



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

March 26, 2015

Dianna Stoopnikoff
Fortune Revenue Silver Mines, Inc.
PO Box 564
Ouray, CO 81427

Re: Revenue Mine, Permit No. M-2012-032, Technical Revision No. TR-5, Hydrology Concerns
Regarding Proposed Ground Water Diversion

Dear Ms. Stoopnikoff,

Many of the questions raised during the Division's review of the current technical revision (TR-5) were communicated to you in our letter dated March 19, 2015. This letter will discuss hydrologic questions surrounding the proposed diversion of underground mine water, i.e., pumping it down to lower working levels via Shaft No. 1. The issue of mine water diversion is complex, with potential environmental impacts to the hydrologic balance and will require further discussion, review, and sampling data before it can be considered. Please be advised that at this time it appears that the proposed ground water diversion is a major change to the mine plan with impacts to final reclamation and an **Amendment**, not a Technical Revision, will be required.

The Division recognizes that the proposed diversion is intended to improve the quality of water discharging from the portal, in order to meet receiving stream standards. However, the diversion has the potential to significantly impact ground water quality and quantity which must be addressed to protect the hydrologic balance both on the surface and below. The current mine pool water quality must not be degraded any further than what it currently is. While it is known that there is water at lower levels in Shaft No. 1, and that it has been impacted by past mining on the Virginius-Monongahela veins, no further hydrologic information pertaining to this mine pool is in the Revenue Mine permit file or included in this revision.

Your discussion of the mine water diversion in this revision is brief, and the information provided is not sufficient for the Division to be able to assess the potential hydrologic impacts. The Division's initial questions about the proposed diversion are listed in the following paragraphs. Please try to address each item below.

The revision states that the water level has equilibrated, though there is no further information about the source(s) of water entering the shaft or fate of water leaving the lower workings. If it is at equilibrium as stated, please explain the hydrologic balance equation. What is the water source in the workings, what is the quantity in-flow, and quantity out-flow?



If the water level of the mine pool normally equilibrates, it raises the question of where the effluent goes. Are there known springs in lower locations in the canyon, lower inter-connecting adits of other mines, or fractures or veins along which the groundwater migrates? A spring or seep survey will be required along with a mapping of the groundwater gradient for potential excursions to the surface via conduits of various sources.

If the water depth has equilibrated, what is the current exact elevation (or normal range of levels) of the water within the shaft? If pumping for this diversion were to occur, how would the mine pool level be affected?

Has the water in Shaft No. 1 been sampled for potential constituents of concerns such as metals, radio-nuclides, and normal water chemistry parameters? Is there any past water quality data available to help establish existing water pool baseline? If past data does exist is there indication of how the water quality has been affected by mining activities currently or in the past? If past water quality information exists, please provide it to the Division for evaluation.

Is there any plan to address the quantity or quality of water if it is negatively affected by the diversion? A plan must be developed to address future monitoring of water quantity and quality both for the current mine pool and the water being introduced by pumping. The plan must include actions to be taken if water quality degrades or quantities exceed expected levels.

Have you consulted the EPA in regards to the possible requirements of an injection well permit for the proposed plan of diverting the water into the lower mine workings? By definition this may be classified as an injection well.

The diversion is proposed as a possible temporary remedy since in the future, the lower workings might need to be dewatered in order to access them and mine there. However, no permanent water quality remedy is addressed. The question that arises is after mining is completed and the site is reclaimed, active (diversion) pumping cannot be continued in perpetuity. Therefore, an effective water treatment plan must exist for the site under this permit in order to meet the Division's ground water quality regulations and WQCD's surface water regulations. Is Fortune Revenue prepared to bond for perpetual water treatment should water quality standards, either for ground water or surface water, not be attainable?

Depending on what further information the Division receives regarding existing data, and a more detailed diversion plan, the Division may require five quarters of sampling before it could be considered. As a reminder, all data collected must be submitted to the Division within 30 days of receipt from the lab.

Please understand the Division has a responsibility to protect the prevailing hydrologic balance. At this point we do not have enough information to accurately assess the impacts to the prevailing hydrologic balance, the environment, or human health and cannot approve the plan as submitted.

March 26, 2015

The revision decision date was extended until April 13, 2015, in order to allow the operator to develop the requested responses, and for the time needed for the Division to review those responses. Given the complexity of the proposed concept of the diversion and its attendant delays in preparing complete responses, if you wish to withdraw the proposed concept from this revision, please indicate such to me in your responses.

Please be reminded that all responses to this letter must be mailed to the Division's Denver office. If response materials include many pages of text or any oversize maps, please include two complete sets so that one set may be sent to the Division's Field Office for review. Please submit your responses well before the new decision date to allow enough time for the Division to review them.

If there are questions, I may be reached by phone at 970-247-5193, or 303-866-3567 x 8175, or by email at: bob.oswald@state.co.us.

Sincerely,

A handwritten signature in black ink, appearing to read "Bob Oswald", with a stylized, cursive script.

Bob Oswald

Environmental Protection Specialist

Ec: Russ Means, DRMS Grand Junction
Greg Lewicki, Greg Lewicki and Assoc.

(c:\15-03 docs\M2012032 TR-5 Hydro review\rco)