 percent of the estimated costs of reclamation.

Comment 6. USFS needs an independent government estimate for the reclamation bond and seek escrow or similarly effective method to guarantee recovery of bonds. System weaknesses for the setting and recovery of bonds subjects USFS to risk for assuming cleanup costs. A recent example involved the abandonment of 40 gas wells at the Spyglass Cedar Creek project in Harding, SD. SD required a bond of $30,000; $20,000 of the bond was liquidated by company officials when Spyglass went bankrupt. State officials estimated it would cost $855,000 of SD funds to close the well field.

Comment 7. The draft EA lacks the support to make the claim of para. 3.7.3.1 "Project activities are not anticipated to affect [surface waters]." As cited in paragraph 3.7.1.1, the project is proposed within the Pactola basin, a municipal watershed already "functioning at risk," with direct inflow from the project area to the reservoir 0.5 miles south. The activities must implement vigorous measures, throughout the entire project, to protect storm water runoff, surface waters and drinking water sources from acidic drainage, transport of metals and sedimentation. There are good practices mentioned in the draft EA, PoA and Reclamation Plan; however, a Storm Water Pollution Prevention Plan (SWPPP) is needed to prescribe measures for the site operator.

Comment 8. A SWPPP is needed for management of all practices, plans and permits during the course of the project. An Erosion and Sediment Control (ESC) Plan is needed, to include mapped locations of ESC features. Robust structural controls, storage locations, containment features and Spill Prevention Control and Countermeasure (SPCC) practices will be needed to manage materials. Inspection and maintenance of controls will be required. Monitoring, sampling, reporting of monitored results and recordkeeping will be needed. Without requiring a SWPPP, the draft EA fails to provide for the establishment of effective protection practices.

Comment 9. The extent of disturbance described (Para 1.1, at 0.86 acres) is underestimated by at least 35 percent, apparently having been modeled using an eight-foot wide trail over the routes of access. The width of a typical one-ton dually pickup is over eight feet. The wheel track might be less than eight feet, but the vehicle body and mirrors could not pass woody vegetation and boulders—removal of which will increase the earth disturbance. What are the widths of the water truck, the 10,000 gallon water storage tanks cited and the equipment needed to move them? Paragraph 3.2.4 cites 12-foot wide trails; the discontinuity needs resolution and extent revised accordingly.

Comment 10. Earth disturbance of this extent generally requires coverage and regulation by a state or EPA Surface Water Discharge permit. The draft EA does not mention what type of permit will be needed to regulate site operations. What discharge coverage will be sought to gain approval for and regulate the discharge of drill cutting fluids, dispersal/burial of cuttings, and operation/restoration of the earth disturbance? Coverage under an individual Industrial Storm Water Permit might be most appropriate. Monitoring and sampling at discharge points should be implemented for the purpose of proving the effectiveness of protective measures and the assertion of para 3.7.3.1.