



INFORM

INFORMATION NETWORK FOR
RESPONSIBLE MINING

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July 11, 2014

Robert Oswald
Colorado Division of Reclamation Mining and safety
Division Durango Field Office
691 CR 233 Room A2
Durango, CO 81301

Via email to: Bob.Oswald@state.co.us

Re: Comments on Crystal Hill Project permit application, Permit No. M-2014-027

Dear Mr Oswald,

The Information Network for Responsible Mining (INFORM) is a Colorado-based citizens organization that advocates for responsible hardrock mining practices and protection of affected communities and the environment. INFORM actively participates in local, state and federal permitting and reviews of mining and milling and is concerned about the impacts to human health and nearby communities, ground and surface water, air quality, wildlife and ecosystems, as well as potential socioeconomic and cultural impacts to residents, agriculture and regional conservation-based resource economies. INFORM has the following questions and comments regarding the permit application submitted by Colorado Mining & Exploration, Inc., to reopen the Crystal Hill open pit operation.

The applicant did not provide a phone number or email address for contact, despite the Division's request to do so. The official notice sent to agencies also lacked full contact information. Since the operator cannot be contacted, the publication date for the public notice cannot be determined, and the deadline for submitting comments for consideration cannot be determined. These comments are intended to be timely and to be considered as an objection to the permit application and we appreciate your consideration of that in advance.

The application lacks sufficient detail in the mining plan, reclamation plan, engineering exhibits and maps to fully understand the scope of activities that are being proposed. The application also states that the mine will not generate acid or toxic-forming materials without sufficient information to support that conclusion.

The Crystal Hill Mine operated as an open pit cyanide heap leach operation until the 1980s and has disturbed an area that is at least 46 acres in size, as indicated in the application's site description. Yet the applicant proposes a limited impact permit for operations less than 10 acres in size (a 9.68-ac permit area is proposed). Somehow it does not quite make sense that an open pit, which is currently at least 7.2 acres in size, should be reopened and mined under a limited impact permit that claims only 5.8 acres of disturbance in the same pit. This is a convenient number if you are trying to squeeze a 46-acre mine down into a 10-acre permit package. Another 3.8 acres is allotted for a waste dump to service a mine that will be authorized to extract up to 70,000 tons per year of material.

The permit acreage does not appear to take into consideration any areas impacted by existing access roads, an ore storage pad, any ancillary equipment storage or parking requirements, or any type of facility for employees, such as an office or even a latrine. The acreage on this permit needs to be recounted and verified with a realistic determination of what impacts will occur where and what types of features will be needed to actually operate the mine. A map that details the proposed disturbed areas should be prepared so that the Division can accurately measure it. Above all, the open pit should not somehow be magically bisected for the purpose of compressing a mine into a 10-acre permit zone. This is like stealing a slice of pie before it's been served at supper; everybody can see that a piece is missing. Complicating this even further is the applicant's assertion that the existing pit will not need to have its final walls altered or recontoured. So, in effect, what is being proposed is that the same mine in the same configuration it had historically will be mined again and retained in the exact same footprint, but somehow its total size will shrink. On paper, at least.

Instead, the Division should require the applicant to submit a 112-d application, because not only is a 46-acre open pit mine being reopened in this instance, a designated mining operation status is warranted. Sufficient information has not been submitted to support the application's statement that no acid or toxic-forming materials will be created on site, despite the fact that gold ore and silver ore will be extracted there. There is no geological assessment or description of the ore body included in the plan. There is provision for an ore storage area discussed in the mining plan. When the plan is to haul ore offsite to an unspecified mill location, it is extremely likely that ore will need to be stockpiled at the mine for efficiency's sake. The application lacks any mention of how ore will be handled, nor is there a statement that all ore will be hauled away on a daily basis so that storage is never a necessity. In reality, ore will be stored on site and precaution will need to be taken to prevent acid mine drainage from being generated. The environmental protection facilities necessary to prevent acid or toxic-forming materials from being released should be described in the application. Sufficient testing is also required to analyze the geochemical nature of the waste rock and ore. The Division should consider how the Crystal Hill pit meets the definition of a designated mining operation under the Mined Land Reclamation Act and require an Environmental Protection Plan to mitigate the mine's impacts in an appropriate and protective manner.

The application does not provide sufficient detail in the mining plan to determine how groundwater would be handled if encountered nor does it provide sufficient information about

the current site conditions to support the statement that “no water is present” on site. Does the open pit retain any water on a seasonal basis due to snowmelt and infiltration? Once the mine returns to operating status, how will that water be managed? Crushing and screening of ore are defined as a processing activity in Rule 6.3.3(1), requiring a description of how it will be done and what facilities will be required, but this information is not included in the permit application. There is no description of what machinery will be required, or where it will be located, where crushed materials will be stored, or how the waste water will be disposed of. The applicant proposes hauling water in on a daily basis, if necessary for screening, thereby eliminating the need for a water tank. While that is certainly possible to achieve, it sounds both inconvenient and unrealistic. Will it also affect the mine’s ability to have an adequate fire control response in the event of an emergency?

Rule 6.3.3(1) requires the application to specify the nature of mining activities at the site, including the quantity, depth, and dimensions of overburden to be removed and the dimensions of the open pit in its final configuration. Without specifying how deep the pit will go, how can it be sufficiently determined that groundwater will not be intercepted? The application does not include any supporting hydrological or geological analysis, nor any baseline data about existing groundwater conditions.

The application appears to rely on an April 18, 1985, letter from an engineer that makes an informal conclusion that steeper-than-normal walls in the pit are acceptable in order to support the current decision to leave the sidewalls in their existing slope configuration. Over the past three decades, a lot has changed in how Colorado addresses and regulates geohazards. A current geotechnical stability assessment should be made at the Crystal Hill site to determine whether, in fact, it is acceptable to leave the slopes in their current configuration for the longterm, or whether they need to be altered to conform with contemporary standards and requirements.

The application lacks any reference in the reclamation plan as to how the site will be revegetated. There also is no discussion of how noxious weeds will be managed. There is mention that there is no existing topsoil at the site, but the applicant appears to use this as the basis for leaving out any plans for reseeded. Rather, the application should include details about how reclamation will be successfully achieved despite this obstacle and take into consideration that soil amendments or additional techniques may become necessary.

The applicant’s stated post-mining use is “commercial/industrial” but that appears to be in conflict with current uses of the area that are described in the application. Those are livestock grazing, seasonal hunting, woodcutting, National Forest access, and rockhounding activities. Those are modest uses that are primarily noncommercial in nature. In truth, the land use at Crystal Hill is first and foremost for wildlife habitat. Considering the location, once mining is concluded, it is extremely unlikely that another industrial operation will be sited there. The highest and best use of the land after mining is as wildlife habitat, and a reclamation plan that reflects that should be incorporated into the permit requirements.

The application mentions that existing bedrock is exposed at the bottom of the pit. Presumably, the mine will require explosives to extract ore, but this is not described in the

application. Rule 6.3.3 requires that the use of explosives must be managed in order to minimize disturbance to the area's hydrology and prevent offsite damage. The application should include information about how that will be achieved as well.

Thank you for the opportunity to submit comments on the Crystal Hill Project. I look forward to seeing how the review develops. Please contact me at (212) 473 7717 if you have questions or I can provide anything else.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer Thurston".

Jennifer Thurston

Director

Information Network for Responsible Mining