

Kennecott Humboldt Mill Permit - PROBLEMS/Talking Points

Thanks to Michelle Halley

Hydrogeologic Issues

- Site is “dominated by Precambrian Rocks covered by a variable thickness of unconsolidated glacial sediments” p.5, App. B
- Site is underlain with “weakly jointed bedrock formation” with dikes and sills and faults and “the deformation and foliation of these rocks has served to produce a weakly jointed bedrock surface.”
- Limited hydrogeologic information collected in vicinity of the pit. It is not enough to assess impacts to surrounding ground water, especially given the complexities:
 - Pit created a local cone of depression n and s of the pit . Once pit static, discharge to N. Surface recharge is from the E and W flanks of the pit, gw recharge is from the S of the pit. Flow from HTDF drains to the N and enters the MB of the Escanaba R.
 - Depth to gw varies from less than 10ft below ground surface E of the mill building to greater than 30 ft near HTDF. GW at mill is to W and SW and enters the Black River. HTDF discharges through subsurface and surface seeps at N face of HTDF and drains to the Middle Branch of the Escanaba R.

Hydrology/Ground Water

- Only 2 groundwater compliance wells (and 5 total) are placed for the whole facility. Fig 5-1, MPA. These are both N of the Lake, but given the complexity of the ground water flows and interactions, this is not adequate.
- Ground water flow near HTDF is complex and multi-direction and is not fully understood by Kennecott. The EIA mentions an “inference” about ground water flow direction near the HTDF and “apparent” impacts and that there “appears to be a restriction of ground water flow” near the Lake.
- Additionally, there is an area where ground water in the Quaternary system flows into the HTDF (App B-1 and I). Depending on how much and where, this may induce turnover.

Surface Water

- No information regarding the water quality going into the wetlands, so it is currently impossible to predict impacts to surface waters (wetlands and multiple discharges to Escanaba River[MB] and Black River).
- Discharge to the wetlands will be applied to surface, it currently enters the wetlands through seeps. Will the temperature of the introduced water be controlled to mimic current conditions?
- Can Kennecott back up their assertion that changes in wetlands will not occur due to the EE wetlands discharge? The application is inconclusive.

Humboldt Tailings Disposal Facility (HTDF)—the Lake

- “Turnover” of water in HTDF not considered, even though DEQ itself has identified that as an issue. The company is relying on chemical stratification of the water and plans to treat only the uppermost portion. This sets a precedent of allowing deep water bodies to be polluted at the bottom, if water at the top is purportedly clean.
- Cyanide, nickel, copper and selenium are already “of concern” at the site.
- HTDF water will go to wetlands N of the basin and into the Mid Br of Escanaba River.
- No construction plans are provided for an earthen dike planned to contain contaminated water in the Lake.

Storm water Management

- Storm water run-off enters the Black River via wetlands. The storm water management plan is to “minimize the time storm water runoff is on site and its contact with historic pyretic material.” This plan in no way addresses the certainty that “storm water” will in some instances be contact water and must be collected and treated. Fugitive dust and air deposition will contaminate water and snow in the area.
- All surface collecting water except water from the pit is classified as non-contact, is not treated and would be discharged directly through sedimentation ponds into ground water or wetlands SW of the facility that drain into the Black River.
- Only 2 surface water monitoring sites are planned at the project site. Kennecott claims that these meet R.203(g) and 406(5)(b) requirements:
(b) Compliance monitoring wells shall be located as close as physically practicable but not more than 150 feet from the mining activity being monitored.
--There are numerous “mining activities” at this site that must be monitored. 2 sites at one far end of the facility are inadequate. Surface water should be monitored regularly at every point where it leaves the site.

Part 632—Humboldt and Eagle

- The definition of “mining activity” includes “beneficiation” – therefore, this application should have been joined with the existing Eagle application. By separating the two, the company avoids an accurate and complete cumulative impacts analysis.
 - “Mining area” means an area of land from which earth material is removed in connection with nonferrous metallic mineral mining, the lands on which material from that mining is stored or deposited, **the lands on which beneficiating or treatment plants and auxiliary facilities are located**, the lands on which the water reservoirs used in the nonferrous metallic mineral mining process are located, and auxiliary lands that are used in connection with the mining. 63201(h).
- Cumulative impacts are not mentioned in the EIA. Cumulative and synergistic impacts assessments are not included related to ground water or surface water/wildlife/wetlands.

Contingency Plans

- No contingency plan for dike failure is in the application.
- No contingency plan for water escape from the HTDF is in the application.

- Fuel spill contingences are not provided in the application.
- The application does not provide contingency plans for fabric filter baghouse malfunction.
- No contingency plans for severe thunderstorms or tornadoes are in this application.

Transportation

- Impacts from ore transport to or from the facility are not addressed.

Fugitive Dust Control

- The application does not include controls for fugitive dust.

Financial Assurance

- The application's financial assurance figure is \$4,649,750. This amount will not come close to covering costs if the HTDF berm fails (which is not accounted for in this Financial Assurance figure because it was not included in the contingency plans.)

EPA Involvement

- UIC for septic, at a minimum