
Attachment A

Written Comment Letters

Representative Form Emails

Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project
Environmental Assessment Worksheet - Record of Decision

March 1, 2024

MILE POST 7 WEST RIDGE RAILROAD RELOCATION, DAM EXTENSIONS, AND STREAM MITIGATION PROJECT EAW
RECORD OF DECISION - ATTACHMENT A
FINDING OF FACT 13.a - COMMENT LETTER - DAYTON, CHARLES

From: Charles Dayton
To: MN_Review, Environmental (DNR)
Subject: Tailings basin dam at Milepost 7
Date: Thursday, May 18, 2023 8:03:51 AM

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During the permitting process for the original permit to dispose of taconite tailings at Milepost 7, I was a lawyer representing Save Lake Superior association and the Sierra Club. I was present and participated actively in the hearing before former DNR Commissioner Wayne Olsen (which were quite lengthy) and each phase of the process that followed, including the Agency hearings, the 3 judge District Court hearings and the Minnesota Supreme court.

Before proceeding with the allowance of an expansion at Milepost 7, DNR should take this opportunity for further study as recommended by Water Legacy and others for these reasons:

The denial of the permit for Milepost 7 was recommended by a former DNR commissioner and accepted by both the PCA and DNR on the basis of evidence produced over a six month hearing.

The reversal of those permit denials by a 3 judge district court of biased Northern Minnesota Judges and a disingenuous Minnesota Supreme Court was a product of concern for loss of jobs in northern Minnesota, as a result of Reserve Mining Company's threats of closure if the permits were denied. It was not based on the record. It is not entitled to weight in your decision, but the denial of the permits by MPCA and DNR is.

Here is a quote from the Minnesota Supreme Court's opinion:

The hearing officer appointed by PCA and DNR took testimony from 160 witnesses, *817 received 1,000 exhibits, and generated an 18,000-page transcript in the 9 months during which Reserve's permit was being considered by him. His findings, conclusions, and recommendations were adopted by the agencies without further evidence and incorporated into resolutions and orders denying permits at Mile Post 7 and encouraging an application for permits at Mile Post 20.

In commenting on the dam to be erected at Mile Post 7, the hearing officer expressed the opinion that the possibility of errors and omissions in construction were increased by the passage of time, and that tailings dams are more difficult to build than conventional water storage dams and are more susceptible to faulty construction. He indicated a lack of confidence in the likelihood of "close cooperation and mutual faith between the designer and the mining operator." The bedrock, he found, would present no problems in dam stability, and the clay samples in the area provided suitable foundation. However, Mile Post 7 would be a major, complex engineering project, resulting in one of the largest dams in the United States, and would be located 3 miles from Lake Superior and 600 vertical feet above it. He found a major failure of the dam

would be catastrophic. In that event, eight residences below the dam would be affected and the tailings would be deposited in Lake Superior with no opportunity for recapture. As between Mile Post 7 and a damsite where the consequences of failure would not be so severe, the hearing officer concluded that prudence would dictate the choice of a safer site, "even if the probability of dam failure is small.

Your Record of Decision relies heavily on the Supreme Court decision but does not provide a discussion of the Administrative law Judge Wayne Olsen's analysis nor that of the agencies themselves. You do not provide adequate citations to those documents nor discuss their reasoning, even though they, rather than the judges, have the expertise that the judges did not. I was not able to find a citation to Olsen's recommendations or the Agencies decisions, except at the Min Historical Society. Why did you not cite them adequately?

The administrative hearing had evidence of other dam failures, including the Teton Dam which collapsed during the hearing.

That history is important to your present consideration of the request to enlarge the tailings basin dam. I assume that you have reviewed the record of the hearings in the 70's on the safety of this dam and the tailings airborne particles contamination. As you know, the PCA board itself **denied the permit**, then the permit decision was reversed by a 3-judge district court that was obviously biased. All three were judges from the northern part of the state, and paid no attention to the expertise of the hearing examiner nor to the MPCA and DNR which had ruled against the permit and the dam.. The Supreme court made a disingenuous decision with ridiculous reasoning. I am aware on good authority that Reserve Mining telephoned the Supreme Court just before the oral argument and said that if the Court ruled against them, they would close the Silver Bay plant and 3,000 workers would be out of work., And the Supreme Court even noted that threat in its opinion. The point is that the agency board, which should have been given deference because of expertise, was pushed aside because of concern for jobs in Silver Bay. There is no doubt in my mind about it.

The disingenuity of the Court in this case is most obvious in its discussion of Milepost 20 which the agencies found to be a "feasible and prudent alternative" under the Minnesota Environmental Rights. The opinion speaks of Milepost 20 (which is apparently "just woods" as is about 16 million acres in Minnesota) as "wilderness" as if it could be compared with the beautiful and unique valley in the North Shore ridge. And the opinion notes that the people who live near Milepost 7 (of which there was no evidence) are as entitled to protection from airborne particulates as the people of Silver Bay. Baloney!

I have to say that the decision of the Minnesota Supreme Court in this case was the most disappointing, disheartening and disingenuous of my career as an environmental lawyer in Minnesota. It is not entitled to deference.,

Charles Dayton

Chuck Dayton

651 341 2049

photography: chuckdayton.smugmug.com

MILE POST 7 WEST RIDGE RAILROAD RELOCATION, DAM EXTENSIONS, AND STREAM MITIGATION PROJECT EAW
RECORD OF DECISION - ATTACHMENT A
FINDING OF FACT 13.b - COMMENT LETTER - DULUTH CITY COUNCIL MEMBERS



May 12, 2023

Bill Johnson
Environmental Review Unit
Ecological and Water Resources Division – Box 25
Minn. Dept. of Natural Resources
500 Lafayette Road N.
St. Paul, MN 55155-4025

VIA EMAIL

Environmentalrev.dnr@state.mn.us

RE: Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project – Environmental Assessment Worksheet

Dear Mr. Johnson:

As local elected officials for the City of Duluth, we appreciate the opportunity to comment on the Environmental Assessment Worksheet (“EAW”) for the Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project (“Mile Post 7 Expansion”) proposed by Northshore Mining Company. The Mile Post 7 tailings basin and proposed expansion are of significant importance to Duluth’s 1st, 2nd & 3rd Districts and our constituents.

Our greatest concern is the lack of information in the EAW regarding dam safety for the proposed Mile Post 7 Expansion. We ask DNR to ensure that the environmental effects of the proposal—including the safety of the dams and the environmental effects that would result from a collapse of the tailings basin’s dams—are fully vetted before a decision is made concerning Northshore Mining Company’s proposal.

It seems clear to us that a collapse of the Mile Post 7 tailings basin dams would have devastating environmental effects. The basin, a 2,000+ acre lake of pollution, is a short three miles uphill of Lake Superior. The effects of a collapse of that basin on the towns below—Beaver Bay and Silver Bay—would be disastrous. The tailings and water would flood into downstream waters, affecting water quality, fish and other aquatic life, wildlife, and the health and safety of nearby residents. A surge of the tailings into Lake Superior would have serious effects for cities like Duluth that depend on the lake for drinking water, in addition to effects on ecosystems and tourism.

In other words, the Mile Post 7 tailings basin exists because of the need to protect Lake Superior; decades of work would be undone in minutes by a dam collapse at the site. And yet, we cannot even say what the effects of a dam collapse might be—because we do not know. The subject has not been publicly studied since the environmental review in the 1970s, and even that study only looked briefly at the consequences of a partial dam collapse. We do not believe DNR should rely on a 40-year-old study, which was not done to modern standards, to assert that the tailings basin is



safe. We need public, unredacted information about the potential environmental effects of a dam breach—exactly what environmental review is required to do.

We are also concerned that DNR may already not be doing all it can to regulate the safety of the Mile Post 7 dams. The EAW indicates that DNR has not issued a dam safety permit for Mile Post 7 because the tailings basin predates the dam safety law. Requiring a dam safety permit would ensure a thorough review of the dam's safety and a public process that would fully disclose information about the dam to area residents who would be affected by a dam collapse.

Because of the potential for significant environmental effects from the Mile Post 7 facility and the Mile Post 7 Expansion, we ask that DNR perform additional environmental review on the subject of dam safety and environmental effects of a dam breach—either a supplement to the EAW or a full Environmental Impact Statement, and that DNR require a dam safety permit. This will help the public understand the safety of the dams and the effects from a potential collapse. Then, if needed, DNR can require more stringent safety measures at the site before reaching a decision on Northshore Mining's request to expand the tailings basin. Thank you for your consideration.

Sincerely,

Gary Anderson

City Councilor, District 1

Mike Mayou

City Councilor, District 2

Roz Randorf

Council Vice President, District 3

Fond du Lac Band of Lake Superior Chippewa

Resource Management Division

MILE POST 7 WEST RIDGE RAILROAD RELOCATION, DAM EXTENSIONS, AND STREAM MITIGATION PROJECT EAW
RECORD OF DECISION - ATTACHMENT A
FINDING OF FACT 13.c - COMMENT LETTER - FOND DU LAC BAND OF LAKE SUPERIOR CHIPPEWA

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Bill Johnson
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MN Department of Natural Resources
500 Lafayette Road N
St. Paul, MN 55155-4025

May 17, 2023

Re: Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project – Environmental Assessment Worksheet

Dear Mr. Johnson:

Thank you for the opportunity to provide comments on the Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project Environmental Assessment Worksheet (EAW).

The Fond du Lac Band of Lake Superior Chippewa is a federally recognized Indian tribe, as well as a member band of the Minnesota Chippewa Tribe "(MCT)". Along with other MCT Bands, the Band retains hunting, fishing, and other usufructuary rights that extend throughout the entire northeast portion of the state of Minnesota under the 1854 Treaty of LaPointe¹ (the "Ceded Territory"), which encompasses in the area of the Project. In the Ceded Territory, the Band has a legal interest in protecting natural resources and all federal agencies share in the federal government's trust responsibility to the Bands to maintain those treaty resources.² In order to fully exercise these guaranteed treaty rights, abundant unpolluted natural resources must be available. Accordingly, water that meets tribal and state water quality standards is required to ensure the full exercise of treaty rights.

¹ Treaty with the Chippewa, 1854, 10 Stat. 1109, in Charles J. Kappler, ed., *Indian Affairs: Laws and Treaties*, Vol. II (Washington: Government Printing Office, 1904), available on-line at <http://digital.library.okstate.edu/kappler/Vol2/treaties/chi0648.htm> (last visited March, 2014).

² See, e.g., Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (stating "the United States has recognized Indian tribes as domestic dependent nations under its protection . . . ,") there is a "trust relationship with Indian tribes," and "[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments."), available at <http://ceq.hss.doe.gov/nepa/regs/eos/eo13175.html> (last visited March, 2014)

Because of their unique government-to-government relationship with the Minnesota tribes, state³ and federal agencies⁴ have a legal responsibility to maintain treaty-reserved natural resources. The Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Natural Resources (MDNR) are required to consider the input gathered from tribal consultation in their decision-making processes, with the goal of achieving mutually beneficial solutions.⁵

The Fond du Lac Band has in recent years communicated concerns about environmental impacts to natural and cultural resources as a result of the expansion of the Mile Post 7 tailings basin and these proposed related actions. Tribal environmental concerns are amplified by the lack of adequate environmental review for this major undertaking. State and federal permitting agencies today are relying upon analyses of environmental impacts from Environmental Impact Statements that were conducted in 1976 (DNR) and 1977 (USACE), with far less rigor and much reduced scope than is typical best practices for today. These analyses neither contemplated nor studied impacts from any expansion of the Mile Post 7 tailings basin beyond the boundary of today's railroad track. Therefore, this substantial expansion of the tailings basin to the west by more than 800 acres, and rise in final elevation of the dams by fifty feet is a major new project requiring government action that was neither planned nor evaluated in any EIS. It is not a "phased action; it requires a new EIS.

In fact, while researching this facility's permitting history, tribes learned that the final EIS approved by DNR on June 2, 1976 found the Mile Post 7 tailings basin alternative would have disqualifying adverse environmental impacts, and did not support constructing the Mile Post 7 tailings basin at that location, let alone its expansion 44 years later. Additionally, the 1977 EIS performed by the USACE did not contemplate or analyze increasing the tailings height to 1365 feet above mean sea level (MSL), or the expansion of the tailings basin west of the railroad track constructed at Mile Post 7.

In the mid 1970's, Cleveland Cliffs (Reserve Mining) was *ordered* to build a tailings basin in order to stop direct discharge of their tailings into Lake Superior. At that time, the primary water quality constituent of concern was asbestos-like or amphibole fibers in the tailings

³ See, e.g., Exec. Order 19-24, "Affirming the Government-to-Government Relationship between the State of Minnesota and Minnesota Tribal Nations: Providing for Consultation, Coordination, and Cooperation."

⁴ See, e.g., Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (stating "the United States has recognized Indian tribes as domestic dependent nations under its protection . . . , there is a "trust relationship with Indian tribes," and "[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments.").

⁵ See, e.g., Exec. Order 19-24, "Affirming the Government-to-Government Relationship between the State of Minnesota and Minnesota Tribal Nations: Providing for Consultation, Coordination, and Cooperation."

being discharged into the lake in proximity to public drinking water intakes. Despite the findings of the EIS, the Mile Post 7 tailings basin was constructed in the Beaver River watershed, and is currently permitted under an MPCA industrial discharge (NPDES/State Disposal System or SDS) permit that expired in 2008 but has been extended administratively. The Beaver River, a designated trout stream, is listed on the MPCA's CWA §303(d) list, with impairments including fish communities, mercury, temperature and pH.

The Minnesota Pollution Control Agency (MPCA) has extensively surveyed this watershed as part of its statewide Watershed Restoration and Protection Strategies (WRAPS) process, and confirmed healthy coldwater biological communities, both fish and macroinvertebrates, in upstream reaches of the Beaver River, including native brook trout. But more downstream reaches near the Mile Post 7 tailings basin have been assessed as impaired for aquatic life use and mercury. The loss of these sensitive species in the stream reaches near the tailings basin are indicative of degradation from previous mine processing disturbances.

Water quality monitoring data presented in the draft CWA 401 certification document for this project also demonstrates that currently there are clear exceedences of MN water quality standards for fluoride and mercury, and highly elevated specific conductance. A Stressor Identification Report and a Total Maximum Daily Load (TMDL) study on the Beaver River have been completed by the MPCA. The Stressor Identification Report indicates that turbidity, altered hydrology and poor habitat are clearly affecting fish communities, and suggests elevated ionic strength (specific conductance), pH and loss of connectivity are likely contributors to this impairment. All of these stressors can be clearly tied to the physical disturbance of the existing tailings basin and the polluted seepage emerging through dam walls and connected groundwater. Expanding the Mile Post 7 tailings basin will exacerbate these impairments, even though the CWA requires the MPCA to restore impaired waters.

5.4 Beaver River Watershed Stressor Identification Summary

Stressor identification results for the Beaver River fish impairment are presented in Table 20. Refer to the section number listed in the right column of the table to review the evidence used to diagnose or eliminate the various stressors that were evaluated for this impairment.

Table 20. Summary of stressor identification results for the Beaver River fish IBI impairment

Candidate cause	Result	Section
Elevated water temperature	•	5.3.1
Low dissolved oxygen	X	5.3.2
Elevated ionic strength (Specific conductivity)	○	5.3.3
pH	○	5.3.4
Poor habitat	•	5.3.5
Loss of connectivity	○	5.3.6
Elevated total suspended solids/Turbidity	•	5.3.7
Altered hydrology	○	5.3.8

Key: • = confirmed stressor ○ = potential stressor X = eliminated candidate cause

Our concerns for the proposed Mile Post 7 tailings basin expansion also include the serious and foreseeable risks of upstream dam failure, which would lead to discharge of highly polluted tailings and slurry water to Lake Superior, less than 3 miles downstream via the Beaver River. These human health and ecological risks have never been analyzed in an EIS. In fact, the Mile Post 7 tailings dam was originally designed to be built using the downstream construction method, but after permitting, the DNR approved upstream method construction for subsequent dam raises. This method of construction is inherently less safe; in fact, it has been banned in many countries around the world after high profile catastrophic tailings dam failures in Brazil and British Columbia.

The Mile Post 7 tailings dam was constructed using upstream methods called “modified centerline or offset-upstream” processes where the dam is constructed out of coarse tailings piled on top of the uncompacted fine tailings. Placing coarse tailings on top of uncompacted fine tailings causes a high level of vulnerability for catastrophic failure caused by seismic or static liquefaction. The 1976 Final EIS only considered the potential impacts of tailings dam failure from relatively safer downstream construction methods without an analysis of catastrophic failure resulting from less stable upstream construction methods. DNR considers Mile Post 7 dams to be High Hazard or Class I dams.⁶ MN Rules consider Class I dams as high hazards because “*failure, mis-operation, or other occurrences or conditions would probably result in...any loss of life or serious hazard, or damage to health, main highways, high-value industrial or commercial properties, major public utilities, or serious direct or indirect, economic loss to the public.*”⁷ Yet there has not been a full evaluation of the vastly increased probability of dam failure due to Northshore’s use of upstream and offset upstream raises to substantially increase dam height since MN DNR’s approval of these methods in 1997.⁸

The Minnesota DNR apparently determined that supplemental analyses were not required for this significant expansion to the Mile Post 7 tailings basin, because the decades-old EIS had already considered impacts to surface and groundwater and determined that “...Based upon MPCA’s understanding of the seepage collection system, and that there is unused pumping capacity available, the agency does not expect seepage-related impacts to deviate significantly from that assessed in the 1977 EIS...any seepage impacts to the water quality of the Beaver River are projected to remain negligible, again within consideration of the issues in the 1977 EIS.” The DNR simply assumed there would be no water quality impacts beyond what was evaluated in the earlier EIS, as “The facility remains subject to NPDES/SDS permit provisions, thus any impacts are subject to ongoing regulatory control.” (DNR 2017 SEIS

⁶ DNR 2022 ROD ¶197.

⁷ Minn. R. 6115.0340, subp. A.

⁸ DNR 2017 ER Memo at pdf pg.14

Memo). Considering the long-expired NPDES/SDS permit, which itself lacks water quality-based effluent limits necessary to protect downstream waters, and the clear evidence of existing water quality impairments in downstream waters, tribes do not share the DNR's confidence in "ongoing regulatory control".

The DNR memo also summarily dismissed any dam safety concerns, concluding "...the proposed adjustments to the final crests for Dams 1, 2, and 5 are not unusual for tailings basins, and as long as the design meets current dam safety standards, the progression should not result in impacts different from what was examined in the 1977 EIS. The Dam Safety Permit will likely have to be amended, but no new analyses beyond those normally required for the permit application are anticipated. The potentially significant adverse impacts associated with dam safety are not affected by the proposed action." (DNR 2017 SEIS memo)

The potential environmental effects of the Mile Post 7 project cannot be determined without a modern dam-safety analysis that assesses the potential area that would be covered by a tailings flood resulting from catastrophic dam failure; the depth and velocity of a tailings flood; anticipated residential and non-residential human health and infrastructure impacts; impacts on terrestrial and aquatic wildlife and their habitats; downstream water quality impacts; and worst-case scenario impacts.

The habitat restoration plans for the stream portions that will be covered by new tailings (and have already been covered by tailings) is only one element of what is actually needed to mitigate the project impacts to aquatic resources. The tailings basin extension will change the head pressure and create seepage in new locations. Water quality impairments must also be addressed through completing and implementing Total Maximum Daily Loads (TMDLs) for existing impairments, identification and permitting of all new seepage or discharge points, and ensuring that those permits include adequate waste load allocations, and wastewater treatment requirements to meet all MN water quality standards. Until these issues are addressed in permitting, this project must not move forward. The MPCA and MN DNR are well aware that only a portion of total seepage is captured through the use of barriers and ditching as documented at through aerial overflights and assessments of downstream waters at all taconite tailings basins in MN.

Liquefaction of tailings causing catastrophic dam failure is also of great concern for this project. Progressing from 1950's mine waste management technology to modern dry-stack technology would reduce the impacts to water quality, require a smaller on-land footprint, and provide a more stable tailings pile heap. Finally, the additional losses to Treaty Reserved Resources within the footprint of this tailings basin expansion are cumulative and must be assessed from that perspective. The MN DNR and MPCA have an obligation to minimize the footprint of the tailings basin and ensure that the expansion does not cause or contribute

to excursions from MN water quality standards resulting from seepage or dam failure. The state has that obligation to the tribes because of their unique government-to-government relationship with the Minnesota tribes.⁹ The Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Natural Resources (MDNR) are required to consider the input gathered from tribal consultation in their decision-making processes, with the goal of achieving mutually beneficial solutions.

In summary, tribal concerns for adverse environmental impacts from these proposed projects to mitigate expansion of the Mile Post 7 tailings basin are based upon the lack of sufficient analysis of predictable impacts, and clear evidence of existing adverse water quality impacts from the tailings basin that are not being controlled through the regulatory framework of permitting. The proposed expansion would also incorporate a coal ash landfill within the dams; there has been no evaluation or analysis of water quality impacts associated with having additional highly toxic waste contained behind leaky coarse tailings dams, built higher than originally planned and by a demonstrably unsafe construction method.

Fond du Lac requests a compulsory Environmental Impact Statement (EIS) be prepared to assess the significant and cumulative impacts of the proposed project. Further, MDNR must require Cliffs to provide sufficient financial assurance to protect reserved Tribal resources, the surrounding community, the environment, and taxpayers from tailings dam failure and tailings basin pollution. We request that DNR require that the Mile Post 7 tailings basin be subject to formal permitting in compliance with dam safety statutes and rules in Minnesota Statutes Chapter 103G and Minnesota Rules Chapter 6115, and with permit to mine statutes and rules in Minnesota Statutes Chapter 93 and Minnesota Rules 6115.

Sincerely,



Nancy Schuldt, Water Projects Coordinator

⁹ See, e.g., Exec. Order 19-24, “Affirming the Government-to-Government Relationship between the State of Minnesota and Minnesota Tribal Nations: Providing for Consultation, Coordination, and Cooperation.”



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May 18, 2023

Re: Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation
Project – Environmental Assessment Worksheet

Dear Mr. Johnson:

Thank you for the opportunity to provide comments on the Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project Environmental Assessment Worksheet (EAW). Grand Portage requests a compulsory Environmental Impact Statement (EIS) to assess the significant and cumulative impacts of the proposed project. Further, Minnesota Department of Natural Resources (MDNR) must require Cliffs to have enough financial assurance set aside to protect reserved Tribal resources, the surrounding community, the environment, and taxpayers from tailings dam failure and tailings basin pollution. Mile Post 7 has been allowed to operate for 40 years without permits that require compliance with current statutes and rules. Therefore, the MDNR must now compel Cliffs to apply for new permits that comply with dam safety statutes and state water quality standards.

Grand Portage is a federally recognized Tribe that has retained hunting, fishing, and other usufructuary rights in the lands and waters that were ceded to the United States. Usufructuary rights were retained to ensure hunting, fishing, and gathering for subsistence, economic, cultural, medicinal, and spiritual needs could continue into perpetuity. “*Reserved property rights, explained by the Supreme Court in 1905 in United States v. Winans, 198 U.S. 371, are not ‘a grant of rights to the Indians, but a grant of rights from them’.* In *Winters v. United States, 207 U.S. 564 (1908)*, the Supreme Court applied this principle in a water rights case. These two cases are the basis of the “reserved rights doctrine”, that recognizes tribes retain those rights of a sovereign government not expressly extinguished by a federal treaty or statute.”¹ In order to fully exercise these guaranteed treaty rights, abundant unpolluted natural resources must be available. Consequently, water that meets tribal and state water quality standards is required to ensure the full exercise of treaty rights.

Because of their unique government-to-government relationship with the Minnesota tribes, state² and federal agencies³ are legally responsible for maintaining treaty-reserved natural resources. The Minnesota Pollution Control Agency (MPCA) and the MDNR are required to consider the input gathered from tribal consultation in their decision-making processes, with the goal of achieving mutually beneficial solutions.⁴

I. Dam Safety Remains a Concern at Mile Post 7

On July 28, 1993, a 27-acre coal ash heap containing approximately 770,000 cubic yards experienced a catastrophic failure and sent a massive amount of mercury-laden waste across Highway 61, the only direct route connecting communities along the North Shore of Lake Superior, picking up a semi-truck on the way and depositing the contaminated slurry into the Beaver River and Lake Superior. Coal ash contains toxic chemicals, including mercury, that increase the risk of cancers, damage the lungs and heart, cause stomach ailments, and contribute to premature death. The land cleanup cost the company \$11 million. Water resources have not been fully restored.

¹ The Federal-Tribal Trust Relationship: Its Origin, Nature, and Scope, Pevar, Stephan L., 2009.

² See, e.g., Exec. Order 19-24, “Affirming the Government-to-Government Relationship between the State of Minnesota and Minnesota Tribal Nations: Providing for Consultation, Coordination, and Cooperation.”

³ See, e.g., Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (stating “the United States has recognized Indian tribes as domestic dependent nations under its protection . . . ,” there is a “trust relationship with Indian tribes,” and “[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments.”).

⁴ See, e.g., Exec. Order 19-24, “Affirming the Government-to-Government Relationship between the State of Minnesota and Minnesota Tribal Nations: Providing for Consultation, Coordination, and Cooperation.”

Grand Portage cmts re Mile Post 7 EAW
May 18, 2023

Prior to the collapse, in 1991, Cliffs predecessor LTV applied to the MPCA for a permit to resume depositing ash on the heap. After a site investigation, MPCA determined that the coal ash heap was polluting Lake Superior from stormwater run-off and seepage and issued a “no discharge” requirement, ordering LTV to stop the release of water from the ash pile. LTV had several options for compliance, including dry storage with a cover over the ash pile. LTV chose and received approval from MPCA to construct a containment and recirculation system, similar to a tailings basin, consisting of a large pond on the downhill side of the ash heap to collect surface runoff and leachate water. Water was pumped from the pond to the top tier of the ash heap, sprayed back onto the heap, and dispersed by evaporation of water through the vegetation covering the ash pile. Excess water from a coal stockpile was also dumped into the pond or directly onto the ash heap. After a moderately strong storm event, the ash heap became saturated and liquefied, causing the collapse.

After the collapse, the coal ash disposal pond was relocated inland next to the current Mile Post 7 tailings basin, where it remains today. The coal ash landfill and the existing West Ridge Railroad are not authorized in the 1977 Master Permit or the 1985 Permit to Mine.

The Mile Post 7 tailings dam was supposed to be constructed using downstream methods analyzed in the 1976 EIS. Upstream construction methods, called “modified centerline or offset-upstream,” are processes where the dam is constructed out of coarse tailings piled on top of the uncompacted fine tailings. Placing coarse tailings on top of uncompacted fine tailings causes a high level of vulnerability for catastrophic failure caused by seismic or static liquefaction. Modified centerline or offset-upstream construction methods were proposed by LTV and approved by the MDNR in 1997.

The analysis based on downstream construction methods and alternative sites were assessed along with the current Mile Post 7 location in 1976. The EIS provides *“Dams of the same design and construction at each of the alternative sites would have a greater safety factor than at Mile Post 7.”*⁵ Even so, one of the EIS conclusions provides that a *“1,000-foot breach in the 13,000 foot south dam at Mile Post 7 would produce a 28 foot high wall of water moving down the Beaver River valley at more than 20 miles per hour to Lake Superior”*⁶ *destroying, impairing and polluting significant waters resources,”*⁷ *thereby thwarting “the entire purpose of on land disposal by emptying stored tailings into Lake Superior. The threat to Lake Superior would not end when operations cease, but would persist indefinitely.”*⁸ The 1976 EIS has no analysis of catastrophic failure resulting from less stable upstream construction methods.

⁵ MDNR and MPCA. Reserve Mining Company, On-Land Tailings Disposal Findings, Conclusions and Recommendations. June, 1976. Pg. 42, conclusion 9.

⁶ MDNR and MPCA. Reserve Mining Company, On-Land Tailings Disposal Findings, Conclusions and Recommendations. June, 1976. Pg. 41, Conclusion 4 [140233.pdf \(mn.gov\)](#)

⁷ Id. Pg. 42, Conclusion 6.

⁸ Id. Pg. 41, Conclusion 5.

Grand Portage cmts re Mile Post 7 EAW
May 18, 2023

The MDNR considers Mile Post 7 dams to be High Hazard or Class I dams.⁹ MN rules describe Class I dams as high hazards because “*failure, mis-operation, or other occurrences or conditions would probably result in...loss of life or serious hazard, or damage to health, main highways, high-value industrial or commercial properties, major public utilities, or serious direct or indirect, economic loss to the public.*”¹⁰ Yet, there has not been a full evaluation of the vastly increased probability of tailings dam failure due to Northshore’s use of upstream and offset upstream raises to increase dam height since MDNR approved these methods in 1997.¹¹ Grand Portage and Fond du Lac, along with GLFIWC and the 1854 Treaty Authority staff requested dam safety inspection documents from the MDNR almost two years ago to assess permitting needs for this project and other proposed mine and tailings basin expansions. After a year and a half, we received most of the documents, although they were heavily redacted. The redactions included all identified seepage locations and their discharge rates and any information regarding potential dam failure or identification of vulnerabilities that could cause a dam breach.

The MDNR required Tribal governmental representatives to use Data Practices Act requests to receive these documents. Then when we asked about the massive redactions, the MDNR stated that “*When this request was first made, DNR sought legal advice from our General Counsel. As a state agency, DNR is subject to the Data Practices Act (DPA). The data you requested is considered nonpublic under the DPA, which is the reason DNR must redact certain data before we provide it to you.*”¹² This appears to be circular logic to deny another governmental agency access to information that must be considered before issuing National Pollution Discharge and Elimination Permits (NPDES permits), dam safety permitting, financial assurance, and insurance. Tribes are governmental agencies that co-regulate activities that can impact reserved resources within the 1854 Ceded Territory, and we do not represent the public; therefore, these redactions should not have occurred.

The proposed expansion of the tailings basin will create new seepage discharges that could impact the stability of the current coal ash pond. Cliffs have the option to use updated technology to dry-stack the tailings. However, just as in 1991, a choice has been made to extend the pond size and store the waste as a slurry. Dry storage should be required to decrease the surface area needed for new tailings, reduce polluted water entering the surrounding streams and Lake Superior, and reduce the risk of catastrophic dam failure.

Further, the potential environmental effects of the Mile Post 7 project cannot be determined without a modern dam-safety analysis that assesses the potential area that would be covered by a tailings flood resulting from catastrophic dam failure; the depth and velocity of a tailings flood; anticipated residential and non-residential human health and infrastructure impacts; impacts on terrestrial and aquatic wildlife and their habitats; downstream water quality impacts; and worst-case scenario impacts.

⁹ MDNR 2022 ROD paragraph 197.

¹⁰ Minn. R. 6115.0340, subp. A.

¹¹ MDNR 2017 ER Memo at pdf pg. 14

¹² Email from Katie Smith, MDNR, to Nancy Schuldt, Fond du Lac Band of Lake Superior Chippewa. May 12, 2023.

Minn. R. 6115.0410, subp. 2, requires a new dam safety permit for dam enlargement, Minn. R. 6115.0410, subp. 2, and transfer of dam ownership requires a permit. Minn. R. 6115.0370. Chapter 6115, a dam safety application and permit approval, must contain provisions that comply with Minn. R. 6115.0410, including the following:

- a) The application must describe the type, size, height, and storage capacity of the dam extending through the life of the impoundment. *Id.*, subp. 2.
- b) The preliminary report for the permit must include all other elements related to the total dam project specifically including railroads. *Id.*, subp. 3.
- c) The final design report must include a dam-break analysis, information on waste materials and disposal practices, stability analysis and design details for dams, impoundments and other features. *Id.*, subp. 6.
- d) The permit can only be approved on findings of dam stability “under all conditions . . . based on current, prudent engineering practice” and dam hazards and on “[c]ompliance with prudent, current environmental practice throughout its existence.” *Id.*, subp. 8(D), (F).

II. Cumulative Environmental Impacts to Tribally Reserved Resources Must be Assessed

In spite of acknowledging that this project will diminish areas available to exercise usufructuary rights within the 1854 Ceded Territory, the EAW states that the State Agencies didn’t consider cumulative environmental effects for project-related changes to cover-types and habitats that would contribute to reductions in areas available to Band members to exercise treaty rights.¹³ However, the only EIS conducted for the Miles Post 7 tailings basin (in 1976) did evaluate some of the project's cumulative impacts. *“Existing timber resources at the Mile Post 7 site would be harvested. The potential for timber production within the disposal area, which is relatively high, would be eliminated. The site would not return to anything similar to its present vegetated condition for several hundred years.”*¹⁴ *“Fishery resources within the disposal area will be destroyed, including 9.7 miles of trout streams. Streams downstream from the disposal area would be adversely affected by erosion at construction areas, including stream diversion dikes and channels, roadways, railroads and pipelines, causing turbidity and sedimentation which would adversely affect the fishery resource. Loss of a portion of the watershed could result in reduction in flow and rise in temperature to critical levels adversely affecting the fishery*

¹³ MDNR. Mile Post 7 West Ridge Railroad Relocation, Dam extensions, and Stream Mitigation Project-Environmental Assessment Worksheet

¹⁴ MDNR and MPCA. Reserve Mining Company, On-Land Tailings Disposal Findings, Conclusions and Recommendations. June, 1976. Pg. 23, at 76. [140233.pdf \(mn.gov\)](#)

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resource downstream from the site, including the anadromous fishery of the lower portion of the Beaver River. Windblown dust, nutrients related to revegetation efforts, seepage and accidental spillage could adversely affect the fishery resource in the vicinity of the site.¹⁵” “Construction and operation of the tailings disposal system at Mile Post 7 would cause pollution, impairment, and destruction of the air, water, land and other natural resources located within the state.¹⁶”

Instead of considering the project's cumulative effects, the term “idled forest lands” is used extensively within this document to obfuscate the loss to Tribes and the surrounding communities. Unless too polluted to do so, forest lands support plants, insects, birds, amphibians, and four-legged animals and are therefore never “idled.” In fact, these forest lands that are planned to become part of the tailings pond and deposition areas are providing ecosystem services at no cost, including filtering pollutants coming from the tailings basin before the contamination can enter Lake Superior on the west and south sides, and the Superior National Forest on the north side. Thus, using the term “idled” is inaccurate when the forest lands are providing needed ecosystem services that mitigate some of the impacts to the local environment. Grand Portage requests the MDNR require an Environmental Impact Statement to assess cumulative project impacts on treaty-reserved natural resources.

III. Water Quality Must be Restored to Comply with MN Rules

“The Tailings Basin Features area watershed draining to the Beaver River is comprised of 11.0 acres, which drains through an unnamed waterway approximately 1.1 mi. before reaching the Beaver River. The Tailings Basin Features area watershed draining to Little Thirty-nine Creek is comprised of 4.4 acres, which drains via sheet flow through a 25-acre wetland complex before reaching Little Thirty-nine Creek. The Tailings Basin Features area watershed draining to the East Branch Beaver River is comprised of 32.9 acres, which drains through a ditch system and unnamed creek before reaching the East Branch Beaver River approximately 1.2 mi. downstream.”¹⁷

All discharges to streams originating within the acreage of the tailings basin must receive NPDES permits to comply with the Clean Water Act.¹⁸ The seepage information documented from the MDNR’s own tailings dam inspections must be provided to and used by the MPCA to ensure all discharges are identified, have an NPDES permit, and that the water has been adequately treated to meet MN Water Quality Standards (WQS) to protect remaining segments of these streams and Lake Superior. Although the EAW notes the impaired streams, it does not mention the existing mercury and PCB impairments in Lake Superior waters, even though the Beaver River drains into Lake Superior. The EAW does not include information on how MPCA addresses the impairment issues through permitting, including Total Maximum Daily Loads (TMDL), Waste Load Allocations (WLA), and wastewater treatment requirements. Instead, the

¹⁵ Id. Pg. 24 at 78.

¹⁶ Id. Pg. 24 at 79.

¹⁷ MDNR. Mile Post 7 West Ridge Railroad Relocation, Dam extensions, and Stream Mitigation Project-Environmental Assessment Worksheet

¹⁸ County of Maui v. Hawaii Wildlife Fund, No. 18-260, 590 U.S._ (2020).

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EAW only provides that: “*Big and Little 39 Creeks are impaired based on fish bioassessments, water column mercury, pH and turbidity; White Rock Creek is impaired for both mercury and PCBs in fish tissue and is infested with White Perch, Viral Hemorrhagic Septicemia, and Round Goby.*”¹⁹ Water quality restoration must be required in addition to habitat mitigation.

IV. Potential Adverse Environmental Consequences Mandate Preparation of an EIS

The losses to Treaty Reserved Resources are cumulative and have occurred since the Treaty signing and must be assessed from that perspective. The MDNR and MPCA have an obligation to minimize the footprint of the tailings basin and ensure that the expansion does not cause or contribute to the spread of invasive species or excursions from MN water quality standards resulting from seepage or dam failure. Due to the potential adverse environmental consequences of this project the MDNR is required to prepare an EIS under MN rules that evaluates *all cumulative impacts* of the proposed new construction of the railroad, extension, and an increase in the height of tailings dams using modified upstream construction methods, and the expansion and change to acreage and location of the wet slurry tailings basin, including the impacts on all water resources. The potential for and the impacts of a dam breach or catastrophic failure on treaty-reserved natural resources, the surrounding communities, nearby streams, and Lake Superior must also be assessed. The EIS must also evaluate and assess all of the Mile Post 7 tailings dam features, including the coal ash pond and other structures and construction methods that have not previously undergone full environmental review.

Sincerely,

Margaret Watkins

Margaret Watkins
Grand Portage Water Quality Specialist

¹⁹ MDNR. Mile Post 7 West Ridge Railroad Relocation, Dam extensions, and Stream Mitigation Project-Environmental Assessment Worksheet



Minnesota Division
Izaak Walton League of America
6601 Auto Club
Road Bloomington
MN 55438

May 18, 2023

To: Minnesota Department of Natural Resources

From Minnesota Division, Izaak Walton League of America

RE: Milepost 7 Stream EAW

This comment is provided on behalf of the Minnesota Division of the Izaak Walton League of America.

One of the Izaak Walton League's storied members was the late Grant Merritt, the first commissioner of the Minnesota Pollution Control Agency, from 1971-1975. Merritt spearheaded the campaign against the Reserve Mining Company's disposal of asbestos laden tailings into pristine Lake Superior. Those same tailings still threaten the lake today as they sit a few miles upstream of Silver Bay. If he were still alive, we believe Grant would be, as we are, demanding that the Milepost 7 tailings basin not be permitted to expand without a full Environmental Impact Statement and a dam safety permit.

The Environmental Assessment Worksheet for this project is unacceptable, leaving out as it does, the risk of dam failure and relying on the fifty-year old review conducted during the 1970s. An adequate review requires use of current science and engineering standards, the actual physical conditions on the site today, and consideration of the growing risk posed by climate change and the wetter conditions and increased rain and snow events it is already bringing to this region.

The proposed expansion would greatly increase the amount of tailings in the basin, from the 120 million long tons it contains today to a proposed 750 million long tons. The existing facility is operating without a dam safety permit, although this is required under Minnesota law. Dam failure would have catastrophic effects on the Beaver River, humans and wildlife, aquatic life, and water quality in the Beaver River valley and in Lake Superior.

The existing basin demands rigorous monitoring and management for the foreseeable future to protect the 10% of the earth's fresh surface water found in Lake Superior (which was its original

intent). Why would we add to this risk without requiring a current and full Environmental Impact Statement, requiring the use of the most stable dam construction methods available, and requiring a dam safety permit to operate?

Sincerely,

Julie O'Leary
President of the W.J. McCabe Chapter

Tim Johnson
Director at Large
Minnesota Division of the Izaak Walton League of America

SENATOR JENNIFER A. MCEWEN
SENATE LABOR CHAIR | DULUTH
2317 Minnesota Senate Building
Saint Paul, MN 55155



Senate
State of Minnesota

Thursday, May 18th, 2023.

Northshore Mining Company
Andrea Hayden
Environmental Manager
10 Outer Driver
Silver Bay, MN 55614.

Minnesota Department of Natural Resources
Bill Johnson
Mining Planning Director
Box 25, 500 Lafayette Road
St. Paul, MN 55155.

To the Honorable Interested Parties,

For the purposes of the Mile Post 7 West Ridge Railroad Relocation, Dam Extension, and Stream Mitigation Environmental Assessment Worksheet, this letter is to serve as public comment standing in opposition to the project, as currently proposed.

It is troubling that the Minnesota Department of Natural Resources is poised to proceed without a recent or in-depth Environmental Impact Statement performed. An environmental review from the 1970s does not serve as sufficient review for a project of this scale.

I share concerns with environmental and community advocates that Northshore Mining Company is owned and operated by multi-billion-dollar transnational mining conglomerate, Cleveland-Cliffs with a well-known history of poor environmental compliance and a recent record of dangerous mining and discharge practices.

In 2022, Cleveland-Cliffs settled violations of the Clean Water Act with the United States Department of Justice, approving a \$3 million dollar payout, because of ammonia and cyanide-laden waste discharge into local waterways resulting in a river fish kill, in addition to beach closures across the Indiana Dunes National Park—which annually draws over 2 million visitors.¹ This failure to be a responsible steward of treasured waterways is alarming.

If this project is to continue, I respectfully ask that the Minnesota Department of Natural Resources necessitate that Northshore Mining Company apply for a dam safety permit and ensure Northshore Mining Company utilize the least-risky and most stable dam construction methods available.

Community members, neighbors to Lake Superior, and Minnesotans deserve to know the potential threats of this project to ensure the best interests of the environment and the affected communities are met. This is best accomplished by requiring Northshore Mining Company to perform a full Environmental Impact Statement that is made available to the greater public.

Sincerely,

A handwritten signature in blue ink that reads "Jennifer A. McEwen".

Senator Jennifer A. McEwen
District 08—Duluth

¹ U.S. Department of Justice. 2022. *Cleveland-Cliffs Agrees to Improve Environmental Compliance at Indiana Facility and Pay \$3 Million Civil Penalty for Ammonia and Cyanide Violations*. Press Release, Washington, D.C.: U.S. DOJ Office of Public Affairs.

**Comments on Mile Post 7 Environmental Assessment Worksheet
by Minnesota Center for Environmental Advocacy, Center for Biological Diversity,
Save Lake Superior Association, Save Our Sky Blue Waters,
Friends of the Boundary Waters Wilderness, and
Izaak Walton League of America**

May 18, 2023

INTRODUCTION

The Mile Post 7 tailings basin was built for one reason: To keep taconite mining waste from being dumped directly into Lake Superior. Now the basin holds 40 years' worth of tailings and Northshore Mining Co. ("Northshore") is seeking permission from the Department of Natural Resources ("DNR") to make changes that would allow it to expand the already large tailings basin by another 650 acres. But the environmental review for the project has a major flaw – it makes no mention whatsoever of what would happen if the dams at the tailings basin are breached. If a breach occurs, decades of mining waste could rush downhill toward Lake Superior, resulting in severe environmental effects and negating the entire reason for the tailings basin's existence. Before DNR reaches any decisions regarding the proposed expansion of Mile Post 7, it must perform a thorough environmental review that examines the risks and effects of a dam breach. Accordingly, Minnesota Center for Environmental Advocacy ("MCEA"), Center for Biological Diversity, Save Lake Superior Association, Save Our Sky Blue Waters, Friends of the Boundary Waters Wilderness, and the W.J. McCabe Chapter of Izaak Walton League of America, ask DNR to order an Environmental Impact Statement ("EIS") on the issue of dam safety or, in the alternative, to supplement the Environmental Assessment Worksheet ("EAW") with this information.

BACKGROUND

I. The origins of the Mile Post 7 tailings basin

The Mile Post 7 tailings basin was originally constructed in the 1970s, when federal courts required Reserve Mining Co. (“Reserve Mining”) to stop disposing tailings directly into Lake Superior.¹ The court explained that disposing the potentially carcinogenic mining waste into the lake endangered people’s health and welfare in violation of the Federal Water Pollution Control Act.² In response, Reserve Mining proposed creating a tailings basin to collect the waste at Mile Post 7, which is located 600 feet vertically above Lake Superior and three miles from the shore of the lake.³

State and federal environmental reviews were required for this proposal. In 1976, a state final environmental impact statement on Mile Post 7 and alternative disposal sites was published (“1976 EIS”).⁴ Based on the 1976 EIS, a hearing officer concluded, and both DNR and MPCA agreed, that Mile Post 7 was an unsuitable location for a tailings basin.⁵ The hearing officer concluded that precautions taken in the construction of dams could reduce, but not eliminate, the risk of dam failure, and that a failure would “thwart the entire purpose of on land disposal by emptying stored tailings into Lake Superior.”⁶ The following year, a federal EIS was completed by the U.S. Army Corps of Engineers (“1977

¹ *Reserve Mining Co. v. Environmental Protection Agency*, 514 F.2d 492, 538 (8th Cir. 1975).

² *Id.* at 529.

³ Cmt. Ex. C - DNR & MPCA, *Findings, Conclusions, and Recommendations on Reserve Mining Company, On-land Tailings Disposal*, Finding 28 (1976) (hereinafter “1976 State EIS Findings”). Exhibits to these Comments will hereinafter be referred to as “Cmt. Ex.”

⁴ *Id.*

⁵ *Id.* at 41-43, 46.

⁶ *Id.* at 41.

EIS”) for Mile Post 7.⁷ Later that same year, despite the findings of the state EIS, the Minnesota Supreme Court ordered the agencies to issue permits that authorized construction of the tailings basin at the Mile Post 7 location, rather than at an alternative location.⁸ Accordingly, in July 1977, the DNR issued Reserve Mining an amended Master Permit allowing construction of the tailings basin, even though state agencies had determined the location unsuitable.⁹

In 1979, Minnesota adopted laws governing dam safety and requiring dam safety permits for tailings basin dams.¹⁰ But no dam safety permit was issued for the Mile Post 7 tailings basin. After the Mineland Reclamation Rules requiring that all metallic mining facilities have a Permit to Mine were passed in 1981, however, Reserve Mining applied for a Permit to Mine that covered the Peter Mitchell mine and the Mile Post 7 tailings basin.¹¹ Reserve Mining received this permit in 1985.¹²

⁷ EAW Ex. J29 – 1977 USACE Final EIS. Exhibits to the Environmental Assessment Worksheet for Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project (April 2023) will hereinafter be referred to as “EAW Ex.”

⁸ *Reserve Mining Co. v. Herbst*, 256 N.W.2d 808, 846 (Minn. 1977).

⁹ EAW Ex. J3 – 1977 Master Permit.

¹⁰ DNR, *Environmental Assessment Worksheet for Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project*, at 19, n.13 (April 2023) (hereinafter, “EAW”); Minn. Stat. § 103G.501-.561; Minn. R. 6115.0300 – 6115.0520.

¹¹ *Id.*

¹² *Id.* Permits to mine control construction and development of a mine, operational practices, and reclamation of mined areas. See DNR, *Permit to Mine*, <https://www.dnr.state.mn.us/polymet/permitting/ptm/index.html>. These permits do not specifically control dam safety. DNR asserts that the Master Permit regulates dam safety at Mile Post 7. *Id.* at 19, n.13.

II. Northshore's request to expand the tailings basin

Decades passed, and ownership of the tailings basin passed to Northshore.¹³ Near the end of the 2010s, Northshore quietly began working toward approval of a major expansion of the tailings basin. In a tailings basin, tailings are constrained by a combination of topography and constructed dams that are raised in vertical and horizontal sections over time. The 1977 EIS had studied, and the 1985 permit approved, a tailings basin with dams at a maximum height of 1,315 feet above mean sea level.¹⁴ This would ultimately lead to a tailings basin with an area of around 2,800 acres.¹⁵ By the late 2010s the tailings basin dam heights were around 1,240 feet.¹⁶

In 2017, Northshore requested permission from DNR to raise the tailings basin dams up to an elevation of 1,365 feet, 50 feet higher than the current maximum permitted level.¹⁷ This would have expanded the tailings basin by approximately 850 acres more than contemplated by the initial environmental review and permitting. DNR, without public notice, directed a memorandum to the file in which it noted its decision not to require environmental review of this major expansion project, despite the Minnesota Rules requiring an EAW for expansions of tailings basins of more than 320 acres.¹⁸ This

¹³ EAW at 14.

¹⁴ EAW at 16, 18.

¹⁵ EAW at 18.

¹⁶ *Id.*; Cmt. Ex. D – DNR, *Memorandum re: Northshore Mine Mile Post 7 Railroad Realignment & Tailings Basin Progression Assessment of EIS Supplement Requirement*, at 1. (March 2017) (hereinafter “2017 DNR Assessment of EIS Supplement Requirement”)

¹⁷ Cmt. Ex. D – 2017 DNR Assessment of EIS Supplement Requirement, at 2.

¹⁸ Cmt. Ex. D – 2017 DNR Assessment of EIS Supplement Requirement, at 6; Minn. R. 4410.4300, subp. 11(B) (EAW required for tailings basin expansion).

cleared the way for Northshore to apply for a wetland permit and water quality certification, from the U.S. Army Corps of Engineers and Minnesota Pollution Control Agency respectively, for a project that would expand the tailings basin by approximately 850 acres, up to a dam height of 1,365 feet.¹⁹ Northshore moved forward with permit applications despite repeated objections from environmental organizations that environmental review must be performed before decisions could be made regarding the expansion.

In June 2021, DNR responded to the environmental organizations' concerns by providing an internal memo in which DNR again declined to order environmental review for an expansion of the Mile Post 7 tailings basin.²⁰ But according to the memo, the project Northshore was proposing had changed—now, Northshore was proposing to extend Dams 1 and 2, relocate a rail line, and develop a new clay borrow site, but not to raise the dam heights above 1,315 feet or to extend the tailings basin beyond the 2,800 acres contemplated by the permits.²¹ On this basis, DNR asserted that no environmental review was needed for the project because it had been covered by the 1970s environmental review.²² No explanation was made for why DNR was discussing only a smaller project,

¹⁹ Cmt. Ex. E – U.S. Army Corps of Engineers, *Public Notice of Section 404 Permit Application for Northshore Mining Company*, at 20 (2020); Cmt. Ex. F – MPCA, *Public Notice of 401 Water Quality Certification for Northshore Railroad Relocation and Tailings Basin Progression Project*, at 1 (2020).

²⁰ EAW Ex. J2 – 2021 DNR Environmental Review Need Determination, at 1.

²¹ *Id.* at 1.

²² *Id.* at 65.

or whether Northshore still intended to seek approval of the larger project, separately or in the future.

III. Requests for environmental review to examine dam safety

Concerned by the lack of environmental review of the expansion and the unclear scope of the project, in November 2021, MCEA and WaterLegacy filed petitions requesting an Environmental Assessment Worksheet for the Mile Post 7 Expansion (“EAW Petitions”).²³ The EAW Petitions argued that the expansion triggered a mandatory EAW because it was an expansion of a tailings basin of more than 320 acres,²⁴ pursuant to Minn. R. 4410.4300, subp. 11(B); or because of the stream diversion of Big 39 Creek and Little 39 Creek, pursuant to Minn. R. 4410.4300, subp. 26.²⁵ The EAW Petitions also argued the Mile Post 7 Expansion had the potential for significant environmental effects because of potential dam safety issues, and that the existence of nearly 50-year-old EISs did not allow Northshore to avoid environmental review for the currently planned expansion.²⁶

In February 2022, DNR denied the EAW Petitions in an 82-page order. DNR stated that increases in dam height were no longer being sought by Northshore, and accordingly the 1970s environmental reviews covered the proposed expansion.²⁷ DNR also stated that its ongoing regulatory authority over the tailings basin would mitigate any potentially

²³ Cmt. Ex. G – MCEA, *Petition for EAW for Proposal to Amend Northshore Mining, Inc.’s Permit to Mine* (Nov. 9, 2021).

²⁴ *Id.* at 7.

²⁵ *Id.* at 25-26.

²⁶ *Id.* at 26-27.

²⁷ EAW Ex. J7 – 2022 DNR Record of Decision, at 30.

significant environmental effects.²⁸ Ultimately, DNR concluded there was no potential for significant environmental effects from the expansion of the tailings basin.²⁹

In March 2022, however, DNR published an EAW for Big 39 and Little 39 Creek Mitigation, based on the mandatory category for stream diversion, even though DNR had asserted in the February 2022 order denying the EAW Petitions that the stream mitigation did not trigger a mandatory EAW.³⁰ MCEA commented that the Mile Post 7 Expansion was a “connected action” to the stream mitigation project, and that DNR was required to include information about the Mile Post 7 Expansion in the EAW.³¹ A month later, MCEA and WaterLegacy sent a letter to DNR Commissioner Sarah Strommen stating that (1) DNR must require Northshore to apply for dam safety permits for Mile Post 7’s dams; (2) DNR must set a term for the Northshore Permit to Mine and the Mile Post 7 dam safety permits; (3) DNR must review Northshore’s financial assurance for the Mile Post 7 closure; and (4) DNR must disclose and update the dam break analysis for Mile Post 7.³² DNR did not respond to this letter. DNR did, however, withdraw the March 2022 Big 39

²⁸ *Id.* at 80-81.

²⁹ *Id.* at 81-82.

³⁰ Cmt. Ex. H – DNR, *EAW for Big 39 and Little 39 Creek Mitigation, Beaver Bay Township, Lake County, Minn.*, at 1 (March 2022).

³¹ Cmt. Ex. I – MCEA, *Comments on the EAW for Big 39 and Little 39 Creek Mitigation, Beaver Bay Township, Lake County, Minn.*, at 1 (April 2022) (citing Minn. R. 4410.1000, subp. 4).

³² Cmt. Ex. J – MCEA & WaterLegacy, *Letter to DNR Commissioner Sarah Strommen re: Northshore Mining Co. Milepost 7 Tailings Basin Need for Dam Safety Permit, Closure Cost Review, and Permit Term* (May 2022).

and Little 39 Creek mitigation EAW at Northshore's request in order to add new data, "including actions proposed at the Mile Post 7 tailings disposal facility."³³

In April 2023, DNR issued the present EAW, which covers not only stream mitigation projects, but also changes proposed for the tailings basin "in order to use the remaining portions of the Tailings Basin."³⁴ The EAW explains that the activities that collectively constitute "the Project" include two components: (1) the changes required to allow the tailings basin to be used to its maximum permitted capacity, including the relocation of a railroad line, the extension of two dams, construction of a rail switchback, and the excavation of clay from borrow pits for dam construction; and (2) stream mitigation projects required by the filling of the entirety of the permitted tailings basin.³⁵

ANALYSIS

I. DNR must order an EIS because of the potential for significant environmental effects from the Mile Post 7 Expansion arising from the risk of a dam breach

DNR must order an EIS if the Mile Post 7 Expansion has the "potential for significant environmental effects."³⁶ In making this determination, DNR must consider the

- A. type, extent, and reversibility of environmental effects;
- B. cumulative potential effects. ...
- C. the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. ... and

³³ Cmt. Ex. K – DNR, *Memorandum re: Decision to Terminate Big 39 & Little 39 Creek Mitigation Project EAW* (June 2022).

³⁴ EAW at 5.

³⁵ *Id.*

³⁶ Minn. Stat. § 116D.04, subd. 2a.

- D. the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies ... including other EISs.³⁷

If DNR decides that “information necessary to a reasoned decision about the potential for, or significance of, one or more possible environmental impacts is lacking, but could be reasonably obtained,” DNR must order an EIS or postpone the decision on the need for an EIS in order to obtain the lacking information.³⁸ In this case, because of the significant—in fact, potentially catastrophic—environmental effects that would result from a breach of the Mile Post 7 tailings basin’s dams, DNR must order an EIS or, at a minimum, supplement the EAW to add information on the safety of the Mile Post 7 dams and the consequences of their failure.

A. DNR must obtain information about dam safety in order to determine the potential for significant environmental effects from the Mile Post 7 Expansion

A collapse of the tailings basin undoubtedly would have significant environmental effects. As the 1976 EIS hearing findings explain, a failure of a 1,000-foot section of the south dam “would produce a wall of water twenty-eight feet high traveling at over 20 miles per hour down the Beaver River valley to Lake Superior” and “would frustrate the sole objective of its construction, the termination of tailings disposal in Lake Superior.”³⁹ These devastating effects would be intensified by the Mile Post 7 Expansion, which would add nearly 562 million long tons⁴⁰ of tailings to the basin. The first question,

³⁷ Minn. R. 4410.1700, subp. 7.

³⁸ Minn. R. 4410.1700, subp. 2a.

³⁹ Cmt. Ex. C – 1976 State EIS Findings, at 13.

⁴⁰ EAW at 17.

therefore, is whether the *potential* exists for these environmental effects to occur. This means the EAW must evaluate how safe the dams would be after the Mile Post 7 Expansion to determine whether the potential exists for the significant environmental effects that would arise from a dam breach.

The EAW, however, contains absolutely no information whatsoever regarding dam safety or the risk of collapse. Although the EAW form does not have a specific question with regard to dam safety, question number 22 asks whether there are any other potential environmental effects from the project, and the EAW simply states, “No other potential environmental effects have been identified.”⁴¹ This is surprising, as the earlier EAW Petitions both identified the risk of a dam breach as a potentially significant environmental effect and submitted an expert report explaining some of those risks. DNR asserted in its order denying the EAW Petitions that the effects of a dam breach had been studied in the 1970s-era environmental reviews, and that any such effects would be mitigated by DNR’s ongoing regulatory authority under Mile Post 7’s Permit to Mine, Master Permit, and oversight under DNR’s Dam Safety Program.⁴² But the risk of dam breach remains an identified potentially significant environmental effect that should have been publicly studied in the EAW so that the public could see, and comment on, the information.⁴³

⁴¹ EAW at 93.

⁴² EAW Ex. J7 – 2022 DNR Record of Decision, at 79-80.

⁴³ See *Matter of Denial of a Contested Case Hearing Request & Modification of a Notice of Coverage Under Individual Nat'l Pollution Discharge Elimination Sys. Feedlot Permit No. MN0067652*, No. A19-0207, 2019 WL 5106666, at *7 (Minn. App. Oct. 14, 2019) (holding

In fact, there are significant risks related to dam safety that DNR has either not acknowledged or not fully evaluated, including four risks identified in the expert report submitted with this comment: (1) the risk that the dams will fail because they are in part constructed on top of the very tailings they are meant to confine; (2) the risk of toe lift or slope instability, (3) the risk of the reclaim dam collapsing, and (4) the risk of continuing malfunctioning or absent instrumentation.⁴⁴ Before DNR can determine whether the Mile Post 7 Expansion has the potential for significant environmental effects, it must evaluate how safe the dams at the tailings basin will be after the expansion, including looking at these four risks.

1. The Mile Post 7 tailings basin dams are at higher risk of failure because they are constructed, in part, on top of the fine tailings they are intended to confine

First, DNR must study the risks of a dam breach that arise from the fact that portions of the dams at Mile Post 7 were built on top of the fine tailings they were intended to confine. This makes them more unstable. No environmental review has ever studied the risk of these dams – the 1970s-era environmental review evaluated the risks of more stable downstream dams, not the riskier types of dams constructed at Mile Post 7.

agency's "analysis was not limited to the EAW form," but instead must cover all information gathered and issues raised in environmental review).

⁴⁴ Cmt. Ex. A – Dr. Steven H. Emerman, *Evaluation of a Record of Decision by the Minn. Dept. of Natural Resources regarding the Proposed Tailings Dam Extensions at the Cleveland-Cliffs Mile Post 7 Tailings Storage Facility, Northeastern Minn.* (May 11, 2023) (hereinafter "2023 Emerman Report").

Tailings basin dams can be constructed in several ways, which have different costs and risks. In the downstream method of construction, each subsequent raise of a dam wall is sloped in a downstream direction, away from the contents of the dam.⁴⁵ This is the safest method of construction, as there are no uncompacted tailings below the dam that are at risk of liquefaction, but it is also the most expensive because of the amount of material required to build the dam walls.⁴⁶ In upstream dam construction, by contrast, the tailings dam is constructed out of coarse tailings placed on top of the uncompacted fine tailings that the dam is confining.⁴⁷ This construction method is cheaper, because only moderate compaction of a smaller amount of material is required.⁴⁸ It is also the least secure method for dam construction because it “relies on the stability of the tailings themselves as a foundation for dam construction.”⁴⁹ Finally, in centerline construction, subsequent raises of the dams are built directly on top of each other, resting both on uncompacted tailings and the downstream slope of the previously built dam wall.⁵⁰ This method is less stable than a downstream dam, but more stable than an upstream dam.

⁴⁵ Cmt. Ex. B – Dr. Steven Emerman, *Evaluation of the Proposed Tailings Dam Extensions at the Cleveland-Cliffs Mile Post 7 Tailings Storage Facility, Northeastern Minn.*, Figure 6b, p. 13 (Sept. 2021) (hereinafter “2021 Emerman Report”).

⁴⁶ *Id.*, Figure 6b, p. 13.

⁴⁷ *Id.*, Figure 6a, p. 12.

⁴⁸ *Id.* Unlike dams constructed to retain water, which produce economic benefits that presumably outweigh their costs, “tailings dams are economic liabilities to the mining operations from start to finish. As a result, it is not often economically feasible to go to the lengths sometimes taken to obtain fill for conventional water dams.” *Id.* at 7.

⁴⁹ Cmt. Ex. L – David M. Chambers & Bretwood Higman, *Long Term Risks of Tailings Dam Failure*, at 2 (Oct. 2011).

⁵⁰ Cmt. Ex. B – 2021 Emerman Report, Figure 6c, p. 14.

Originally, the Milepost 7 tailings basin dams were designed to be raised using the downstream method of construction, and it is this construction method that was studied in the 1976 and 1977 EISs. In fact, both EISs specifically contrasted the safer downstream method that was planned for the facility with the less safe upstream method.⁵¹ But this plan changed. In 1997, Northshore changed its construction for Dams 1 and 2 to the upstream method.⁵² Then in 2003, DNR has asserted, the construction method shifted again to “modified centerline or offset upstream.”⁵³ This means, according to DNR, that the dams were constructed “on a lift of fine tailings that are upstream of the starter dam.”⁵⁴ A study of the construction of Dams 1 and 2 demonstrates these changes, indicating that the dams were first constructed as starter dikes, then raised in an upstream direction, and finally topped with centerline raises on the upstream dams, which are on top of the fine tailings.⁵⁵

In the order denying the EAW Petitions, DNR strenuously objected to the tailings basin dams at Mile Post 7 being referred to as “upstream dams.” There is no question as to why Northshore would not want the dams so characterized. Upstream construction has been criticized by a number of mining and dam construction organizations, including the Society for Mining, Metallurgy and Exploration and the International Commission on

⁵¹ Cmt. Ex. C – 1976 State EIS Findings. at 9; EAW Ex. J29 – 1977 USACE Final EIS, at 158.

⁵² EAW Ex. J7 – 2002 DNR Record of Decision ¶ 170.

⁵³ *Id.* ¶ 173.

⁵⁴ *Id.* ¶ 178.

⁵⁵ Cmt. Ex. B – 2021 Emerman Report, at 35.

Large Dams,⁵⁶ and banned in Brazil, Chile, Peru, and Ecuador.⁵⁷ Because the design places dam walls on top of uncompacted fine tailings, upstream dams are especially vulnerable to failure by liquefaction, in which the tailings that constitute the dam wall lose their strength and behave like a liquid.⁵⁸ If the underlying tailings liquefy, “the dam could fail by either falling into or sliding over the liquefied tailings.”⁵⁹ And liquefaction becomes a greater concern for upstream dams as dam height increases.⁶⁰ For these reasons, the Surface Mining Handbook by the Society for Mining, Metallurgy, and Exploration from February 2023 denounces upstream construction, explaining that it “has been utilized in many of the most serious [tailings basin] failures [even though] the dangers of failure inherent with the upstream method have been recognized for many decades.”⁶¹ And the *Safety First: Guidelines for Responsible Mine Tailings Management* from Earthworks and Mining Watch concludes unequivocally: “Because of the demonstrated risk associated with upstream dam construction, upstream dams must not be built at any

⁵⁶ Cmt. Ex. A – 2023 Emerman Report, at 2, 16-17.

⁵⁷ Cmt. Ex. B – 2021 Emerman Report, at 22.

⁵⁸ *Id.* at 15, 17. Liquefaction occurs when the pores between loosely packed particles become so saturated with water that the particles can no longer touch each other and thereby support the load of the mass of particles. In such cases, the load is supported only by the water, and the entire mass of particles and water behaves like a liquid. (See *id.*, Figure 8, at 15-16 for a fuller description of liquefaction.) Tailings basins “are especially susceptible to liquefaction” because their contents are discharged from pipes without subsequent compaction. *Id.* at 16.

⁵⁹ *Id.* at 17. A downstream dam, by contrast, can survive the complete liquefaction of the tailings stored within the dam. *Id.*

⁶⁰ Cmt. Ex. A – 2023 Emerman Report, at 17.

⁶¹ *Id.* at 17.

new facilities ... Expansion of existing upstream tailings facilities must cease, and these facilities must be safely closed as soon as possible.”⁶²

To distance Mile Post 7 from these concerns, DNR insists that the Mile Post 7 dams do not meet the “classical definition of an upstream dam.”⁶³ But because modified centerline construction still includes construction of the dam on top of uncompacted tailings, the design must still be considered a type of upstream dam.⁶⁴ Even a centerline raise constructed on top of an existing upstream dam constitutes an upstream dam.⁶⁵ But the issue here is not the exact definition of “upstream” or “modified centerline” or “offset upstream” construction methods. Regardless of what the dams are called, the fact is that “Dams 1 and 2 share the feature that causes the greater vulnerability to failure of upstream dams, which is the construction of dikes on top of uncompacted tailings.”⁶⁶ This makes them more likely to fail.⁶⁷ Accordingly, the safety of these dams merits further study before they are extended – particularly because only downstream, not upstream, modified centerline, or offset upstream, dams were considered in the 1970s EISs.

DNR also has asserted that the Mile Post 7 dams are stable, despite being built on top of fine tailings like an upstream dam, because the underlying tailings have compacted

⁶² Cmt. Ex. A – 2023 Emerman Report, at 16.

⁶³ EAW Ex. J7 – 2022 DNR Record of Decision ¶ 178.

⁶⁴ Cmt. Ex. A – 2023 Emerman Report, at 18. In some places where upstream dams have been banned, companies have claimed their dams are “modified centerline” to avoid the prohibition. *Id.* at 18.

⁶⁵ *Id.* at 20.

⁶⁶ *Id.* at 2.

⁶⁷ *Id.* at 20.

over time.⁶⁸ However, DNR presents no evidence for this assertion.⁶⁹ In fact, in many cases tailings have failed to significantly compact even half a century after they were deposited in a basin, and there is no reason to believe the tailings at Mile Post 7 have done so.⁷⁰ Because of the safety concerns associated with dams built on top of the fine tailings they are intended to confine—as Dams 1 and 2 at Mile Post 7 undisputedly are—environmental review must consider the potential for a dam breach related to the Mile Post 7 Expansion.

2. The Mile Post 7 dams are at risk of breach because of potential toe uplift and slope instability under undrained loading

Second, DNR must examine the potential of a dam breach at Mile Post 7 through the mechanisms of toe uplift or slope instability under undrained loading. The EAW mentions neither of these possibilities.

“Toe uplift” occurs when “seepage forces from groundwater emerging downstream of the dam are strong enough to lift the toe of the dam,” i.e., the point where the downstream face of the dam meets the ground.⁷¹ This is a danger at dams with clay foundations—like the dams at Mile Post 7—and it can lead to dam failure when the bottom of the dam is pushed upward.⁷² The widely recognized acceptable factor of safety against toe lift for a dam is 1.5, as recognized by Barr Engineering, the consultant that

⁶⁸ EAW Ex. J7 – 2022 DNR Record of Decision ¶ 219.

⁶⁹ Cmt. Ex. A – 2023 Emerman Report, at 21.

⁷⁰ *Id.* at 22. Compaction requires the particles to dry out, and samples have shown that tailings deep within a basin may remain saturated even after decades. *Id.*

⁷¹ *Id.* at 27.

⁷² *Id.* at 27-28.

calculated factors of safety for the dams at Mile Post 7.⁷³ But the factors of safety against toe lift calculated by Barr Engineering for Dams 1, 2, and 5 from a seepage model all were below this acceptable number.⁷⁴ At an elevation of 1,215 feet above sea level, Barr calculated the factors of safety at 1.04 for Dam 1, 1.48 for Dam 2, and 1.20 for Dam 5.⁷⁵ At the dams' planned ultimate elevation, Barr calculated factors of safety of .97 for Dam 1, 1.43 for Dam 2, and in a later analysis, 1.04 for Dam 5.⁷⁶ Barr recognized that that the 1.04 factor of safety was "unacceptable."⁷⁷ Using standard language for dam safety analyses, the dams would be considered "unstable against toe uplift."⁷⁸ But the EAW does not mention toe uplift or these factors of safety at all.

"Undrained loading" occurs when water cannot move freely through a dam during a disturbance, such as an earthquake or machinery vibrations, causing a pressure build up that can lead to liquefaction.⁷⁹ The most commonly used factor of safety for undrained slope instability is 1.5, but Barr Engineering used a recommended factor of safety of 1.3.⁸⁰ But Barr Engineering still calculated a factor of safety of 1.27, below even

⁷³ *Id.* at 29-30.

⁷⁴ *Id.* at 30-32.

⁷⁵ *Id.* at 30-32. Barr Engineering also calculated factors of safety based on information from piezometer measurements for Dam 1 only, and using this method calculated a 1.31 factor of safety, still below the acceptable factor of safety of 1.5. *Id.* at 30. However, there is a concern that the relevant piezometers for Dam 1 may not be giving correct measurements. *Id.*

⁷⁶ *Id.* at 30-32.

⁷⁷ *Id.* at 33.

⁷⁸ *Id.* at 33.

⁷⁹ *Id.* at 34-35.

⁸⁰ *Id.* at 35-36.

the lowered recommended value, for Dam 1 at its ultimate elevation of 1,315 feet.⁸¹ Barr dismissed any issue with this instability, however, by saying that “[m]any changes may take place in the seepage conditions of the dam [by the time it reaches 1,315 feet], including possible stockpiling of plant aggregate along the toe of the dam for storage and strength-gain in foundation and dam materials.”⁸² But mere speculation about Northshore’s future actions cannot substitute for an actual analysis of this issue—and none exists in the EAW.

These two issues demonstrate the potential for significant environmental effects with the Mile Post 7 Expansion. Analyses by Northshore’s own engineering consultant show that the tailings basin dams already are unstable against toe uplift and that one, at a higher elevation, will become unstable against undrained loading. DNR should make no decision regarding a project that would involve extending these unstable dams and ultimately raising and loading hundreds of millions of tons of tailings behind them until DNR has thoroughly studied these issues in environmental review.

3. The reclaim dam within the Mile Post 7 tailings basin is on the cusp of failure, and its failure creates the risk of other dam breaches

Third, DNR must study the stability of the reclaim dam within the tailings basin, which has the potential to collapse and cause other dam breaches. The reclaim dam “is an interior dam that creates a ring dike around a historical low area within the basin which allows water to be ponded where floating pump stations return water to the plant

⁸¹ *Id.* at 35.

⁸² *Id.*

or the water treatment plant.”⁸³ When an updated stability analysis of the reclaim dam was prepared in 2015 to address planned dam raises, the results showed that the reclaim dam was unstable.⁸⁴ Currently, the factors of safety calculated for the reclaim dam at two particular stations are .90 and 1.00.⁸⁵ A factor of safety of 1.00 indicates a dam on the cusp of failure.⁸⁶

If the reclaim dam collapses, energy released from its failure could be transferred to the water in the reclaim pond, which could potentially flow over the top of the outer dams and cause a breach.⁸⁷ Alternatively, energy from the collapse could be transferred to one of the outer dams, making them less stable, which could in turn lead to a breach.⁸⁸ While these are possibilities, not certainties, they are risks that should be studied in the EAW. Instead, the EAW does not even mention the reclaim dam.

4. The ongoing history of missing and malfunctioning monitoring equipment at the Mile Post 7 tailings basin dams creates a higher risk of dam breach

Finally, DNR must consider the long history of missing or malfunctioning piezometers at Mile Post 7. Without proper monitoring of the dams at Mile Post 7—which as explained above are built on fine tailings and should be considered unstable against toe uplift—the risk of dam breach is increased. But the EAW does not mention any monitoring of the stability of the dams at all.

⁸³ EAW Ex. J19 – 2019-2023 5 Year Operating Plan, at 23.

⁸⁴ *Id.* (stating reclaim dam has factors of safety “less than minimal accepted values.”)

⁸⁵ *Id.* at 24.

⁸⁶ Cmt. Ex. B – 2021 Emerman Report, at 2.

⁸⁷ Cmt. Ex. A – 2023 Emerman Report, at 38-39.

⁸⁸ *Id.* at 39.

Piezometers are instruments used to measure the pressure of groundwater in dams or other conduits, allowing the pressure to be monitored and controlled if necessary. But a lack of functional piezometers at the Mile Post 7 dams has been a recurrent theme throughout nearly all of Northshore's five-year operating plans.⁸⁹ In 2019, Barr Engineering reported that 23 piezometers at Mile Post 7 were malfunctioning or non-functional.⁹⁰ Although DNR later reported that 18 of the piezometers were abandoned, replaced, or "in process" (which, notably, is not the same as ensuring all of them were properly functioning), this was not the only time monitoring equipment has been faulty at the site.⁹¹ In 1995, a consultant reported that it had not been considered necessary to replace damaged or malfunctioning equipment over the 19 years since installation.⁹² In 2003, there were no working monitoring instruments at Dam 5.⁹³ In 2013, Barr Engineering reported a number of piezometers and other pieces of equipment were malfunctioning.⁹⁴ As expert Dr. Steven Emerman explained upon reviewing the operating plans:

There has been a persistent lack of care in the maintenance of the instrumentation that appears to have lasted for about four decades. It is not at all obvious as to why it is necessary for external consultants to inform the dam operators that instruments are malfunctioning or non-functional. It is even more disturbing when the dam operators do not take action on the recommendations of the external consultants.⁹⁵

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* at 39-40.

⁹⁴ *Id.* at 40.

⁹⁵ *Id.* at 44.

This is yet another critical issue of dam safety that must be considered before decisions are made regarding the Mile Post 7 Expansion.

While DNR, in its order on the EAW Petitions, dismissed the possibility of a dam failure at Mile Post 7, in fact the tailings basin has already failed.⁹⁶ In 2000, a tailings pipeline at the facility broke, resulting in the release of 10 million gallons of tailings slurry into the Beaver River watershed, causing significant impacts to fish and other aquatic life.⁹⁷ Northshore eventually paid a penalty of \$200,000, funded a supplemental environmental project that cost \$240,000, and paid an additional \$47,000 for late completion of corrective actions relating to the tailings pipeline break.⁹⁸ DNR cannot merely assume that Mile Post 7 is invulnerable to failure, or that it is fundamentally different from other tailings basins that have failed.⁹⁹ The tailings basin is at risk of breach—this creates the *potential* for significant environmental effects that the EAW has not even mentioned. Accordingly, DNR should order an EIS or supplement the EAW.

B. DNR must examine the environmental effects that would occur from a dam breach

If the Mile Post 7 dams were breached, the environmental results could be not only significant, but catastrophic. The tailings basin currently holds nearly 120 million long tons of tailings in a 2,150 acre lake.¹⁰⁰ After the Mile Post 7 Expansion, ultimately Northshore expects the basin to hold more than 750 million long tons of tailings in a 2,800

⁹⁶ *Id.* at 25.

⁹⁷ *Id.*

⁹⁸ *Id.* at 26.

⁹⁹ *Id.* at 27.

¹⁰⁰ EAW at 17-18.

acre lake.¹⁰¹ And all of this mining waste and water would be held in a lake 600 feet vertically above and three miles away from Lake Superior.¹⁰² Undoubtedly the release of this water and waste in a dam breach would be devastating. But the EAW does not mention, let alone analyze, the effects that would occur.

First, the cost in human life could be considerable. The deaths of thousands of people have been caused by tailings dam failures, through drowning and suffocation.¹⁰³ In one well-known and horrific example, the Brumadinho upstream tailings dam in Brazil liquefied and collapsed in 2019, killing at least 259 people and spreading a 10-meter-high wave of mud that spread several miles downhill.¹⁰⁴ And aside from these directly caused deaths, leakage of contaminants from the tailings – which can include toxic elements like arsenic or lead – “almost certainly results in increased rates of pathology and, by extension, mortality.”¹⁰⁵

In addition, the discharge of waste material into river systems would affect water and sediment quality and aquatic life for many miles downstream.¹⁰⁶ The contaminants might kill wildlife and aquatic life directly, or over time through contamination and habitat destruction. After a tailings basin breach in Spain, for example, all the fish and

¹⁰¹ *Id.*

¹⁰² Cmt. Ex. C – 1976 State EIS Findings, Finding 28.

¹⁰³ Cmt. Ex. N – D. Kossoff et. al, *Mine tailings dams: Characteristics, failure, environmental impacts, and remediation*, 51 *Applied Geochemistry* 299, 235 (2014).

¹⁰⁴ Cmt. Ex. M – Luiz Henrique Silva Rotta et. al, *The 2019 Brumadinho tailings dam collapse: Possible cause and impacts of the worst human and environmental disaster in Brazil*, 90 *Int. J. App. Earth Obs. Geoinformation* 2 (2020).

¹⁰⁵ Cmt. Ex. N – D. Kossoff et. al, *Mine tailings dams: Characteristics, failure, environmental impacts, and remediation*, 51 *Applied Geochemistry* 299, 235 (2014).

¹⁰⁶ *Id.*

shellfish in the nearby watercourses were killed, leading to the collection of 37 tons of dead fish in the month following the breach.¹⁰⁷ And even after cleanup, contamination might linger in some areas for years after a tailings spill incident.¹⁰⁸

Here, in the event of a major breach, contaminated water and tailings could reach Lake Superior in a matter of minutes, causing decades' worth of tailings to contaminate its waters, harming water quality, fish and other aquatic life, wildlife, and habitats. The pollution could contaminate drinking water relied on by many people along the lakeshore, including those in Duluth, and harm recreation and tourism in the area. As stated by the 1976 EIS, this would "thwart the entire purpose" of requiring land disposal rather than continued dumping of tailings into Lake Superior.¹⁰⁹ Ultimately, however, although we can predict the environmental effects could be catastrophic, we do not know exactly what the effects of a dam breach would be. This is for a simple reason: The EAW does not include any analysis of those effects. DNR must order an EIS or supplement the EAW in order to study these incredibly significant potential environmental effects.

II. DNR cannot depend upon the previous environmental review or its regulatory authority to avoid environmental review now

In its order denying the EAW Petitions, DNR relied heavily on two factors in determining the Mile Post 7 Expansion did not have the potential for significant environmental effects. First, DNR asserted that a new environmental review would be unnecessary because previous environmental review in the 1970s covered the effects of

¹⁰⁷ *Id.* at 235-36.

¹⁰⁸ *Id.* at 237.

¹⁰⁹ Cmt. Ex. C - 1976 State EIS Findings, at 41.

the Mile Post 7 Expansion. Second, DNR asserted that any potentially significant environmental effects would be mitigated by DNR's ongoing regulatory authority over the tailings basin.¹¹⁰ But neither of these factors excuses DNR from performing environmental review now on dam safety at the Mile Post 7 Expansion.

A. The 1970s environmental review does not provide sufficient information for DNR to “anticipate and control” effects from a current dam breach

One of the factors DNR must consider in determining whether to order an EIS is “the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies...including other EISs.”¹¹¹ But environmental effects from a dam breach cannot be “anticipated and controlled” based on the 1970s-era environmental review, because the 1976 and 1977 EISs do not provide sufficient information about the potential for significant environmental effects from a dam breach *now*.

First, the studies are close to 50 years old, and they are, accordingly, out of date. The EISs were not intended to cover all environmental effects that might arise from the tailings basin forever; both the 1976 and 1977 EISs contemplate a 40-year timespan for the tailings basin and evaluate the potential effects of the project within that assumed

¹¹⁰ EAW Ex. J7 – 2022 DNR Record of Decision, at 80-81.

¹¹¹ Minn. R. 4410.1700, subp. 7(D).

lifetime.¹¹² Now, more than 40 years have passed, meaning the EISs do not accurately foretell the environmental effects of a current dam breach.¹¹³

Second, unsurprisingly, methods of environmental analysis have changed significantly over the years. By modern standards, the dam breach study included in the 1976 EIS is “entirely inadequate.”¹¹⁴ The 1976 EIS noted little more than the facts that eight residences were in the area the water would occupy and that dam failure would frustrate the objective of ending the disposal of tailings into Lake Superior.¹¹⁵ By contrast, contemporary industry guidance documents on dam failure require detailed analyses of consequences of a dam breach.¹¹⁶ A modern dam breach study would include information about the depths, velocities, and paths of the expected tailings flood; discussions of impacts on homes, buildings, businesses, and infrastructure; analyses of harm to wildlife and aquatic life; and the expected effects on long-term air and water quality.¹¹⁷ None of this information is in the 1970s-era EISs. In addition, a modern dam breach study would consider climate change-related information. Specifically, the study would consider that Minnesota is getting wetter, with more precipitation each year and

¹¹² Cmt. Ex. C – 1976 State EIS Findings, at 7; EAW Ex. J29 – 1977 USACE Final EIS, at 16 (“The longest possible construction time is approximately 40 years with construction just ahead of the rising pond.”); *see also* EAW Ex. J29 – 1977 USACE Final EIS, at 13, 25, 59, 72.

¹¹³ *See Unite Here! Local 5 v. City and Cty. Of Honolulu*, 231 P.3d 423, 451 (Haw. 2010) (holding 1985 EIS was no longer valid for project by 2010, when the environmental impacts were examined only through 2000, even though project was otherwise unchanged).

¹¹⁴ Cmt. Ex. B – 2021 Emerman Report, at 60.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

a higher likelihood of heavier, damaging rainstorms.¹¹⁸ This added precipitation could lead to higher-than-expected water levels in the tailings basin, which could put pressure on the dams. But again, the 1970s-era EISs do not consider climate change effects on dam safety (and nor does the EAW, despite the inclusion of a section on climate change).

Third, circumstances at the tailings basin and in the surrounding area have changed significantly in the past five decades. The 1976 and 1977 EISs both studied the effects of a *downstream* dam—but in 1997 the dam design was changed, and this change has never been subjected to environmental review. In addition, the area likely has developed considerably since the 1970s.¹¹⁹ Based on a visual examination of the nearby terrain as shown on Google maps, the Silver Beaver Rifle and Pistol Club, Silver Bay Golf Course, and Beaver River South Campsite appear to potentially be within the path of the tailings flood, along with the town of Beaver Bay. The 1970s-era environmental reviews provide no information about the expected path of the flood, or about what current development—houses, businesses, or infrastructure—might be in its way. In addition, the natural resources—wetlands, water quality, wildlife, and aquatic life, to name a few—in the area likely have changed considerably since the 1970s. No information about the current environment or surroundings is, of course, analyzed in the 50-year-old EISs.

In sum, the 1970s-era EISs do not even purport to provide information about what would happen in a current dam breach. They explain nothing about what volume of flood

¹¹⁸ DNR, *Climate Trends*, https://www.dnr.state.mn.us/climate/climate_change_info/climate-trends.html#:~:text=Minnesota%20keeps%20getting%20warmer%20and,in%20the%20past%20several%20decades.

¹¹⁹ Cmt. Ex. B – 2021 Emerman Report, at 60.

would result, where the flood would go, what development and resources would be affected, or what the long-term effects would be—all critical information with respect to a dam breach. Without this information, DNR cannot actually “anticipate and control” environmental effects of a current dam breach based on the EISs. DNR does not have sufficient detail about what those effects would be. Accordingly, the 1976 and 1977 EISs do not allow DNR to avoid ordering an EIS now.

Additionally, in denying the EAW Petitions, DNR pointed to a 2012 dam breach study by Northshore as part of an Emergency Action Plan. DNR said this study addressed many of the effects of dam failure missing from the EISs.¹²⁰ However, the study as released to the public was heavily redacted: “nearly all of the potentially useful information has been blacked out, including maps, tables, model details and assumptions, conclusions, and recommendations.”¹²¹ It is impossible, under these circumstances, to determine whether this study actually provides information that would allow DNR to “anticipate and control effects.” Regardless, this document is entirely useless for fulfilling one of the main purposes of environmental review—providing useable information *to the public* about the environmental effects of a proposed project.¹²² DNR cannot rely upon a nonpublic document to avoid doing the public environmental analysis required by the Minnesota Environmental Policy Act.

¹²⁰ EAW Ex. J7 – 2002 DNR Record of Decision ¶ 223, Document J.

¹²¹ Cmt. Ex. A – 2023 Emerman Report, at 46-47.

¹²² Minn. R. 4410.0300, subp. 4A.

B. DNR's ongoing regulatory authority is not specific, targeted, and certain to be able to mitigate environmental effects at the tailings basin

Another factor for DNR to consider in determining the potential for significant environmental effects is “the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority.”¹²³ DNR may only rely on mitigation measures that are “specific, targeted, and are certain to be able to mitigate” the identified effects to avoid ordering an EIS.¹²⁴ In denying the EAW Petitions, DNR relied on DNR's ongoing regulatory authority under Mile Post 7's Permit to Mine, Master Permit, and oversight under DNR's Dam Safety Program to mitigate the environmental effects of the Mile Post 7 Expansion.¹²⁵ But DNR does not appear to be exercising its regulatory authority in a way that is specific, targeted, and certain to mitigate the environmental effects of a dam breach, because DNR is failing to exercise all of its regulatory powers over Mile Post 7.

Most importantly, DNR has failed to require a dam safety permit for the Mile Post 7 dams. DNR has asserted that Mile Post 7 did not require a dam safety permit because the tailings basin predated the laws governing dam safety.¹²⁶ But in fact, Minnesota's dam safety laws require that the dams at Mile Post 7 h. Under Minn. Stat. § 103G.531, subd. 1, the only exemption for dam permits is for dams in existence before 1937 – which the Mile Post 7 dams undisputedly were not. In addition, permits under chapter 103G are subject

¹²³ Minn. R. 4410.1700, subp. 7(C).

¹²⁴ *Citizens Advocating Responsible Dev. v. Kandiyohi Cnty. Bd. of Comm'rs*, 713 N.W.2d 817, 835 (Minn. 2006)

¹²⁵ EAW Ex. J7 – 2002 DNR Record of Decision, at 80.

¹²⁶ EAW at 19, n.13.

to “applicable law existing before or after the issuance of the permit.”¹²⁷ Accordingly, once laws governing dam safety were in place, DNR had a duty to require Reserve Mining to apply for a dam safety permit. Then, when Northshore acquired the Mile Post 7 facility after Reserve Mining’s bankruptcy, the rules again mandated that DNR require a dam safety permit. As the rules state, no one can transfer ownership of a Class I or II dam without a permit from the commissioner.¹²⁸ Finally, DNR’s dam safety rules now require a dam safety permit before the Mile Post 7 Expansion may proceed. The rules require a permit for the “alteration, repair, or removal of a dam,”¹²⁹ and “alteration” is defined as any activity that will affect the safety of a dam or alter public waters.¹³⁰ Extending and raising the Mile Post 7 dams and adding hundreds of millions of tons of tailings to the tailings basin would affect the safety of the dam, and accordingly, DNR must require a permit. DNR certainly is not acting in a “specific and targeted” way that is “certain” to mitigate concerns about dam safety if DNR does not even require a legally mandated dam safety permit for Mile Post 7.

In addition, as explained above, DNR has failed to require a modern dam breach study that would fully analyze the expected effects of a dam failure at Mile Post 7, and has failed to publicly release the most up-to-date information it has regarding the effects of a tailings basin failure. Nor has DNR sufficiently exercised oversight over Northshore’s operations so as to ensure that Northshore is properly monitoring the stability of the

¹²⁷ Minn. Stat. § 103G.315, subd. 11(a)(3).

¹²⁸ Minn. R. 6115.0370.

¹²⁹ Minn. R. 6115.0350.

¹³⁰ Minn. R. 6115.0320, subp. 2.

dams. This is shown by the repeated issues with missing or malfunctioning equipment, as explained above. These actions also show that DNR is not acting in a way that is certain to mitigate concerns about dam safety. It is failing in its obligations to inform the public about a potential environmental and safety hazard and to ensure that Northshore is properly monitoring the safety of the dams.

Other issues, too, show that DNR is failing to exert its full regulatory authority over the Mile Post 7 tailings basin. DNR has failed to set a definite term for the 1985 Permit to Mine that Northshore is requesting be amended for the Mile Post 7 Expansion, even though Minnesota statutes require DNR to determine the term necessary for “the proposed mining operation, including reclamation or restoration.”¹³¹ And DNR has failed to require sufficient financial assurance for the Mile Post 7 closure, despite a statutory requirement that DNR review the amount of financial assurance annually.¹³² In 2020, Northshore stated in a letter to DNR that its financial assurance for Mile Post 7’s closure costs is only \$4 million in the form of an irrevocable letter of credit.¹³³ This is clearly an inadequate amount—even in 1988, closure costs were estimated at \$18 million,¹³⁴ and they surely have risen due to inflation, new development, and the enlargement of the Mile Post 7 facility over thirty years. These deficiencies reveal a

¹³¹ Minn. Stat. § 93.481, subp. 3(a). The 1985 Permit to Mine has a *minimum* duration based on the lifetime of the Peter Mitchell pit, but no limit based on reclamation or restoration, as required by the rules.

¹³² Minn. Stat. § 93.49.

¹³³ Cmt. Ex. O – Cleveland-Cliffs Inc., *Letter to Jennifer Engstrom, DNR*, at 2 (Dec. 15, 2020).

¹³⁴ Cmt. Ex. P - *Tailings Basin Closure Consensus Plan for Reserve Mining Co.*, at 38 (Aug. 16, 1988).

pattern, under which DNR has repeatedly failed to exert all of its ongoing regulatory authority over the Mile Post 7 tailings basin.

When DNR has failed to require a dam safety permit, a dam breach study, or the upkeep of dam stability monitoring equipment, and has failed to exercise its regulatory authority over the Mile Post 7 tailings basin in other ways, DNR cannot assert that its ongoing regulatory authority is *certain* to prevent a dam breach. Accordingly, DNR cannot rely on its regulatory authority to avoid an EIS.

CONCLUSION

The Mile Post 7 tailings basin already holds a massive amount of contaminated water and mining waste within its dams, and if DNR approves the Mile Post 7 Expansion, the tailings basin would hold hundreds of millions of tons more. Before DNR makes a decision about the proposal to expand the tailings basin, it must fully study the potential for significant environmental effects that would arise from a dam breach. As explained by Dr. Emerman, a full environmental review analyzing the effects of a dam breach

enables all stakeholders, including state regulatory agencies, local governments, tribal governments, and the general public, either as individuals or as members of organizations, to determine whether the construction or expansion of a tailings dam is a wise decision. ... There is no way for all stakeholders to decide whether [the Mile Post 7 Expansion] is a wise decision without knowing the full consequences (including all potential environmental, socioeconomic and cultural impacts) in the event of dam failure.¹³⁵

Because of the potential for significant—and in fact devastating—environmental effects from a dam breach at the Mile Post 7 tailings basin, DNR must order an EIS or, at a

¹³⁵ Cmt. Ex. A – 2023 Emerman Report, at 48.

minimum, supplement the EAW with this information before making any decisions regarding the Mile Post 7 Expansion.

Respectfully submitted,

s/Joy R. Anderson

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RE: Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project –
Environmental Assessment Worksheet (EAW)

May 18, 2023

Founded in 1968, The Sierra Club is the nation's oldest and largest grassroots environmental organization, representing over 50,000 members and supporters in Minnesota. The Sierra Club works to safeguard the health of our communities, protect wildlife, and preserve our remaining wild places through grassroots activism, public education, lobbying, and litigation. As a leading grassroots voice working to preserve and protect Minnesota's environment, we empower volunteer leaders to act through environmental advocacy, community organizing, and outdoor exploration. We participate in the administrative process to encourage environmental health and sustainability, long term wildlife and habitat protection, and biodiversity goals.

The proposal from Northshore Mining to relocate the West Ridge Railroad, extend Dams 1 and 2, construct a Dam 1 switchback, and develop a clay borrow site at the Mile Post 7 tailings basin must be denied. The Mile Post 7 tailings basin was never a good idea. A toxic tailing basin site should never have been built next to Lake Superior, nor should it now be expanded. Instead of considering plans to expand this dangerous tailings basin, the citizens and Agencies of the State of Minnesota should be working to dismantle and clean up this site before it does any more damage.

I. The EAW is Insufficient

The EAW that the DNR prepared is totally insufficient and lacks crucial information. The EAW fails to analyze dam failure risks, let alone to avoid them or require that they be studied and disclosed to the public. The EAW contains no modern dam breach analysis, closure, reclamation plan, or financial

assurance to protect Minnesota taxpayers. If there are to be any additions to this site a full Environmental Impact Statement (EIS) must be prepared along with proper permits.

The current EAW provides no environmental analysis of the potential and cumulative environmental effects of the location, structure, and height of the tailings basin expansion. The EAW provides no analysis of the health and safety risks to the surrounding communities. The only EIS conducted by the State of Minnesota for the Mile Post 7 tailings basin was done in 1976, almost half a century ago. Nothing related to this project can proceed until an EIS is conducted and proper permitting takes place.

II. Permits are Missing

The DNR has irresponsibly allowed the Mile Post 7 tailings basin to operate for more than 40 years without legally required permits. The 1977 “Master Permit” for the tailings basin said the permit would expire in 1982 and could only be renewed for five-year intervals by following applicable statutes. However, the last permit to mine for the Mile Post 7 tailings basin was issued in 1985 and expired long ago. The Mile Post 7 tailings basin has never had a dam safety permit required by Minnesota statutes and rules. The railroad built on the tailings basin site is not described on any permit. These violations are outrageous, irresponsible, and need to be remedied immediately.

III. The Expansion of the Site Threatens Water Resources and Local Communities

This project will result in damage to nearby wetlands and streams. It proposes to expand the height of the tailings by 50-80 feet. Also, expanding the basin so it is adjacent to a coal ash landfill and expanding tailings dams by 12,200 feet (more than two miles). The Sierra Club is concerned with the safety posed by a taller tailings dam and tailings pile, the location of tailings piles near a coal ash facility, and the instability of these changes given the unsafe “upstream” dam raises added by DNR without public notice in 1997. A failure at Mile Post 7 tailings dams would be catastrophic for downstream communities, Lake Superior, and the surrounding environment.

The Sierra Club is concerned with how this proposal would affect water resources both within the tailing basin area, and nearby. Losing more portions of Big Thirtynine Creek and Little Thirtynine Creek is unacceptable. Reshaping and redirecting stream channels is risky with unforeseen environmental consequences.

The Sierra Club is concerned with the loss of wetland areas resulting from this proposal. Constant loss of wetlands makes it impossible for sensitive species, who need this habitat, to ever make a recovery. “Direct wetland impacts would occur from construction of the relocated materials supply railroad and the proposed extensions of Dams 1 and 2. Approximately 43.8 acres of wetlands would be impacted by excavation and fill due to construction activities” (EAW, 63). “Indirect wetland impacts

would also occur due to the Tailings Basin Features from impoundment resulting from construction of the new railroad embankment; these impacts would be permanent. Four (4) wetlands encompassing approximately 40.2 acres would be affected” (EAW, 63).

Mining activities often results in unforeseen and unplanned damage to the environment. Mining activities results in environmental damage to our land and water resources. Water is one of our most precious commodities, what’s best for Minnesota’s water is also what’s best for Minnesota’s economy, health and wellbeing of Minnesota’s citizens and future generations.

IV. Effects on Species

Climate change is already happening and with it will come extreme weather, droughts, loss of food sources and new diseases. It is our responsibility to ensure wildlife has the food, water, and range they need to breed and survive. Protecting wildlife habitat not only ensures that we will be able to enjoy our outdoor traditions for years to come—it also helps combat global warming. By keeping our wetlands and forests intact, we help clean up carbon pollution from the air and stop the worst impacts of global warming. If we want America’s wildlife to survive, we must help them adapt by protecting critical habitat and creating wildlife corridors that will allow for migration as temperatures rise.

It is the responsibility of the DNR to protect sensitive species so that their populations can once again flourish. The DNR is not fulfilling their duty and is losing this battle. Constant and relentless management projects chip away at what is left of sensitive species habitat. The EAW acknowledges the fact that the project area is likely habitat to many sensitive species and federally listed species:

“The Tailings Basin Features and Stream Mitigation Sites are in a larger complex of scrub-shrub wetlands, forested wetlands, and forested uplands adjacent to the existing Tailings Basin. The area is likely used by commonly occurring species such as: migratory songbirds; small mammals such as voles, mice, shrews; and medium to large mammals such as snowshoe hare, bobcat, Canada lynx, red fox, gray fox, American marten, fisher, moose, white-tailed deer, bear, and gray wolf among others” (EAW, 72).

“The Proposer reports a review of USFWS Information for Planning and Consultation (IPaC) tool was used to identify federally listed species that may occur within the Project area. The review identified three threatened mammals including the Canada lynx (*Lynx canadensis*), northern long-eared bat (*Myotis septentrionalis*), gray wolf (*Canis lupus*); one endangered bird, the piping plover (*Charadrius melodus*); and one candidate species for the monarch butterfly (*Danaus plexippus*)” (EAW, 76).

The EAW goes on to erroneously conclude that: “The Project would also result in minor adverse impacts to common wildlife species due to the loss of approximately 339.1 acres of wildlife habitat because of the conversion of land use for the construction of Dam 1, Dam 2, rail switch back, railroad embankment, and clay borrow pit. For common wildlife species, this loss is considered minor because

their populations are stable” (EAW, 77). After just listing many sensitive species and federally listed species, to then label them as “common” is misleading and false. Their populations are *not* stable, otherwise they would not have state and federal designations as sensitive, threatened, and protected.

Next the EAW admits that this project will negatively impact moose and that mountain lions have been documented in the area:

“Habitat for moose is likely available within the Project area. The key habitat types considered moose habitat include mature forest, grassland/brushland, and aquatic environments. As such, the project would likely affect individuals in the vicinity through habitat loss and fragmentation for the Tailings Basin Features, though not likely at the population level” (EAW, 78).

“There is no evidence that the mountain lion has a self-sustaining, breeding population in Minnesota, although some sightings are confirmed in the state including on camera near the Project site. The species is highly mobile and seems to be nomadic in their presence in the state” (EAW, 78).

Sensitive species such as moose and mountain lions need to be protected along with their habitat. Moose populations have been declining in northern Minnesota in recent years. As the climate steadily warms, it is important for the DNR to assure the continued survival of moose by protecting their habitat. Moose need wetlands, muskeg, and marsh areas, and this project will result in negative effects to wetland areas and other water resources, disturbing or displacing this species from critically needed refugia.

Allowing for a massive 650-acre expansion without proper permits and environmental review endangers our precious natural resources, Lake Superior, and the people of the communities in Northern Minnesota. This project cannot proceed in its current form. An EIS must be prepared, and proper permitting completed.

Sincerely,

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May 18, 2023

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RE: Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation
Project – Environmental Assessment Worksheet

Dear Mr. Johnson,

The attached comments on the Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project – Environmental Assessment Worksheet (“EAW”) are submitted by WaterLegacy and joined by Northeastern Minnesotans for Wilderness (“NMW”). We request that the Minnesota Department of Natural Resources (“DNR”) take the following actions:

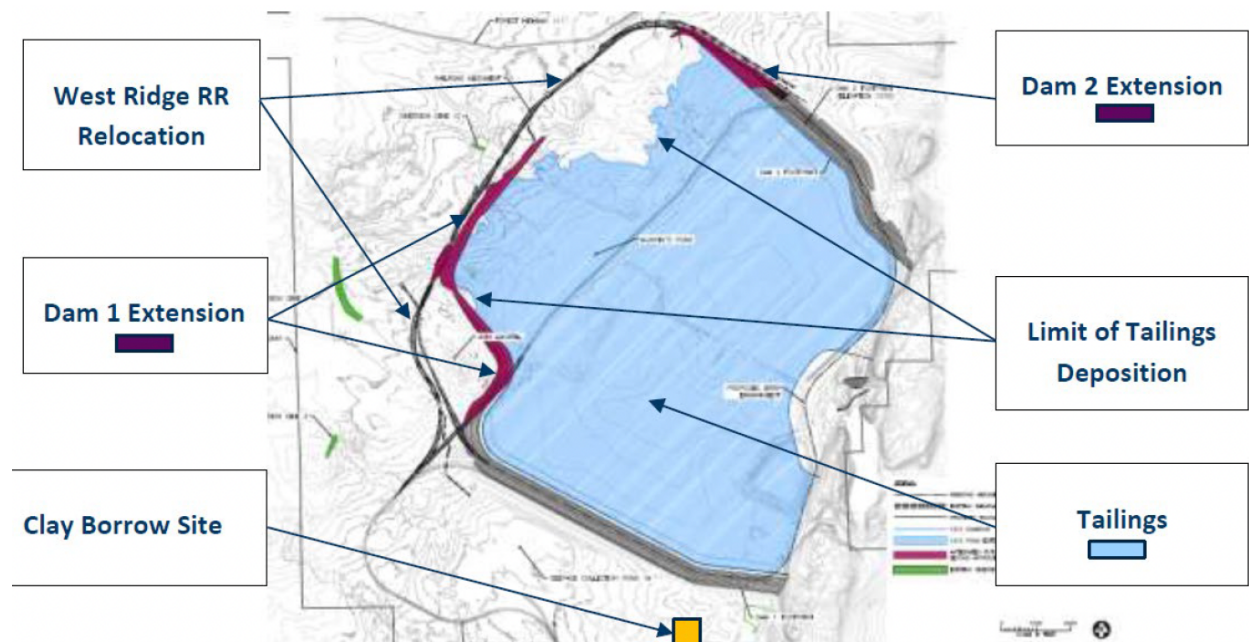
- A. Prepare an environmental impact statement (“EIS”) for all proposed new, extended and expanded Mile Post 7 tailings basin features, including cumulative impacts of project developments since the 1977 EIS because the proposed project, including cumulative impacts, has the potential for significant environmental effects not subject to effective mitigation by ongoing public authority. Minn. Stat. § 116D.04; Minn. R. 4410.1700, subp. 7(A)-(D); Minn. R. 4410.2000, subp. 3(A).
- B. Analyze in that EIS: 1) the potential environmental and safety impacts of dam breach and failure for upstream and “offset upstream” dam raises constructed on top of uncompacted tailings near Lake Superior; 2) all project features with the potential for significant impacts to wetlands and water resources; and 3) potential alternatives to avoid, minimize, or mitigate such effects.
- C. Require the applicant, Northshore Mining Company (“Northshore”), a wholly owned subsidiary of Cleveland-Cliffs, Inc. (“Cliffs”) to apply for a Dam Safety Permit for the Mile Post 7 tailings basin and evaluate issuance of that permit in a formal, open process that allows for public notice and comment. Minn. Stat. ch. 103G, Minn. R. ch. 6115.
- D. Require Northshore to apply for renewal of its permit to mine and an amendment pertaining to the Mile Post 7 tailings dam and evaluate approval of that renewal and amendment as a substantial change requiring an open public process. Minn. Stat. ch. 93, Minn. R. ch. 6130.

Many of the facts supporting the requested actions are not disputed. The factual background and the authorities and arguments upon which we rely are stated in the following pages.

I. PROPOSED MILE POST 7 PROJECT

1. Details of the Mile Post 7 Proposed Project are provided in the DNR EAW for Mile Post 7 West Ridge Railroad Relocation, Dam Extensions, and Stream Mitigation Project, December 2022 version (“*EAW*”) and in the DNR’s Record of Decision Findings of Fact, Conclusions and Order Denying an EAW for the Mile Post 7 Tailings Basin Progression, February 4, 2022, EAW appendix j7 (“*DNR 2022 ROD*”).

2. Elements of the Proposed Project, *DNR 2022 ROD* ¶48, are shown below:



3. Based on these DNR documents, the Proposed Project would include:

- a) Extension of existing Dams 1 and 2 at their western ends by 8,100 feet and 4,100 feet respectively, for a total increase of 12,200 feet of tailing dams. *DNR 2022 ROD* at 78.¹
- b) Relocation of the West Ridge Railroad approximately 4000 feet to the northwest. *DNR 2022 ROD*, ¶47c. The proposed rail embankment would allow relocation of the railroad currently on the west side of the tailings basin; it be approximately 3,700 feet long and would cover 8.40 acres. *EAW* at pdf 7.

¹ The EAW states that Dam 1 extension would be 6,600 feet and the Dam 2 extension 2,350 feet. *EAW* at pdf 5 (the EAW is not paginated).

- c) A 650-acre extension of the tailings basin, increasing the current area covered with tailings from approximately 2,150 acres to an anticipated 2,800 acres of tailings *DNR 2022 ROD*, ¶47b, page 78.
- d) Permitting elevations of Dams 1, 2, and 5, which are currently at 1,242 feet above mean sea level (“amsl”), 1,244 feet amsl, and 1,255 feet amsl respectively to increase to 1,315 amsl. *EAW* at pdf 5-6, 15.
- e) Loss of 66.73 acres of wetlands and shallow lakes and 249.54 acres of wooded/forest. *EAW* at 30. Approximately 264 acres of direct wetland impacts and 45 acres of indirect wetland impacts. *DNR 2022 ROD* at 78.
- f) Filling the remaining portions of Big Thirtynine Creek and Little Thirtynine Creek, located within the Tailings Basin, *EAW* at 5, resulting in direct impacts to 5,150 feet of Big Thirtynine Creek and 3,420 feet of Little Thirtynine Creek. Minnesota Pollution Control Agency (“MPCA”) Section 401 Certification, June 29, 2021, *EAW* appendix j16 (“*MPCA 401*”) at 1.
- g) Effects on 8,570 linear feet of stream resources due to: construction of the Dam 1 extension and rail switchback (1,675 feet), tailings basin progression (3,368 feet), and impoundment or the seepage pond and pumphouse (3,527 feet). *DNR Internal Memo Mile Post 7 Environmental Review Need Determination*, June 28, 2021, *EAW* appendix j2 (“*DNR 2021 ER Memo*”) at 37.
- h) Excavation of a clay borrow site of approximately 100 acres outside the EIS study area for ongoing construction of Dam 5. *DNR 2022 ROD*, ¶47d.
- i) Approximately 30.08 acres of new Dam 2 and railroad construction occurring outside the EIS study areas of both the 1975-76 *DNR* Final EIS and the 1977 *USACE* Final EIS for the Mile Post 7 tailings basin. *DNR 2022 ROD*, ¶96.

II. OVERVIEW OF HISTORY

4. In 1974, the United States District Court found that the discharge of tailings into Lake Superior by Reserve Mining Company was a violation of the Federal Water Pollution Control Act, enjoined further disposal in the Lake, and ordered Reserve Mining to find an on-land disposal site for its tailings. *See EAW* appendix j31.²

² *United States v. Reserve Mining Co.*, 380 F. Supp. 11 (D. Minn. 1974) *aff’d* and modified by *Reserve Mining Co. v. EPA*, 514 F.2d 492 (8th Cir. 1975).

5. In 1975 and 1976, DNR and MPCA jointly prepared an EIS for the proposed Reserve Mining Company On Land Tailings Disposal Plan. The *1975 Draft EIS* is provided in EAW appendix j9a.

6. Public hearings were held from June 23, 1975 through March 18, 1976; 17,884 pages of transcript were taken from 160 witnesses; the State's Final EIS was deemed complete on June 2, 1976; and Findings and Conclusions, and Recommendations for the Final EIS were issued. DNR and MPCA, Final EIS for Northshore MP7 Tailings Basin, June 2, 1976, EAW appendix found in j9a starting at pdf page 356 ("*1976 FEIS*") at 3, 46 (numbered FEIS pages).

7. The 1976 Final EIS recommended the Midway alternative tailings basin site concluding, "The record in this proceeding clearly establishes that Mile Post 7 is not a suitable location for disposal of Reserve's tailings and would be contrary to law." *1976 Final EIS* at 3, 46.

8. DNR and MPCA denied permits for use of the Mile Post 7 site, and Reserve Mining appealed to state district court, which ordered the state agencies to grant Reserve Mining permits for the Mile Post 7 site. U.S. Army Corps of Engineers ("USACE") Final EIS, Mar. 1977, WL Ex.1 ("*1977 USACE FEIS*") at 5.

9. On appeal, the Minnesota Supreme Court ordered DNR and MPCA to issue a permit for its preferred site at Mile Post 7. *Reserve Mining Co. v. Herbst*, 256 N.W.2d 808 (Minn. 1977).

10. On August 23, 1977, DNR issued a Master Permit for the Mile Post 7 tailings basin and dams pursuant to Minnesota Statutes Chapters 105 and 116D. EAW appendix j.3 ("*1977 Master Permit*") at 4.

11. On March 1, 1985, DNR issued a permit to mine for the Peter Mitchell mine, stockpiles, railroad, plant, and tailings basin. EAW appendix j.5 ("*1985 PTM*") at 1. The 1985 permit to mine incorporated the 1977 Master Permit plans and schedules by reference. *Id.* at 3.

12. DNR has not identified other formal permits or amended permits pertaining to the Mile Post 7 tailings basin and dams. *See e.g., EAW, DNR 2022 ROD, DNR 2021 ER Memo.*

13. The EAW's chronology states, "August 1995 1977 Master Permit renewed." The document cited by DNR is a letter renewing the "master permit" that was issued on August 17, 1989 and citing several later unspecified modifications. DNR Letter, August 30, 1995, EAW appendix j.4. ("*DNR 1995 Letter*").

14. The August 17, 1989 document cited by DNR is a stipulation reflecting the Cyprus Northshore Mining Corporation ("Cyprus") purchase of Reserve Mining assets from the bankruptcy trustee and providing for shutdown, closure, and reclamation of Mile Post 7. Stipulation Agreement in re Reserve Mining Co., August 17, 1989, EAW appendix j27 ("*1989 Stipulation*").

15. According to a 2005 document, Cliffs through a wholly owned subsidiary mining company, purchased the stock from Cyprus in 1994 and renamed the mining company Northshore Mining Company. *See* Mile Post 7 Master Permit Amendment and Assignment of the Permit to Mine, March 7, 2005, EAW appendix j6 (“*2005 PTM Assignment*”).

16. Eleven years later, in March 2005, DNR and Cliffs signed a document assigning the permit to mine to Northshore and stating that the Mile Post 7 tailings basin permit, the “1977 Master Permit” in these proceedings, was “amended and transferred” to Cyprus in 1989 and “further modified,” “renewed,” and “extended” numerous times through 2004. *2005 PTM Assignment*.

17. On August 18, 2016, Northshore notified DNR that it proposed to relocate the Mile Post 7 railroad, extend the existing tailings basin to the west, and increase the height of the tailings basin to 1,365 feet amsl. DNR Memo, Mile Post 7 Railroad Realignment & Tailings Basin Progression, March 16, 2017, WL Ex. 2 (“*DNR 2017 ER Memo*”) at 1-2. DNR denied the need for a supplementary EIS for the Mile Post 7 Project on March 16, 2017. *Id.* at 6.

18. On September 21, 2020, in response to a Clean Water Act Section 404 Notice for the Mile Post 7 tailings basin expansion, WaterLegacy sent both DNR and USAE comments requesting environmental review before approving the project. WaterLegacy Comments on Milepost 7 Tailings Basin Expansion, September 21, 2020, WL Ex. 3.

19. In response to WaterLegacy’s September 2020 comments, DNR denied the need for environmental review. *DNR 2021 ER Memo* at 65.

20. WaterLegacy, along with 365 Minnesota residents, petitioned DNR on November 9, 2021 to prepare an EAW for the Mile Post 7 Project. WaterLegacy Petition for EAW, November 9, 2021, WL Ex. 4 (“*WL Petition*”).³ The Petition asserted that stream impacts, among other factors, made preparation of an EAW mandatory. *Id.* at [CITE]

21. In response to WaterLegacy and MCEA petitions for an EAW, on February 4, 2022, DNR’s formal Record of Decision concluded that an EAW would not be prepared for the Mile Post 7 Project. *DNR 2022 ROD* at 82.

³ The Minnesota Center for Environmental Advocacy (“MCEA”) and more than 100 individuals also petitioned DNR for an EAW for the Mile Post 7 Project in the fall of 2021.

22. On March 15, 2022, DNR published an EAW for the Big Thirtynine and Little Thirtynine Creek Mitigation Project. Northshore notified DNR that the mitigation project would be withdrawn to provide new data and requested that DNR stop work on the EAW.⁴

23. DNR subsequently resumed the process of preparing an EAW for the Mile Post 7 West Ridge Railroad Relocation, Dam Extension, and Stream Mitigation Project, which was provided to the public on April 18, 2023.⁵

III. ENVIRONMENTAL REVIEW REQUIREMENTS

24. Minnesota Statutes 116D.04, subd. 2a requires: “(a) Where there is potential for significant environmental effects resulting from any major governmental action, the action must be preceded by a detailed environmental impact statement prepared by the responsible governmental unit.” In addition, subd. 2a (d) states that the “responsible governmental unit's decision on the need for an environmental impact statement must be based on the environmental assessment worksheet and the comments received during the comment period.”

25. Minnesota Rules part 4410.2000, subp. 3A, directs a responsible governmental unit (“RGU”) to prepare a discretionary EIS:

A. when the RGU determines that, based on the EAW and any comments or additional information received during the EAW comment period, the proposed project has the potential for significant environmental effects; or

B. when the RGU and the proposer of the project agree that an EIS should be prepared.

26. Criteria that must be used to decide whether a project has the potential for significant environmental effects include these factors: A. “type, extent, and reversibility of environmental effects”; B. “cumulative potential effects”; and C. “the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority.” Minn. R. 4410.1700, subp. 7.

27. “Cumulative potential effects” includes incremental effects of a project on the environment in addition to other past and future projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources. Minn. R. 4410.0200, subp. 11a.

⁴ DNR, Big 39 and Little 39 Creek Mitigation Project Decision to Terminate EAW, available at <https://www.dnr.state.mn.us/input/environmentalreview/big-39-and-little-39-creek-mitigation-project/index.html>.

⁵ DNR’s Project website page is <https://www.dnr.state.mn.us/input/environmentalreview/mile-post-7-tailings-basin-project.html>.

28. DNR has concluded that the Mile Post 7 Proposed Project does not fall within any of the exemptions from environmental review contained in Minn. R. 4410.4600. *DNR 2022 ROD*, ¶56.

IV. BASIS FOR ENVIRONMENTAL IMPACT STATEMENT

A. Dam Construction Method and Tailings Basin Dam Breach or Failure.

29. The State's 1976 Final EIS required that tailings dams for the Mile Post 7 be constructed using the downstream method and found that other construction methods were unsuitable as follows:

The proposed design utilizes the "downstream" method of dam construction, which is desirable from an engineering standpoint. As the height of the dam increases, the dam is constructed in the direction away from (or downstream from) the basin. Thus, in contrast with the upstream method of dam construction which had been used in prior years, the downstream method avoids the placement of dam construction materials on previously deposited fine materials, which would be unsuitable as a base for the dam.

1976 FEIS, ¶16.

30. The 1976 Final EIS determined that, even with the downstream method of tailings dam construction, an alternative location should be selected due to the potential for significant environmental effects of a dam breach at Mile Post 7, as follows:

A 1,000 foot breach in the south dam at Mile Post 7 "would produce a 28 foot high wall of water moving down the Beaver River valley at more than 20 miles per hour to Lake Superior." *1976 FEIS* at 41, Conclusion ¶4.

"Significant water resources would be destroyed, impaired and polluted." *Id.* at 42, ¶6.

Major failure at Mile Post 7 would "thwart the entire purpose of on land disposal by emptying stored tailings into Lake Superior." *Id.* at 41, ¶5

"The threat to Lake Superior would not end when operations cease, but would persist indefinitely." *Id.*

DNR has acknowledged that the "risk of dam failure was a significant part of the EIS analysis in selecting a site for Reserve Mining's tailings basin." *DNR 2022 ROD* ¶194.

31. DNR considers Mile Post 7 dams to be High Hazard or Class I dams. *DNR 2022 ROD* ¶197. A Class I dam is a dam in which “failure, mis-operation, or other occurrences or conditions would probably result in...any loss of life or serious hazard, or damage to health, main highways, high-value industrial or commercial properties, major public utilities, or serious direct or indirect, economic loss to the public.” Minn. R. 6115.0340, subp. A.

32. The 1977 USACE Final EIS also evaluated the Mile Post 7 tailings basin only with the planned downstream construction method, explaining that the “downstream construction method planned for the dams is generally considered to be preferable to the more commonly employed upstream construction method, since it does not place coarse dam material on previously deposited slimes.” *1977 USACE FEIS* at pdf 173.

33. Early construction of all three Mile Post 7 dams was consistent with the State’s 1976 Final EIS and the 1977 USACE Final EIS. *DNR 2022 ROD* ¶211. However, by 1995 Northshore requested that DNR allow future dam raises by the “upstream” method. Northshore Five Year Operating Plan for Milepost 7 Tailings Basin, November 28, 1995, EAW appendix j17 (“*1995-1998 FYOP*”) at 19.

34. In 1997, DNR approved Northshore’ plans to “continue operations utilizing upstream construction methods instead of the Reserve-proposed downstream construction.” The new operating plan included “progressive raising of dams by upstream construction methods.” *DNR 2017 ER Memo* at pdf 14.

35. In 2004, the upstream construction method was modified, and Northshore adopted an “offset upstream” or “modified centerline” construction method with tailings and aggregate both upstream and downstream of the centerline core. Northshore Five-Year Operating Plan Years 2019-2023 for Milepost 7 Tailings Basin, January 2019, EAW appendix j19 (“*2019-2023 FYOP*”) at 2; *DNR 2022 ROD*, ¶173.

36. Since 2004, Mile Post 7 Dams 1 and 2 “have been raised using the offset upstream construction method to minimum elevations of 1,241 feet and 1,243.9 feet, respectively.” *2019-2023 FYOP* at 2.

37. Although downstream construction methods were originally used for dam construction, since the late 1990s upstream and offset upstream construction methods were used for the Mile Post 7 dams. *DNR 2021 ER Memo* at 3; *DNR 2022 ROD*, ¶173.

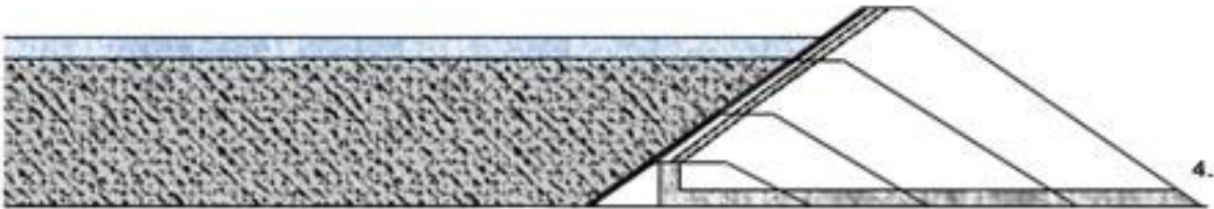
38. The proposed new horizontal extensions of Dams 1 and 2 in the Mile Post 7 proposed project would be undertaken using a centerline construction method. *2022 DNR ROD* ¶194. This construction method is neither an “upstream” method nor the “downstream” construction method studied and adopted for the Mile Post 7 tailings dam in both the 1976 Final EIS and the 1977 USACE Final EIS.

39. It is not disputed that proposed Mile Post 7 Project would continue to use what DNR describes as the “offset upstream” or “modified centerline” method to increase the heights of all of the main Dams 1, 2, and 5. *DNR 2022 ROD*, ¶¶194, 211, including the dams facing toward Lake Superior.

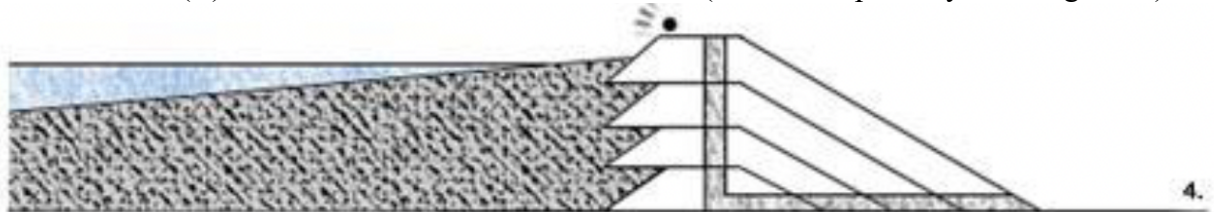
40. Dr. Steven Emerman has an M.A. in Geophysics from Princeton University, a Ph.D. in Geophysics from Cornell University, 31 years of experience teaching hydrology and geophysics, 70 peer-reviewed publications, and national and international expertise in the evaluation of proposed and existing tailings dams. Steven Emerman, *Evaluation of the Proposed Tailings Dam Extensions at the Cleveland-Cliffs Mile Post 7 Tailings Storage Facility*, Northeastern Minnesota, September. 30, 2021, WL Ex. 5 (“*Emerman 2021*”) at 63.

41. The following figures from Dr. Emerman’s report, *Emerman 2021* at 12-14, 23, illustrate the (A) downstream, (B) centerline, (C) upstream and (D) modified centerline/offset upstream construction methods:

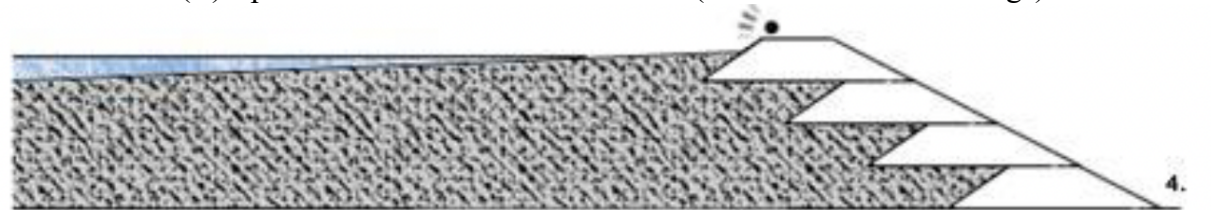
(A) Downstream dam construction method (new raises rest on ground).



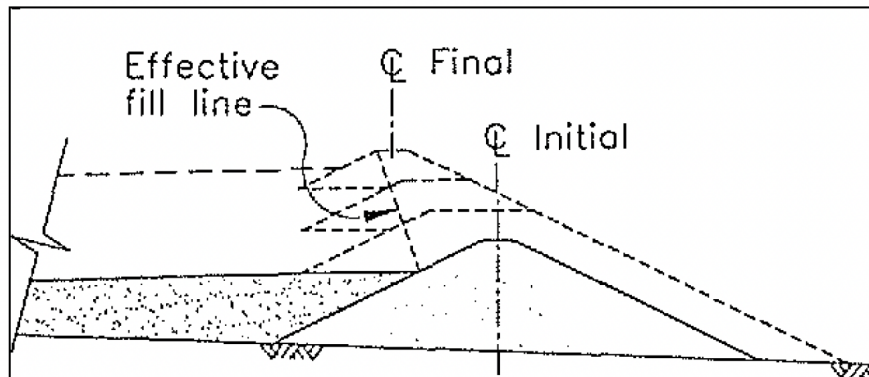
(B) Centerline dam construction method (new raises partially rest on ground).



(C) Upstream dam construction method (new raises rest on tailings)



(D) Modified centerline/offset upstream method (new raises rest on tailings).



42. Dr. Emerman's report, summarized recent data on dam failure risks:

"Empirical databases that have become available since the late 1970s have reinforced the high risk of failure of upstream dams, which made up only 19% of new facilities by the decade 2010-2019."

"Considering only upstream, centerline and downstream dams, on a global basis, upstream dams make up 54% of existing dams, but 71% of dam failures, while downstream dams make up 38% of existing dams, but 20% of dam failures."

"A recent analysis of the Global Tailings Portal has shown that upstream facilities have a higher incidence of stability issues (18%) than other facility types (even after controlling for age), being twice that of downstream facilities."

Emerman 2021 at 62.

43. Dr. Emerman's conclusion that upstream dams have a higher likelihood of failure than downstream dams has not been disputed by DNR.

44. Peer-reviewed literature published in 2021, Franks *et al.* (2021) cited in *Emerman 2021* at 37, graphed tailings dam stability issues by type of facility, as reproduced on the next page:

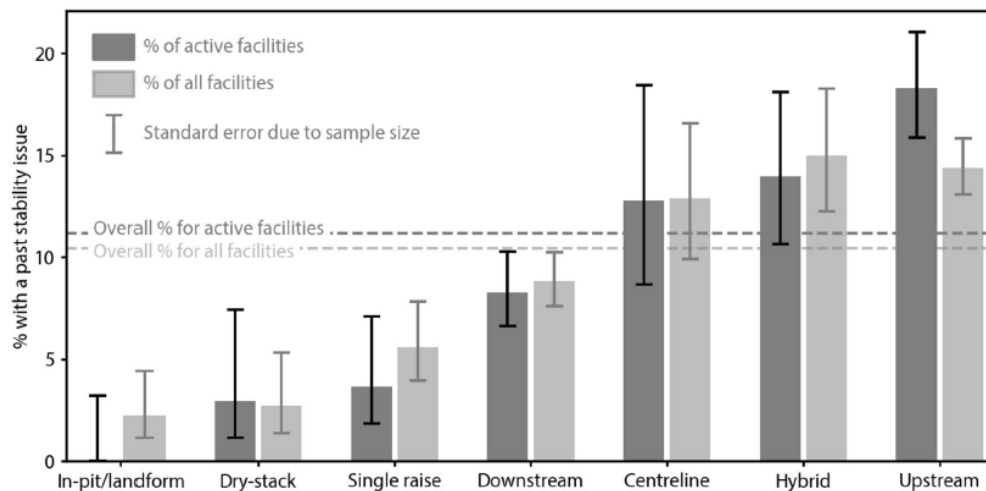


Figure 3. Stability of tailings facilities. Proportion of facilities with a stability issue by raise type. Error bar lengths are binomial confidence intervals for the subsample represented by each bar, showing ± 1 standard error (approximately 68%).

45. Dr. Emerman’s report explained that tailings dams “constructed using the upstream method are especially vulnerable to failure by either seismic liquefaction or static liquefaction because the dam is built on top of the uncompacted tailings.” *Emerman 2021* at 17. As a result, “even if the dam temporarily maintains its structural integrity while the underlying tailings liquefy, the dam could fail by either falling into or sliding over the liquefied tailings. *Id.*

46. Dr. Emerman explained that “modified centerline or offset-upstream dams” are “simply upstream dams, in which the dam is constructed out of coarse tailings on top of the uncompacted fine tailings that they are confining.” *Emerman 2021* at 61. This method of dam construction “retains the essential feature that makes the upstream method vulnerable to failure by seismic or static liquefaction (placement of dam construction material on top of uncompacted tailings).” *Emerman 2021* at 22.

47. DNR stated that for the Mile Post 7 offset upstream dams placed on tailings “there is a degree of compaction present in the tails lying under the dams that affords some degree of improved stability.” *DNR 2022 ROD* ¶219.

48. However, DNR has not disputed the premise that, other things being equal, “offset” upstream dams or “modified” centerline dams built on tailings have less stability than dams using the downstream construction method evaluated and required by the 1976 Final EIS.

49. It is undisputed that no EIS has studied the potential environmental impacts of Mile Post 7 tailings dam raises constructed on top of uncompacted, previously deposited tailings. *DNR 2022 ROD* ¶¶217, 219.

50. DNR has stated that the “type of impacts due to dam construction and operation are generally the same regardless of the method of construction.” *DNR 2022 ROD* ¶211.

51. However, no EIS has considered the potential scope, extent, and severity of dam breach or dam failure impacts of the Mile Post 7 tailings dam with methods of construction that deviate from the planned downstream method.

52. No EIS has evaluated the differential probability of dam breach or dam failure of the Mile Post 7 tailings dam due to the fact that Northshore has used upstream and offset upstream raises to increase dam height since the late 1990s, rather than the downstream raises prescribed and studied in 1975-1977 environmental review.

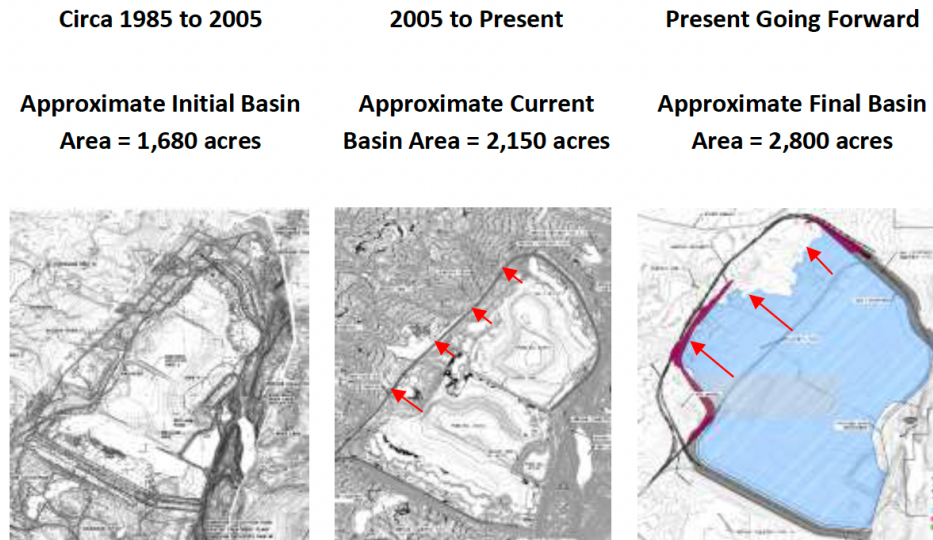
53. No EIS has evaluated the cumulative potential effects on the environment of the increased heights of the Mile Post 7 Proposed Project dam raises to 1,315 amsl, given the use of upstream and offset upstream tailings dam construction since the late 1990s.

54. Dr. Emerman concluded that the use of upstream dam raises at Mile Post 7 “must be reconsidered in light of the new knowledge regarding the unsafe nature of upstream dams” based on data made available since 2020. *Emerman 2021* at 3, 61-62. He recommended that “no action should be taken regarding the proposed tailings dam extension at the Mile Post 7 tailings storage facility without a new Environmental Impact Statement at a minimum.” *Id.* at 63.

B. Tailings Basin Extension, Railroad Relocation, and Coal Ash Landfill Not Assessed.

1. Enlargement of Tailings Basin by 650 Acres

55. It is undisputed that the Mile Post 7 proposed project would extend the tailings basin and add 650 acres to the current tailings basin area, as shown in the images below from the *DNR 2021 ER Memo* at 17.



56. It is also true, as DNR has emphasized, that the crude outline of the Mile Post 7 tailings site during 1975-1977 environmental review included most of the area into which the proposed project plans to expand. *See e.g., DNR 2022 ROD*, ¶74.

57. DNR admits that the 1975 Draft EIS proposed that, of the 7.6 square miles for tailings, 4.6 square miles would contain fine tailings and 3.0 would store coarse tailings. *DNR 2022 ROD* ¶74.

58. However, DNR has asserted that, since the 1976 Final EIS did not break down the areas assigned for fine tailings and coarse tailings, the record could be interpreted to allow ~2,950 acres allocated for a tailings basin containing 753,023,000 tons of wet slurry tailings. *DNR 2022 ROD*, ¶¶75, 83.

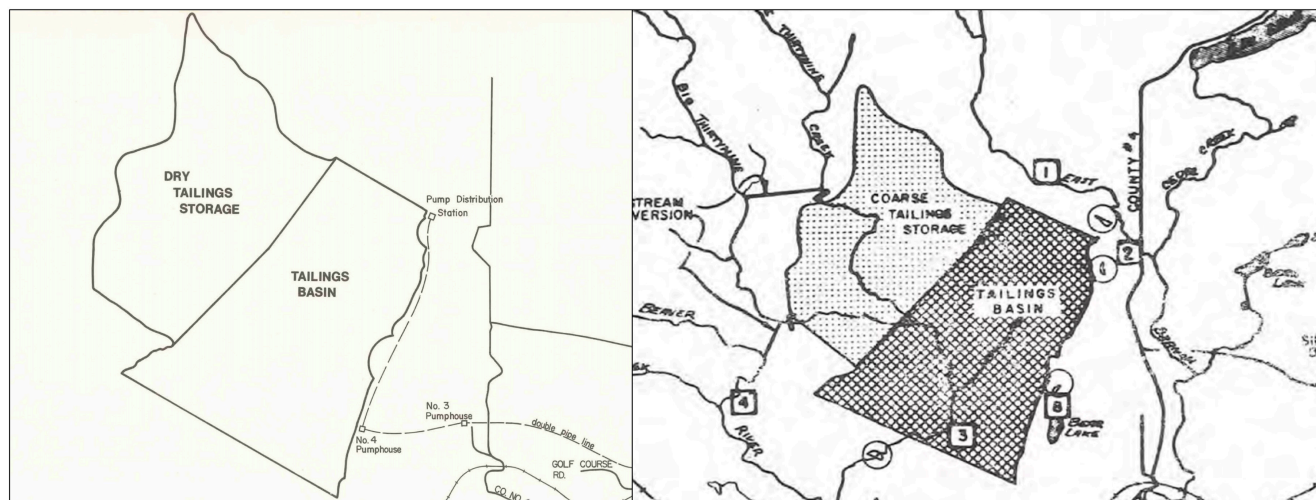
59. DNR's interpretation is not supported by federal and state environmental review documents. Plans for Mile Post 7 storage of dry coarse tailings are not equivalent to plans for containment of wet slurry fine tailings in a tailings basin.

60. The 1975 Draft EIS clearly stated that the "proposed Mile Post 7 plan includes a separate storage/disposal area" for coarse dry tailings which "is to be located to the northwest of the proposed fine tailings disposal basin." *1975 Draft EIS* at 45.

61. The 1977 USACE Final EIS explained that coarse tailings (also described to include dry cobbles and filtered tailings) would be transported by rail to the Mile Post 7 site, but "fine tailings" would be sent to clarifiers and dewatered to a slurry and then piped to the proposed tailings basin. *1977 USACE FEIS* at 11, ¶¶1.042-43.

62. The ultimate height of the Mile Post 7 tailings basin was designed not to contain the total tonnage of tailings, but rather to be sufficient to store all of the fine tailings and some coarse tailings, although coarse tailings to the maximum extent would be used for dam construction. *1977 USACE FEIS* at 13-14, ¶¶1.055, 1.061.

63. The state's 1975 Draft EIS and the federal 1977 USACE Final EIS both clearly distinguished between the tailings basin area and dry storage of coarse tailings as shown in the illustrations on the next page:



DNR, Mile Post 7 Tailings Basin, 1975 Draft EIS, Fig. 12, pdf 74

USACE, Mile Post 7 Tailings Basin, 1977 USACE FEIS at A-58, pdf 280

64. In addition, in response to critical comments from the U.S. Department of Interior, the USACE clearly stated that the coarse tailings storage area was completely “removed from the project design.” *1977 USACE FEIS*, at pdf 189 (unpaginated comments).

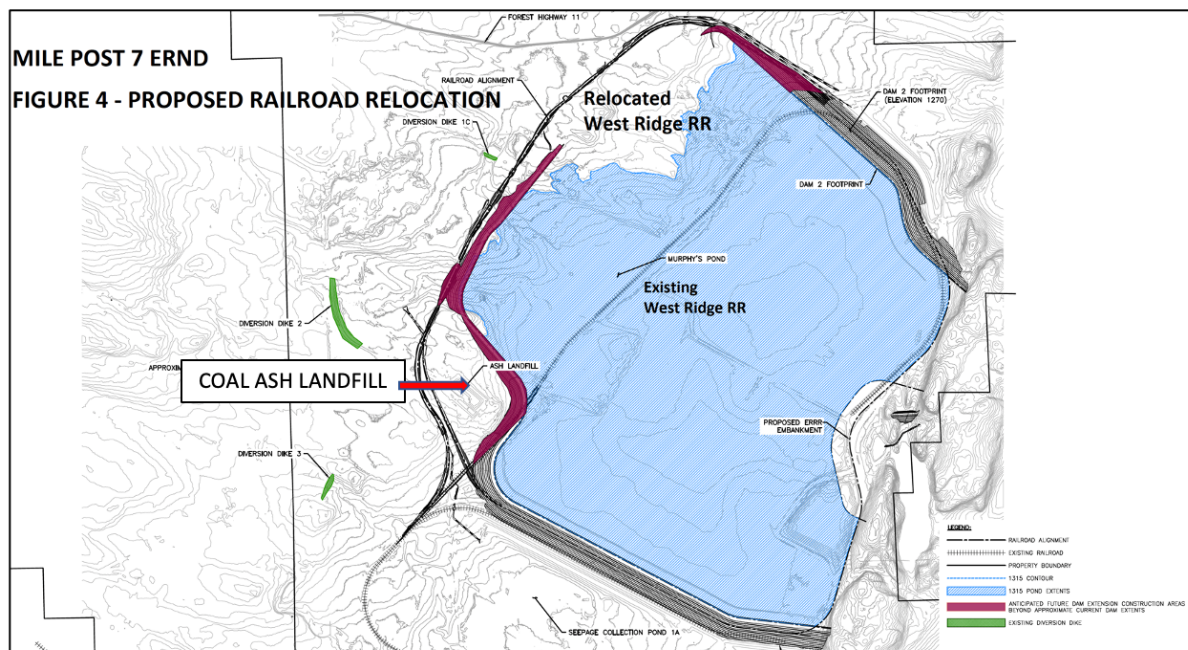
65. DNR has acknowledged, “The Proposer reports coarse tailings storage as envisioned in the 1975-76 Final EIS and 1977 USACE Final EIS never occurred at the tailings basin site and is not expected to occur.” *DNR 2022 ROD* ¶104.

66. The use of the site area west of the existing railroad line for dry storage of coarse tailings was explicitly evaluated in the 1975 Draft EIS and in the 1977 USACE Final EIS, but that proposed use was rejected by the USACE in response to comments by another federal agency and is neither proposed nor expected in the future. Findings 63-66.

67. Expansion of the wet slurry tailings basin 650 acres west of the existing railroad line was never evaluated in 1975-1976 state environmental review or 1977 federal environmental review. Findings 57-67.

2. Coal Ash Landfill, Dam Extension, and Railroad Relocation.

68. The Mile Post 7 site contains a 30-acre coal ash landfill with a total capacity of 566,000 cubic yards and is intended to be used for the disposal of coal ash and other approved wastes up to its design capacity. *EAW* at pdf 23-24. Construction of the coal landfill began in 2000, and its location is at the southwest corner of the proposed expansion of the Mile Post 7 tailings basin, *DNR 2021 ER Memo* at 53, Figure 4, shown on the next page with a larger label added.



69. Northshore anticipates that at some point when the tailings pond elevation is higher, the pond on the west side of the western extension of Dam 1 would become a seepage pond and that seepage would occur along the portion of the dam extension (red in above figure) “in the vicinity of the ash landfill.” *DNR 2021 ER Memo* at 54.⁶

70. DNR acknowledges that the “need for this disposal and eventual development of a landfill was neither anticipated nor analyzed in the 1975-76 Final EIS, nor in the 1977 USACE Final EIS. Neither mandatory nor discretionary Environmental Review has occurred for the facility.” *EAW* at pdf 24. No permit refers to this disposal facility. *See 1977 Master Permit; 1985 PTM.*

71. DNR acknowledges that an estimated 8,100 feet of new Dam 1 construction is needed for the Mile Post 7 proposed project in order to avoid the coal ash landfill. This new Dam 1 construction to avoid the coal ash landfill results in a net increase of 5,500 feet of dam construction beyond what was considered in the 1976 Final EIS. *DNR 2022 ROD*, ¶214.

72. DNR similarly acknowledges that Mile Post 7 Dam 2 is already 800 feet longer than the length studied in the state’s 1976 Final EIS and will require an additional 4,100 feet of new construction to accommodate the relocation of the railroad. This results in a net increase of 4,900 feet of new construction for Dam 2 beyond that estimated in the 1976 Final EIS. *DNR 2022 ROD*, ¶214.

⁶ Northshore modeling suggests that the future tailings pond, even at 1,355 feet amsl, would not elevate groundwater levels beneath the landfill. *DNR 2021 ER Memo* at 54-55. It has not been shown that this modeling was independently validated.

73. It is undisputed that for the Mile Post 7 proposed project, taken together, “the total length of new dam construction beyond that anticipated in the 1975-76 Final EIS is 10,400 feet.” *DNR 2022 ROD*, ¶214.

74. The EAW states that the 1977 USACE Final EIS describes a Construction Railroad General Alignment at the tailings, while the 1975 Draft EIS only refers generally to a “possible railroad spur” off the Reserve Railroad basin to convey coarse tailings for Mile Post 7 dam construction. *EAW* at pdf 22.

75. In fact, Exhibit A-31 of the 1977 USACE Final EIS depicts both the initial location of rail spurs and an “ultimate” railroad alignment similar to the existing West Ridge Railroad alignment at the Mile Post 7 tailings basin. *1977 USACE FEIS*, pdf 252, Ex. A-31.

76. No text or exhibit in the 1977 Final EIS describes or depicts any railroad alignment approximating the railroad alignment proposed in the Mile Post 7 expansion project.

77. State 1975-1976 environmental review did not even evaluate construction of the existing West Ridge Railroad. There are no EIS exhibits depicting any proposed railroad alignment and no text references to construction of any railroad alignment. Text mentioning hauling tailings by rail appear to refer to existing railroad lines. *See e.g., 1975 Draft EIS* at 17, 269, 289; *1976 FEIS* at 6.

78. In summary, no state or federal EIS has studied the environmental impacts of the relocation of the railroad proposed for the Mile Post 7 project. Findings ¶¶ 74-77.

79. DNR acknowledges that the 1977 Master Permit for the Mile Post 7 tailings basin “did not expressly identify the tailings storage facility as including a materials supply railroad.” *EAW* at pdf 22.

80. In fact, the 1977 Master Permit did not mention “railroads” as a feature “proposed by the Permittee and hereby permitted as to overall project concept,” but rather in the unrelated context of permitting stream crossings of roads and railroads. *1977 Master Permit* at 3, 28.

81. The 1985 permit to mine that included the Mile Post 7 tailings basin only referred to an existing railroad; it did not authorize railroad construction. *1985 PTM*.

82. No state environmental review document or permit evaluated or permitted the construction of the existing Mile Post 7 railroad alignment, let alone the new alignment proposed in the Mile Post 7 expansion project. Findings ¶¶ 74-81.

83. DNR acknowledges that the proposed new railroad would abut the full length of the Dam 2 extension and would also be constructed on a small section of the Dam 1 extension. *DNR 2022 ROD*, ¶47c.

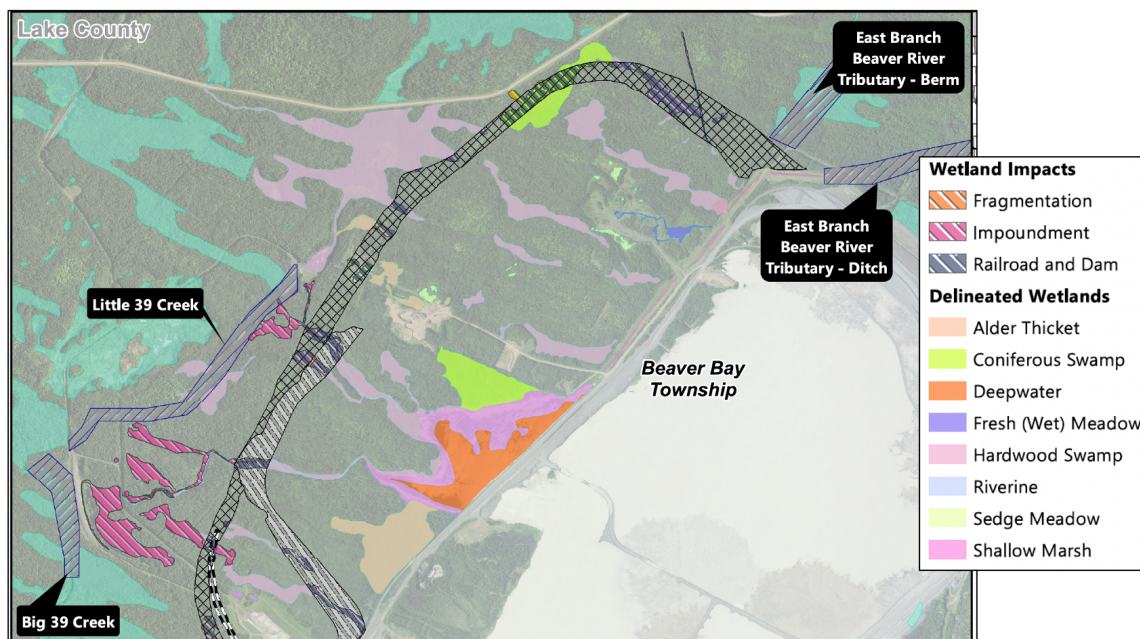
84. None of the 1975-1977 state or federal environmental review documents evaluate a proposal to locate a railroad embankment on a portion of the Mile Post 7 tailings basin dams.

85. No permit pertaining to the Mile Post 7 tailings basin authorizes construction of a railroad on any part of Mile Post 7 dams.

86. DNR acknowledges that the relocation of the West Ridge Railroad in the proposed Project would require an amendment to the Permit to Mine. *EAW* at pdf 22.

87. The *EAW* proposes mitigation measures for impacts to surface waters and wetlands resulting from the construction of 12,200 feet of extensions of Dams 1 and 2 and the relocation of the west railroad.

88. *EAW* Figure 7-2 shows the location of wetland impacts and of surface waters that would be affected by the Mile Post 7 tailings basin proposed project.



89. DNR concluded that, when compared to the existing landcover in the Beaver River-Frontal Lake Superior Watershed, the Mile Post 7 project impacts are considered negligible. *EAW* at 93. DNR also stated that even with development of the remaining 650 acres of “permitted tailings deposition capacity along with the proposed Project” cumulative impacts are considered negligible “as approximately 98-98% (sic.) of the total resource base remains unaffected.” *EAW* at pdf 93.

90. However, the 2023 *EAW* did not consider “wetland impacts” or impacts on other resources within the 650 acres that DNR viewed as already permitted for tailings storage. *See e.g. EAW* Figure 7-2, Finding ¶88.

91. The only environmental assessment of the effects on wetlands, surface waters, forests, or wildlife Mile Post 7 tailings basin extension to these 650 acres would have been made at least 46 years ago and under different circumstances in the 1975-1977 state and federal EIS processes.

C. Time Horizon and Selection of Alternatives

92. The 1975-1977 state and federal EIS documents described the Mile Post 7 tailings basin project that was assessed as a project with a 40-year life. *See e.g., 1975 Draft EIS* at 17, 98, 242, 289, 290, 293; *1976 FEIS*, ¶¶8-9; *1977 USACE FEIS* at 13, 25, 59, 72.

93. DNR has acknowledged that for the original EIS the “planned operational life of the tailings management facility was 40 years.” DNR 2022 ROD ¶25.

94. DNR has suggested that the only significance of the 40-year Mile Post 7 tailings basin operational life is to project the total quantity of tailings for which storage was planned. *See e.g., 2021 DNR ER Memo* at 56.

95. The time Northshore has taken to produce a volume of tailings is not the only issue salient in environmental review.

96. The 1977 USACE Final EIS—the only environmental review document actually supporting implementation of a tailings basin at Mile Post 7—considered the 40-year loss of biological productivity and the time needed for reclamation in its assessment. *1977 USACE FEIS* at 59.

97. The 1977 Final EIS also explicitly weighed the benefits of the proposed tailings basin and the duration of use of the disposal site:

[T]he proposed on-land tailings disposal site [has] a projected use period of 40 years . . . The above described long-term adverse effects on the environment would be imposed for the following benefits to society and the environment. There would be the cessation of the disposal of taconite tailings into Lake Superior.

1977 USACE FEIS at 145-146.

98. DNR’s 2015 Record of Decision denying the need to prepare an EIS for the Northshore progression of the Peter Mitchell Mine pit responded to comments (presumably in 2013) stating that, at the current rate of rise for the Mile Post 7 tailings basin it would take approximately 44 years to reach the ultimate permitted height of 1,312 feet amsl so tailings storage capacity would be “exhausted in 2057.” DNR 2015 Peter Mitchell Mine Progression Record of Decision, April 22, 2015, WL Ex. 6 (“*DNR 2015 Mine ROD*”) at 5.

99. Based on the DNR 2015 Peter Mitchell progression Record of Decision, *id.*, the proposed Mile Post 7 expansion project would not be needed until 2057, which is 80 years after the 1977 Final EIS was completed and 40 years after the 1977 EIS predicted the operational mine life of the tailings basin would be done.

100. DNR has stated that the construction of the Dam 1 and 2 extensions for the Mile Post 7 proposed expansion project would take place over the course of an estimated 40 years, *EAW* at pdf 8, thus completing construction in the mid 2060s.

101. DNR has not projected for how long after construction the Mile Post 7 proposed tailings basin expansion would extend the operational life of the tailings basin, other than to cite the operating life of the Peter Mitchell Mine. *EAW* at pdf 5. The 2015 Peter Mitchell progression Record of Decision stated that mine closure was “more that 60 years into the future.” *DNR 2015 Mine ROD* at 10. This timeline could extend the operational life of the tailings basin to 2075.

102. No EIS considered the potential environmental effects of the Mile Post 7 tailings basin if the operational life were extended beyond 40 years.

103. No EIS considered the balance of benefits and harm to society if the Mile Post 7 tailings basin’s operational life were extended beyond 40 years.

104. Based on DNR’s decision documents, if the proposed project is approved, the Mile Post 7 tailings basin would remain operational a century after the 1975-1977 state and federal environmental review process. Findings ¶¶98-101.

105. There has been progress in scientific knowledge and availability of information on environmental factors since the state and federal Final EIS documents were approved in 1976 and 1977. For example, any EIS today would consider the effects of climate change in evaluating both tailings dam risks and impacts on water resources and wildlife.

106. DNR stated that climate-related variables were addressed in the 1975 Draft EIS. *DNR 2022 ROD*, ¶242. However, the only climate data used in the 1975 Draft EIS was the “little climatic data” available on prior actual precipitation at specified area weather stations. *1975 Draft EIS* at 109-111.

107. The 1976 Final EIS used the same actual precipitation information to conclude that the “risk of overtopping the dams as a result of unusually heavy rainfall is greater at Mile Post 7 than at the alternative sites.” *1976 FEIS*, ¶86.

108. The 1977 USACE Final EIS provided a more thorough discussion of seepage and probable maximum precipitation, but even the USACE analysis relied on “precipitation records from 1906 to the present.” *1977 USACE FEIS* at 31. Unsurprisingly for the time, the Final EIS did not mention climate change or global warming.

109. No 1975-1977 EIS considered extreme drought and extreme precipitation, warming trends, hydrological changes to waters and wetlands, ecological stresses to plants, fish, and wildlife, or any other factors resulting from climate change known to modern scientists conducting environmental review.

110. Reliance on an EIS long past any reasonable expiration date is also significant in terms of evaluation of potential alternatives to the proposed Mile Post 7 project.

111. The 1975-1976 state environmental review process for Reserve Mining tailings storage evaluated tailings basin sites at alternative locations. The Final EIS explained that in-pit tailings disposal was not examined in detail due to evidence “sufficient to require its rejection at least for the present.” 1976 FEIS, ¶81.

112. However, the state’s 1976 Final EIS proposed future evaluation of in-pit disposal, as follows:

¶82. No detailed review of Reserve’s mining plan was made by the state to determine whether adjustments could be made to accommodate in pit disposal of tailings . . .

¶83. In view of the future need for tailings disposal sites, it would be desirable to ascertain the feasibility and desirability of using both depleted and operating pits for that purpose, and to evaluate the relative costs of covering potentially merchantable ores versus the use of additional land areas for tailings disposal.

113. Consideration of in-pit disposal alternatives for Peter Mitchell Mine tailings would be very different today. Factors such as the closure of other taconite operations, the ownership of depleted pits, and availability of information on tailings dam failure and seepage control would influence potential alternatives to extension of the Mile Post 7 tailings basin.

114. Cliffs shuttered the Northshore mine from May 2022 through April 2023 and recently informed the public that its owner “does not expect to run the ore operation at full capacity in 2023.” M. Hughlett, Northshore Mining on Iron Range open again after a year of idling, *Star Tribune*, April 25, 2023, WL Ex. 7.

115. Cliffs’ CEO, Lourenco Goncalves, explained, “Northshore has been totally idle since the spring of last year. We will continue to treat that facility as our swing operation, and at this time, we still do not expect to operate Northshore in full anytime this year.” J. Lovrien, Northshore Mining partially restarts, *Duluth News Tribune*, April 25, 2023, WL Ex. 8.

116. There is no evidence of urgency preventing a current and rigorous consideration of the *potential significant environmental effects* of the proposed Mile Post 7 tailings basin extension by 650 acres as well as features identified by DNR as the proposed project.

117. There is no evidence of urgency preventing a current and rigorous consideration of *alternatives* to the proposed Mile Post 7 tailings basin extension by 650 acres as well as features identified by DNR as the proposed project.

V. PERMITTING REQUIREMENTS

A. Dam Safety Permitting Requirements.

118. DNR has claimed that the 1977 Master Permit and operation plans provided by Northshore take the place of a dam safety permit for the Mile Post 7 tailings basin, stating:

- a) The 1977 Master Permit for the Mile Post 7 tailings basin, by its terms, “was to be updated every five years,” which “update was accomplished through Mile Post 7 Operation Plans” prepared by Northshore. *EAW* at pdf 19; *2022 DNR ROD*, ¶42.
- b) “Because the laws governing dam safety were not in place until 1979, the 1977 Master Permit regulates dam safety at Mile Post 7.” *EAW* at pdf 19; *see also 2022 DNR ROD*, ¶27.
- c) “DNR has extensive protocols around dam inspection, maintenance, design safety, operations” and that “are incorporated” into the 1977 Master Permit requirements at Mile Post 7. *DNR 2022 ROD*, ¶193.
- d) Any Mile Post 7 tailings basin environmental effects “are subject to mitigation by ongoing regulatory authority . . . under the DNR Permit to Mine and Master Permit, including oversight under the DNR Dam Safety Program.” *2022 DNR ROD* at 80.

119. None of these assertions by DNR accurately reflect the terms of the permits, their history, or applicable law.

120. The 1977 Master Permit for the Mile Post 7 tailings dam stated that DNR’s approvals of project features, terms, and conditions “shall be based on and comply with the provisions of Minnesota Statutes Chapters 105 and 116D.” *1977 Master Permit* at 4.

121. The 1977 Master Permit gave an expiration date for the permit and the mechanism by which the permit could be renewed:

This permit shall become effective on the date of issuance by the Commissioner. This permit shall expire August 2, 1982. The permit may be renewed by the Commissioner for five-year intervals upon written request by the Permittee made

not later than 180 days prior to the date of expiration. Renewal shall be pursuant to the provisions of Minnesota Statutes Chapter 105.

1977 Master Permit at 4-5.

122. The 1977 Master Permit specified that renewal “shall be pursuant to the provisions of Minnesota Statutes Chapter 105.” At the time, the provisions of Minn. Stat. § 105.37 to 105.64 (Repealed 1990, c. 391 art.10 s.4)⁷ applied to work in public waters and dam permits.

123. By March 24, 1980, DNR had enacted dam safety rules implementing Chapter 105, which were codified by the Revisor of Statutes in 1982.⁸ Archived DNR Rules, 6 MCAR 1.5030-1.5050, 1980, WL Ex. 9.

124. Among other provisions, DNR rules applicable by 1980 required the classification of existing dams according to their hazard level, 6 MCAR § 1.5032(B)(2) and prohibited the transfer of ownership of any Class I hazard dam without an application and a permit from the Commissioner based on the conditions and financial capabilities of the transferee. 6 MCAR § 1.5032(C), WL Ex. 9.

125. The 1977 Master Permit was issued to Reserve Mining, and a 1989 Stipulation states that Reserve Mining’s assets were acquired by Cyprus from the bankruptcy trustee. Findings 10-11.

126. DNR has provided no permit application, evaluation of Cyprus or formal permit documents reflecting transfer of ownership to Cyprus consistent with the rules then applicable to transfer of a Class I hazard dam. Findings 10-12.

127. Minnesota Statutes Chapter 105 was repealed in 1990 and replaced with Chapters 103A through 103G. Ch. 391, Laws of Minn. 1990.⁹

128. Chapter 103G statutes have governed the Mile Post 7 tailings dams since their adoption. A new Mile Post 7 application and permit is required under Chapter 103G:

- a) Only dams in existence on and before July 1, 1937 are exempt from compliance with Chapter 103G requirements. Minn. Stat. 103G.531.
- b) Dams are subject to “applicable law existing before or after the issuance of the permit,” Minn. Stat. § 103G.315, subd. 11(a)(3).

⁷ Minnesota Statutes 1976, Chapter 105, <https://www.revisor.mn.gov/statutes/1976/cite/105/pdf>.

⁸ Minnesota Code of Agency Rules of the Department of Natural Resources in effect on September 15, 1982, <https://www.revisor.mn.gov/rules/31/date/1982>.

⁹ Minnesota Session Laws 1990, ch. 391, <https://www.revisor.mn.gov/laws/1990/0/391/>.

- c) A permit application and permit are required for the transfer of ownership of a dam. Minn. Stat. §103G.245, subd. 1, subd.3.
- d) The commissioner may extend the time limit in a permit related to mining only for cause shown and upon application by the permittee. Minn. Stat. § 103G.315, subd. 14(c)

129. Cliffs through its wholly owned subsidiary (renamed Northshore Mining Company) purchased the assets of Cyprus in 1994. The only documentation DNR has provided of this transfer is an assignment document prepared eleven years later. Findings 10-12, 15-16.

130. Minnesota Rules Chapter 6115 have applied to the Mile Post 7 tailings dams since these rules were adopted in 2008. A new dam safety permit is required for dam enlargement, Minn. R. 6115.0410, subp. 2, and transfer of dam ownership requires a permit. Minn. R. 6115.0370.

131. Under Chapter 6115, a dam safety application and permit approval must contain provisions that comply with Minn. R. 6115.0410, including the following:

- a) The application must describe the type, size, height, and storage capacity of the dam extending through the life of the impoundment. *Id.*, subp. 2.
- b) The preliminary report for the permit must include all other elements related to the total dam project specifically including railroads. *Id.*, subp 3.
- c) The final design report must include a dam-break analysis, information on waste materials and disposal practices, stability analysis and design details for dams, impoundments and other features. *Id.*, subp. 6.
- d) The permit can only be approved on findings of dam stability “under all conditions . . .based on current, prudent engineering practice” and dam hazards and on “[c]ompliance with prudent, current environmental practice throughout its existence.” *Id.*, subp. 8(D), (F).

132. DNR has provided no record demonstrating that an application for a new dam permit, for extension or renewal of the 1977 Master Permit, or for transfer of ownership of the Mile Post 7 tailings dam has been made by any permittee since 1977.

133. In fact, the appendices to the Mile Post 7 proposed project EAW reflect that DNR has relied on various informal, incomplete, and in some cases retroactive documents to renew, modify, extend, or transfer the tailings dam 1977 Master Permit. Findings 10-16, 118.

134. DNR has provided no record demonstrating that the requirements of statutes and rules applicable to dam safety permits have been followed in connection with the Mile Post 7 dam.

135. No Mile Post 7 dam safety permit—including the 1977 Master Permit—classifies the hazard level of the Mile Post 7 tailings dam, describes all related features, demonstrates that the dam provides stability under all conditions, represents current prudent engineering practice for Class I dams, or reflects compliance with prudent current environmental practice throughout its projected existence.

136. In 2021, Petitioners for an EAW specifically requested that DNR require a dam break study and disclose its results to the public in environmental review and prior to approval of the proposed Mile Post 7 project. *WL Petition* at 15-16.

137. Dr. Emerman detailed some of the requirements for a dam breach study and emphasized that potential environmental effects of the Mile Post 7 project cannot be determined without a modern dam-breach study including analysis of at least the following: the area covered by the tailings flood; depths and velocities of the tailings flood; impacts on residents, roads, bridges, and infrastructure; impacts on short-term and long-term human health; impacts on fish and wildlife, including impacts on habitat; impacts on air and water quality; impacts on aquatic life and ecology on Lake Superior and other downstream waters; and a worst-case dam failure scenario. *Emerman 2021* at 60.

138. In response, DNR cited the NMC 2012 Emergency Action Plan (“EAP”) and stated that a new dam breach analysis is expected to be available in early 2022. *DNR 2022 ROD*, ¶¶223-224.

139. The 2012 EAP was provided among DNR’s attachments to its 2022 Record of Decision denying an EAW for the Mile Post 7 project. However, the methods and results of the dam break analysis were redacted almost in their entirety. *See* Mile Post 7 EAP, Dec. 26, 2012, WL Ex. 10 at pdf 9, 12-16, 46-81. This redacted EAP provides none of the information necessary to review potential significant environmental effects or to address public concerns.

B. Permit to Mine Requirements.

140. DNR has acknowledged that the railroad relocation in the proposed Project will require an amendment to the Mile Post 7 permit to mine. The status of this process is pending Northshore’s response to DNR’s comments related to tailings basin features. *EAW* at pdf 32.

141. Since the 1985 Permit to Mine was issued, the permit to mine record for the Mile Post 7 tailings basin has lacked regulatory formality, consistency, and transparency. Findings 11-16, 118.

142. Significant tailings basin features, including the coal ash landfill and the existing West Ridge Railroad are not authorized in either the 1977 Master Permit, the 1985 Permit to Mine, or any other permit to mine document. Findings 68-70, 81-86.

143. Whether or not the proposed Mile Post 7 project proceeds, the permit to mine should be formally renewed and amended to comply with applicable statutes and rules and identify all features of the tailings basin.

144. DNR is required to set a definite term for a permit to mine. Minn. Stat. § 93.481, subd. 3(a); *In re NorthMet Project Permit to Mine Application*, 959 N.W.2d 731, 758 (Minn. 2021).

145. The term for the permit to mine pertaining to the Mile Post 7 tailings basin is five years, incorporating the terms of the 1977 Master Permit by reference. *1977 Master Permit* at 4-5, 1985 PTM at

146. A permit to mine must include a plan for reclamation and restoration that complies with lawful requirements and is practical and workable under available technology. Minn. Stat. § 93.481, subd. 1, subd. 2.

147. DNR must require a bond, security or other financial assurance from the operator of a mine and annually review the extent of each operator's financial assurance. Minn. Stat. § 93.49.

148. Neither the 1977 Master Permit, the 1985 Permit to Mine, nor any amendment of these permits contain a reclamation plan or provision for financial assurance. *1977 Master Permit*, 1985 PTM at 2.

149. The only provision for financial assurance in this record was prepared for potential imminent mine closure in 1989 and required only \$19 million dollars for closure and reclamation. *1989 Stipulation* at 11-12.

150. When the DNR commissioner finds that a proposed amendment constitutes a "substantial change" to the permit to mine, public notice and comment is required, and a hearing shall be held if written objections are received. Minn. Stat. § 93.481, subd. 3(b); Minn. R. 6130.4800, subp. 1-2; Minn. R. 6130.5000, subp. 1.

151. As compared to the 1985 Permit to Mine, an amendment to provide a current and accurate description of all tailings basin features, a reclamation plan, and financial assurance would be a substantial change, whether or not the amendment also includes the Mile Post 7 tailings basin proposed project.

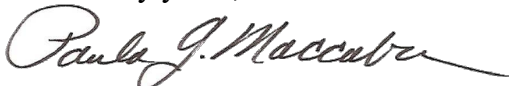
CONCLUSION

Based on the preceding information and the files and records in these proceedings, including the DNR's appendices and WaterLegacy's attached exhibits, WaterLegacy and NMW respectfully request the DNR to take the actions detailed on the first page of this comment.

Specifically, we ask DNR to prepare an EIS that evaluates all potential cumulative environmental impacts of the proposed new construction of a railroad, substantial extension and increase in height of tailings dams, and substantial expansion and change to acreage and location of the wet slurry tailing basin itself, including the impacts on all affected water resources and the impacts of dam breach or catastrophic failure on local communities, proximate streams, and on Lake Superior itself. In this EIS, we request that DNR take a hard look at the Mile Post 7 features that have never been subject to environmental review, the features that are inconsistent with the plans and recommendations that emerged from 1975-1977 federal and state environmental review, and the features that may have seemed appropriate or unavoidable half a century ago in order to stop Reserve Mining from dumping tailings into Lake Superior, but are no longer consistent with current, prudent engineering and environmental practice. Specifically, we would request that the DNR evaluate whether there is a feasible and prudent alternative to expansion of the Mile Post 7 tailings basin, including but not limited to in-pit tailings disposal and a conscientious and financially assured closure plan for the existing tailings basin.

Next, we request that DNR require that the Mile Post 7 tailings basin be subject to formal permitting in compliance with dam safety statutes and rules in Minnesota Statutes Chapter 103G and Minnesota Rules Chapter 6115 and with permit to mine statutes and rules in Minnesota Statutes Chapter 93 and Minnesota Rules 6115. For the past 40 years, Mile Post 7 has lacked a permit that complies with current statutes and rules. DNR has allowed its series of owners to operate outside regulatory guardrails, based on discretion behind closed doors, rather than a formal process that allows public review and analysis by external and independent experts. WaterLegacy and NMW request that the DNR advise Northshore that the company must apply for a dam safety permit for Mile Post 7 and for a renewed and substantially amended permit to mine in compliance with all applicable laws, including requirements for a permit term, a dam breach analysis, detailed specifications of all dam design and site features, a plan for closure and reclamation, and financial assurance that will protect the community, the environment, and taxpayers from tailings dam failure and tailings basin pollution during unplanned stoppage as well as during closure and post-closure. Thank you for your consideration.

Sincerely yours,



Paula G. Maccabee

WaterLegacy Advocacy Director and Counsel

Matt Norton

NMW Policy and Science Director

From:
To: MN_Review, Environmental (DNR)
Subject: Mile Post 7 Stream Review & Environmental Assessment
Date: Monday, May 8, 2023 12:13:07 PM

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Mr. Johnson,

Dear Mr. Johnson,

I write to express my concern about effects of the proposed expansion of the Northshore Mile Post 7 tailings basin on the water quality of Lake Superior and on human health and safety.

The only environmental impact statement (EIS) performed by the State of Minnesota for the Mile Post 7 tailings basin was done in 1976, almost half a century ago. That final EIS required a tailings dam at the Mile Post 7 location must use “downstream” construction methods for stability. Even with that less risky construction method, the EIS recommended against locating a tailings basin so close to Lake Superior.

In 1977, the courts forced Minnesota agencies to accept the Mile Post 7 site preferred by Reserve Mining. But no courts have prevented the Minnesota Department of Natural Resources (DNR) from conducting a rigorous EIS review since then. That is on you.

There has never been any environmental review of the “upstream” dam raises the DNR approved for the Mile Post 7 dams since 1997, of the coal ash waste facility or tailings basin expansion near that facility, or of the impacts of climate change on potential Mile Post 7 tailings dam failure.

REQUEST: To protect Lake Superior and community safety, I request that DNR perform an EIS for the Mile Post 7 tailings basin expansion focused on the cumulative effects of its structure, location, size, and height, and alternatives that would avoid and minimize risks of dam breach and contamination of water resources, as well as impacts to wetlands and streams.

In addition, even though the 1977 Mile Post 7 “Master Permit” said that the permit would expire in 1982 and could only be renewed for 5-year periods consistent with Minnesota statutes, this requirement has not been followed. The last permit to mine for the tailings basin was in 1985 and expired long ago. There has never been a dam safety permit for the tailings basin.

REQUEST: To protect Lake Superior and community safety, I request that DNR use an open public permitting process and require both a current permit to mine and a dam safety permit for the Mile Post 7 tailings basin that satisfies all Minnesota statutes and rules and provides a rigorous dam breach study and closure/reclamation plan with sufficient financial assurance to protect Minnesota taxpayers.

It is not too late to protect Lake Superior waters and community health and safety by requiring

an EIS and appropriate permits for the Mile Post 7 tailings basin expansion.

Sincerely,

Name

Street Address

City, State, Zip Code

Phone

MILE POST 7 WEST RIDGE RAILROAD RELOCATION, DAM EXTENSIONS, AND STREAM MITIGATION PROJECT EAW
RECORD OF DECISION - ATTACHMENT A
FINDING OF FACT 15 - FORM EMAIL NO. 2

From: on behalf of
To: MN_Review, Environmental (DNR)
Subject: Please order an Environmental Impact Statement for the Mile Post 7 Expansion proposal
Date: Thursday, May 11, 2023 9:04:19 PM

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Dear Bill Johnson,

The proposal by Northshore Mining to expand the Mile Post 7 tailings storage facility upstream of Lake Superior is of significant concern for Minnesotans. If the dams at this facility were to collapse, the environmental results could be devastating – to nearby residents, to aquatic habitats and wildlife, to Lake Superior, and to those who rely on it for drinking water. A 40-year-old study conducted according to 1970s environmental review standards is not sufficient to show the dams are safe. Nor are company studies that aren't disclosed to the public. DNR should fully study dam safety and the significant environmental effects that would occur if the dams failed, before it makes a decision regarding this proposal, especially considering that dam design has changed since the earlier review.

The lack of a dam safety permit is further evidence of the need for full environmental review of the current proposal. It is not enough for DNR to point to its own regulation of the facility to conclude no significant environmental effects will occur. We need the additional safeguards and public review that a dam safety would involve. Because the EAW does not have information about dam safety or the environmental effects of a collapse, DNR should order an Environmental Impact Statement for the Mile Post 7 Expansion proposal and require a dam safety permit with a full public notice and comment process.

Sincerely,
Name
Address
Email

MILE POST 7 WEST RIDGE RAILROAD RELOCATION, DAM EXTENSIONS, AND STREAM MITIGATION PROJECT EAW
RECORD OF DECISION - ATTACHMENT A
FINDING OF FACT 16 - FORM EMAIL NO.3

From: on behalf of
To: MN_Review, Environmental (DNR)
Subject: Mile Post 7 Stream EAW
Date: Tuesday, May 16, 2023 4:50:21 PM

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Dear DNR Environmental Review:

It is my view that the draft Environmental Assessment Worksheet is unacceptable. It leaves out significant environmental risks, including dam failure and catastrophic damage of the Beaver River valley. People have the right to know what the potential threats are. Instead of using only this EAW, the DNR should require a full Environmental Impact Statement and not rely on the outdated environmental review of the 1970s. In addition, the DNR should require Northshore Mining to apply for a dam safety permit and utilize the least-risky, most stable dam construction methods for the new dam walls.

Sincerely,

Name
Street Address
City, State, Zip Code

From:
To: MN_Review, Environmental (DNR)
Subject: Mile Post 7 Stream EAW Saturday,
Date: May 6, 2023 7:43:45 AM

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Dear DNR Env. Reviewers:
In order to ensure responsible stewardship of natural resources, and transparency in government, I would like to go on record to ask that the following be done in regards to mile post 7 stream EAW:

- (1) provide an up-to-date Environmental Impact Statement
- (2) require a dam safety permit
- (3) require an emergency plan for dam failures

We are neighbor’s to 10% of the nations freshwater and cannot afford to get this wrong.

Sincerely,
Name
Street Address
City, State, Zip Code
Phone

MILE POST 7 WEST RIDGE RAILROAD RELOCATION, DAM EXTENSIONS, AND STREAM MITIGATION PROJECT EAW
RECORD OF DECISION - ATTACHMENT A
FINDING OF FACT 18 - UNIQUE EMAIL

From: Christopher Smith
To: MN_Review, Environmental (DNR)
Subject: Smith — Mile Post 7 Stream EAW
Date: Tuesday, April 18, 2023 3:58:21 PM

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To Whom It May Concern,

The EAW relies on outdated information as it references the northern long-eared bat (NLEB) 4(d) rule which was revoked on March 31, 2023 when the NLEB was reclassified as endangered under the federal Endangered Species Act.

In addition, the project proponent and RGU should use the Minnesota-Wisconsin Determination Key in IPaC to assist in the effect determinations for the gray wolf, Canada lynx, and other federally listed species and critical habitats.

Chris

Christopher E. Smith, M.Sc., CWB®

FieldEcology.com
@FieldEcology