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Mr. Doug Haywood
BLM Las Cruces District Office
1800 Marquess Street
Las Cruces, NM 88005

Submitted via Email to: BLM_NM_LCDO_Comments@blm.gov

RE: Comments on Draft Environmental Impact Statement for the Copper Flat Mine

Dear Mr. Haywood:

The New Mexico Interstate Stream Commission ("ISC") submits the following comments on the Draft Environmental Impact Statement for the Copper Flat Mine (the "Draft EIS"). Notice of the Draft EIS was published in the Federal Register, Vol. 80, No. 229 on November 30, 2015, and comments are due March 4, 2016. We want to thank the Bureau of Land Management ("BLM") for the opportunity to comment on the Draft EIS.

The ISC is interested in the Draft EIS because of the effects the proposed action, and the proposed alternatives, will have on the Rio Grande and Caballo Reservoir. The ISC is charged with administration of all interstate water compacts for New Mexico, as well as protecting, conserving and developing the waters and stream systems of the State. NMSA 1978, § 72-14-3 (1943). In this role, the ISC examined the Draft EIS to determine whether the BLM has met the requirements of the National Environmental Protection Act, 42 U.S.C. §§ 4321-4370h ("NEPA"). Please note that in addition to the information available on the BLM website, the ISC also reviewed the groundwater flow model files used to complete the Draft EIS. The ISC obtained the model files from the New Mexico Office of the State Engineer, a cooperating agency on the Draft EIS.

Based on our review, the ISC is concerned that the BLM did not adequately examine all the environmental consequences of the proposed action required to make a fully-informed and well-considered decision. Some of the items not covered by the Draft EIS, or addressed inadequately, are substantial and it is doubtful that, if challenged, the Draft EIS would stand up to the "hard look" standard set forth in NEPA jurisprudence. It

is our hope that these comments will assist the BLM in modifying the Draft EIS to meet the requirements of NEPA.

Impact to Administration of the Rio Grande Compact

First and foremost, the Draft EIS fails to address impacts to the administration of the Rio Grande Compact (the "Compact") and to the Compact states of New Mexico, Colorado, and Texas. Specifically, the proposed action will decrease Usable Water in Project Storage, which is defined by the Compact as "all water, exclusive of credit water, which is in project storage and which is available for release in accordance with irrigation demands, including deliveries to Mexico." *See* Act of May 31, 1939, ch. 155, 53 Stat. 785 (the full text of the Rio Grande Compact). The water stored in Caballo Reservoir is Usable Water in Rio Grande Project Storage.

Usable Water is determined on a daily basis. Unless offset, a decrease in Usable Water in Project Storage will occur as a result of the groundwater pumping conducted to support the mining operations of the proposed action, and proposed alternatives. In total, the production will result in extraction of about 60,000 acre-feet of water from the groundwater system by the end of 15.67 years (pumping duration for the proposed action). Conservatively, for the aquifer to recover to its present condition, all of the pumped water will be captured from surface water that would otherwise have reached the Rio Grande or Caballo Reservoir itself, or from existing springs in the area. Therefore, if the impact on the Rio Grande and Caballo Reservoir is not offset on a real-time basis, there will be an impact on the amount of water in the Reservoir, thereby reducing Usable Water in Project Storage.

More specifically, under the terms of the Compact, if Usable Water in Project Storage is decreased below specified levels, the following impacts will occur:

1. Article VII of the Compact prohibits storage in reservoirs constructed after 1929, upstream of Elephant Butte Reservoir, whenever there is less than 400,000 acre-feet of Usable Water in Project Storage. As noted above, Usable Water is not stored in Elephant Butte alone, but is also stored in Caballo Reservoir. The Draft EIS acknowledges that the proposed action, and proposed alternatives, will impact water storage in Caballo, therefore affecting the amount of Usable Water in Project Storage. Thus, the proposed action and alternatives could have adverse impacts on the timing of Article VII storage restrictions for both New Mexico and Colorado, limiting both states' ability to store water upstream of Elephant Butte. For New Mexico, any reduction in water stored in Caballo Reservoir would have significant impact on the ability of the Middle Rio Grande Valley to store water in El Vado

Reservoir. This storage limitation affects agricultural and municipal uses in the most populous part of the State.

2. Article VIII of the Compact requires New Mexico and Colorado to release their debit water from upstream reservoirs to Elephant Butte Reservoir in order to bring Usable Water in Project Storage to 600,000 acre-feet by March 1st. Any reduction to the amount of water stored in Caballo Reservoir will reduce the amount of Usable Water in Project Storage. Accordingly, such a reduction would have an impact on this upstream debit water release and, consequently, on the amount of water available for use above Elephant Butte.

3. The proposed action may also impact actual or hypothetical spill as defined in Article I of the Compact. Lowering the amount of actual water in storage and Usable Water levels in Project Storage will lessen the likelihood of an actual or hypothetical spill occurring, which have major impacts on both credit and debit accounting for Colorado and New Mexico under the Compact. *See* Article I(p) and I(q) of the Compact.

4. The proposed action could also have adverse impacts on Actual Release from Project Storage. Actual Release is defined in the Compact as "the amount of usable water released in any calendar year from the lowest reservoir comprising project storage." *See* Article 1 of the Compact. If Usable Water amounts are reduced in Caballo Reservoir, the lowest reservoir with Project storage, the volume of water available for irrigators in the Rincon and Mesilla Valleys in New Mexico, as well as for Texas and Mexico farmers, will also be reduced.

Accordingly, the ISC suggests the BLM analyze the impacts of the proposed action and alternatives to Compact administration. Alleged groundwater withdrawal impacts on the surface water in the Lower Rio Grande basin of New Mexico are already the basis for interstate litigation involving the Compact. *See* Texas v. New Mexico and Colorado, Original No. 141. Thus, the Compact is not something that should be ignored in the BLM's analysis of the environmental effects of the proposed action. Also, it is important to note that the Compact cannot be modified to meet the needs of the proposed action. Thus, to remedy these issues, the impacts on the Rio Grande and Caballo Reservoir by the proposed action, or a proposed alternative, will need to be offset on a real-time basis.

The Model Minimizes the Impacts of Groundwater Withdrawals on the Surface Waters of the Rio Grande and Caballo Reservoir

Second, the ISC is concerned about the groundwater flow model used in the Draft EIS. Specifically, the impact on the surface and ground water supplies in the mine area is evaluated using a groundwater flow model that utilizes assumptions not supported by field data, in particular reservoir elevations, and contains conceptual misrepresentations. *See* Sections 3.5 & 3.6 of the Draft EIS. Below is a discussion of these concerns along with suggestions on how to fix the issues.

1. In the Draft EIS, Caballo Reservoir is represented with a head dependent boundary that is fixed at 4200 feet for all time periods: pre-mining, during the mining operations, and post mining. *See* Model Files, New Mexico Office of the State Engineer. Caballo Reservoir elevations are extremely important to the analysis because the elevation of the Reservoir controls groundwater discharge back into the Reservoir, therefore impacting substantially the effects to ground and surface water supplies of the proposed action and alternatives. It is unclear why the Draft EIS used the fixed elevation. The United States Bureau of Reclamation has historical data showing end of month levels of the Reservoir since the date of construction. That data should be used in the model at least up to 2015, and then an estimated annual fluctuation could be used to simulate lake elevation during the mining operations and post-mine time periods.

2. The model assumes all water in the alluvium (model layer 1) is isolated from the Upper Santa Fe group by a confining bed in the entire model area. Furthermore, the model conceptually assumes that there is no horizontal interaction between the Upper Santa Fe group and neighboring alluvium; it only allows vertical interaction through a very low vertical conductance. This assumption results in minimizing (or completely isolating, *see* 3.6.1.4 page 3-63 second paragraph) the pumping impact on the surface water and shallow alluvium in the whole model area. For example, Figure 3.13a in the Draft EIS shows only one foot of drawdown in the lower Percha Creek area after 15.67 years of pumping. This would be remarkable based on the location of the wells and levels of pumping required for the proposed action. To make sure this assumption is valid, and accordingly preserve the model's integrity, the assumption needs to be tested using site specific hydrogeologic data and a sensitivity analysis.

3. The model also assumes that there is Paleo-channel that results in an additional source of water to the model area from north to south. However, the predominant groundwater flow direction is from west to east toward the Rio Grande and Caballo Reservoir. This assumed boundary in the model adds additional water to the system that may not exist. A sensitivity analysis was done

on this boundary and concluded that inclusion of this boundary does impact the measured surface flow of the Rio Grande. *See* Draft EIS page 3-71. However, despite this finding, the BLM decided to keep this boundary in the model that was used in the evaluation of the proposed action. The ISC suggests examining this sensitivity analysis again to determine how to better handle this assumption in the model.

4. The model top layer elevations contain a very steep elevation change in the middle of the model that is not supported by the United States Geological Survey Digital Elevation Model map. The model elevations need to be corrected after review of the map.

5. In the model, the routing of water in Percha Creek is not modeled correctly; it is represented by two reaches while it should have been represented by three reaches. *See* Model Files, New Mexico Office of the State Engineer. The model flow routing in Percha Creek should be corrected.

Certain Elements of the Mine's Water Budget and Associated Supply Are Unclear

Finally, the initial source of the recycling water needed for the proposed action and proposed alternatives is not clearly stated in the Draft EIS (9,096 acre-feet, Table 2-10, Figure 2-6). Does the tailing facility currently contain this full amount of water from previous operations? If not, it will take the mine about 5 years to reach a recycling capacity of 9,096 acre-feet at a 75 percent recycling efficiency. This amount of water, or a lesser amount if part of the 9,096 acre-feet is already available, is not included in the modeling undertaken for the Draft EIS. The BLM should clearly state the source of this water and include any additional water needed in the modeling for the Draft EIS.

Conclusion

For the reasons discussed above, the Draft EIS does not yet meet the requirements of NEPA. It fails to fully examine the environmental consequences of the proposed action by omitting review of its effects on Compact administration, utilizes a model that minimizes the effects of the proposed groundwater withdrawals on the surface water supply, and fails to clearly indicate and model the source of the recycling water. The ISC is hopeful that its feedback will result in BLM's modification of the Draft EIS to address these concerns.

Please contact Kim Bannerman at (505) 827-4004 or kim.bannerman@state.nm.us if you have questions regarding our comments.

Sincerely,

Deborah K. Dixon, P.E., Director
New Mexico Interstate Stream Commission

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cc: Rolf Schmidt-Petersen, NMISC Rio Grande Bureau Chief
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