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Manh Choh Comments

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The Northern Alaska Environmental Center is submitting the following comments regarding the draft decisions of the DEC Integrated Waste Management Permit 2023DB0001 and DNR Reclamation Plan F20232626RPA for the Manh Choh mine.

The Northern Alaska Environmental Center does not oppose all mining in Alaska. We strongly support tribal sovereignty and the inherent rights of the Native Village of Tetlin to self-determination. While ore could be milled at the mine site, Kinross Gold and Contango Ore are choosing to utilize public infrastructure to avoid the increased expense of developing a mill in Tetlin. However, this component of their plan, the proposed ore haul transportation plan by Kinross Gold from Tetlin to Ft. Knox, poses significant risks to human and environmental health and does not have the support of the stakeholders along the proposed route (250+ miles).

It is our position that a more thorough review of the data and permit application are required before authorizing this project, especially as these permits do not include the transportation corridor or the ore processing and storage at Fort Knox. We have significant concerns with numerous aspects of the permits.

Scope of permits. These permits only consider the impacts and reclamation of the mine site itself, which is an incomplete assessment of the project. As proposed, the



Manh Choh mine operation will include significant movement of ore away from the mine site, and its operation depends on separate infrastructure located outside of the mine site. Yet the infrastructure that supports this movement, including the transportation corridor and Fort Knox mill and waste storage facilities, are not included in these permits despite them being intrinsically linked. There are multiple sites involved in this project, including the Manh Choh mine site itself, the road from the mine to the highway, the staging area where ore will be loaded onto haul trucks, the 250 mile transportation route, and its destination at the Fort Knox mine processing and storage facilities. Without considering each of these locations and infrastructure types in the permits, they do not adequately address the full scope of this project.

Inadequate data. The waste management permit does not consider spills outside of the immediate mine site and excludes the transportation route and storage and management of waste material at Fort Knox. As these are a critical component of the infrastructure and operation of the mine, they must be included in data collection, assessment, and management plans. According to the August 2022 letter from the EPA, baseline data at the mine site itself included several erroneous data points and currently, there is no baseline data for water or environmental quality outside of the mine site, where impacts will occur due to movement of ore off-site. We strongly request baseline data be collected and reviewed before authorization of a permit.

Fugitive dust. Heavy-metal laden fugitive dust and spills will impact the environment within and beyond the borders of the mine site, with no management plans in place to



address mitigation and remediation outside of the mine site. Beyond covered loads, there are no plans outlined within the waste management or reclamation permits to address spills in waterways along the transportation route, or heavy-metal dust impacts on the flora and fauna between Tetlin and Fort Knox. There are also no permits issued for release of materials outside of the mine site, though spills and impacts from fugitive dust will inevitably occur. It is critical that DNR and DEC require further collection of baseline data within the mine site, and require new collection of data along the transportation corridor to track impacts in order to mitigate and respond to these issues when they occur. Most critically, the acid-generating and heavy metal leaching ore, when spilled from trucks, will have profound impacts on landscape, water quality, wildlife, flora, and human health surrounding the transportation corridor. The lack of baseline data to plan appropriate mitigation, track impacts, and respond with the necessary cleanup efforts is critical information that is missing from the waste management permit.

Management of acid-generating rock. Manh Choh ore poses significant risk of acid-generation and heavy metal leaching; these permits only consider management of these materials at the mine site. Because of the acid-producing nature of the Manh Choh ore, careful handling is required at each stage of the extraction, transportation, milling, and storage and remediation processes to ensure that contaminated materials, including effluent, are captured and treated before causing environmental impacts. Significant amounts of potentially acid generating and heavy metal leaching wastes will be transported out of the mine area (as noted in pg. 10 of the Reclamation and Closure



Plan), yet nothing in these permits addresses management of these materials once they leave the Manh Choh mine site. While moving these materials away from the mine site reduces the footprint of the site itself, it spreads the impacts, including contamination from potentially acid-generating and heavy metal leaching wastes, across a much larger footprint that is not being addressed in these permits.

According to the geochemical report, approximately half of the ore from Manh Choh is potentially acid-generating, posing a high risk of contaminating groundwater sources. The current plans to store materials at the Manh Choh mine site include pits back-filled with waste rock and either capped with non-reactive rock and covered with a liner, or filled with water to reduce oxidation of the ore; while this reduces the chances of acid-generation and heavy-metal leaching, chances of groundwater pollution from these water bodies remains significant, and poses threats to the water quality of surrounding habitat and the nearby Tetlin National Wildlife Refuge. Further, without a liner to cover the pits, there are significant risks to migratory waterfowl if they land in the pit water bodies. The waste storage plan is inadequate, and further review of on-site storage methods is needed, as is development and review of a waste management plan for waste rock beyond the site of the mine.

Fort Knox is not currently permitted to manage and monitor acid-generating and heavy-metal leaching materials, which has not been considered in the Manh Choh waste management permit or the reclamation plan. The current proposal for mixing Fort Knox and Manh Choh ore is to use an 80:20 or 70:30 mix to reduce oxidation and



acid generation of the Manh Choh ore. However, the waste management and reclamation plans do not include alternative management measures of acid mine drainage or heavy-metal leaching that will still occur at this site, even at lower concentrations, nor has there been data collection or analysis of impacts of acid mine drainage from waste storage at Fort Knox into its surrounding environment including the Chena River watershed. The Environmental Assessment for Fort Knox was completed in 1993, and did not include management of potentially acid-generating or heavy-metal leaching materials. As such, these considerations must be part of the Manh Choh permitting process, and the Fort Knox plans must be updated to account for the new ore material that will be introduced to the site, as should its reclamation and closure plans. The waste management and reclamation plans must include ALL sites where Manh Choh ore will be transported, processed, and stored, otherwise the permits are incomplete.

Current management plans at Manh Choh suggest no additional permitting requirements or monitoring on the part of Fort Knox to manage or monitor acid-generation and heavy metal leaching, despite significant amounts of material being transported and stored off-site. The waste management permit therefore is incomplete, as it does not consider the management of ALL waste generated from the mine, including the waste that is being removed and relocated to Fort Knox for processing and storage. The Fort Knox reclamation plan accounts for stabilization within 100 years with no further monitoring beyond that time due to the lack of acid mine drainage or significant heavy metal leaching. However, with the addition of ore



from Manh Choh, which DOES generate acid and as such, requires a more aggressive reclamation and monitoring plan, re-evaluating and updating the Fort Knox reclamation plan to account for acid generation and heavy metal leaching, as well as additional monitoring of these materials, should be included in this permit. This permit MUST consider these impacts beyond the mine site if it is to fully address waste management of the Manh Choh ore.

Water monitoring. These permits only require water quality monitoring for 5-7 years post-mine closure; this is insufficient as acid-generating and heavy-metal leaching storage must be monitored *in perpetuity* to confirm that the waste materials and effluent are not contaminating the surrounding environment. While the plans currently include minimizing oxygen exposure of reactive material and capturing effluent, this management realistically must continue far beyond the current 5 year permitted timeline, to ensure that mitigation is successful and that water and environmental quality is protected for future generations. Further, an adaptive management plan should be developed as part of the waste management and reclamation plans to address potential unplanned seepage and contamination of groundwater resources from the back-filled pits to mitigate further impacts.

Requests. Given that a mining project that includes multiple sites and a transportation plan of this scale is unprecedented in the US, and there is not sufficient data to show that this full mine to mill plan can operate without compromising the safety and health



of communities and the surrounding environment, we object to the issuance of these permits at this time, and request the following:

- An extension of the public review and comment period, as the one month period recently provided posed a challenge to review the hundreds of pages of technical documentation related to these permits (some of which was not provided to the public in accordance with permitting and commenting practices). Despite the mine-friendly culture of the surrounding communities, resolutions from local governments expressed concern or direct opposition to major components of the mine plan that has not been included in these permits (Fairbanks City Council Resolution 5021 [passed 1/9/23], North Pole City Council Resolution 23-03 [passed 2/6/23], and FNSB Resolution 2023-13 [passed 3/9/23]). There is clearly a need to provide more time and information to the public in order to receive well-informed and substantive comments regarding these permits.
- A comprehensive review from state and federal agencies that assesses the mine AND its related infrastructure including the entire transportation corridor from mine to mill and the ore's end location at the Fort Knox mine, as was suggested by the Environmental Protection Agency in their letter to the US Army Corps of Engineers (USACE) in 2022. A federal environmental impact statement or more thorough state environmental assessment should be conducted for the ENTIRE project scope.
- DNR should complete an environmental assessment of the mixing of Manh Choh acid-generating ore with non-acid-generating ore from Fort Knox to determine best management practices and review and update the Fort Knox closure plans and associated bond assurance accordingly to fully cover future mitigation costs including the additional liability from the acid-generating ore.



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- Additional meetings with stakeholders need to be held to ensure that members of the surrounding communities are fully informed and engaged in the process. DNR and DEC must provide public hearings and additional time to review this project's development, especially in regards to its environmental, cultural, social, and human health impacts.

After reviewing the draft decisions of the DEC Integrated Waste Management and DNR Reclamation Plan, we conclude that no permits should be granted at this time.

We appreciate your acceptance and review of our comments, and we look forward to your addressing these concerns.

On behalf of the Northern Alaska Environmental Center staff, board of directors, and 5,716 constituents,

Katie McClellan
Clean Water and Mining Coordinator
Northern Alaska Environmental Center

