Midwest Mining Rush Threatens Water: Part IV: Challenging the Mine Permitting Process

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Several groups have banded together to file a lawsuit that finds fault with the Michigan Department of Environmental Quality's permitting process. The National Wildlife Federation, Huron Mountain Club, Keweenaw Bay Indian Community and the Yellow Dog Watershed Preserve argue that the permitting process did not adhere to the state's 2004 non-ferrous mining law and claims that decision making was driven by politics rather than science. There was no independent Environmental Impact Statement (EIS) and no one – not even Kennecott – provided a hydrological study for a mine that will be dug 1,000 feet beneath the Salmon Trout River – which is mostly fed by groundwater and is just a handful of miles from Lake Superior. So there is no baseline on which to hold the company accountable. In addition, there were numerous procedural violations, including Michigan Department of Environmental Quality (MDEQ) official, Joe Maki, who led the Mine Review Team that recommended the permit. He admitted in sworn testimony that he did not adhere to the law, and, in fact, he did not completely understand it when he issued the permit to Kennecott.

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Maki acknowledged that the permit did not meet many of the regulatory necessities and neither he nor the mining team applied the key provision of Michigan's law that requires that the applicant demonstrate that they will not pollute, impair or destroy the air, water or other natural resources. When Maki was asked whether he applied this standard, he "stated that he did not apply this section of the statute to his analysis," according to legal documents. Additionally, the rest of the state's mining team "did not apply this section of the statute to its analysis." Moreover, the Salmon Trout River runs through the heart of the public's concern about the Eagle Project, yet the state agents never asked Kennecott how the river would be affected by their proposed underground (or under-river) mine.

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"They found numerous errors and omissions in the materials provided by the mining company and the Department of Environmental Quality's own experts have raised serious concerns about the stability of the roof of the mine. Despite voluminous expert testimony stating the danger of the sulfide mine to people, wildlife and natural areas, the Michigan Department of Environmental Quality and the Michigan Department of Natural Resources issued Kennecott Eagle Minerals permits in 2007 to perform sulfide mining on the public lands," stated National Wildlife Federation's Director of the Great Lakes region, Andy Buschbaum.

The MDEQ buried a report written by an independent contractor it had hired to evaluate Kennecott's permit application. The evaluator, David Sainsbury of Itasca Consulting Group, found some significant problems. The report and its contents were unearthed when NWF lawyer Michelle Halley invoked the Freedom of Information Act in an effort to read the findings. Halley maintains that the DEQ ignored her initial requests – then provided just part of the information before finally releasing the entire report.

Sainsbury's first concern has to do with the stability of the crown pillar which is responsible for holding up the roof of the underground mine. He writes: "The analysis techniques used to assess the Eagle crown pillar stability do not reflect industry best practice. In addition, the hydrologic stability of the crown pillar has not been considered. Therefore, the conclusions made within the Eagle Project Mining Permit Application regarding crown pillar subsidence are not considered to be defensible." Sainsbury did not understand why the company was not concerned with this and added, "Considering the sensitive nature of the hydrological environment surrounding the Eagle project, further detailed analysis should be conducted to fully understand the expected short- and long-term crown pillar subsidence and hydrologic stability."

Again, in sworn testimony, Maki of MDEQ admitted that nothing had been done with the Sainsbury information and his criticism of the rock mechanics work in Kennecott's application.

Sainsbury also found that Kennecott did not perform some of the vital tests they claimed to have done in their application. "The Eagle Project Mining Permit Application states that both plastic and elastic deformations of the crown-pillar rock mass were evaluated. In fact, no analyses were conducted using plasticity theory to predict shear and tensile failure of the rock mass," he writes.

Mining companies always claim they won't pollute in their applications, according to Ann Maest, Ph.D., a geochemist who specializes in the interaction of earth materials and water. Maest researched the Environmental Impact Statements of more than 100 mines in the Northwest to find out what they had predicted would happen to water quality in the permit applications. Of those, she created a subset of 25 mines that had a more complex hydrology. "What we found was that three quarters of them (mine applicants) predicated there would be no adverse effect to water quality – that water quality standards would not be exceeded – and what we found was that it was not true. They have to predict this or they won't get a permit," she said. In fact, her research also found that sulfide mines in water wealthy areas "90 percent of the time were likely to exceed water quality standards adversely. The mines that were in other areas, not close to water, did not have an observable impact on the environment. When you have a combination of sulfide mining and water resources, there is greater likelihood you will have water quality problems."

The Yellow Dog Plains area, where the mine will be located, receives an average of 200 inches of snow and up to 36 inches of rain each year. This wet weather is critical when determining how the unearthed contaminants will behave. When snow melts and when it rains, water will infiltrate the crown pillar and create acid rock drainage and leaching both of which will pollute water in the underground mine. Locals petitioned for an independent U.S. Geological Study to look at the hydrology of the area to be used as a baseline. They argued that to properly monitor the mine, experts need to know the current stream and groundwater conditions and flow patterns.

"All these streams are part of the system that could potentially be affected by sulfide mining as well as the Lake [Superior] itself. Because a hydrological study was never done, there will be little to stand on in the future to prove contamination," said Martha Bush of Little Tree Cabins. "The lack of that study is clearly protection for the companies themselves. If they don't know, no one can prove it. So sulfide pollution can be a background as opposed to coming from the mine site."

Lake Superior. Photo: NASA

The U.S. Geological Survey denied residents request for a baseline study, and it is unlikely Michigan will ever provide such a study since it is so costly. USGS studies take about five years to complete and cost over a million dollars. Michigan is the Rust Belt state with the highest unemployment rates and the second highest unemployment rate in the United States.

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"The Eagle deposit is unique," said scientist Ann Maest in court testimony. "It has extremely high sulfide content. There aren't that many other deposits in the world that have such a high sulfide content." In her analysis of Kennecott's application she concluded that the rock at the proposed site "is going to generate acid and produce high concentration of metals and other contaminants." (This means Kennecott miscalculated both the amount of acid rock drainage and the amount of metal leaching in the application.) Maest also found that Kennecott's predictions for water quality "severely underestimates the concentrations of contaminants that will be present in water related to the mine." What is worse, when the mine closes, she says that the water that will be left in the mine will be badly contaminated, exceeding all standards.

In their EIS, Kennecott did not address how acid rock drainage or other pollutants would impact the groundwater or surface water. MDEQ's Maki agreed in sworn testimony that the mine has the potential to leach sulfuric acid and heavy metals into ground and surface water, but the agency still gave the Eagle Project the green light.

Michigan's law also requires mining companies to reveal the possible impacts of accidents and contingency plans before gaining a permit. Kennecott wrote that the mine is designed to prevent failures and accidents from occurring and so, logically, they just won't happen. In the event of a cave in, there are no plans to deal with worker safety. There are no plans for a greater inflow of groundwater to the mine or contaminated water leaking into aquifers from the underground mine.

Despite all of these concerns, Kennecott's permit made it through the approval process even though, in 2007, Governor Jennifer Granholm said - through her spokesperson - that she had directed the DEQ to "insure that Kennecott's application meets or exceeds all requirements" of the new law.

Maest isn't surprised; she says that states are underequipped to evaluate such projects even though they are, by law, responsible for analyzing them. "Michigan didn't have anyone internally who really understood mining operations," Maest says. "They had consultants…and generally the consultants work for the mining companies so that is their orientation – to get projects permitted." The bottom line is actually *the bottom line. S*tates cannot afford to pay top dollar for the best scientists and engineers. These individuals end up working for the big mining companies.

In the mid-1990s, Rio Tinto's Kennecott started buying up land in Michigan's Upper Peninsula (UP). They have accumulated at least a half-million acres and leased more than a quarter of the mineral rights in Marquette County. Then, in 2003, it was revealed that they had tapped into and found the nickel and copper rich sulfide ore deposits, and the mineral rush began.

Since 2004, Kennecott has spent at least a million dollars in contributions to legislators in Michigan's capital, Lansing. They most likely have spent much more through their lobbying firm, the Governmental Consultant Services, Inc. (GCSI). GCSI is not required to report how much they have spent for each client, Richard Robinson, director of Michigan's Campaign Finance Network told DCBureau.org.

Initially the lobbying focused on the governor and lawmakers from the eight UP districts to pass the new sulfide mining laws. Then the focus was on getting approval for the 8,000 page mining permit application, according to an investigation by the *Great Lakes Bulletin*.

Matt Johnson had been Governor Jennifer Granholm's point person on metallic sulfide mining since 2003. It has been reported thatthe governor threw her support behind the permit based on his advice. In 2008, Johnson left her office to work in the government relations office of Kennecott.

Rio Tinto has designs on digging more mines in this region once they have proven themselves with Kennecott. They have led the way for a number of other companies that want to profit from these rich deposits of nickel, copper and other metals.

Because of the number of mines they have proposed in the area, Jeff Gamble, owner of the Big Bay Point Lighthouse B &B says, "Kennecott is towing the line really carefully on this one. I

would not guarantee they would be as careful with those." He hopes some significant monitoring will be set up.

At least six more sulfide mines are vying to operate on the shores of the Great Lakes. Rep. Stupak is concerned and says they will put the "world's largest body of fresh water" in jeopardy. The lakes are not the only ones in danger. Numerous small business owners are equally threatened.

"We are a business that thrives on the tourist population," says Bill Thompson of Downwind Sports. People go to the UP to recreate and to get away from it all. I believe this proposed mine threatens to change the character of our area."

Photo: Phill Scoville

Martha Bush argues that just the initial construction has had a negative impact on the character of the area and her business. The mine site used to have a strong north-woods feel. For 35 years, she has sent people up a country lane to pick berries and relax in the beauty of the countryside. But now it is strewn with industrial electrical lines, and there is no green canopy arching above the lane. Mine construction workers are annoyed when her guests appear. "It is no longer a country road that goes nowhere. It clearly is going somewhere, and it has changed the whole environment where we live – and they haven't even started [mining] yet."

Bush's cabins are nestled along Lake Superior on a hilly country road. For decades, families have been drawn to her resort for its peacefulness. Now Kennecott's trucks are using that road to transport materials. "The trucks that go by have to gear up and break and my cabin on the corner has complained for five weeks that children couldn't sleep with the rumbling of the trucks," Bush said during the height of her summer season in 2010. She claims that once the mine is in full operation, she will have huge loaded trucks going past her cabins every six minutes around the clock. "So that affects my business very, very directly. It will not be a relaxing place," she said.