UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region8

November 12, 2020

Ref: ORA-N

Chad Stewart
Attn. OSMI Fringe Lease EA
Grand Mesa, Uncompahgre and Gunnison National Forests
2250 South Main Street
Delta, Colorado 81416

Dear Mr. Stewart,

The U.S. Environmental Protection Agency has reviewed the October 9th, 2020 Scoping Letter for the Ouray Silver, Inc project (Project) Environmental Assessment (EA) prepared by the US Department of Agriculture Forest Service. The following scoping comments were prepared in accordance with our responsibilities under the National Environmental Policy Act (NEPA).

The Project will allow for the expansion of the Revenue-Virginius Mine, a historic silver, gold, copper, lead, and zinc mine in Ouray County, Colorado, through the lease sale of federally managed lands in the Uncompahgre National Forest. The Scoping Letter states that as the surface management agency, the USFS will consider potential impacts to surface resources (i.e. water, timber and recreation) as part of the scope of this EA. It further explains that BLM will ultimately determine if the fringe lease will be issued or not. While the USFS locatable mineral regulations only allow the USFS to regulate surface impacts on Forest Service land, the NEPA regulations require analysis and disclosure of effects with a close causal relationship to the proposed action. Impacts to hydrology and water quality from mining and the handling of waste are the primary impacts of underground mining on federal parcels and have a close causal relationship with the overall operations. We therefore recommend the scope of analysis include all impacts with close causal relationship to the proposed action be evaluated and disclosed to inform the public and the Forest's decision.

Based on our current understanding of the Project, the Project area, and the information available, EPA has identified the following key topics that we recommend evaluating in the NEPA analysis to identify any potential impacts to public health and the environment: (1) water resources; (2) air resources; and (3) mitigation and control measures. It will be important to ensure that this project does not cause or contribute to violations of Colorado's Water Quality Standards or exacerbate the impairment of Sneffels Creek. Such impacts would be considered "significant" under NEPA. If such impacts are identified, we recommend the NEPA document evaluate whether they are consistent with the National Forest Management Act and USFS regulation and policy.

The EPA's detailed comments are enclosed. We appreciate your consideration of our comments at this early stage of Project development and request a future notification to review the EA prior to the finalization of a decision. If further explanation of our comments is desired, please contact me at

(303) 312-6704 or strobel.philip@epa.gov or Carolyn Gleason, Lead Reviewer for this project at (303) 312-6441 or gleason.carolyn@epa.gov.

Sincerely,

Philip S. Strobel
NEPA Branch Chief
Office of the Regional Administrator

Enclosure

Enclosure -EPA Comments
US Forest Service- Ouray Silver Project

(1) Water Resources

A. Water Quality Impacts and Mitigation

The EPA recommends discussing the following resource impacts, including disclosure of which waters may be impacted, their nature, and the specific pollutants that they deal with:

- Operational Waters: Potential impacts to water quality caused by planned operations including tailings, muds, and discharge waters. We recommend detailed descriptions of planned operational water monitoring activities and past operational water constituents, volumes, pH, and handling systems.
- Sedimentation: Potential impacts to water quality from runoff associated with surface disturbances from subsidence related to mining near-surface ores as well as road and support structure construction. This runoff would include sheetwash from the Project catchment area into nearby surface water resources such as creeks or ponds. Specifically, we recommend assessing the potential for runoff to modify sediment loads and introduce salts, heavy metals, and other pollutants into surface water as Project mining progresses.
- Groundwater: Potential impacts to local aquifers and the regional groundwater catchment from infiltration through the Project mines and the macropores or fissures they potentially induce from existing and proposed operations. This also includes potential groundwater emergences such as springs or seeps. Additional guiding questions for this analysis have been provided in Section C.
- Drinking Water: Potential impacts to drinking water from the Project including source water protection areas and other municipal or private water supplies.
- 303(d) List Impairment: Potential impacts to Sneffels Creek from the Project's proposed actions. Per the Colorado Department of Health and the Environment Water Quality Control Commission's March 2, 2018 Colorado Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, EPA has identified zinc, cadmium, lead, manganese and aquatic invertebrate impairments in Sneffels Creek below Governor Basin. This impaired reach is within the Project area and we therefore recommend a detailed analysis of existing site conditions and the Project's potential contributions to these impairments also be included in the EA. If the project would cause additional impairments or worsen existing impairments, those impacts would be considered significant. We recommend working closely with the Colorado Department of Health and Environment to ensure the project will not cause or contribute to water quality impairments. Additional guiding questions to use during the development of a surface water impact statement have been provided in Section D.

The EPA recommends the NEPA analysis identify and discuss how surface water quality will be protected or impacted by Project activities. To this end, the EPA recommends the NEPA analysis include:

- A list of Best Management Practices (BMPs) that will be required to protect surface water resources;
- A discussion of the circumstances under which the BMPs would be applied (e.g., proximity to surface water resources, presence of erosive soils, slope, subsidence, etc.); and,
- An explanation of how USFS or another government entity would ensure that the BMPs would be monitored to ensure timely and correct implementation as well as timely maintenance.

B. Protection of Wetlands and Riparian Areas

The protection and restoration of wetlands and riparian areas is a high priority. These resources increase landscape and species diversity, support many wildlife species, and are critical to protecting water quality and designated beneficial water uses. We recommend that USFS analyze potential impacts from the Project alternatives to the following:

- Total wetland area and function;
- Wetland vegetation, riparian habitats, and aquatic biota; and,
- Wetland erosion or aggradation from runoff channelization or redirection.

We also recommend that the NEPA analysis evaluate methods to protect surrounding wetlands and riparian areas including the following:

- Specific mitigation requirements and BMPs applicable for construction, maintenance and reclamation activities to prevent adverse impacts to aquatic resources downslope of the Project site. These could include silt fences, detention ponds and other stormwater control measures; and,
- A map of seeps, springs, surface water bodies, wetlands, tributaries, and wildlife areas delineating these resources before development in order to facilitate their protection and support any necessary US Army Corps of Engineers permits.

C. Guiding Questions for Analysis: Groundwater Resources

Given the impaired waters designated in Sneffels Creek and the unknown extent of its potential hydrologic connections to local aquifers in and around the Project vicinity, a throughout analysis of groundwater in the Project catchment and its potential impacts from Project activities is recommended. We recommend that the NEPA analysis address the following questions regarding groundwater resource impacts from current or proposed operations at the Project site:

- What are the current and projected discharge amounts from the mine as a result of groundwater infiltration/intersection?
- How will the mine be dewatered, what changes will occur with groundwater levels, and will there be any impacts to hydrology of connected surface waters?
- How many seeps and springs are currently in the area and what changes in discharge volume and water quality are anticipated as a result to intercepting groundwater through the underground workings?
- What are current and future effects to discharge volume and water quality at other points of groundwater discharge in the area such as an existing draining mine? Where is the mapped location of these points?
- We recommend the including a map of locations of other mining operations in the Project vicinity and a discussing the hydrogeology with an emphasis on how groundwater is connected in the area. What current and future impacts are there to other historical or active operations (i.e. Camp Bird 14 level tunnel) via hydrologic connection?
- What hydrologic connections exist between the Project area and San Miguel county? How might Project activities impact aquatic resources and water rights on the San Miguel county side of the watershed divide?
- Is the current passive treatment plant capable of treating the additional volume of groundwater generated by the Project operational expansions?

- Is the current passive treatment plant effective in the winter? We recommend an evaluation of how freezing conditions and snow cover affect the continued operation of the passive treatment plant and its storage capacity.
- Are the current tailing storage piles and the passive treatment plant effective in extreme climactic conditions such as avalanches and flooding? Do these conditions affect the storage and operations of these systems and their ability to prevent spill over into surrounding groundwater and surface water bodies?
- Does the existing water treatment system at the Revenue Mine facility have the appropriate treatment train to accommodate the discharge water and mud generated during core drilling?
- What groundwater/surface water interactions exist in and around the passive treatment system and the bio-reactive leach field?
- What are the groundwater monitoring requirements regarding Project tailing storage piles? How is infiltration within the Project tailing storage piles prevented?
- Will water in contact with underground mine walls result in acid rock draining (ARD) or metal leaching? In addition to ARD and metal leaching, we recommend the NEPA analysis characterize whether the chemistry of mine waters would be influenced by explosives use because the use of explosives often results in nitrate and ammonia impacts to underground mine water.
- What exact treatment is expected for mine backfill material (i.e. to what extent would tailings be dewatered and will cement or other amendments would be added to the backfill) and how that treatment may relate to potential subsidence and surface and groundwater quality impacts?

D. Guiding Questions for Analysis: Surface Water Resources

We recommend that the NEPA analysis address the following questions regarding surface water resource impacts from current and proposed operations at the Project site:

- What are the current surface water monitoring protocols and how would that be expanded to capture any additional impacts from the underground workings and tailings piles?
- How would impacts to seeps, springs, and other points of discharge be monitored?
- How will temperature of surface impoundment discharges impact the temperature of the receiving aquatic life cold-designated Sneffels Creek?
- How will stormwater be managed to prevent impacts to Sneffels Creek and riparian wetlands?
- We recommend the EA detail how water quality standards identified for Sneffels Creek (Segment 9 of the Uncompahgre River Basin, Regulation #35 Stream Classifications and Water Quality Standards) will be met in coordination with existing operations and the proposed expansion. Will modifications to the existing Colorado Discharge Permit System permitted discharge limits be required to reach attainment of these standards?
- What aquatic and terrestrial species may be affected by Project activities? This analysis would benefit from the specific consideration of Sneffels Creek and the Mt. Sneffels Wildlife Area.

(2) Air Resources

The EPA recommends the following focuses be placed on the NEPA analysis regarding air resource preservation and quality:

- Emissions Inventory: We recommend identifying all equipment and activities that will generate air emissions. This would include identifying whether equipment will be electric or diesel and whether the site has line power and any diesel backup power. Also, we recommend estimating

emissions from all equipment and operations including blasting and milling of the ore as well as dust generated from waste rock dumps and disturbed areas. We also understand that exploratory drilling may take place. If it is anticipated that further surface drilling will take place, we recommend emissions from the drill rig be included in the analysis.

- Ventilation: We recommend identifying and locating any existing exhaust vents from the mine and whether any new ventilation or escape shafts will be needed on the Forest Service lease parcels. If new ventilation structures are needed, we also recommend mapping planned access or maintenance roads to these facilities, particularly if newly constructed for the Project. We recommend that the EA examine the feasibility of installing infrastructure to actively exhaust mine areas after they have been blasted. As part of this, we recommend examining or explaining any particulate filtration that could be available to reduce particulate from the surface emission point.
- Ventilation Safety: We recommend explaining mine ventilation efficiency and how miners will be kept safe should oxygen deficient environments be encountered. As part of this we recommend summarizing any findings regarding the cause of oxygen deficiencies in the mine and any ways accidents and equipment failure may be avoided.
- Dust control: We recommend an analysis of the dust control that may be needed based on the emission inventory for construction and operation of the Project. The EPA recommends reducing surface disturbance to effectively reduce fugitive dust should it exist. Impacts can also be reduced by reclaiming disturbed areas as soon as practicable.

(3) Mitigation and Control Measures

We recommend that the USFS include a section in the NEPA analysis that details the mitigation and control measures that will be implemented for the Project, including what entity will be executing the mitigation. If applicable, the analyses recommended above should also all include a plan disclosing the level of required or anticipated mitigation and control methods, inspection schedules, documentation procedures, and accountability processes. A list of all necessary permits for construction, transportation, water, air, or land use in the Project vicinity may also clarify implementation and mitigation plans in the EA. Where there is scientific uncertainty regarding effects or the capability to avoid effects, we recommend surface including a post-implementation water quality monitoring program in the Project area to identify any potential resource improvements or mitigation needs developed through Project operation. We recommend the NEPA analysis also include an outline of how the underground mine would be closed and the impacts that could be anticipated during closure and post-closure. This could include the plugging of adits, water management and monitoring, and any need or plans for the continued operation and maintenance of stormwater runoff controls, tailings storage piles, and the passive treatment plant. Financial assurance is the cornerstone of controlling and mitigating the long-term environmental impacts from hard rock mining. We recommend the EA discuss if the leasing of these federal parcels requires assessing a new cost estimate to direct the value of the bonding, as required by the State of Colorado.