STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

RECORD OF DECISION

In the Matter of the Determination of Need for an Environmental Assessment Worksheet for the Mile Post 7 Tailings Basin Progression, Lake County, Minnesota

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

FINDINGS OF FACT

1. Respectively on November 10, 2021, and December 21, 2021, the Minnesota Environmental Quality Board (EQB) received two petitions requesting the preparation of an Environmental Assessment Worksheet (EAW) for the proposed Mile Post 7 Tailings Basin Progression,[1] located in Lake County, Minnesota. With this progression the Mile Post 7 Tailings Basin will have reached it intended design capacity.

2. The EQB determined that both petitions met the threshold requirements for an EAW petition as set forth in Minn. R. 4410.1100, subp. 1 and 2.

3. In accordance with the requirements of Minn. R. 4410.1100, subp. 5, the EQB designated the Minnesota Department of Natural Resources (DNR) as the Responsible Governmental Unit (RGU) to make the decision on the need for an EAW. See also, Minn. Stat. § 116D.04, subd, 2a(c) and Minn. R. 4410.0500, subp. 1. The two petitions were transmitted to the DNR for a determination of the need for an EAW.

4. The DNR received the first Petition (Petition 1) from the EQB on November 15, 2021.

5. Notice of the assignment of Petition 1 to the DNR was published in the EQB *Monitor* on November 16, 2021.

6. The DNR requested a 15-day extension on the decision period for Petition 1 from the EQB on December 1, 2021. The EQB granted the extension that same day.

[1]The Mile Post 7 Tailings Basin Facility (Facility) was constructed by Reserve Mining Co. in the late 1970s to receive and impound fine tailings, a byproduct of processing taconite ore extracted from the Peter Mitchell Mine. The 2,800 acre Facility was subject to environmental review between 1975 and 1976. Approximately 2,150 acres of the 2,800 acre Facility have been filled with tailings to date. The current "Project" as defined by the Petitioners in their Petitions, is North Shore Mining Company's proposal to undertake the activities necessary to allow it to use of the remaining 650 acres of the Facility for tailings from the Peter Mitchell Mine as envisioned in the 1975-76 environmental review. North Shore Mining Company is a subsidiary of Cleveland Cliffs Inc., which obtained the assets of Reserve Mining in Minnesota, including Mile Post 7, when Reserve Mining filed for Bankruptcy in 1986.

7. The DNR received the second Petition (Petition 2) from the EQB on December 21, 2021.

8. Notice of the assignment of Petition 2 to the DNR was published in the EQB *Monitor* on December 21, 2021.

9. The DNR requested a 15-day extension on the decision period for Petition 2 from the EQB on January 7, 2022. The EQB granted the extension that same day.

10. Pursuant to Minn. R. 4410.1100, subp. 2, a petition must contain the following information:

    a. a description of the proposed project;
    b. the proposer of the project;
    c. the name, address, and telephone number of the representative of the petitioners;
    d. a brief description of the potential environmental effects which may result from the project; and
    e. material evidence indicating that, because of the nature and location of the project, there may be potential for significant environmental effects.

11. The petitions submitted on the Mile Post 7 Tailings Basin Progression contained the required elements prescribed in Minn. R. 4410.1100, subp. 2.

12. The "project" identified in the petitions is the "Mile Post 7 Tailings Basin Progression" ("Proposed Project") proposed by Northshore Mining Company, a subsidiary of Cleveland-Cliffs, Inc., ("Proposer") to allow it to use the remaining capacity of the existing Mile Post 7 Tailings Basin Facility (Facility). DNR was notified by the Proposer of the need to amend the Permit to Mine ("Permit to Mine Amendment") for the "Proposed Project" on December 15, 2020. The "Proposed Project" includes extending Dams 1 and 2, relocating the materials supply rail line ("West Ridge Railroad"), continued placement and subsequent progression of fine tailings into the basin to its remaining permitted capacity, and development of a new clay material borrow site. No change in the capacity of the tailings basin as originally designed, the final dam height of any dams, nor alterations in the production or deposition rates of tailings, is proposed.

    Petition 1 at 3. Petition 2 at 6.

13. Upon receiving the request for amendment, DNR considered whether the proposed actions provided in ¶ 47a-d, and contained in the Permit to Mine Amendment, required environmental review. DNR completed its review of the actions proposed in the amendment in June 2021. See *DNR's Cleveland-Cliffs, Inc. and Northshore Mining Company Mile Post 7 Tailings Basin Progression and Clay Borrow Site Environmental Review Need Determination* from June 28, 2021 ("DNR June 2021 ER Need Determination"). DNR determined the project did not require preparation of a mandatory EAW or supplemental Environmental Impact Statement (EIS). *Id*.

14. DNR previously considered whether a similar proposal required environmental review in March 2017 (DNR March 2017 ER Need Determination). That project included the proposed extensions of Dams 1 and 2, relocation of the West Ridge Railroad, and progression of the Mile Post 7 tailings

basin to an elevation of 1,365 feet above mean sea level (amsl), the latter predicated on raising the final dam heights for Dams 1, 2, and 5 by an additional 50 feet from the previously permitted 1,315 foot amsl elevation. No new clay borrow site was proposed at that time. DNR determined the project did not require preparation of a mandatory EAW or a supplemental EIS. *See Northshore Mine Mile Post 7 Railroad Realignment & Tailings Basin Progression Assessment of EIS Supplement Requirements (March 16, 2017)*. The Proposer did not pursue a Permit to Mine Amendment nor implement this action.

Petition 1 at 3. Petition 2 at 6.

15. Both Petitions allege that this "Proposed Project" may have the potential for the following environmental effects:

    a. Harm to aquatic life, wildlife, and human health from tailings dam failure, including the Beaver River and Lake Superior, and downstream residents of Silver Bay and other North Shore communities.
    b. Direct impacts to 264 acres of wetlands and deepwater waters of the state, and indirect impacts to 45 acres of wetlands, due to inundation and watershed alteration.
    c. Direct impacts to 5,150 feet of Big Thirtynine Creek and 3,420 feet Little Thirtynine Creek from relocation of the West Ridge Railroad 4,000 feet to the northwest and expansion of the tailings basin.

    Petition 1 at 4-5. *Petition 2 at 13, 25*.

16. Minnesota Rules part 4410.1100, subp. 2E, requires that the petition contain material evidence indicating "that, because of the nature and location of the project, there may be potential for significant environmental effects." This material evidence must physically accompany the petition and may not be included as merely a reference or citation to where the material evidence can be found.

17. Petition 1 contained the following material evidence:

    a. DNR, Internal Memo re: Cleveland-Cliffs, Inc. and Northshore Mining Company Mile Post 7 Tailings Basin Progression and Clay Borrow Site Environmental Review Need Determination (June 28, 2021), with DNR References 1-33.

        (1) Barr Engineering. 2005. Wetland Replacement Plan 2005. Tailings Basin Railroad Relocation, Diversion Ditch Relocation, and Road Raise. May 2005. 212 pgs.
        (2) Barr Engineering. 2016. Northshore Landfill – Groundwater Elevation Effects from Planned Dam 1 Extension and Realignment/Pond Raise. Technical Memorandum. December 6, 2016. 10 pgs.
        (3) Barr Engineering. 2018. 2019-2023 Water Balance Report – Milepost 7 Tailings Basin, Silver Bay, Minnesota. December 2018. 45 pgs.
        (4) Barr Engineering. 2019. Joint Permit Application and Wetland Replacement Plan. West Ridge Railroad Relocation and Tailings Basin Progression. April 2019. 538 pgs.

(5) Barr Engineering. 2021. South Borrow Area Threatened and Endangered Species Review. March 2021. 4 pgs.
(6) Barr Engineering. 2021. Revised Tailings Basin Threatened and Endangered Species Review. April 2021. 51 pgs.
(7) Cleveland Cliffs, Inc./Northshore Mining Company. 2020. Permit to Mine Amendment Application – Mile Post 7 Basin Progression and Clay Borrow Sites. December 15, 2020. 4 pgs.
(8) Minnesota Department of Natural Resources. 1975. Reserve Mining Company's Proposed On Land Tailings Disposal Plan. Draft Environmental Impact Statement. October 1975. 320 pgs.
(9) Minnesota Department of Natural Resources. 1976. Reserve Mining Company's Proposed On Land Tailings Disposal Plan. Final Environmental Impact Statement. June 1976. 131 pgs.
(10) Minnesota Department of Natural Resources. 1977. Amended Permits for Reserve Mining Company's Mile Post 7 On-land Tailings Disposal System and Related Facilities. Master Permit. August 23, 1977. 41 pgs.
(11) Minnesota Department of Natural Resources. 1985. Permit to Mine. March 1, 2985. 3 pgs.
(12) Minnesota Department of Natural Resources. 2014. Environmental Assessment Worksheet. Northshore Mining Company Progression of the Ultimate Pit Limit. October 15, 2014. 45 pgs.
(13) Minnesota Department of Natural Resources. 2015. Record of Decision on the Need for an EIS. Northshore Mining Company Progression of the Ultimate Pit Limit. April 22, 2015. 56 pgs.
(14) Minnesota Department of Natural Resources. 2021. Inspection Report/Site Visit – MN01477; Milepost 7 – Northshore Mining Company. April 2021. 13 pgs.
(15) Minnesota Pollution Control Agency. 1984. Permitting – Effluent Limits Review. NPDES Historical Highlights. North Shore Mining Silver Bay. May 1984. 120 pgs.
(16) Minnesota Pollution Control Agency. 2005. Northshore Mining Company – Furnace 5 Reactivation Project. Record of Decision on the Need for an Environmental Impact Statement. November 2005. 23 pgs.
(17) Minnesota Pollution Control Agency. 2005. NPDES/SDS Permit MN0055301. December 2005. 82 pgs.
(18) Minnesota Pollution Control Agency. 2013. Air Emission Permit No. 07500003-010. May 2013. 350 pgs.
(19) Minnesota Pollution Control Agency. 2013. Air Emission Permit No. 07500003-101. June 2013. 162 pgs.
(20) Minnesota Pollution Control Agency. 2017. Northshore Mining Industrial Solid Waste Disposal Facility, SW-409. Permit Reissuance. May 2017. 18 pgs.

(21) Minnesota Pollution Control Agency. 2020. Draft 2015-02528-DWW 401 Northshore Mining Company. Lake County. Section 401 Water Quality Certification. December 2020. 7 pgs.
(22) Northshore Mining Company. 1995. Operations Plan for Milepost 7 Tailings Basin. November 1995. 37 pgs.
(23) Northshore Mining Company. 2003. Five Year Operations Plan; Years 2004-2008. Northshore Mining Company Milepost 7 Tailings Basin. December 2003. 38 pgs.
(24) Northshore Mining Company. 2010. Five Year Operations Plan; Years 2009-2013. Milepost 7 Tailings Basin. Revised September 2010. 46 pgs.
(25) Northshore Mining Company. 2013. Five Year Operation Plan; Years 2014-2018. Milepost 7 Tailings Basin. December 2013. 239 pgs.
(26) Northshore Mining Company. 2019. Five Year Operation Plan; Years 2019-2023. Milepost 7 Tailings Basin. January 2019. 283 pgs.
(27) Reserve Mining Company/Peter Mitchell Mine. 1981. Application for a Permit to Mine. February 1981. 74 pgs.
(28) Reserve Mining Company. 1984. Preliminary Engineering Report. Milepost 7 Tailings Disposal System Excess Water Discharge. March 1985. 53 pgs.
(29) United States Army Corps of Engineers. 2018. Section 404 – Clean Water Act Public Notice. MVP-2015-02528-MWW. October 2018. 16 pgs.
(30) United States Army Corps of Engineers. 2020. Section 404 – Clean Water Act Public Notice. MVP-2015-02528-RMM. July 2020. 74 pgs.
(31) United States Army Corps of Engineers. 2020. Section 404 – Clean Water Act Public Notice. MVP-2015-02528-RMM. August 2020. 2 pgs.
(32) United States Environmental Protection Agency. 2016. Correspondence. USEPA Preliminary Comments on Pre-Public Notice Draft NPDES Permit for Northshore Mining Company, Silver Bay, Minnesota, Permit No. MN0055301. Exhibit 16 – WaterLegacy Milepost 7 Comments (September 21, 2020). July 2016. 5 pgs.
(33) WaterLegacy. 2020. Clean Water Act Section 404 Permit MVP-2015-02528-RMM and Pending or Proposed Minnesota Permits and Permit Amendments for Northshore Milepost 7 Tailings Basin Expansion and Dam Enlargement. Correspondence with 30 Exhibits. September 21, 2020. 22 pgs.

b. WaterLegacy, Milepost 7 Tailings Basin Expansion and Clean Water Act Section 404 Permit Comment Letter (Sept. 21, 2020), with WaterLegacy Exhibits 1-30.

(1) USACE, Public Notice of Northshore Application for Section 404 – Clean Water Act Permit MVP- 2015-02528-RMM at 1(July 28, 2020).
(2) Georeference of Preferred Project Alternative map (found at autop. 5 of Public Notice).
(3) B. Johnson to R. Doneen, Memo, Northshore Mine Mile Post 7 Railroad Realignment & Tailings BasinProgression Assessment of EIS Supplement Requirements, Mar. 16, 2017 (DNR 2017 SEIS memo) with Northshore Summary (attached) (August 18, 2016), autop. 15-16.

(4) *In the Matter of the Application by Reserve Mining Co. for Permits for the Mile Post 7 On-land Tailings Disposal Plan at Silver Bay*, MN, Findings, Conclusions and Recommendations adopting final EIS, June 2, 1976.
(5) USACE, Final EIS Power Plant Discharge Structure, Delta Stabilization Dike, and On-Land TaconiteTailings Disposal, Reserve Mining Co., Silver Bay, MN Mar. 1977.
(6) *In the Matter of the Determination of the Need for an Environmental Impact Statement for the Northshore Mining Company Progression of the Ultimate Pit Limit in St. Louis County, Minnesota*; Findings of Fact, Conclusions, and Order, April 2015 at 5 of 56.
(7) Independent Expert Engineering Investigation and Review Panel, Report on Mount Polley Tailings Storage Facility Breach, Jan. 30, 2015 (Mount Polley Report) at 55, at 59.
(8) F.F. Carmo et al., Fundão tailings dam failures: the environment tragedy of the largest technological disaster of Brazilian mining in global context, *Perspectives in Ecology and Conservation* (2017) 145-151 at 146.
(9) J. Morrill, et al., *Safety First: Guidelines for Responsible Mine Tailings Management*, Earthworks andMiningWatch Canada, June 2020 at 12.
(10) Google Map of "Milepost 7 Tailings Ponds," 2020 imagery.
(11) V. Martin et al., Challenges with conducting tailings dam breach assessments, 85th Annual Meeting of International Commission on Large Dams, July 3-7, 2017.
(12) Milepost 7 Dam Database Record, last searched Aug. 21, 2020.
(13) MPCA, Impaired Waters List, 2020, at https://www.pca.state.mn.us/water/minnesotas-impaired-waters-list, pertinent excerpt.
(14) MPCA, NPDES/SDS Permit MN0055301 Northshore – Silver Bay, Modification Dec. 2, 2005.
(15) USEPA letter to MPCA, MPCA's Intent to Update NPDES Permits for Mining Operations, June 22, 2016.
(16) USEPA letter to MPCA, Preliminary Comments on the on the Pre-Public Notice Draft NPDES Permit forNorthshore Mining Company, Silver Bay Permit No. MN0055301, July 22, 2016.
(17) MPCA, Discharge Monitoring Reports, Spreadsheet provided by MPCA on Sept. 3, 2020.
(18) MPCA, Bulk DMR Data Export MN0055301, mercury, downloaded from https://www.pca.state.mn.us/data/wastewater-data-browser on Sept. 9, 2020.
(19) MPCA, Bulk DMR Data Export MN0055301, fluoride, downloaded from https://www.pca.state.mn.us/data/wastewater-data-browser on Sept. 9, 2020.
(20) MPCA, Bulk DMR Data Export MN0055301, specific conductance, downloaded from https://www.pca.state.mn.us/data/wastewater-data-browser on Sept. 9, 2020.
(21) B.L. Johnson & M.K. Johnson, An Evaluation of a Field-Based Aquatic Life Benchmark for SpecificConductance in Northeastern Minnesota, November 2015.
(22) S. M. Cormier, EPA, Review Memorandum for "An Evaluation of a Field-Based Aquatic Benchmark for Specific Conductance in Northeast Minnesota" (November 2015). Prepared by B. L. Johnson and M. K. Johnson for WaterLegacy, Feb. 4, 2016.
(23) USEPA, Field-Based Methods for Developing Aquatic Life Criteria for Specific Conductivity, PublicReview Draft, EPA-822-R-07-010 December 2016, Appendix D. Development of a Background-to- Criterion Regression Model, at D-4, D-23.

(24) MPCA, Lake Superior South Watershed Total Maximum Daily Load Report, Dec. 2018, at 2.
(25) Griffith et al, Using Extirpation to Evaluate Ionic Tolerance of Freshwater Fish, *EnvironmentalToxicology and Chemistry*, March 2018, at 10-11.
(26) MPCA, Northshore Mining Co. Industrial Solid Waste Disposal Facility, Solid Waste Facility Draft Permit SW-409, April 2017 at 4.
(27) USACE, Table 1, Water Resources Jurisdictional Impact Detail Section 404 Clean Water Act, June 26,2020.
(28) USACE, Extension in email response to MPCA email on Northshore Section 401 Clean Water Act decision timeline, Aug. 6, 2020.
(29) Ulrich, Considerations for tailings facility design and operation using filtered tailings, Australian Center for Geomechanics, 201-210 at 209 (2013).
(30) Rotta et al. The 2019 Brumadinho tailings dam collapse: Possible cause and impacts of the worst human and environmental disaster in Brazil, *Int. J. Appl. Earth Obs. Geoinformation* 90 (2020).

c. MPCA, Clean Water Act Section 401 Certification Northshore Mining Company Permit 2015-02528-RMM (June 29, 2021).

d. Steven H. Emerman, Evaluation of the Proposed Tailings Dam Extensions at the Cleveland-Cliffs Milepost 7 Tailings Storage Facility, Northeastern Minnesota (September 30, 2021).

Petition 1 at 3; attachments with filing.

18. Petition 2 contained the following material evidence:

a. DNR, Internal Memo re: Cleveland-Cliffs, Inc. and Northshore Mining Company Mile Post 7 Tailings Basin Progression and Clay Borrow Site Environmental Review Need Determination (June 28, 2021), with References.
b. Steven H. Emerman, Evaluation of the Proposed Tailings Dam Extensions at the Cleveland-Cliffs Milepost 7 Tailings Storage Facility, Northeastern Minnesota (September 30, 2021).
c. U.S. Army Corps of Engineers, Final Environmental Impact Statement for Power Plant Discharge Structure, Delta Stabilization Dike, and On-Land Taconite Tailings Disposal (March 1977).
d. DNR, Office Memorandum on Assessment of EIS Supplement Requirement (March 16, 2017).
e. MPCA, Section 401 Water Quality Certification (June 29, 2021).
f. Minnesota Environmental Partnership, Letter re: Northshore Mining Company application to discharge fill material (February 6, 2019).
g. U.S. Army Corps of Engineers, Public Notice on Section 404-Clean Water Act Permit (July 28, 2020).
h. MPCA, Public Notice of Intent to Issue 401 Water Quality Certification (October 19, 2020).
i. WaterLegacy, Letter re: Clean Water Act Section 404 Permit MVP-2015-02528-RMM (September 21, 2020).
j. Center for Biological Diversity, Letter re: MVP-2015-02528-RMM (September 24, 2020).
k. WaterLegacy, Letter re: Clean Water Act Section 401 Water Quality Certification Northshore Railroad Relocation, Tailings Basin Expansion & Dam Enlargement (November 10, 2020).

l. Center for Biological Diversity, Letter re: Draft 401 Water Quality Certification for Northshore Railroad Relocation and Tailings Basin Progression Project (November 5, 2020).
m. Luiz Henrique Silva Rotta, The 2019 Brumhaldo tailings dam collapse: Possible cause and impacts of the worst human and environmental disaster in Brazil, 90 International Journal of Applied Earth Observation and Geoinformation (August 2020).
n. David Chambers and Bretwood Higman, Long Term Risks of Tailings Dam Failure (October 2011).
o. Jan Morrill et al., Safety First: Guidelines for Responsible Tailings Management (June 2020).
p. D. Kossoff et al., Mine tailings dams: Characteristics, failure, environmental impacts, and remediation, 51 Applied Geochemistry 229 (2014).

Petition 2 attachments at filing.

19. The Project Proposer provided additional information in relation to the Petition 1 and Petition 2 (collectively "Petitions") on or about December 2, 2021, through January 31, 2022. This additional information included but was not limited to:

a. Email from Proposer's Representative re: Query 1-Status of Equipment, plus attachment (December 2, 2021).
b. Email from Proposer's Representative re: Query 2-Confirmation of Final Elevation of Tailings Elevation (December 2, 2021).
c. Email from Proposer's Representative re: Query 3-Factors Around Project Lifespan (December 3, 2021).
d. Email from Proposer's Representative re: Query 5-Information on Remnant Steams (December 3, 2021).
e. Email from Proposer's Representative re: Query 6-Figure Capturing Streams and Historic Diversions, plus attachment (December 3, 2021).
f. Email from Proposer's Representative re: Query 7-Length of Stream Diversions (December 3, 2021).
g. Email from Proposer's Representative re: Confirming Construction Methods for Dams 1 and 2 Extensions (December 7, 2021).
h. Email from Proposer's Representative re: Query 12-Reclaim Pond Stability Analysis (December 7, 2021).
i. Email from Proposer's Representative re: Query 11-Updated Stability Analyses for Dams 1 and 2 (December 10, 2021).
j. Email from Proposer's Representative re: Confirming Construction Methods for Dams 1 and 2 Extensions – Follow-up (December 10, 2021).
k. Email from Proposer's Representative re: Query 8-Estimate of Footprint for West Ridge Railroad (December 10, 2021).
l. Email from Proposer's Representative re: Query 9-Timing Around Proposed Project (December 10, 2021).
m. Email from the Proposer's Representative re: Query 13-Elevation of Existing West Ridge Railroad, plus attachment (December 10, 2021).
n. Email from Proposer's Representative re: Query 15-Communicating Project Change to USACE plus attachments (December 28, 2021).

o. Email from Proposer's Representative re: Query 17-Chronology of Dam Construction Methods for Dams 1 and 2 (January 6, 2022).
p. Email from Proposer's Representative re: Query 14-Reason for Change in Project (January 7, 2022).
q. Email from Proposer's Representative re: Query 18-Mining Projections RE: 2015 Pit Progression Project (January 7, 2022).
r. Email from Proposer's Representative re: Query 16-Proposed Project Footprint RE: Ash Landfill (January 10, 2022).
s. Email from Proposer's Representative re: Query 19-Project Area Addressed in 404 Permit and 401 Certification (January 12, 2022).
t. Email from Proposer's Representative re: 1997 Five Year Operation Plan plus attachment (January 18, 2022).
u. Email from Proposer's Representative re: Query 20-Year-round Tailings Basin Operation (January 26, 2022).
v. Email from Proposer's Representative re: Request for 2008 Water Balance Report plus attachment (January 27, 2022).
w. Email from Proposer's Representative re: Question about Dam Inspections (January 31, 2022).

20. In addition to the information provided by the Petitioners and the Project Proposer, the DNR collected and reviewed additional information known to DNR regarding the potential effects alleged by the petitions or otherwise identified by DNR. This additional information included but was not limited to:

a. Email from Proposer's Representative re: Northshore Mining's Tailings Basin Progression Permit to Mine Amendment Application, plus attachment (December 15, 2020).
b. Email from DNR Mineland Reclamation Program re: Permit to Mine-WCA Provisions for Mile Post 7-Permitting Documentation (January 14, 2021).
c. Email from Proposer's Representative re: Query 3-Support Information for Heritage Program Review, plus attachment (January 15, 2021).
d. Email from Proposer's Representative re: Query 4-Updated Legal Land Description Figure, plus attachment (January 21, 2021).
e. Email from Proposer's Representative re: Query 1-Request for Supplemental Dam Stability Analysis Documentation, plus attachments (x2) (January 21, 2021).
f. Email from Proposer's Representative re: Query 6-Current Future Dam Crest Elevations Freeboard, (January 21, 2021).
g. Email from Proposer's Representative re: Query 1-Request for Supplemental Dam Stability Analysis Documentation, plus attachment (January 21, 2021).
h. Email from Proposer's Representative re: Query 1-Request for Supplemental Dam Stability Analysis Documentation (January 21, 2021).
i. Email from MPCA Metallic Mining Sector-Water re: Background Information for MP7-Current NPDES/SDS Permit, plus attachment (January 21, 2021).
j. Email from Proposer's Representative re: Query 8-Impacted Wetland Acreages, plus attachment (February 2, 2021).
k. Email from DNR Dam Safety Unit re: Mile Post 7 PTM Amendment: Supplemental Information Need (February 2, 2021).

l. Email from Proposer's Representative re: Query 10-Additional Information around Geotechnical Stability, plus attachment (February 8, 2021).
m. Email from DNR Dam Safety Unit re: Query 10-Additionial Information around Geotechnical Stability, plus attachment (February 8, 2021).
n. Email from DNR Mineland Reclamation Unit re: Mile Post 7 Questions about the Permit to Mine and 5 Year Operations Plan (February 8, 2021).
o. Email from Proposer's Representative re: Query 10-Additional Information around Geotechnical Stability, plus attachments (x2) (February 12, 2021).
p. Email from Proposer's Representative re: Query 10-Additional Information around Geotechnical Stability (February 12, 2021).
q. Email to DNR Dam Safety Unit re: NSM: Query 10-Additional Information around Geotechnical Stability, plus attachments (x2) (February 12, 2021).
r. Email From DNR Mine Permitting and Coordination Section re: Mile Post 7 Permit to Mine Amendment-Supplemental Information Need (February 12, 2021).
s. Email from DNR Mine Permitting and Coordination Section re: Mile Post 7 Permit to Mine Amendment-Supplemental Information Need, plus attachment (February 12, 2021).
t. Email from MPCA Metallic Mining Sector-Water re: Mile Post 7 PTM Amendment-Supplemental Information Need (February 16, 2021).
u. Email from Proposer's Representative re: Query 11-Activities Around the Existing RR Embankment (February 26, 2021).
v. Email from Proposer's Representative re: Query 14-Clarification for Area Depicted in Figure 1 (February 27, 2021).
w. Email from Proposer's Representative re: Easy Question (February 28, 2021).
x. Email from Proposer's Representative re: Query 15-Site Preparation Activities (February 28, 2021).
y. Email from Proposer's Representative re: Query 20-Height of Proposed New Construction for Dam 1, plus attachment (March 1, 2021).
z. Email from Proposer's Representative re: Quick Question (March 2, 2021).
aa. Email from Proposer's Representative re: Additional Follow-up Query 13-Estimated Total Area within the 1315 feet Elevation (March 2, 2021).
bb. Email from Proposer's Representative re: Query 16-Acreage of Wetlands Outside the EIS Boundary, plus attachment (March 2, 2021).
cc. Email from Proposer's Representative re: Query 17-Treatment of Previously Abandoned RR Lines, plus attachment (March 2, 2021).
dd. Email from Proposer's Representative re: Query 12-Estimated Total Area of Wetland Impacts to Date (March 5, 2021).
ee. Email from Proposer's Representative re: Query 21-Water Treatment Plant (March 8, 2021).
ff. Email from Proposer's Representative re: Query 19-New Dam Construction Methods (March 9, 2021).
gg. Email from Proposer's Representative re: Query 21-Seepage Collection System (March 9, 2021).
hh. Email from Proposer's Representative re: Query 22-Water Treatment Plant Document Request, plus attachment (March 9, 2021).
ii. Email from Proposer's Representative re: Query 18-Anticipated Future Dam Construction with Figure, plus attachment (March 12, 2021).

jj. Email from Proposer's Representative re: Query 24-Coarse Tailings Deposition (March 12, 2021).
kk. Email from Proposer's Representative re: Query 25-Plant Aggregate vs. Coarse Tailings (March 12, 2021).
ll. Email from DNR Dam Safety Unit re: MP7: Follow-up on Future Dam Construction Methods for Question 1, plus attachment (March 23, 2021).
mm. Email from MPCA Metallic Mining Sector-Water re: Technical Review for ER Need Determination-MPCA-Water (March 24, 2021).
nn. Email from Proposer's Representative re: Query 3.1-Support Information for Heritage Program Review, plus attachment (March 31, 2021).
oo. Email from DNR Mineland Reclamation Program re: Northshore Permit to Mine Basin Progress Clay Borrow Sites-Tech Review for ER Need Determination-Reclamation, plus document (March 31, 2021).
pp. Email from DNR Mineland Reclamation Program re: Northshore Permit to Mine Basin Progress Clay Borrow Sites-Tech Review for ER Need Determination-Wetlands, plus document (March 31, 2021).
qq. Email from Proposer's Representative re: Query 21.1-Clarification of Seepage Collection System (April 1, 2021).
rr. Email from DNR Mineland Reclamation Program re: Northshore Mine Tailings Characterization (April 5, 2021).
ss. Email from MPCA Metallic Mining Sector-Water re: Groundwater Evaluation around Ash Landfill, plus attachments (x2) (April 5, 2021).
tt. Email from MPCA Metallic Mining Sector-Air re: Background Information for MP7-Current Air Permit-Follow-up Request, plus attachment (April 7, 2021).
uu. Email from Proposer's Representative re: Query 26-Railroad Construction on East Side of Basin (April 12, 2021).
vv. Email from Proposer's Representative re: Quick Question, plus attachment (April 12, 2021).
ww. Email from MPCA Metallic Mining Sector-Water re: Updated MP7 Resumption of the Permit Reissuance Process for MPCA MN0055301 NPDES/SDS Permit (April 12, 2021).
xx. Email from MPCA Metallic Mining Sector-Water re: Mile Post 7 Section 401 Draft Certification, plus attachment (April 13, 2021).
yy. Email from Proposer's Representative re: Query 3-Additional Follow-up and Clarification, plus attachments (x2) (April 15, 2021).
zz. Email from Proposer's Representative re: Query 3-Additional Follow-up and Clarification, plus attachments (x3) (April 15, 2021).
aaa. Email from DNR Dam Safety Unit re: MP7 Inspection Report, plus attachment (April 19, 2021).
bbb. Email from MPCA Metallic Mining Sector-Air re: Technical Review for ER Need Determination-MPCA-Air (April 23, 2021).
ccc. Email from Proposer's Representative re: Length of Dam Extensions, plus attachment (April 27, 2021).
ddd. Email from Proposer's Representative re: Question on Length of Current Dams (May 3, 2021).
eee. Email from DNR Dam Safety Unit re: 5YOP Dam Safety Factors of Safety (May 4, 2021).
fff. Email from DNR Natural Heritage Program re: Mile Post 7 Clay Borrow Sites-NHIS Program Review (May 5, 2021).

ggg. Email from MPCA Metallic Mining Sector-Water re: Response to Water Quality Standards Question (May 10, 2021).
hhh. Email from MPCA Metallic Mining Sector-Water re: Administrative Penalty Order Content (May 11, 2021).
iii. Email from MPCA Metallic Mining Sector-Water re: Questions about Total Dissolved Solids Monitoring in Groundwater Seepage at Pond 1B (May 14, 2021).
jjj. Email from Proposer's Representative re: Update-Acreage of Tailings Footprint over Time and Volume, plus attachments (x2) (May 19, 2021).
kkk. Email from DNR Mine Land Reclamation Program re: Request for Northshore Basin Wetland Replacement Plans (June 3, 2021).
lll. Email from MPCA Metallic Mining Sector-Water re: Addressing some Water Quality Parameters around Monitoring Mile Post 7 (June 7, 2021).
mmm. Email from DNR Mineland Reclamation Program re: Mile Post 7 Estimated New Acreage, plus attachment (June 14, 2021).
nnn. Email to Proposer's Representative re: DNR ER Need Determination for Mile Post 7 Tailings Facility Tailings Basin Progression and Clay Borrow Site, plus attachments (x2) (June 28, 2021).
ooo. Email from EQB Environmental Review Program Coordinator re: Citizen Petition-Proposed Northshore Mining Company Milepost 7 Expansion Project, plus attachment (November 15, 2021).
ppp. Email to EQB Environmental Review Program Coordinator re: Citizen Petition-Proposed Northshore Mining Company Milepost 7 Expansion Project (November 15, 2021).
qqq. Email to Proposer's Representative re: Receipt of Citizen Petition for an EAW on Mile Post 7 Progression Project-Proposer Notification by RGU, plus attachment (November 19, 2021).
rrr. Email to EQB Environmental Review Program Coordinator re: DNR Request for 15-Day Extension of Citizen Petition Record of Decision Period-Northshore Mining Mile Post 7, plus attachment (December 1, 2021).
sss. Email from EQB Environmental Review Program Coordinator re: DNR Request for 15-Day Extension of Citizen Petition Record of Decision Period-Northshore Mining Mile Post 7, plus attachment (December 1, 2021).
ttt. Email to DNR Dam Safety Unit re: Follow-up with Northshore Mining Petition on Status of Equipment, plus attachment (December 2, 2021).
uuu. Email from DNR Dam Safety Unit re: Follow-up with Northshore Mining Petition on Status of Equipment (December 2, 2021).
vvv. Email from DNR Mining Permitting and Coordination Section re: Request for Trout Stream Designation Status Mile Post 7 (December 3, 2021).
www. Email to Proposer's Representative re: Query 4-Information Regarding De-Listing of Trout Waters – Resolved (December 3, 2021).
xxx. Email from DNR Dam Safety Unit re: DSP Citizen's Petition Review, plus document (December 5, 2021).
yyy. Email from DNR LAM Reclamation Program re: MP7 – Figure of Currently Permitted Mile Post 7 Mining Area plus attachments (January 5, 2022).
zzz. Email from DNR Dam Safety Unit re: Follow-up on DSP Comment (January 20, 2022).
aaaa. Email from DNR Dam Safety Unit re: Additional Follow-up on DSP Comment (January 20, 2022).
bbbb. Email from DNR Dam Safety Unit re: Definitions (January 21, 2022).

cccc. Email from DNR Dam Safety Unit re: Follow-up on Compaction at Mile Post 7 (January 24, 2022).

21. In addition to the information provided by the Petitioners and the Project Proposer, the DNR collected and reviewed additional documentation known to DNR regarding the potential effects alleged by the petitions or otherwise identified by DNR. This additional documentation included but was not limited to:

    a. Document: United States Army Corps of Engineers. 1977. Final Environmental Impact Statement. Power Plant Discharge Structure, Delta Stabilization Dike, and On-Land Taconite Tailings Disposal, Reserve Mining Company, Silver Bay, MN (March 1977).
    b. Document: United States Army Corps of Engineers Final EIS. 1977. Exhibit 31 – Construction Railway General Alignment (August 24, 1976).
    c. Document: Tailings Basin Closure Consensus Plan for Reserve Mining Company, Silver Bay, Minnesota (August 16, 1988).
    d. Document: Milepost 7 Tailings Basin Five Year Operations Plan. 1997. Northshore Mining Company (March 21, 1997).
    e. Document: Milepost 7 Tailings Basin Five Year Operations Plan Approval and MilePost 7 Master Permit Renewal. Minnesota DNR (August 12, 1997).
    f. Document: 2005 Wetland Replacement Plan Approval (August 31, 2005).
    g. Document: USACE Correspondence Clarifying Permit 2005-2628-TWP (June 6, 2006).
    h. Document: Water Balance Report Years 2009-2013 – Milepost 7 Tailings Basin (November 2008).
    i. Document: Stability Evaluation of Dams 1, 2, and 5. 2009. Milepost 7 Tailings Basin, Silver Bay, Minnesota (July 2009).
    j. Document: Emergency Action Plan; Milepost 7 Tailings Basin; Dams 1, 2, and 5; Beaver River and East Branch Beaver River; Beaver Bay, Minnesota (December 26, 2012). With redactions.
    k. Document: Reclaim Dam Slope Stability Analysis (October 9, 2015).
    l. Document: West Ridge Railroad Relocation; Final Wetland Delineation Report (October 2015).
    m. Document: Figure 1 – Northshore Mining and Construction Extents West Ridge Railroad Realignment (August 15, 2016).
    n. Document: 2019 Wetland Replacement Plan Approval (May 9, 2019).
    o. Document: 2015-02528-MMW 401 Application from Northshore Mining Company, Lake County, Minnesota; Section 401 Water Quality Certification Denial Without Prejudice (August 2, 2019).
    p. Document: Report of the Expert Panel on the Technical Causes of the Failure of Feijao Dam I; Expert Panel: Robertson, Peter K. (Chair); de Melo, Lucas; Williams, David J.; and Wilson, G. Ward (December 12, 2019).
    q. Document: Northshore Mining Company – Stream Mitigation Plan re: Tailings Basin Progression Project (June 30, 2020).
    r. Document: Attachment A – MPCA Antidegradation Assessment for Section 401- Northshore Mining Company (June 30, 2020).

s. Document: MVP-2015-02528-MMW-West Ridge Railroad Relocation and Tailings Basin Progression Elevation Adjustment. Cleveland-Cliffs Inc. – Northshore Mining Company (March 12, 2021).
t. Document: Northshore Mine Mile Post 7 Tailings Basin Project. USACE Department of the Army Environmental Assessment (EA) and Statement of Findings (September 16, 2021).
u. Document: Northshore Status of Equipment Update (December 2, 2021).
v. Document: Cliffs-Northshore Mile Post 7 – Permit to Mine – Mining Area Boundary Figure (January 2022).
w. Document: Tailings Dam Definitions Derived from Internet Research – Dam Safety Program (January 21, 2022).

22. Minnesota Statute § 116D.04, subd. 2a(c), requires the RGU to prepare an EAW where a petition signed by not less than 100 individuals who reside or own property in the state "demonstrates that, because of the nature or location of a proposed action, there may be potential for significant environmental effects." *See also,* Minn. R. 4410.1100, subp. 6,. and *Carl Bolander & Sons Co. v. Minneapolis,* 448 N.W. 2d N.W. 2d 804, 810 (Minn. Ct. App. 1992).

23. Both Minnesota Statutes and Minnesota Rules describe what an RGU must consider in response to a petition when it determines whether, because of the nature and location of the project, there may be a potential for significant environmental effect and thus require an EAW. Minn. Stat. § 116D.04, subd. 2a(c). The factors that must be considered are the nature and location of the project and the criteria for potentially significant environmental effects described in Minn. R. 4410.1700, subp. 7. *Id*. And Minn. R 4410.1100, subp. 6.

24. The RGU shall deny the petition if the evidence presented fails to demonstrate that the project may have the potential for significant environmental effects. Minn. R. 4410.1100, subp. 6. In considering the evidence, the RGU must take into account the following factors:

    A. type, extent, and reversibility of environmental effects;
    B. cumulative potential effects. The RGU shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project;
    C. the extent to which environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project; and
    D. the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

    Minn. R. 4410.1700, subp. 7.

25. The Mile Post 7 tailings facility is located approximately five miles west of Silver Bay, MN. Originally constructed by Reserve Mining Company ("Reserve Mining") in the late 1970s, the Mile Post 7 tailings basin receives and impounds fine tailings that are a byproduct of processing taconite ore extracted from the Peter Mitchell Mine. Ore from the Peter Mitchell Mine is sent by rail to a processing facility located in Silver Bay, MN. The waste from the processing includes both coarse and fine tailings, the latter having a particle size similar to talc powder. The fine tailings are transported as a water slurry by pipeline to the tailings basin where they are pumped to varying locations within the basin's interior. As designed, the tailings area was to cover 2,800 acres of land. The tailings area currently covers ~2,150 acres of the anticipated 2,800 acres. The planned operational life of the tailings management facility was 40 years.

26. Tailings deposited at the Mile Post 7 site are physically contained by a combination of site topography and three existing dams designated as Dams 1, 2, and 5. Tailings dams are compacted fill embankments continuously constructed (raised and expanded) over the life of the facility, typically beginning with construction of a starter dam with the main dam wall subsequently raised over time. The current elevations of Dams 1, 2, and 5 are 1,242 feet amsl, 1,244 feet amsl, and 1,255 feet amsl respectively. The maximum permitted elevation for all three dams is 1,315 feet amsl, and 1,305 feet amsl for the highest elevation of the tailings deposition area itself (to provide for ten feet of freeboard from the tailings to the top of the dams). Dam construction began in the late 1970s and has been underway since. Extensions of some sort of these dams have always been anticipated and have occurred previously to permit the use of all the tailings basin capacity. Since 2003, Dams 1 and 2 have been constructed using the offset upstream or modified centerline method.

27. Tailings dams in Minnesota are subject to DNR's Dam Safety Program pursuant to Minn. Stat. § 103G.501 through 103G.561. Also see Minn. R. 6115.0300 through 6115.0520. Because the laws governing dam safety were not in place until 1979, the Master Permit regulates dam safety at Mile Post 7. In addition, all three dams at the Mile Post 7 tailings basin are classified as Class 1 or High Hazard Dams. A Class 1 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. This classification would not change if the "Proposed Project" were implemented. Because the dams at Mile Post 7 are Class 1 dams, they are monitored daily by the basin engineer and other employees working on the dam. A qualified engineering firm is required to perform a dam safety inspection in the spring of each year. Additionally, the qualified engineering firm is required to undertake a thorough detailed inspection conducted over several days in October of each year. The purpose of the annual inspection is to review the performance and condition of the dams. The information is compiled in an Annual Report. This inspection includes a thorough analysis of the monitoring data system.

28. The Factors of Safety[2] consistently assessed at the Mile Post 7 dams include various scenarios for Effective Stress Stability Analysis (ESSA) and Undrained Strength Stability Analysis (USSA);

[2]Factor of Safety is a calculated measure of: 1) the actual load bearing capacity of a structure or component, or 2) the required margin of safety for structure or component according to code, law, or design requirements. Minimum Factor

these scenarios include various iterations around block failure, fine tailings yield strength, and liquefied strength. DNR accepts the following values for minimum Factors of Safety: ESSA = 1.50; USSA = 1.30; and liquefied = 1.10. Tables 3, 4, and 5 of the 2019-2023 Five Year Operation Plan provide the Computed Factors of Safety for Various Scenarios for Dams 1, 2, and 5 respectively. The current Factors of Safety for the Mile Post 7 dams exceed the DNR minimum values. *See 2019-2023 Five Year Operation Plan at 19-26*.

29. Coarse tails to construct Dams 1, 2, and 5 are transported to the Mile Post 7 tailings basin by means of a materials supply railroad that is a spur off the main rail line connecting the Peter Mitchell Mine to the processing facilities at Silver Bay. The spur branches at the approach to Dam 1. The right branch is the main construction material supply route for Dam 1. The left branch is located along the western edge of the tailings basin that has been filled to date; it supplies construction materials for Dams 2 and 5 and is called the "West Ridge Railroad." The location of the West Ridge Railroad has shifted over time as the tailings basin has been filled. The West Ridge Railroad is not an impoundment structure, and its placement was never intended to serve that function. The West Ridge Railroad was moved from its original placement to its current location in 2005. It sits at an elevation of 1,240 feet amsl.

30. The Facility includes other infrastructure, including an ash landfill, a water treatment plant, and various water management features to control runoff and capture seepage emanating from the base of the dams.

31. In June 1973, the US Environmental Protection Agency (USEPA) released discovery of asbestiform fibers in the drinking water of the City of Duluth, MN. The source of the fibers was thought to be tailings discharges by Reserve Mining into Lake Superior. *See 1975 Draft EIS at 7*.

32. In April 1974, the U.S. Federal District Court for Minnesota ordered Reserve Mining to halt discharges of fine tailings into Lake Superior. *United States v. Reserve Mining Co.,* 380 F. Supp. 11 (D. Minn. 1974) *aff'rmd and modified by Reserve Mining Co. v. EPA,* 514 F.2d 492 (8th Cir. 1975). Thereafter, Reserve Mining was required to locate a land disposal site for tailings originating from ore mined at the Peter Mitchell Mine and processed at Silver Bay, MN.

33. Reserve Mining identified the Mile Post 7 location as a potential tailings disposal site in the early 1970s. Reserve Mining initiated its requests for permits for constructing and operating a tailings facility at Mile Post 7 on November 18, 1974. Up until this point tails derived from ore mined at the Peter Mitchell Mine were discharged directly into Lake Superior.[3] *Id*.

34. The Minnesota Environmental Quality Council (MEQC) determined that an EIS should be prepared for Reserve Mining's Mile Post 7 plan in December 1974. On May 19, 1975, the MEQC

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of Safety is the minimum required/acceptable ratio of the strength to the applied load of a dam or other similar load-bearing structures. DNR has established accepted minimum Factors of Safety for dams constructed and operated in Minnesota.

[3] Reserve Mining's disposal practices prior to the establishment of the Mile Post 7 Basin was the subject of extensive federal and state litigation. A documentation of the history of this litigation can be found in the 1975 Draft Environmental Impact Statement.

designated the DNR and Minnesota Pollution Control Agency (MPCA) as the agencies jointly responsible for preparation of the EIS. *Id*.

35. As discussed more fully below, the Mile Post 7 tailings basin was subject to state environmental review. The "Reserve Mining Company's Proposed On Land Tailings Disposal Plan" EIS was conducted over 1975 and 1976. A Draft EIS was released in October 1975 ("1975 Draft EIS").[4] The Final EIS ("1975-76 Final EIS") issued in 1976 consists of the Draft EIS and the Finding, Conclusions and Recommendations, Index to Transcripts, and Listing of Exhibits from the administrative proceedings.[5]

36. The 1975 Draft EIS includes the following content:

- An evaluation of the proposed Mile Post 7 site and the following alternatives: Embarrass Alternative; Colvin Alternative; Snowshoe Alternative; Midway Alternative; and Mine Site Alternative; a "no build" alternative was not evaluated;

- A description of the Proposed Mile Post 7 tailings basin plan designed to comply with the on-land tailings disposal plan;

- An assessment of the following impact areas: mineral potential (i.e., geology); soils; landforms; hydrology; water quality; aquatic habitat and biota; terrestrial habitat and biota; socioeconomics; land use; recreation; transportation; aesthetics; air quality; noise; and energy;

- The identification of measures to mitigate adverse environmental impacts;

- The identification of irreversible and irretrievable commitments of resources; and

- A disclosure of short term uses of the environment versus long term productivity.

The 1975 Draft EIS was incorporated into and became part of the 1975-76 Final EIS.

37. The Administrative Hearing portion of the 1975-76 Final EIS includes:

- Findings regarding: Present Operations; Mile Post 7 Proposal Changes in Operations; Description of Proposal; Dam Construction; Effects of Dam Failure; Water Resources Effects; Air Quality Effects; Other Natural Resource Effects; Alternatives, including: In Pit Disposal, Changes in Operations for Alternatives, Comparison of Environmental Effects, Economic Feasibility of Alternatives; Effects of Termination; Time Required to Implement; Delta Stabilization; Adequacy of EIS;

[4]All citations to the 1975 Draft EIS apply to the Draft Environmental Statement for Reserve Mining Company's Proposed On Land Tailings Disposal Plan (October 1975).

[5]For ease of citation, all citations to the 1975-76 Final EIS apply to the Finding, Conclusions and Recommendations from the administrative proceedings (June 2, 1976). It must be remembered that the Final EIS includes the Draft EIS as modified by the Findings, Conclusions, and Recommendations of the administrative proceedings. *See 1975-76 Final EIS at cover "Notice of Completion of Final EIS."*

- Conclusions; and

- Legal Memorandum.

38. DNR deemed the 1975-76 Final EIS for the Mile Post 7 tailings basin adequate or complete on June 2, 1976. *1975-76 Final EIS at PDF 2*. The 1975-76 Final EIS assumed a 40-year project life for the Mile Post 7 tailings basin. *Id. at 7*.

39. Upon completion of the 1975-76 Final EIS, the MPCA and DNR undertook consideration of Reserve Mining's permit applications previously submitted in November 1974. After reviewing the 1975-76 Final EIS and the information submitted by Reserve Mining, on July 1, 1976, the DNR and MPCA denied Reserve Mining's request for permits for constructing and operating a tailings basin at Mile Post 7.

40. Reserve Mining appealed the DNR and MPCA respective permit denials to the Lake County District Court, Sixth Judicial District, which received additional evidence from November thru December 1976. The District Court issued a final decision directing DNR and MPCA to issue permits to Reserve Mining for Mile Post 7 on January 31, 1977. This decision was appealed to the Minnesota Supreme Court. *Reserve Mining Co. v. Herbst et al*., 256 N.W. 2d 808 (Minn. 1977).[6]

41. Upon review of the extensive administrative record including the 1975 Draft EIS and Transcript of the Administrative Hearing (1975-76 Final EIS), the Hearing Officer's Order at the completion of said hearing and extensive briefing, the Minnesota Supreme Court on May 27, 1977, ordered the DNR and MPCA to issue Reserve Mining the permits necessary to construct and operate the Mile Post 7 tailings basin. *Id. at 845-846.* It is noteworthy that the Supreme Court's extensive opinion included an analysis of many of the issues raised by the petitioners in these petitions including: the ultimate size of the tailings basin; design and construction of tailings basin dams; alternative sites to the Mile Post 7 site; impact of water discharges from the tailings basin; air pollution associated with fugitive dust; and mitigation measures. *Id. at 828-84 and 844-845.*

42. DNR issued a Master Permit to Reserve Mining to operate a tailings disposal facility at Mile Post 7 in August 1977 ("1977 Master Permit"). By its terms the permit was to be updated every five years. This update was accomplished through Mile Post 7 Operation Plans. *See 1977 Master Permit at 4*. These operation plans were required to be submitted every five years for review and approval by DNR and MPCA (Five Year Operation Plans) over the anticipated 40-year life of the Mile Post 7 tailings basin. The 2019-2023 Five Year Operation Plan is currently in effect. Because the laws governing dam safety were not in place until 1979, the Master Permit regulates dam safety at Mile Post 7.

[6] The decision in *Reserve Mining Co. v. Herbst et.al,* 256 N.W. 2d 808 (Minn. 1977) was the culmination of extensive litigation regarding the disposal of tails generated from ore mined at the Peter Mitchell pit and processed Reserve's Silver Bay facility, a brief history of which can be found in the court's decision.

43. Pursuant with passage of the Mineland Reclamation Act rules for ferrous mining in 1981, Reserve Mining submitted an Application for a Permit to Mine to DNR in February 1981 ("1981 Permit to Mine Application").

44. In March 1985, DNR issued a Permit to Mine to Reserve Mining (Northshore or Proposer)[7] for all its operations, including the entire Facility (i.e., tailings basin), the mine at the Peter Mitchell Pit, and the taconite ore processing facilities at Silver Bay ("1985 Permit to Mine"). The Permit to Mine is reviewed annually. The permit assumed an operating life of the mine at the Peter Mitchell Pit to be at least 35 years, which coincided with the assumed life span of the Mile Post 7 tailings basin.

45. On May 17, 1977, the US Army Corps of Engineers (USACE) issued a federal EIS ("1977 USACE Final EIS") for the proposed Power Plant Discharge Structure, Delta Stabilization Dike, and On-Land Taconite Tailings Disposal project at Mile Post 7. Like the state's 1975-76 Final EIS, the federal final environmental impact statement considered the environmental impacts associated "with authorization of Federal permits" for the Mile Post 7 tailings basin. Of note the 1977 USACE Final EIS stated "it is presently anticipated that a final decision with respect to these and other matters pertaining to the applicant's permit request will not be made until resolution of the current State of Minnesota/Reserve Mining impasse." *See 1977 USACE Final EIS at i*.

46. The 1977 USACE Final EIS includes the following content:

- An evaluation of the proposed Mile Post 7 site and the following alternatives: Embarrass Site; Colvin Site; Snowshoe Site; Midway Site; and no action;

- A description of the background, project location, existing operations, and proposed action for tailings disposal;

- A description of the environmental setting at the Mile Post 7 site, including: geology; mineral potential; soils; water resources; water quality; aquatic biota; terrestrial flora; terrestrial fauna; land use and recreation; cultural resources; and land ownership;

- A description of the relationship of the proposed project to land use plans;

- An assessment of the following impact areas for on-land tailings disposal: mineral potential (i.e., geology); soils; vegetation and terrestrial habitat; wetlands; threatened and endangered species; water quality and aquatic habitat; noise levels; air quality; public health; energy; recreational opportunities; aesthetic values; agriculture; socioeconomics; land use; and historical/archaeological values;

[7]In 1986 Reserve Mining went into bankruptcy. Its assets, including the Peter Mitchell Mine, Mile Post 7 and the Silver Bay Processing Facility were acquired by Cyprus Mineral/Cyprus North Shore Mining Company in 1989. In 1990 Cyprus Mineral sold the assets of its Cyprus North Shore Company to Cleveland Cliffs, Inc. which operates the facility (Northshore Mining Co.) as one of its subsidiaries.

- An assessment of alternatives to on-land tailings disposal: background; mine pit disposal; current status; Babbitt sites; Embarrass Site; Colvin Site; Snowshoe Site; Midway Site; and no action;

- A disclosure of the relationship between local short-term uses of the human environment and maintenance and enhancement of long-term productivity;

- The identification of irreversible and irretrievable commitments of resources; and

- A disclosure of coordination.

47. The currently proposed Northshore Permit to Mine Amendment, if authorized, would permit Northshore to use the remaining capacity at the Mile Post 7 tailings basin, includes the following project elements:

    a. Extension of Dams 1 and 2. The Proposer intends to extend the western ends of Dams 1 and 2 to allow continued placement of tailings in the Mile Post 7 over the remaining useful life of the tailing basin and the permitted life of the Peter Mitchell Mine. The dam extensions included in the requested permit amendment would be placed beyond the limits of the current dam footprints would be founded on natural ground and constructed using the centerline method.[8] No changes to Dam 5 are proposed. Dam 1 is presently 10,000 feet long, the Dam 1 extension adds 8,100 feet of new dam, principally designed to prevent tailings from being deposited in the vicinity of the existing ash landfill. Dam 2 is currently 6,000 feet long and is proposed to be extended an additional 4,100 feet. The Proposer has not requested to change the final dam height for either Dams 1 or 2; these will remain at 1,315 feet amsl as currently allowed and as anticipated in the 1975-76 Final EIS. The dams will remain classified as Class 1 or High Hazard Dams as provided in ¶ 27.

    b. Progressing the Area of Tailings Deposition. The Proposer intends to continue placing tailings into the Mile Post 7 tailings basin to its anticipated full capacity. The total tailings disposal area in the tailings basin area evaluated in the 1975-76 Final EIS and currently permitted is 2,800 acres. Of this total area, 2,150 acres have been covered with tails to date. The requested permit amendment, if granted, would involve extension of Dams 1 and 2 to permit the placement of tailings in the final 650 available acres of the basin. Tailings placed in this final acreage would continue to be deposited until the maximum capacity of the tailings basin is reached, (i.e., a tailings placement elevation of 1,305 feet amsl within the basin). There is no proposal to alter tailings production or deposition rates from that of current operations. No new pipelines are proposed.

    c. Westward Relocation of the West Ridge Railroad. To fill the remaining capacity of the tailings basin and continue the transport of plant aggregate to Dams 1 and 2 for construction, the Proposer would relocate the West Ridge Railroad by shifting the rail corridor approximately 4000 feet to the northwest of the existing corridor. Once the existing railway corridor is reclaimed, tailings would overtop the site of the current railway and extend into the remaining

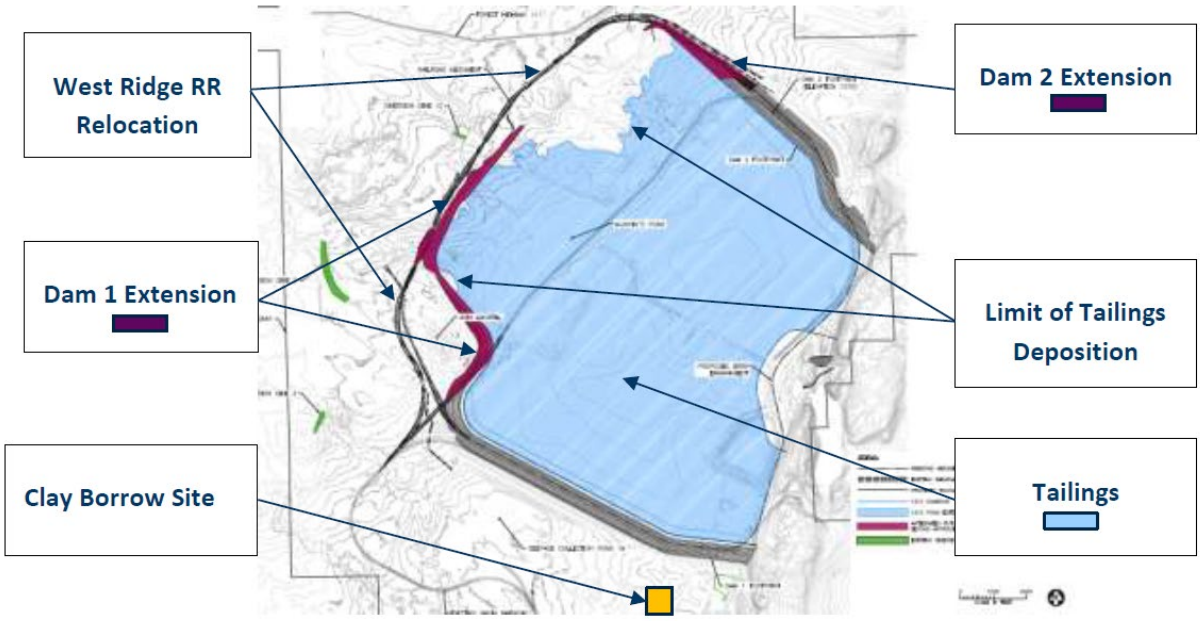
[8] The Proposer notified DNR of the shift to a centerline method for the extensions on December 7, 2021.

650 acres of the basin permitted for tailings deposition. The new railway would be established at an elevation of ~1,315 feet amsl. The majority of new railway embankment construction would occur separate from and outside of the extended dam footprints, although the new railway embankment would be constructed on a small section of the Dam 1 extension, while abutting the entire length of the Dam 2 extension. The relocated railway would be inside the existing diversion ditches that were designed and constructed at the western limit of the tailings basin permit boundary. The new railway, as does the existing railway, would be used to supply plant aggregate and filter sands as construction materials for ongoing development of the dams.

d. Development of New Clay Borrow Site. The Proposer intends to extract clay material for ongoing construction of Dam 5 from a clay borrow pit developed on approximately 100 acres of company-owned property located immediately south of the basin. Although no changes are proposed to Dam 5 under the "Proposed Project," its construction includes a clay core that requires a steady source of compatible clay materials for continued construction. The Proposer reports some clay removal activity has already occurred at the site, but the need for a continuous source of suitable clay as a construction material would be addressed with the proposed permit amendment. Once clay removal ceases, the area would be reclaimed taking into consideration the depth of the extracted resource and whether bedrock was exposed.

See Section 2 of DNR June 2021 ER Need Determination at 5-7.

48. The image below depicts the four elements of the "Proposed Project" subject to the requested Permit to Mine Amendment. *Id. at 7.*



49. Minnesota Rules 4410.0200, subp. 65, defines a "project" as "a governmental action, the results of which would cause physical manipulation of the environment, directly or indirectly."

50. Minnesota Rules part 4410.0200, subp. 33, defines a "governmental action" as "activities including projects wholly or partially conducted, permitted, assisted, financed, regulated, or approved by governmental units, including the federal government." Approval is defined as "a decision by a unit of government to issue a permit or otherwise authorize the commencement of a proposed project." Minn. R. 4410.0200, subp. 4.

51. A project can only be considered a "project" for purposes of environmental review if its implementation requires some "governmental action." Minn. R. 4410.0200, subp. 65. In this instance Northshore is requesting that DNR approve an amendment to its Permit to Mine to make the physical adjustment at the Mile Post 7 tailings basin that would allow Northshore to use the basin's remaining capacity. *See* ¶ 12. The act of amending a permit to mine is a governmental action within the meaning of Minn. R. 4410.0200, subp. 33.

52. The second element necessary to meet the definition of "project" for purposes of environmental review is physical manipulation of the environment. It is not disputed that the activities necessary to allow Northshore to use the remaining useful life of the Mile Post 7 tailings basin will require physical manipulation of the environment. *See at* ¶ 47a-d describing the physical on the ground activities that must occur before Northshore can use the remaining life of the Mile Post 7 tailings basin for which it has requested a permit amendment. Because Northshore must obtain an amendment to its Permit to Mine before it can conduct these physical activities, these activities constitute a "project" within the meaning of Minn. R. 4410.0200, subp. 65.

53. Minnesota Rule 4410.1000, subp. 4, directs that "multiple projects and multiple stages of a single project that are connected actions or phased actions must be considered in total when determining the need for an EAW." A phased action "involves two or more projects undertaken by the same proposer "that a... [responsible governmental unit] ... determines: will have environmental effects on the same geographic area; and are substantially certain to be undertaken sequentially over a limited period of time." Minn. R. 4410.0200, subp. 60.

54. The Proposer is required to complete six functional stream restorations, two per year in 2022, 2024, and 2026, under MPCA's Section 401 Water Quality Certification ("Section 401 Certification"). These are potentially phased actions, however the timing of the "Proposed Project" relative to the schedule, location, and likely activities to be conducted for the stream restoration projects limits the potential for environmental effects on the same geographic area. *See MPCA Section 401 Certification at 3*.

55. An EAW or EIS is not required for those projects that are exempt from environmental review. Minnesota Rule 4410.4600, subp. 2, sets forth five standard exemptions to environmental review. These standard exemptions are:

    A. projects for which no governmental decisions are required;
    B. projects for which all governmental decisions have been made. However, this exemption does not in any way alter the prohibitions on final governmental decisions to approve a project under part 4410.3100;
    C. projects for which, and so long as, a governmental unit has denied a required governmental approval;

D. projects for which a substantial portion of the project has been completed and an EIS would not influence remaining construction; and
E. projects for which environmental review has already been completed or for which environmental review is being conducted pursuant to part 4410.3600 or 4410.3700.

56. The DNR June 2021 ER Need Determination analyzed each of these exemptions and concluded that the "Proposed Project" does not fall within any of the exemptions to environmental review as set forth in Minn. R. part 4410.4600. *See DNR June 2021 ER Need Determination at 9*.

57. In determining whether to order a discretionary EAW, including in response to a citizens' petition, the governmental unit need only find "that there may be the potential for significant environmental effect." *Carl Bolander & Sons Co. v. Minne*apolis, 448 N.W. 2d 804, 810 (Minn. Ct. App. 1992) (emphasis in the original) and Minn. R. 4410.1000, subp. 3A. An RGU is not, however, required to undertake environmental review on the basis of speculative information. *Reserve Mining Co. v. Herbst*, 256 N.W. 2d 808, 829-30 (1977).

58. Petition 1 identifies the project as the following actions:

    a. Increase in tailings basin area from the current size of ~2,150 acres to 2,800 acres.

    b. Increase in the permitted height of the existing High Hazard Class 1 tailings dams from 1,242, 1,244, and 1,255 feet amsl to 1,315 feet amsl respectively.

    c. Addition of 8,100 feet to Dam 1 and 4,100 feet to Dam 2.

    d. Relocation of the Mile Post 7 rail line to an area "outside the area of disturbance boundary that was assessed in the 1975-76 Final EIS to allow placement of tailings over the present rail corridor."

    e. Impact to Little Thirtynine and Big Thirtynine Creeks due to tailings basin enlargement (3,368 feet), construction of the Dam 1 extension and relocated railroad embankment (1,675 feet), and impoundment or [installation] of the future west side seepage pond and pumphouse (3,527 feet).

    See Petition 1 at 3.

59. Petition 2 identifies the project as the following actions:

    a. Extension of the western ends of Dams 1 and 2 to allow continued placement of tailings in the Mile Post 7 tailings basin;

    b. Placement of tailings over another 650 acres of ground, west of the current West Ridge Railroad, up to the maximum basin elevation of 1,305 feet;

    c. Relocation of the West Ridge Railroad line approximately 4,000 feet to the northwest, at an elevation above 1,315 feet; and

d. Development of a new clay borrow pit on 100 acres of company-owned property south of the basin to extract clay material for ongoing construction of Dam 5.

See Petition 2 at 12.

60. Neither petition provides allegations nor evidence addressing the proposed new clay borrow sites part of the "Proposed Project" identified in ¶ 47d.

61. Both Petitions collectively allege the "Proposed Project" requires preparation of a mandatory EAW because it exceeds the 320-acre mandatory EAW threshold. Minn. R. 4410.4300, subp. 11B. When compared to the existing footprint, the Petitions allege the "Proposed Project" (i.e., Northshore's use of the remaining permitted capacity at Mile Post 7) will increase the area of the Mile Post 7 tailings basin by approximately 650 to 750 acres and, therefore, exceeds the 320-acre threshold.

Petition 1 at 6. Petition 2 at 7.

62. Minnesota Rules part 4410.4300, subp. 11B, requires preparation of a mandatory EAW for expansion of a stockpile, tailings basin, or mine by 320 or more acres.

63. The term "expansion" is defined as an *extension* of the capability of a facility to produce or operate beyond its existing capacity…and excludes renovations or repairs that do not increase the capacity of the facility. Minn. R. 4410.0200, subp. 28. (*Emphasis* added)

64. The term "extension" is not defined in Minn. R. 4410.0200 but is defined in Merriam Webster Dictionary as "an enlargement in scope of operation," and the Oxford English Dictionary defines the term extension as "a part that is added to something to enlarge or prolong it, a continuation." These are the definitions of "extension" relied upon to determine whether the "Proposed Project" constitutes an expansion of the permitted operational tailings storage capacity at Mile Post 7.

65. The DNR has analyzed whether Northshore's proposal to use the remaining capacity of the Mile Post 7 tailings basin, from both the perspective of acreage and volume of tailings proposed to be stored in the Mile Post 7 tailings basin, to determine whether the "Proposed Project" constitutes an expansion.

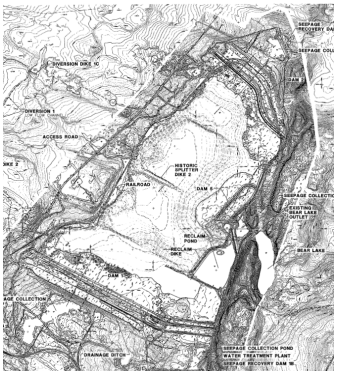
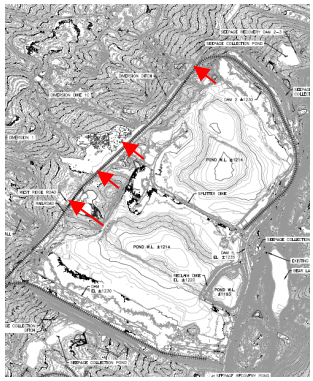
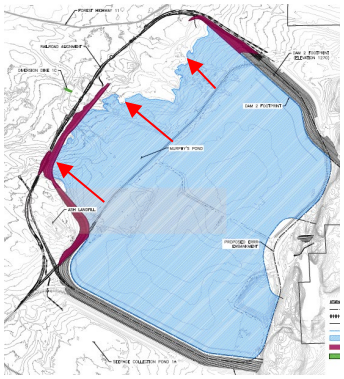
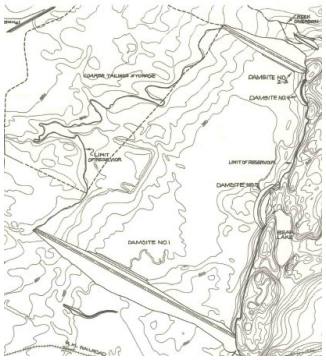
66. Tailings basins are designed to accommodate tailings production over extended periods of time, often over decades. Consequently, the actual tailings footprint within the basin changes as tailings are delivered for storage in the basin. When DNR issues its permit to mine, it permits the total ultimate capacity of the tailings basin and geographic footprint of the tailings basin. Likewise, when DNR receives a request to establish a tailings basin, DNR conducts environmental review on the planned basin footprint recognizing that the placement of tailings within the basin (i.e., progression of tailings in the basin) will change over time.

67. As detailed in ¶ 26, tailings deposited at the Mile Post 7 site are physically contained by a combination of site topography and three existing dams designated as Dams 1, 2, and 5. These

dams were expected to be constructed over time as tailings were deposited in the basin. Therefore, the ultimate or final dam height coupled with site topography dictates the tailings basin's depth and shape (i.e., maximum volume capacity and area in which tailings may be deposited and where tailings will flow and settle within the basin. This issue was considered in Section 3.4.1.2 of the DNR June 2021 ER Need Determination.

68. At Mile Post 7, the combination of existing "high" site topography, Dam 5 on the eastern side of the basin, and the continued construction of Dams 1, 2, and 5 to the south, north, and east respectively has caused tailings deposition area to "spread" or progress upgradient and westward over time. This is expected to continue under the "Proposed Project." The westward tailings progression of the total area covered with tailings in the basin is shown on the images below.

Westward Tailings Progression Over Operational Period

Circa 1985 to 2005	2005 to Present	Present Going Forward	1975-76 Final EIS
Approximate Initial Basin Area = 1,680 ac	Approximate Current Basin Area = 2,150 ac	Approximate Final Basin Area = 2,800 ac	Approximate Final Basin Area = 2,950 ac
			

See DNR June 2021 ER Need Determination at 17.

69. The final dam height evaluated in the 1975 Draft EIS was 1,280 feet amsl. This was conceptually depicted in 1975 Draft EIS Figure 3, Proposed Mile Post 7 Disposal Area. *Id. at 11.*

70. The final dam heights considered in the 1975-76 Final EIS were adjusted upward by approximately 30 feet, meaning the final dam height by the end of environmental review was ~1,310 feet amsl. *Id. at 11-12* (summarizing the modifications made in the dam height during the administrative hearing proceedings and reflected in the 1975-76 Final EIS).

71. The final dam height identified at Section 1.050 of the 1977 USACE Final EIS was 1,315 feet amsl, which was selected to "to provide sufficient storage capacity for 40 years of operations." *See 1977 USACE Final EIS at 12.*

72. The 1977 Master Permit set the final height of the "Tailings Containment Dams" and specified "Dams 1 and 2-3…will be constructed to ultimate crest elevation 1,315 mean sea level, over a period of years, according to a predetermined construction schedule." *See Section V, 1977 Master*

Permit, at 12. Similarly, Dams 4, 5, and 6 were proposed to be constructed to ultimate crest elevation 1,315 mean sea level. The 1985 Permit to Mine approved the tailings basin with "an average level of ultimate tailing pond area will be about elevation 1,305 while the dam crests will be elevation 1,315." *Id.*

73. The final dam heights for Dams 1, 2, and 5 would not be modified by the "Proposed Project." The height of all three dams remains at 1,315 feet amsl as shown on Figure 1 of the proposed amendment. *See Permit to Mine Amendment at 4*. There is no meaningful difference in the dam heights evaluated in the 1975-76 Final EIS and 1977 USACE Final EIS, and the dam height specified in the 1977 Master Permit and the 1985 Permit to Mine, both of which remain in effect today.

74. The total proposed Facility area evaluated in the 1975 Draft EIS was 7.6 square miles for both fine and coarse tailings. Because of the relationship between the final dam height and the area to be covered by fine tailings, the estimated area to be covered by fine tailings in the 1975 Draft EIS was 4.6 square miles, or ~2,950 acres. Thus, the balance of 3.0 square miles was to be used as a coarse tailings storage and disposal area. *See Section 3.4.2 of DNR June 2021 ER Need Determination at 16*.

75. Although the reason was not specified, the total area assigned to the tailings basin in the 1975-76 Final EIS was adjusted downward to approximately 6 square miles, or 3,850 acres, from the 7.6 square miles assessed in the 1975 Draft EIS. *See 1975-76 Final EIS at 8*. In addition, the 1975-76 Final EIS did not break out the area assigned for fine tailings disposal, which meant the maximum elevation of tailings deposition of 1,305 feet amsl did not change thus leaving ~2,950 acres allocated for disposal of fine tailings.

76. The changes made in the 1975-76 Final EIS were incorporated into the 1977 Master Permit. The tailings basin in the 1977 Master Permit would encompass "approximately six square miles," or ~3,850 acres total. *See 1977 Master Permit at 2*. Because there was no change in the final dam heights from the 1975-76 Final EIS, this equated to ~2,950 acres allocated for actual disposal of fine tailings under the 1977 Master Permit. There were no modifications to the tailings basin acreage made under the 1985 Permit to Mine. *See 1981 Permit to Mine at 48*.

77. The Proposer used Lidar-based imagery to provide an updated estimate of the total acreage available in the basin up to the 1,305 feet amsl permitted elevation for actual tailings disposal, which allows for a ten-foot freeboard from the final dam height of 1,315 feet amsl. The calculation indicates the tailings basin at capacity will cover ~2,800 acres, which is slightly less than the estimates from the 1975-76 Final EIS and 1977 Master Permit. *See DNR June 2021 ER Need Determination at 15-16*.

78. Based on this Lidar data, the Mile Post 7 tailings basin currently covers ~2,150 acres of the 2,800 acres evaluated in the 1975-76 Final EIS and permitted in both the 1977 Master Permit and 1985 Permit to Mine. The "Proposed Project," if implemented, would allow Northshore to use the remaining 650 acres of the permitted tailings basin for placement of fine tailings. At that point the Mile Post 7 tailings basin would reach 2,800 acres out of its 2,950 acres of permitted capacity. Approximately 550 acres of surface within the basin under the "Proposed Project" between the

1,305 feet amsl contour and the base of the relocated West Ridge Railroad would not be covered by tailings. There is no plan to deposit tailings on this remaining 550 acres above the 1,305 foot amsl contour. The entire Facility, including the tailings basin, would then undergo reclamation and closure procedures required under the Master Permit and Permit to Mine when the total permitted capacity of the tailings basin is reached.

79. Because Northshore is merely proposing in the "Proposed Project" to undertake the work necessary to use the 650 acres of previously studied and permitted tailings basin, and because this area is within the originally allocated 2,950 total acres to be covered by tailings that were studied in the 1975-76 Final EIS and authorized in the 1977 Master Permit, there is no expansion of the tailings basin within the meaning of Minn. R. 4410.4300, subp. 11B.

80. Although the acres associated with progressing the tailings do not constitute an expansion, it is relevant to consider whether the volume of material proposed to be stored under the "Proposed Project" constitutes an increase in capacity from that considered in the EIS, subsequent permitting, and updated estimates under the "Proposed Project." This issue was considered in Section 3.4.1.3 of the DNR June 2021 ER Need Determination.

81. The 1975 Draft EIS assumed 20,417,000 long tons of fine tailings would be pumped annually into the Mile Post 7 tailings basin over the 40-year operational life of the Mile Post 7 tailings basin. This amounts to a total deposition of 816,680,000 long tons of fine tailings over the life of the project. Although not directly comparable to the 1975-76 Final EIS estimate, the 1977 Master Permit provided the tailings basin would eventually store 733,000,000 long tons of "fine and coarse tailings." *See DNR June 2021 ER Need Determination at 14*.

82. The Proposer reports that actual tailings production has not met the original projections of ~20 million long tons per year over the estimated 40-year life of the Facility. The tailings production rate from 1985 to 2005 ranged from ~4.0-5.3 million long tons per year, resulting in the deposition of an estimated 88,736,000 long tons of fine tailings in the at Mile Post 7 tailings basin. Much of this deviation from the original estimate can be attributed to the vagrancies of the steel market over time, including four years of no tailings production while Reserve Mining was in bankruptcy. Since 2005 to the present, fine tailings production has ranged from ~5.5-7.9 million long tons per year, resulting in the placement of an additional ~102,383,000 long tons of fine tailings within the tailings basin. In aggregate, the Proposer estimates that the total volume of tailings deposited at the Mile Post 7 tailings basin between 1985 and 2019 is 191,118,000 long tons. *Id. at 14-15*.

83. The Proposer used Lidar-based modeling and disposal data to calculate the remaining volume in the tailings basin from a baseline date of May 2019 and assuming a permitted final dam height of 1,315 feet amsl. Based on this analysis, the remaining volume in the tailings basin is estimated to be 561,905,000 long tons of tailings. When the volume of existing tailings (119,118,000 long tons) is added to the remaining capacity (561,905,000 long tons), the total volume of tails in the Mile Post 7 tailings basin is projected to be 753,023,000 long tons of tailings. *Id. at 15*.

84. Comparing the values, the original 1975-76 Final EIS estimate of ~820 million long tons of capacity in the basin is greater than the current estimated total volume of ~750 million long tons of tailings capable of being stored in the basin. Therefore, from a volume perspective absent any

proposed change in the maximum dam height, there is no expansion in the capacity of the tailings basin within the meaning of Minn. R. 4410.4300, subp. 11B. The Proposer states that no change in final dam heights is anticipated. Once the remaining capacity of the basin is filled at a final dam height of 1,315 feet amsl, the tailings basin will be reclaimed and closed.

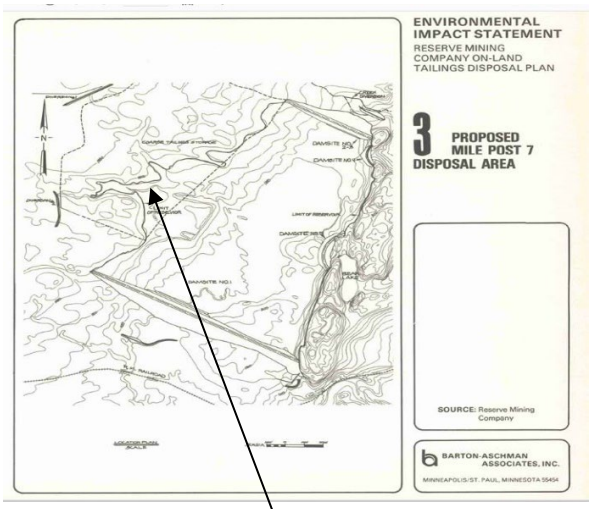
85. Petition 1 alleges that the 1977 Master Permit fails to specify the acreage of the permitted tailings basin and that the accompanying map does not cover the entire tailings basin area.

Petition 1 at 5.

86. This statement is incorrect on both counts. First, the 1977 Master Permit at Section VI.A, Main Tailings Containment Facility – Description, states the "impoundment area will occupy approximately 6 square miles of land and will store eventually 733,000,000 long tons of fine and coarse tailings." *See 1977 Master Permit at 14*. Second, Engineering Design Figure C-18 of the supporting documentation for the 1977 Master Permit is a topographical map of the area proposed to be covered by the tailings basin; the figure depicts the main dams, pond elevations over the life of the project, diversion dikes, flow channels. *See Attachment 4 of DNR June 2021 ER Need Determination at PDF 84*. Figures 3 and C-18 were attached to the DNR June 2021 ER Need Determination as Attachments 3 and 4 respectively. Both figures show the extent of the tailings deposition area within the greater EIS study area as provided in ¶¶ 101-102.

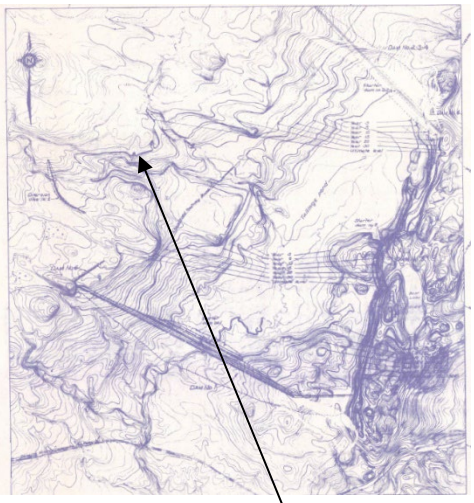
DNR June 2021 ER Need Determination

Attachment 3 – 1975 Draft EIS Figure 3



1,280 foot contour

Attachment 4 – Engineering Design Figure C-18



1,315 foot contour

See DNR June 2021 ER Need Determination at 11 and 13.

The 1977 Master Permit also includes a map of the tailings basin in the permit application at Appendix B. *See 1977 Master Permit at 38*. Considered together, this set of figures clearly demonstrate that the 1977 Master Permit permitted the entire acreage of the tailings basin, including that portion of the tailings basin that is proposed to now be filled by the Proposer. In

short, an evaluation of the 1977 Master Permit and the current "Proposed Project" does not involve the expansion of a permitted tailings basin with the meaning of Minn. R. 4410.4300, subp. 11B.

87. Petition 1 also alleges 1985 Permit to Mine does not permit the entire basin because it only references the permit application but does not itself contain reference to the total acreage of the permitted tailings basin and, therefore, cannot form the basis of a conclusion that the present "Proposed Project" is not an expansion of the Mile Post 7 tailings basin. But again, this is not borne out by a review of the permit, because by its very terms the permit includes the materials contained in the permit application including the entire area of the tailings basin.

88. The 1985 Permit to Mine expressly provides, in its introductory paragraph, that the permit is granted "[p]ursuant to Minnesota Statutes § 93.44 – 93.51 and on the basis of the statements and information contained *in the permit application* [*emphasis* added]. . . which are made a part hereof by reference. . ." Section III A which outlines the "General Provisions" of the "Conditions of the Permit" expressly provides that "[m]ining and reclamation activities associated with taconite mining and processing operations shall be conducted in a manner consistent with the plans and schedules presented in the permit application. Including, by reference, the August 23, 1977, Amended Permit [i.e., 1977 Master Permit] for the Mile-Post 7 basin and subsequent renewals, approvals or amendments to the permit." *See 1985 Permit to Mine at 1-2*. Regarding assertions made in Petition 1 that the June 2021 ER Need Determination lacks reference to the permit to mine application, it is noted that the 1981 Permit Application is Reference 27 of the DNR June 2021 ER Need Determination listed at ¶ 17.a.(27).

89. The 1981 Permit to Mine Application at Section 3, "Environmental Setting Maps – Silver Bay Operations," further provides "[t]he environmental aspects of these operations have previously been covered in greater detail than is required in this permit application," in particular "in the many environmental studies that were carried out in conjunction with Reserve Mining Company's conversion from in-lake tailing disposal to the Milepost 7 on-land disposal." However, Subsection (a) – Bedrock Geology, includes drawing number 292-0024 depicting the Mile Post No. 7 Site – Geologic Plan and Sections, and Figure 2.1.4.2-A – Beaver River Drainage Basin – Rivers, Streams, and Lakes. Both figures depict the fine tailings disposal area as it would occur with the placement of Dams 1, 2, and 5 and tailings deposition up to the 1,280 feet amsl elevation contour. *See 1981 Permit to Mine Application at 6-c and 6-d*. The State 1975 Draft EIS estimated the area within this contour at 4.6 square miles, or ~2,950 acres, as provided in ¶ 74.

90. The 1981 Permit to Mine Application at Section 6, Mining and Reclamation Plan, Subsection (d) – "Methods, Sequence and Schedules of Reclamation," Subitem 2 – "Sloping and Land Form Designs," states: "The average level in the ultimate tailing pond area will be about elevation 1,305 [feet amsl] while the dam crests will be elevation 1,315 [feet amsl]." *Id. at 48*. Thus the 1981 Permit to Mine Application for Mile Post 7 assumed and permitted a tailings basin whose volume was predicated on a dam height of 1,315 feet amsl.

91. Because the "Proposed Project" completes tailings disposal within the area anticipated and permitted in the 1977 Master Permit and 1985 Permit to Mine, which incorporates the 1981 Permit to Mine Application, there is no expansion of the tailings basin within the meaning of Minn. R. 4410.4300, subp. 11B.

92. Petition 2 alleges the reduction in final dam height from 1,365 feet to amsl to 1,315 feet amsl results in "a tailings basin of smaller size." The Petition notes DNR does not explain why it is considering only this smaller expansion rather than the 50-foot increase in final dam height identified in the MPCA and USACE approvals.

    Petition 2 at 8.

93. The Proposer reports the original request to increase the final dam height by an additional 50 feet was based on several cost and operational factors that are no longer relevant. The choice of 50 additional feet was based on the natural ledge rock barrier on the eastern end of the basin as an upper engineering limitation when considered with the final on-the-ground footprint identified in the state and federal EISs. The currently "Proposed Project" under the amendment is consistent with the 1975-76 Final EIS, the 1985 Permit to Mine, and the 1977 Master Permit and associated dam safety requirements, that are predicated on a final dam elevation of 1,315 feet amsl to contain the tailings generated from the remaining economic ore reserves from the Peter Mitchell Pit.

94. Regarding the final dam heights referenced in the USACE Section 404 – Clean Water Act Permit Public Notice of October 2018 (2018 Section 404 Permit) indicating that the Proposer was asking to adjust the final dam heights to 1,365 feet amsl, the Proposer notified the USACE of an adjustment to the "Proposed Project" on March 12, 2021, ("Northshore Project Adjustment Notification Letter"), that it was no longer proposing a 50-foot raise in the final dam height. The purpose of the change was "to align the June 2018 [USACE] permit application with other permit actions underway through the State of Minnesota" noting "this adjustment in elevation does not change the aquatic resource impacts under the USACE's jurisdiction." *Northshore Project Adjustment Notification Letter at 1*. Subsequently, the USACE's September 2020 Statement of Findings for the Environmental Assessment ("USACE Section 404 EA") conducted on the "Proposed Project" identified "tailings would be deposited into the basin…where the natural topography is below a 1,315-foot elevation." *USACE Section 404 EA at 5*. Because the "Proposed Project" subject to the Permit to Mine Amendment does not include any change to the final dam heights at the Mile Post 7 tailings basin, which is affirmed in the USACE decision document, there is no basis for the allegation that there is an increase in dam height requiring the preparation of an EAW.

95. Both Petitions allege the DNR acknowledged in the DNR June 2021 ER Need Determination of that approximately 30 acres of project footprint would be used for dam construction outside the EIS study area, which is indicative of no environmental review contemplating a tailings basin in the location of the "Proposed Project." The area identified outside the EIS study area is a result of the final dam height changing from 1,365 feet amsl to 1,315 feet amsl under the revised "Proposed Project."

    Petition 1 at 6. Petition 2 at 8.

96. The Proposer estimated approximately 30.08 acres of new Dam 2 and railway construction would occur outside the EIS study area for both the 1975-76 Final EIS and 1977 USACE Final EIS (collectively "EISs"), which is a relevant factor in assessing whether the "Proposed Project" would

result in impacts not previously assessed. Although the exact configuration of all future tailings basin facilities was not available at the time of the EISs, both assumed the possibility of some degree of disturbance within the entire EIS study area as being necessary for development of the tailings basin facilities and dam construction. Thus, both documents considered the maximum level of impact. Regarding the allegation, the 30.08 acres would not be subject to tailings deposition and does not increase the size of the tailings basin over that previously studied and permitted. Rather this area would be covered by materials (i.e., coarse tails) used to construct the dams and railway. The impacts of dam and railway construction and operation were anticipated and studied and detailed in the EISs and would be expected to be the same types of impacts at the estimated 30.08 acres resulting from the proposed Dam 2 extension outside the EIS study area. *See DNR June 2021 ER Need Determination at 7*.

97. As Section 2.6 of the DNR June 2021 ER Need Determination indicated, the footprint and potential impacts of the "Proposed Project," including wetlands, would be evaluated by DNR during the Permit to Mine Amendment process. *Id.* See ¶ 119. Subsequent to the ER need determination, the permit process estimated that 83 acres would be impacted by the "Proposed Project" that are within the EIS study area but outside the currently permitted mining area of disturbance. *See Cliffs-Northshore Mile Post 7 – Permit to Mine – Mining Area Boundary Figure at ¶ 21(v)*. No tailings would be deposited in these 83 acres as it is all above the 1,315 foot amsl contour at the site. Nor does the modification of the mining area of disturbance increase the size of the tailings basin or the volume of tailings that may be stored in the tailings basin. The modification of the mining area boundary (to accommodate the relocation of the West Ridge Railway and Dam 2 extension) construction would be evaluated during the Permit to Mine Amendment for the "Proposed Project." The estimated 83-acre adjustment of the permitted mining area, and the 30.08 acres outside the EIS study area, are less than the 320-acre mandatory EAW threshold at Minn. R. 4410.4300, subp. 11B, and neither proposed action increases the capacity of the Mile Post 7 tailings basin.

98. Petition 2 alleges that in 2017, the DNR asserted that environmental review is unnecessary because the "Proposed Project" was already examined in previous environmental review. The Petition further alleges that the Proposer maintains the progression is consistent with the 1977 USACE Final EIS. But the proposed tailings basin expansion was not contemplated or studied in the 1976 or 1977 EISs, and they cannot be used to justify avoiding environmental review now.

    Petition 2 at 9.

99. As provided in ¶ 14, in 2017 DNR determined the proposed project (as configured at that time) did not require preparation of a mandatory EAW or supplemental EIS. The proposed extension itself of Dams 1 and 2, as reviewed in 2017 and under the current Permit to Mine Amendment, represents a new Facility element that was not expressly defined in either of the state or federal EISs. However, the proposed extensions under the "Proposed Project" do reflect continuation of historic dam building activities at the tailings basin necessary to allow total use of the permitted capacity of the Facility. The EISs and subsequent permits always anticipated the construction of dams over time to contain the tailings being placed in the tailings basin. Thus, the impacts of dam construction within the permitted mining area were analyzed in the EISs, and the impacts and reversibility of the proposed dam extensions are consistent with that analysis with the exception

that the scale of impacts for dam construction will be substantially less than dam construction conducted to date. There will be no changes in the tailings progression from that studied in the EISs and permitted in the 1977 Master Permit and 1985 Permit to Mine. This is because the final dam height of 1,315 feet amsl remains the same as the dams studied in the EISs. Nor does the proposed relocation of the West Ridge Railroad result in unanticipated and unanalyzed impacts. As discussed in greater detail in ¶ 101-102, the EISs assumed the possibility of some degree of disturbance within the entire EIS study area as being necessary for development of the tailings basin facilities, including dam construction. As provided in ¶ 106, the "Proposed Project" is within the entire Facility footprint evaluated in the 1977 USACE Final EIS. Thus, both documents considered the maximum level of potential impact. This was addressed in Sections 4.3.1.1, 4.3.1.2, and 4.3.1.3 of the DNR June 2021 ER Need Determination.

100. Both Petitions allege that a figure generated by Northshore Mining in 2017 ("Northshore 2017 Figure") incorrectly represents the tailings basin footprint as proposed by the Expansion Project. To support this assertion, the Petitions contrast the 2017 figure with a surface water monitoring figure from the 1977 USACE Final EIS, which shows a very similar EIS study area outline divided into a western area of "tailings storage" and an eastern area of "tailings basin." The former was to be the location to supply "potential storage of dry 'coarse tailings' for dam construction purposes.

Petition 1 at 6. Petition 2 at 9.

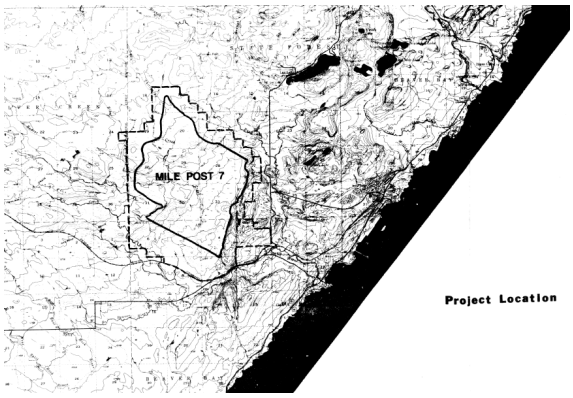
101. The Northshore 2017 Figure was provided to DNR as supporting information for the DNR March 2017 ER Need Determination, which included a depiction of the EIS study area. See ¶ 21m. The DNR June 2021 ER Need Determination addressed the EIS study area in Section 3.4.2.1. Attachment 2 of the DNR June 2021 ER Need Determination is Figure 16 of the 1975 Draft EIS, which is the "Proposed Mile Post 7 Plan, Tailings Basin and Ancillary Facilities." This figure shows the outline of the tailings basin area evaluated in the 1975 Draft EIS. *See 1975 Draft EIS at 42*. This figure matches to the "State EIS study area" depicted in the Northshore 2017 Figure provided in the Petitions. Exhibit 1 of the 1977 USACE Final EIS, also matches the outline of the 1975-76 Final EIS "approved EIS boundary" depicted in Figure 1 of the DNR June 2020 ER Need Determination. *1977 USACE Final EIS at A-1*.

1975 Draft EIS

Figure 16: Proposed Mile Post 7 Plan, Tailings Basin, and Ancillary Facilities

1977 USACE Final EIS

Exhibit 1: Project Location



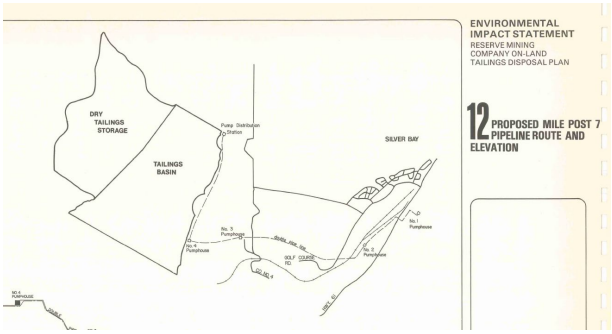
See DNR June 2021 ER Need Determination at 15. Also see 1977 USACE Final EIS at A-1.

There is no difference between the defined project study areas (depicted in the EISs) and the more recent supporting Proposer figure from 2016-17 that result in unanticipated and unanalyzed impacts. As discussed in greater detail in ¶ 102, the EISs assumed the possibility of some degree of disturbance within the entire EIS study area as being necessary for the tailings basin facilities including dam construction. Thus, both documents considered the maximum level of potential impact within the meaning of Minn. R. 4410.4300, subp. 11B, based upon comparison of the figures.

102. Figure 12 of the 1975 Draft EIS, which is the "Proposed Mile Post 7 Pipeline Route and Elevation," shows the outline of the EIS tailings basin study area, which is broken into a western "dry tailings storage" area and an eastern "tailings basin" area. *See Draft 1975 EIS at 38*. This figure is analogous to Exhibits 46 and 47 of the 1977 USACE Final EIS, the latter figure cited in both Petitions. *See 1977 USACE Final EIS at A-58 and A-62*. All three figures provide a general conceptualization of how storage of fine and coarse tailings was originally proposed to occur at the site.

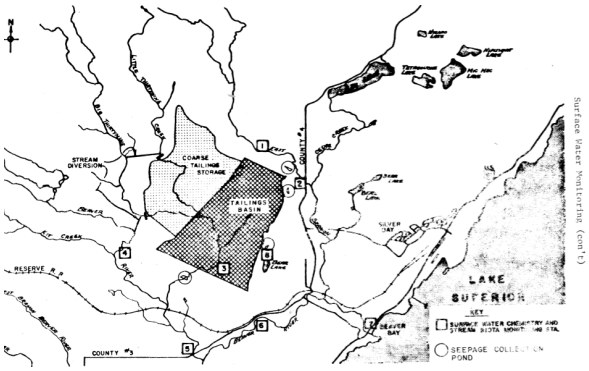
1975 Draft EIS

Figure 12: Proposed Mile Post 7 Pipeline Route and Elevation



1977 USACE Final EIS

Exhibit 46: Surface Water Monitoring

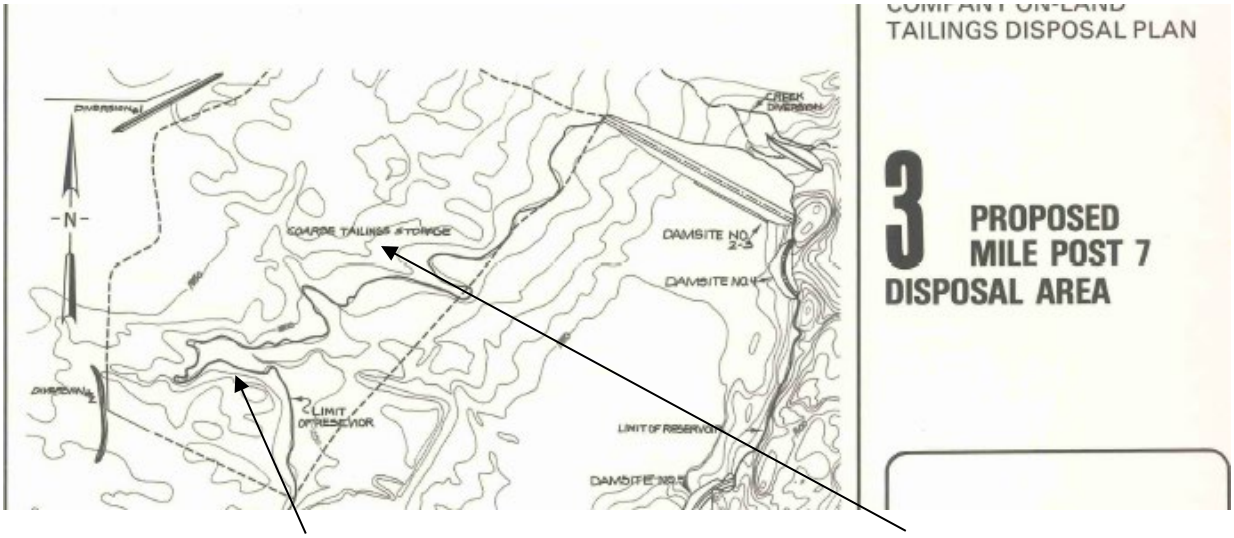


See DNR June 2021 ER Need Determination at 38. Also see 1977 USACE Final EIS at A-58.

103. However, Figure 3 of the 1975 Draft EIS, "Proposed Mile Post 7 Disposal Area," shows greater detail than Figure 12 regarding the potential storage of fine and coarse tailings at the tailings basin. *See 1975 Draft EIS at 21*. It does so by depicting the actual 1,280 foot contour as the "limit of reservoir" while also showing an area north-northwest and upgradient of the tailings basin reservoir limit labeled as "coarse tailings storage." The ultimate elevation of the coarse tailings storage area at the site was anticipated to be 1,430 feet amsl, which was 150 feet above the final dam elevation of 1,280 feet amsl assessed in the 1975 Draft EIS EIS. *See 1975 Draft EIS at 45.* Figure 3 is thus a more precise depiction of how both fine and coarse tailings could be stored at Mile Post 7 than provided in Figure 12 of the 1975 Draft EIS cited in the Petitions. The 1977 USACE Final EIS does not provide any more specific locational information around coarse tailings storage than the figure cited in the Petitions. As provided in ¶ 70-72, the 1,280 foot contour was adjusted up ~30 feet in the 1975-76 Final EIS and subsequently adjusted to ~1,315 feet amsl in the 1977 Master Permit.

DNR June 2021 ER Need Determination

Attachment 3 – 1975 Draft EIS Figure 3



See DNR June 2021 ER Need Determination at 38.

104. The issue of potential coarse tailings storage is addressed in Section 4.3.2.3.2 of the DNR June 2021 ER Need Determination. 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 because of the "Proposed Project." The Proposer does indicate the possibility of some storage of coarse tailings above the physical tailings limit once dam construction comes to an end, and the tailings basin is filled to its permitted capacity. But this is not what Northshore is currently proposing. If future coarse tailings storage above 1,315 feet amsl is advanced by the Proposer, then it will be very late in operations and more likely during reclamation and closure. The environmental impacts of any coarse tailings storage (above the relocated West Ridge Railroad), if it is ever advanced, would be addressed at the time of reclamation and closure. *See DNR June 2021 ER Need Determination at 38*. According to the 1975 Draft EIS, the coarse tailings area was to be cleared and would be used for the storage of coarse tailings if the use of these materials for winter construction of dams, roads, and dikes proved unfeasible. *See 1975 Draft EIS at 45*. The Proposer reports dam construction is performed throughout the year, including during the winter, which eliminated the need for storage of excess coarse tailings in the upland portion of the tailings basin site as originally envisioned in the 1975 Draft EIS.

105. Petition 2 states that comments from USEPA on the USACE Section 404 Permit application (October 2018) cite an 845-acre expansion that extends beyond the boundaries of the 1977 USACE Final EIS footprint.

Petition 2 at 7.

106. The USEPA correspondence offered the comment that the federal EIS evaluated a "planned 5,000-acre footprint for the tailings basin." *See USEPA Letter at 2*. The 5,000-acre value provided by USEPA corresponds to the amount of habitat that would be removed by development of the Mile Post 7 Facility. See Sections 4.050 and 4.111 of the federal EIS. *See 1977 USACE Final EIS at 60, 76.* These are the only references to a specific area of project-related development in the federal EIS. This translates to approximately 7.8 square miles of affected area, which is similar to the estimated area of 7.6 square miles of project impacts analyzed in the 1975-76 EIS. *See* ¶ 74. Because USEPA did not identify how the previous iteration of the proposed tailings basin progression extended beyond the EIS study boundary, it is impossible to determine from this statement alone that the tailings basin has expanded beyond the study area of evaluated in either EIS. All data available to DNR indicates that there is no expansion of the proposed tailings basin. *See* ¶¶ 61-101. As provided in ¶ 108, the USACE Section 404 EA identifies at total Facility area covering approximately 3,700 acres, which includes the estimated 845 acres cited by the Petitioners at a final dam height of 1,315 feet amsl. The material evidence provided in the Petition does not support the allegation that the tailings basin would be expanded. In addition, the estimated area of impact assessed in both the state and federal EISs was essentially the same by this account, differing by approximately 0.2 square miles of potentially impacted area.

107. Petition 2 states that the public notice for MPCA's Section 401 Certification (October 2020) indicates the "Proposed Project" would expand the tailings basin to 3,700 acres, which represents an expansion of 900 acres from the currently permitted basin of 2,800 acres.

    Petition 2 at 8.

108. Documentation for both the USACE Section 404 – Clean Water Act Permit Public Notice of July 2020 (2020 Section 404 Permit) and the MPCA Section 401 Certification identify a final project configuration covering 3,700 acres. The Proposer reports this is based on the following breakout of existing and proposed Tailings Basin Facility features: the footprint of Existing Dam 1 (252 acres); the footprint of Existing Dam 2 (122 acres); the footprint of Existing Dam 5 (17 acres); the footprint of proposed West Ridge Railroad Embankment, including the Dam 2 Extension (158 acres); the footprint of proposed Dam 1 Rail Switchback (8 acres); the footprint of proposed Dam 1 Extension (72 acres); and the footprint of internal area within existing dams and proposed West Ridge Railroad, including landfill (3,061 acres). This amounts to 3,690 acres, which was rounded up to 3,700 acres in the decision documents. As provided in ¶ 116, there are differences in the jurisdictional regulation of wetland impacts across the DNR, MPCA, and USACE for compensatory mitigation requirements. The 3,700-acre project area defined for the USACE Section 404 Permit and Section 401 Certification reflects these differences. However, for purposes of determining whether there has been an expansion of the tailings basin within the context of Minn. R. 4410.4300, subp. 11B, the DNR must look to whether the tailings basin itself has expanded by 320 or more acres. As set forth in paragraphs ¶¶ 65 through 84, the actual size of the tailings basin itself, and the volume of tails it would hold at end of its operational life, has remained constant since the 1970s. The "Proposed Project" does not alter the size of the tailings basin and, therefore does not result in an expansion of the Mile Post 7 tailings basin pursuant to Minn. R. 4410.4300, subp. 11B.

109. Both Petitions allege that at no time did the USACE 1977 Final EIS contemplate any expansion of the wet slurry tailings basin beyond the boundary of the current railroad track. The Petitions further assert that the coarse tailings storage area was removed from the project based on comments from the USEPA. The Petitions continue by indicating no EIS analyzed the environmental effects of a wet tailings basin in the location and of the size contemplated by the proposed expansion.

Petition 1 at 7. Petition 2 at 10.

110. The Petitioners are incorrect. As detailed in ¶¶ 69 to 71, the 1975-76 Final EIS and USACE 1977 Final EIS assessed potential project impacts from tailings deposition up to a final dam elevation of 1,315 feet amsl. Neither the 1975-76 Final EIS nor the 1977 USACE Final EIS assessed fine tailings deposition above the 1,315 foot amsl contour. Likewise, the actual acreage of the tailings basin has remained constant at the originally permitted, however updated, estimate of 2,800 acres. *See* ¶¶ 78-79**.** The issue of the projected tailings progression over the life of the tailings basin is addressed in Sections 3.4.2.2 and 4.3.1.2 of the DNR June 2021 ER Need Determination. Because the "Proposed Project" does not involve fine tailings deposition above 1,305 feet amsl, which accounts for ten feet of freeboard at the final dam height of 1,315 feet amsl, there is no expansion of the tailings basin within the meaning of Minn. R. 4410.4300, subp. 11B.

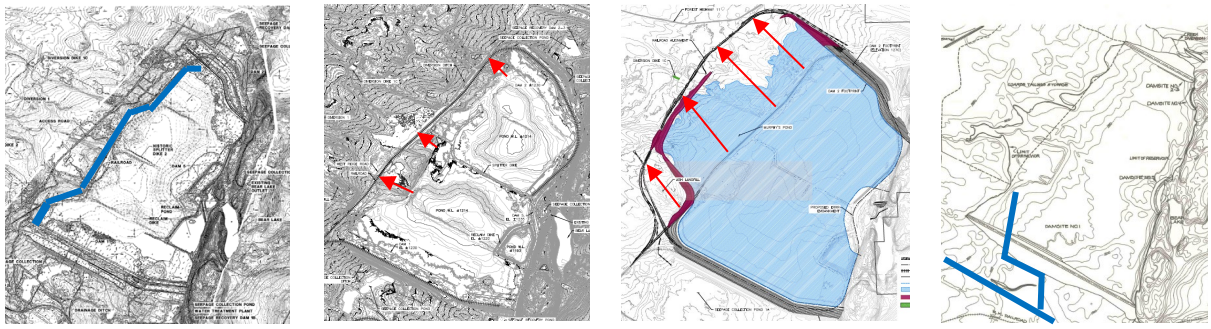
111. Regarding the relationship of fine tailings deposition and the location of the material supply railroad, the 1975-76 Final EIS provided that the coarse tails required for dam construction would be delivered to the Mile Post 7 site by means of a spur rail line from Reserve Mining's existing mining railroad. This was shown in the 1975 Draft EIS in Figure 16, which is detailed in the DNR June 2021 ER Need Determination at Attachment 5 – Possible Railroad Spur. *See (complete) DNR June 2021 ER Need Determination at PDF 85*. Although no location was specified for this spur line in the 1975-76 Final EIS, an estimated 5.5 miles of new railroad construction was necessary to connect the existing Reserve Railroad line at Mile Post 6.5 to the future operations at Mile Post 7. It was generally understood this spur line would move over time to accommodate the changing construction areas for the dams and as the basin filled with tailings. That is to say the spur line is little more than a convenience for the transportation of building materials to the tailings basin dam sites as the basin evolved. *Id. at 24*.

112. Whereas the 1975 Draft EIS only referenced a general "possible railroad spur" off the existing Reserve Railroad to convey the dam construction materials across the tailings basin site, the 1977 USACE Final EIS addressed the future materials supply railroad in detail at Sections 1.056 to 1.060, and in "Exhibit 31 – Construction Railway General Alignment." Railroad components were expected to evolve over time and included the: spur railroad; initial railroad; intermediate railroad(s); and the ultimate railroad, where subsequent components were to be relocated upgradient along the western side the tailings basin over time. *See 1977 USACE Final EIS at 13-14, A-36*. This rail line was, in fact, constructed and was moved over time to its present alignment as the West Ridge Railroad. Northshore now proposes to relocate the West Ridge Railroad under the "Proposed Project" to its final alignment, an alignment that is depicted as the "ultimate railroad" on Exhibit 31. *Id. at A-36.* The greater detail in the 1977 USACE Final EIS reinforces the understanding of this site feature at the time of the 1975-76 Final EIS as well as the understanding that this rail line was intended to move over time.

113. Once construction materials were delivered to the Mile Post 7 site by the spur line, they had to be transported to the sites of the individual Mile Post 7 confinement dams. As anticipated in the 1977 USACE Final EIS and discussed in ¶ 111, Reserve Mining built the West Ridge Railroad that traversed the basin to convey construction materials to the Dams 2 and 5 sites. It was generally understood that the location of the construction materials delivery rail line would change over time as all the dams grew larger and the basin filled with tailings. For example, tailings were first placed on the eastern portion of the basin. At that time the West Ridge Railroad traversed the basin along the western side of the initial tailings deposition area. As the original area of tailings deposition advanced upgradient and westward, in 2005 the West Ridge Railroad was moved approximately 1000-2000 feet west from its original alignment to its current location at an elevation of ~1,240 feet amsl. The figures below depict the shifting position of the West Ridge Railroad over time.

Shifting Position of West Ridge Railroad Over Operational Period

Original RR Line	RR Line Relocation #1	RR Line Relocation #2	Potential RR Spur
Circa 1985 to 2005	2005 to Present	Present Going Forward	1975-76 EIS w/Spur



Importantly, this line was never intended to define the volume of the tailings basin because it is not an impoundment structure, nor was it ever permitted as an impoundment structure. The permitted dams are the impoundment structures. *See DNR June 2021 ER Need Determination at 17-18.*

114. Both the original location of the West Ridge Railroad (circa 1985-2005) and its current location (2005 to present) are well below the 1,315 foot amsl elevation of the Mile Post 7 tailings dams. However, to convey construction materials across the basin to the dam sites, it is necessary that the West Ridge Railroad's elevation be above the area designated for fine tailings placement. The "Proposed Project" relocates the West Ridge Railroad approximately 4000 feet further to the west, above the maximum dam height elevation of 1,315 feet amsl from the current elevation of ~1,240 feet amsl, so that it can continue to be used to convey construction materials to the dam sites as the remaining capacity of the basin is filled. Other than serving as a means of supplying dam construction materials across the basin to the impoundment dam sites, there is no relationship between the shifting location of West Ridge Railroad over time and the tailings deposition area assessed in the 1975-76 Final EIS, and subsequently approved in the 1977 Master Permit and 1985

Permit to Mine. Because the West Ridge Railroad is merely a construction conveyance mechanism and was never studied or permitted as one of the basin's impoundment structures, the reclamation and overtopping (with tails) of the current rail line and its relocation under the "Proposed Project" cannot form the basis of an expansion of the tailings basin within the meaning of Minn. R. 4410.4300, subp. 11B. *Id*.

115. Both Petitions allege that the "Proposed Project" will impact approximately 309 acres of wetlands as a result of the relocation of the West Ridge Railroad. Of these 309 acres, approximately 264 acres of wetlands and deepwaters (i.e., deeper wetland formed when Little Thirtynine Creek was blocked by the original relocated railway construction) would be impacted while another 45 acres would be impacted from watershed alteration. These impacts are taken from the MPCA's Section 401 Certification.

    Petition 1 at 8. Petition 2 at 25.

116. The Petitions cite, in support of this allegation, wetland impacts identified in the MPCA Section 401 Certification. As detailed in the USACE Section 404 EA, potential impacts from the "Proposed Project" are subject to the authority of the USACE Section 404 Permit, DNR Lands and Minerals (Wetland Conservation Act (WCA)), and MPCA Section 401 Certification. The USACE Section 404 EA specifically notes "there are discrepancies between aquatic resource impacts and the amount of compensatory mitigation required from each regulatory entity (USACE, DNR, MPCA) because they each have jurisdictional authorities over different aquatic resources on the site. This means the acreage estimates of wetland impacts vary across the three jurisdictions, where in this instance the Petitions cite only the MPCA's estimate under its Section 401 Certification authority. *See USACE Section 404 EA at 5*.

117. The MPCA Section 401 Certification: specifies the location of the "Proposed Project;" quantifies direct and indirect impacts to Waters of the State associated with the "Proposed Project;" and identifies necessary mitigation. Based on the MPCA's review of supporting documentation, the MPCA determined there is reasonable assurance that if the "Proposed Project" complies with the requirements of the Wetland Replacement Plan (June 2018), the Response to Denial Without Prejudice (June 2020), the Antidegradation Assessment (June 2020), and the Stream Mitigation Plan (August 2020), then the actions under the "Proposed Project" "will be conducted in a manner that will not violate applicable water standards." *See MPCA Section 401 Certification (June 29, 2021) at 2*. These constitute the conditions of the MPCA Section 401 Certification ensuring potential water quality impacts to wetlands and deepwaters from the "Proposed Project" have been addressed and/or mitigated.

118. The 1975 Draft EIS was scoped to and did consider how construction of a tailings basin would change the surface character of the Mile Post 7 site, including "marshes." Tailings deposition was projected to cover or fill 800 acres of existing wetlands. New wet areas were expected to be created from ponds forming over some areas that were previously wet and subsequently filled with tailings. The 1975 Draft EIS concluded that filling these wetland or marshes would result in a permanent impact affecting the underlying hydrology of the basin and the watershed in the vicinity of the basin. The document specifically notes the impact on the ability of the hydrologic system in the vicinity of the Mile Post 7 site to convey or store runoff. The 1975 Draft EIS also indicated that

when the Mile Post 7 tailings basin is closed, there would be some degree of mitigation for lost wetlands if a permanent settling pond was left onsite. *See 1975 Draft EIS at 222, 224-225*. The issue of potential wetland impacts is also addressed in Section 4.3.2.1 of the DNR June 2021 ER Need Determination.

119. Wetland impacts associated with the "Proposed Project," both direct and indirect due to fill-related actions, have also been evaluated by DNR over time in accordance with the requirements of WCA. Minn. Stat. §§ 103G.221 and 103G.222. WCA, which was adopted in 1991, requires the permit to mine reclamation plan to contain a wetland replacement plan approved by the DNR. Minn. Stat. § 103G.222, subd. 1(a). Mitigation for both direct and indirect wetland impacts are a requirement of said wetland replacement plan if impacts cannot be avoided or minimized. *Id. at subd.1(b)*.

120. Minnesota Rule 8420.0930, subp. 3A, requires that those mining operations that were in existence prior to July 1, 1993, and for which wetland impacts were approved but which were not initiated prior to 1993, must include approved wetland replacement plans for the undisturbed wetlands in either the mining operations' "operating plan or annual report as required in the permit to mine." Because the Mile Post 7 1985 Permit to Mine was issued prior to 1991, and because construction of the Mile Post 7 tailings basin as permitted in 1985 Permit to Mine authorized the impact to approximately 800 acres of "marshes," the owners and operators of Mile Post 7 were required to include Wetland Replacement Plans in either their operating plan or their annual report as new wetland areas were proposed to be impacted. *See DNR June 2021 ER Need Determination at 28*.

121. The first occasion to apply the mitigation requirements of WCA to Mile Post 7 occurred in May 2005 with submittal of a wetland replacement plan (2005 Wetland Replacement Plan). The 2005 Wetland Replacement Plan requested approval of the impact of 20 acres of wetlands in association with the continued development of the tailings basin. *See 2005 Wetland Replacement Plan at 1*. A USACE permit issued on August 12, 2005, (2005-2628-TWP), which authorized the filling of 20 acres of wetlands. DNR approved the 2005 Wetland Replacement Plan on August 31, 2005, which identified that permit conditions listed in the USACE approval would meet the requirements of WCA. *See DNR 2005 WRP Approval at 1*. Subsequent to both the USACE and DNR approvals, on June 6, 2006, the USACE authored a letter clarifying that all areas within the tailings basin dikes up to an elevation of 1,252 feet, which is essentially just below the elevation of the wetlands approved for impact in 2005, had been permitted by various USACE permits prior to issuance of the aforementioned permit 2005-2628-TWP. The letter also indicated that appropriate compensatory mitigation had been provided for under federal requirements. *See USACE Clarification Permit 2005-2628-TWP at 1. Also* s*ee DNR June 2021 ER Need Determination at 28*.

122. In April 2019 in accordance with the requirements of Minn. R. 8420.0930, subp. 3A, the Proposer prepared and submitted to DNR a Wetland Replacement Plan ("2019 Wetland Replacement Plan") for the "Proposed Project" in accordance with their 2019 operating plan. The wetland impacts identified in the 2019 Wetland Replacement Plan were based on a Wetland Delineation Report submitted to DNR and the USACE in October 2015. As part of its ongoing regulatory oversight over wetlands impacted by mining operations, the DNR reviewed and approved the 2019 Wetland Replacement Plan in May 2019. *See 2019 Wetland Replacement Plan Approval at 1-2.* The 2019 Wetland Replacement Plan addresses all wetlands impacted by the "Proposed Project." *Id*.

123. The 2019 Wetland Replacement Plan identified 42 wetlands within the project area that met WCA jurisdictional requirements. Potential impacts to those features were assessed based upon: the type of impact; the duration of impact; the area of the wetland impacted; whether the impacts were direct or resulted in the fragmentation of a wetland; the potential indirect impacts; the wetland classification; and the overall wetland quality. *See 2019 Wetland Replacement Plan at Table 3a.* Special considerations were given to: protected plant and wildlife resources; unique vegetation communities; special fish and wildlife resources; archaeological, historical, and cultural resources; groundwater sensitivity; sensitive surface waters; education or research use; waste disposal sites; and consistency with other comprehensive regional plans. *Id. at 18-20*.

124. The 2019 Wetland Replacement Plan identified that a total of ~264 acres of direct and indirect wetland impacts are subject to WCA because of the proposed dam extensions, relocation of the materials supply railroad, and progressing tailings up to 1,305 feet amsl. *Id*. Assuming the EIS's estimation that 800 acres of marsh would be filled if all of the capacity of the Mile Post 7 tailings basin were used, 536 acres of the original 800 acres of marsh or "wetland" identified as potentially affected wetlands have been impacted by the Mile Post 7 Facility to date.

125. Based WCA's jurisdictional requirements set forth in the Permit to Mine, the 2019 Wetland Replacement Plan identified a total of 228.30 acres of directly impacted wetlands subject to mitigation. The following wetland plant community types would be impacted by the project: hardwood swamp; shallow marsh; alder thicket; coniferous swamp; sedge meadow; and fresh (wet) meadow. *Id. at Table 2a*.

126. The 2019 Wetland Replacement Plan identified an additional 35.97 acres of potential indirect wetland and stream impacts due to blockage of the natural discharge routes by the placement of the dam extensions and/or relocated West Ridge Railroad. Most of these wetlands are likely to be converted to deepwater habitats or other wetland communities over an extended time period. *Id*.

127. As specified in ¶ 119, mitigation must be specified for direct and indirect wetland impacts caused by the "Proposed Project." The use of replacement as mitigation for wetland impacts can only be approved by the DNR if Northshore has demonstrated in its wetland replacement plan that it cannot avoid or minimize both direct and indirect impacts. Minn. Stat. § 103G.222, subd. 1(b). As further discussed in the 2019 Wetland Replacement Plan, the wetland impacts identified therein cannot be avoided or minimized unless the remaining capacity of the Mile Post 7 tailings basin remains unused. To do so would require finding a new tailings basin to store the remaining tails from the ore mined from the Peter Mitchell Mine, which would have significantly greater environmental impacts than using the remaining capacity of the Mile Post 7 tailings basin. DNR determined the Proposer demonstrated impact avoidance and minimization as required and as addressed through conditions of the 2019 WCA decision. *See 2019 Wetland Replacement Plan Approval at 2*. Because these impacts cannot be fully avoided or minimized, replacement is the appropriate method for mitigating wetland impacts associated with the "Proposed Project." Replacement for both the direct and indirect project impacts are required for 264.27 acres of impacted wetlands. The 2019 Wetland Replacement Plan specifies that wetland credits will be purchased to mitigate these impacts at a 1:1 ratio from the Lake Superior Wetland Bank Account #1609, which is in the same Bank Service Area (#1) as the "Proposed Project's" wetland impacts. *Id*.

128. Additionally, the MPCA Section 401 Certification, as identified in ¶¶ 108, 117, and 271, contains specific mitigation measures that must be undertaken to protect the water quality in the vicinity of the "Proposed Project." These measures include: best management practices (BMPs); stream water chemistry monitoring; stream mitigation sites; wetland monitoring; data quality requirements (i.e., quality assurance); reporting; adaptive management requirements to address environmental conditions as they arise during construction and operation; compensatory mitigation; and standard conditions. The MPCA concluded that meeting these conditions provides reasonable protections of wetland water quality during pendency of the "Proposed Project." *See MPCA Section 401 Certification (June 29, 2021) at 2-9*.

129. In determining whether to prepare an EAW, the DNR must consider the "extent to which the environmental effects are subject to mitigation by ongoing regulatory authority . . . that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project." Minn. R. 4410.1700, subp. 7C. Thus, the rule requires more than simply identifying the number of wetlands that may be impacted but requires that the proposer demonstrate that the wetland impacts are subject to adequate mitigation. The material evidence provided with the Petitions does not demonstrate that the "Proposed Project," due to its nature and location, may have the potential to cause significant wetland impacts that are not adequately mitigated by the ongoing regulatory authority identified in ¶¶ 115 through 127. In fact, the potential wetland impacts are subject to regulatory controls that are reasonably expected to mitigate for the wetland impacts and are reasonably certain to occur because they are a condition of: the existing Permit to Mine for Mile Post 7; the associated WCA conditions set for in the 2019 Wetland Replacement Plan; the MPCA 401 Water Quality Certification; the NPDES Storm Water Construction Permit for the Project; and USACE Section 404 Permit.

130. The material evidence provided with the Petitions does not demonstrate that the "Proposed Project," due to its nature and location, may have the potential to cause significant wetland impacts within the meaning of Minn. R. 4410.1700, subp. 7C.

131. Both Petitions allege the "Proposed Project" would directly impact 5,150 feet of Big Thirtynine Creek and 3,420 feet of Little Thirtynine Creek. Petition 1 also alleges the potential significant effects of the West Ridge Railroad relocation on water resources were not studied in the 1975-76 Final EIS or 1977 USACE Final EIS and have the potential for significant environmental effects.

Petition 1 at 3, 8. Petition 2 at 25.

132. The MPCA-approved Section 401 Certification, which is a requirement of the USACE Section 404 Permit, found that the "Proposed Project" would directly impact 5,150 feet of the remnants of Big Thirtynine Creek and 3,420 feet of Little Thirtynine Creek. These impacts will be caused by direct fill and impoundment associated with the Dam 1 extension, relocation of the West Ridge Railroad, and the deposition of tailings in the remaining portion of the Mile Post 7 tailings basin. Mitigation of these impacts included restoration of: 1) 5,700 feet of Little Thirtynine Creek; 2) 1,700 feet of the Big Thirtynine Diversion site; 3) 3,000 feet of the East Branch Beaver River and Culvert Replacement site; 4) 4,855 feet of the East Branch Tributaries sit; 5) 2,766 feet of the Berm

Removal site; and 6) 3,501 feet of the White Rock Creek site. *See MPCA Section 401 Certification at 1-2*.

133. According to the 1975 Draft EIS approximately 7 miles of Big Thirtynine Creek, and 2.7 miles of Little Thirtynine Creek, existed within the boundary of the proposed tailings basin. According to the 1975 Draft EIS, the "tailings basin [would] occupy 7.6 square miles and eliminate approximately 9.7 miles of streams," which would result in reduced capacity of the drainage basin to carry waters downstream thus reducing downstream flows. These changes in flow regimes caused by the diversions would result in varying reductions of in river miles and an associated loss of fishing habitat. *1975 Draft EIS at 231*.

134. The 1975 Draft EIS identified construction of six primary stream diversions associated with the development of the Mile Post 7 site, three of which would "reduce the amount of water entering the [tailings] basin to a manageable level, two as part of the seepage collection facilities, and one to permit construction of starter dam no. 1." *Id. at 45*. Stream Diversions 1 and 2 would to be constructed first. Both diversions required construction of dikes to stop stream flow, and channels to reroute the stream flow. Diversion 1 would divert Little Thirtynine Creek to Big Thirtynine Creek, while Diversion 2 would divert Big Thirtynine Creek to the Beaver River. The 1975 Draft EIS considered impacts to water resources and found that rerouting streams would "physically preserve the streams but will not create desirable aquatic habitat in the new channel," and may alter stream temperature. *Id. at 229*.

135. The 1975 Draft EIS also found that Diversions 1 and 2, if implemented, would divert 22.6 square miles of the 31.3 square miles of stream flow in the Big and Little Thirtynine Creeks watershed, which is a sub-watershed of the Beaver River watershed. It was estimated that 23 cubic feet of water per second would be diverted or lost from the watershed. *Id. at 47*. The diversions would also eliminate one waterfall. *Id. at 220*.

136. Sections 4.053 through 4.063 of the 1977 USACE Final EIS also considered how construction and operation of the Mile Post 7 tailings basin would impact aquatic habitats within the Beaver River Watershed. *See 1977 USACE Final EIS at 61-62*. Although not as detailed as the 1975-76 Final EIS, the anticipated impacts to water resources were consistent across the two EISs, especially in terms of the changes to Big and Little Thirtynine Creeks resulting from construction of Diversions 1 and 2.

137. The 1977 Master Permit Section VII.D, "Diversion Dikes and Channels – Surface Water Diversions 1 and 2," authorized construction of Diversions 1 and 2. The purpose of the diversions was to prevent surface runoff and flows from entering the tailings basin. Both diversions were required to be designed for controlling the probable maximum precipitation event. Diversion 1 would connect Little Thirtynine Creek with Big Thirtynine Creek. Diversion 2 would connect Big Thirtynine Creek with the Beaver River. *See 1977 Master Permit at 18*.

138. Diversion Channels 1 and 2, and Diversion Dikes 1 and 2, were constructed in 1978. Diversion 1 was 6,400 feet long and Diversion 2 was 2,420 feet long. Both diversions have been routinely inspected and maintained since being constructed. Similarly, flows in the two reaches of Big Thirtynine Creek and Little Thirtynine Creeks south of the diversions have been restricted since

the original construction of Diversions 1 and 2. This means all watershed-scale impacts resulting from constructing the diversions, and subsequent impacts to the streams from reduced flows, have been in place since 1978.

139. The two reaches of Little Thirtynine and Big Thirtynine Creeks remaining on site are remnant watercourses of the approximately 7 miles of Big Thirtynine Creek, and 2.7 miles of Little Thirtynine Creek, assessed in the 1975-76 Final EIS. *See* ¶¶ 137-138 (discussing the construction work undertaken pursuant to the 1977 Master Permit to divert both creeks). These remnant watercourses are currently described as long, linear riverine basins for purposes of WCA jurisdiction. The flows in these remnants are greatly reduced from the pre-construction flows of Little Thirtynine and Big Thirtynine Creeks. In fact, there are stretches of these remnants with no discernable flow. Both remnant stream channels are subject to beaver activity and there are numerous beaver impoundments within each stream segment. The Index of Biological Integrity (IBI) for fish and macroinvertebrates has scored these remnants as "not functioning." *See Northshore Mining Stream Mitigation Plan at Appendix A at 6-7*.

140. The approved 2019 Wetland Replacement Plan, which satisfies the requirements under WCA and the USACE Section 404 Permit, identifies three types of impacts to the two stream remnants, portions of which have become wetlands ("remnant wetlands") that would be affected by the "Proposed Project." These are impacts resulting from the proposed blockage of the stream remnants, physical placement of the railroad and dam, and final progression of tailings; there is regulatory overlap with the MPCA Section 401 Certification for these impacts as provided at ¶¶ 116-117. The blockage or impoundment impacts are considered indirect and have the potential to convert the remnant wetlands to other wetland types or deepwater habitat. The latter two types of impacts are direct impacts because the stream remnants will be filled either for construction activities or covered by tails, thus eliminating any wetland functions or values. The total area that will be filled and/or impounded and that is subject to Section 404 jurisdiction is estimated to be 2.53 acres. *See 2019 Wetland Replacement Plan at Table 2b at PDF 36*.

141. Based on the analysis set forth in ¶¶ 132-140, the material evidence provided with the Petitions together with materials available to the agency does not demonstrate that the "Proposed Project," due to its nature and location, may have the potential to cause significant impacts to stream resources.

142. Petition 2 alleges that regardless of whether the proposed relocation of the West Ridge Railroad is a prelude to a further basin expansion, the potential significant effects have never been studied in environmental review. The Petition further cites the new railroad embankment serving as a dam allowing tailings to be deposited to an elevation of 1,365 feet amsl.

Petition 2 at 25.

143. The Petitioners are incorrect. As set forth in ¶ 47a, the "Proposed Project" does not include increasing the final dam height by 50 feet to 1,365 feet amsl. However, the West Ridge Railroad in its original and present location traversed the interior of the basin below the 1,315 foot amsl final dam elevation established in the late 1970s by the 1975-76 Final EIS, 1977 USACE Final EIS, and the 1977 Master Permit. Because the elevation of the West Ridge Railroad must be above

the 1,315 foot amsl contour to avoid inundation with tailings under the "Proposed Project," an estimated 51.5 acres of new railroad bed footprint would occur from placement of the relocated West Ridge Railroad. As set forth in ¶ 96, the EIS study areas included all but approximately 30 acres of the projected footprint under the "Proposed Project," with the area occurring outside the EIS study area located at the Dam 2 extension. *See Section 2.6 of DNR June 2020 ER Need Determination at 7*.

144. In fact, the 1975-76 Final EIS did assess this issue. The document provides that the coarse tails required for dam construction would be delivered to the Mile Post 7 site using Reserve Mining's existing mining railroad. The 1975-76 Final EIS identified a railroad spur running from Reserve Mining's existing railroad to the future Mile Post 7 site ("Mile Post 7 Spur") but did not identify a specific corridor to move materials from the Mile Post 7 Spur across the tailings basin to the dam construction site other than to depict a possible railroad spur on 1975 Draft EIS Figure 16. *See 1975 Draft EIS at 42*. The 1975-76 Final EIS estimated the Mile Post 7 Spur corridor would involve clearing 0.08 square miles of clearing representing the *de facto* area of direct impact for this project feature. Although no location was specified for the Mile Post 7 Spur or the West Ridge Railroad corridor in the 1975-76 Final EIS, an estimated 5.5 miles of new railroad construction would be necessary to connect the existing Reserve Railroad line at Mile Post 6.5 to the future Mile Post 7 and dam construction sites within the future basin. *Id. at 24*.

145. As set forth in ¶ 112, the 1977 USACE Final EIS addressed the future materials supply railroad in more detail than the 1975-76 Final EIS at Sections 1.056 to 1.060, and in "Exhibit 31 – Construction Railway General Alignment." *See 1977 USACE Final EIS at 13-14, A-36*. Railroad components were expected to evolve over time, ending with the ultimate railroad relocated upgradient along the western side the tailings basin when the 1,315 foot amsl final dam height contour was reached. The "Proposed Project" is analogous to the ultimate railroad envisioned in the 1977 USACE Final EIS.

146. Once Mile Post 7 was permitted, Reserve Mining operationalized the conveyance of dam construction materials from the site boundary to the dam building locations for Dams 2 and 5 within the Mile Post 7 site by constructing the West Ridge Railroad. Preparing the West Ridge Railroad corridor for construction was like preparing the dam sites for construction. This entailed clearing the corridor, preparing the site, placing coarse, compacted tailings to elevate the corridor, all of which was followed by the placement of wood crossties and metal rails to serve as the rail line. This is the same method that would be used to relocate the West Ridge Railroad under the "Proposed Project."

147. Although the construction and operational aspects of the dams and West Ridge Railroad are similar, construction activities associated with dams were ongoing because the dams were built incrementally as tailings were brought to the site. As noted in ¶ 113, unlike the dams the West Ridge Railroad was not designed as a permanent feature but would move over time so the dam construction materials could reach the dams as needed. In 2005 it was necessary to move the West Ridge Railroad approximately 1000-2000 feet west from its original alignment to its current alignment. This was because as tailings deposition advanced westward and upgradient, tailings would eventually overtop and cover the original alignment. This relocation was undertaken in

accordance with all then existing regulatory controls governing the Mile Post 7 tailings basin. *See Section 3.4.2.3 of the DNR June 2021 ER Need Determination at 17-18*.

148. Petitioner makes the claim addressed in ¶ 143 even though the 51.5 acres of new footprint would be of essentially the same extent associated with the previous iterations of the West Ridge Railroad. This was confirmed by data from the Proposer. The Proposer provided estimates of the West Ridge Railroad's geographic footprint over time in terms of the length, width, and area covered by the West Ridge Railroad corridor. The West Ridge Railroad corridor as originally constructed covered 28.5 acres, was 16,310 feet long, and exhibited an average embankment width of 77 feet. The current corridor, which was established in 2005, covers 30.8 acres, is 16,600 feet long, and has an average embankment width of 80 feet. The proposed new corridor would cover 51.5 acres, would be 21,950 feet long, and would have an average embankment width of 102 feet. These changes in acreage, length, width that occur each time the corridor is moved is a function of local topography and the necessary engineering.

149. The West Ridge Railroad in its original, present, and future location all traverse the interior of the basin evaluated in the 1975-76 Final EIS and approved in the 1977 Master Permit. The footprint of the proposed West Bank Railroad relocation represents 51.5 acres of new impacts within the tailings basin footprint where all of the historic documents anticipated that the resources at issue in the Petition would be lost because they would be covered by fine (or coarse) tails. The 1975-76 Final EIS analyzed those impacts. The claim made by the Petitioners seems to be that the activities associated with relocating the West Ridge Railroad differ from the types of activities from rail line placement provided at ¶¶ 110-113 and permitted by the 1977 Master Permit. Petitioners makes this claim notwithstanding the fact that the 1975-76 Final EIS analyzed the environmental impacts of rail line placement expected in this location, and the 1977 Master Permit and the 1985 Permit to Mine both permitted this activity in this location.

150. As discussed in ¶ 146, the relocation of the West Ridge Railroad under the "Proposed Project" is expected to have impacts the same or like those as identified in the 1975-76 Final EIS due to dam construction and tailings placement, but at a much reduced physical and temporal scale relative to dam construction activity, some of which would be reversed once reclamation requirements under the Permit to Mine are implemented. See also ¶¶ 47a and 47b. Similarly, the impacts should be identical to those discussed for this project feature in the 1977 USACE Final EIS at ¶ 112. Finally, Petitioners fail to note the 1975 Draft EIS evaluated storage of coarse tails at this location that assumes degradation of essentially all environmental assets present in this area. *See 1975 Draft EIS at 45*. In addition, the impacts associated with the estimated 50.5 acres of new footprint under the "Proposed Project" would be subject to the provisions of the Permit to Mine Amendment and Master Permit. The material evidence provided with the Petition together with the information available to the DNR does not demonstrate that the "Proposed Project," due to its nature and location, may have the potential to cause significant impacts that are not adequately mitigated by the ongoing regulatory authority identified in ¶¶ 42-44 and 147.

151. Both Petitions allege that stream impacts alone may require an EAW. In particular, the Petitioners believe that the "Proposed Project" will affect portions of Big Thirtynine and Little Thirtynine Creeks that are designated trout streams. The diversion, realignment, or channelization of any

designated trout steam requires preparation of a mandatory EAW pursuant to Minn. R. 4410.4300, subp. 26.

Petition 1 at 8. Petition 2 at 25.

152. It is true at one time prior to construction of the Mile Post 7 basin that there were designated trout streams within the area allocated for tailings deposition. *See 1975 Draft EIS at 141*. In the late 1970s, however, in accordance with the 1977 Master Permit, water was diverted from the natural stream channels of Big Thirtynine and Little Thirtynine Creeks to reduce surface water flows into the basin from their upper watersheds. The upper reaches of both creeks were then diverted to the Beaver River. This diversion disconnected the historic upper reaches of both creeks from their lower reaches leaving remnant segments of both creeks within and below the tailings basin. *Id. at 45, 249*. These diversions were studied in the 1975 Draft EIS as provided in ¶¶ 133-134. After the diversion both historic stream channels were removed from the list of designated trout streams and the new diversion channel was designated as a trout stream. Thus, the remnants of both of Little Thirtynine and Big Thirtynine Creeks located below the diversion are no longer designated trout streams and have not been a designated trout streams for many years. The diversion channels ("Diversion 1 and Diversion 2") now designated as trout streams were designed and constructed as mitigation for the project impacts associated with disconnecting the natural stream channels of Big Thirtynine and Little Thirtynine Creeks from their upper watershed. Therefore the "Proposed Project" does not result in a "diversion, realignment, or channelization" of a designated trout stream. Nor does the "Proposed Project" impact the Diversions 1 and 2 channels (part of the current designated trout stream).

153. As provided in ¶ 152, the remnant portions of Little Thirtynine and Big Thirtynine Creeks affected by the "Proposed Project" are not trout streams designated by the commissioner and, therefore, are not subject to environmental review pursuant to Minn. R. 4410.4300, subp. 26.

154. Both Petitions allege the "Proposed Project" will affect greater than 500 feet of natural watercourse with a total drainage area of ten or more square miles, whose diversion, realignment, or channelization requires preparation of a mandatory EAW pursuant to Minn. R. 4410.4300, subp. 26.

Petition 1 at 8. Petition 2 at 25.

155. The remnant portions of Little Thirtynine and Big Thirtynine Creeks affected by the "Proposed Project" do not have a total drainage area of ten or more square miles. As provided in ¶ 152, construction of Dikes 1 and 2 in the late 1970s isolated these remnant streams from their original upper watersheds at that time. All runoff contributions since the 1970s for these stream remnants originate from the immediately adjacent sub-watersheds, which is less than two square miles thus disqualifying designation of these remnant streams as protected waters. This is significantly less than ten square miles. Thus, impacts to these remnant sections of Little Thirtynine and Big Thirtynine Creeks by the "Proposed Project" do not require the preparation of a mandatory EAW pursuant to Minn. R. 4410.4300, subp. 26.

156. Both Petitions allege the "Proposed Project's" impacts to streams and wetlands, with "attendant effects on water quality, aquatic life, and wildlife," have the potential for significant environmental effects. This issue is addressed in Section 4.3.2.1 of the DNR June 2021 ER Need Determination.

Petition 1 at 8. Petition 2 at 26.

157. The 1975 Draft EIS assessment of the impacts of project-related dam construction and operation (i.e., Dams 1 and 2), and the construction and operation of the tailings basin, and stream diversions, included, but was not limited to, the analysis of the following environmental effects: diversion of runoff; filling streams, marshes, and lakes used for conveyance and storage of runoff within the watershed; removal of vegetation; turbidity and changes in pH in downstream waters; loss of aquatic habitat and biota; alteration of terrestrial habitat and biota; air quality impacts; and noise. *See 1975 Draft EIS at 221-225, 227-228, 229-231, 233, 257-258, and 259-262.*

158. The impacts to wetlands, aquatic life, and water quality impacts caused by the construction and operation of the entire Mile Post 7 tailings basin including the area covered by the "Proposed Project" were studied in the 1975-76 Final EIS. The Petitioner has not alleged that said analysis was insufficient or that the impacts to these resources associated with completing the work at the basin are somehow different than those analyzed in the 1975-76 Final EIS. Rather, the Petitioners would have the agency treat the "Proposed Project" as something separate and apart from the Mile Post 7 Facility analyzed in the 1975-76 Final EIS. But in fact, the potential significant impacts of the "Proposed Project" are merely a subset of the full set of impacts studied in 1975-76 Final EIS and 1977 USACE Final EIS when the impacts of the complete Mile Post 7 Facility were analyzed. As discussed in ¶¶ 152 and 155, construction of Dikes 1 and 2 in the late 1970s substantially severed the upstream contributing watershed from its lower reaches and resulted in subsequent reductions in flow and diminishment of instream habitat quality as provided at ¶ 138. As provided in ¶ 132 through 140, not only were these impacts anticipated and evaluated in the original 1975-76 Final FEIS and 1977 USACE Final EIS, but subsequent permitting including the approved 2019 Wetland Replacement Plan, USACE Section 404 Permit, MPCA Section 401 Certification, and MPCA NPDES/SDS Permit No. MN0055301, in part address these historic impacts and fully anticipate and control potential adverse impacts to wetland and stream resources in the present, including the requirement of specific mitigation measures for both site features. This mitigation also addresses potential impacts to aquatic life and wildlife associated with this part of the Miles Post 7 tailings basin.

159. Petition 1 *sets forth* as evidence supporting the need for an EAW a report prepared by Dr. Steve H. Emerman to explain the potential adverse effects related to dam safety and dam failure that Petitioners claim have not been evaluated by DNR. The report recommends that no action be taken on the "Proposed Project" without, at a minimum, a new Environmental Impact Statement.

Petition 1 at 9.

160. Minnesota Rules part 4410.4400, subp. 8b, requires the preparation of a mandatory EIS for construction of a new facility for mining metallic minerals or for the disposal of tailings from a metallic mine.

161. As provided in ¶ 47, the "Proposed Project" does not involve the construction of a new disposal facility for tailings from metallic mining. Rather, the "Proposed Project" is a stage of the Mile Post 7 tailings basin construction, and ongoing tailings progression and management, that was fully considered and studied in the 1975-76 Final EIS. The "Proposed Project" does not, therefore, require the preparation of a mandatory EIS.

162. Minnesota Rules part 4410.2000, subp. 3A, directs an 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."

163. The citizen petition process at Minn. R. 4410.1100, which is the basis of this Record of Decision, is not a comment within an EAW comment period and cannot form the basis for preparing a discretionary EIS within the meaning of Minn. R. 4410.2000, subp. 3A. Nor have the RGU and the Proposer agreed that the preparation of an Environmental Impact Statement is necessary for the "Proposed Project."

164. As part of its review of the "Proposed Project," however, the DNR did conduct a previous analysis to determine whether the existing 1975-76 Final EIS for the Mile Post 7 Facility, which includes aspects of the "Proposed Project," should be supplemented. *See DNR June 2021 Need Determination at 19-65.* In that analysis the DNR did consider the issue of dam safety and determined that "[c]onsidering the Proposed Project in terms of dam safety, there is no substantial new information or new circumstances that significantly affect the potential environmental effects of the Project that have not been considered in the 1975-76 Final EIS." *Id. at 33*. This determination was not noticed in the *EQB Monitor* but was made available to the Petitioners and not appealed (by the same Petitioners).

165. Both Petitions raise concerns regarding the risk of dam failure associated with upstream dam construction at Mile Post 7. The Petitioners allege that the 1976 and 1977 EISs required that the Mile Post 7 tailings basin dams use downstream, rather than upstream, construction because the downstream method avoids placement of dam construction materials on previously deposited fine materials and slimes, which would be unsuitable as a base for the dam.

    Petition 1 at 9. Petition 2 at 18.

166. Dam Safety was an issue of significant concern during the 1975-76 Final EIS process, especially at the EIS Administrative Hearing. At the close of the hearing, the Administrative Law Judge concluded that construction of the Mile Post 7 dams should be done using the downstream method of construction. *See 1975-76 Final EIS at 16*. Because EISs are not a project approval document, the 1975-76 Final EIS did not "require" the dams at Mile Post 7 to use the downstream construction method as alleged. Rather, the 1975-76 Final EIS considered a project proposing to use the downstream method for dam construction. Each of the three principal methods of dam construction, which are downstream, upstream, and centerline, offers its own mix of pros and cons across several engineering and design factors, including but not limited to safety, relative stability,

and construction material requirements. *See Tailings Dam Definitions Derived from Internet Research – Dam Safety Program at 1*.

167. Construction of the Mile Post 7 dams commenced in 1977-78 after issuance of the 1977 Master Permit, which in this unique circumstance is the regulatory mechanism governing dam construction at Mile Post 7. *See* ¶ 27. Initial construction of both Dams 1 and 2 began in 1978, with starter dam construction that included a clay seepage cutoff blanket. Over the period 1980 to 1986, Dam 1 was constructed using the downstream method while Dam 2 was constructed using the centerline construction method. Over the period 1986-1990, there was no dam construction because operations ceased as Reserve Mining entered bankruptcy. *See ¶ 19o, Email from Proposer's Representative*. Beginning in 1990, dam building restarted under the 1998 Closure Consensus Plan using wide beaches to shrink the pond volume and establish a foundation for revegetation measures. Plant aggregate was placed approximately 1,400 feet upstream of the dams over beaches to minimize dust. Fine tailings were discharged upstream to create approximately 300-foot-wide beaches. *Id*. As provided in ¶¶ 172 and 173, dam construction methods underwent further change circa 1997 before stabilizing in 2003 to the modified centerline or offset upstream method for Dams 1 and 2.

168. Regarding the "Proposed Project," the proposed extensions of Dams 1 and 2 would be undertaken using the centerline construction method, which is not the same as the upstream method. As provided in ¶ 47a, the "Proposed Project" does not rely on the upstream method of dam construction for the extensions of Dams 1 and 2.

169. Both Petitions allege that in 1995 the Proposer requested use of the "upstream method" for future dam raises and that both the DNR and MPCA approved this method of construction in 1997. They allege that DNR cited economic downturns and lack of inexpensive construction materials as the basis for this change.

Petition 1 at 9-10. Petition 2 at 19.

170. The Petitions are incorrect. The change in construction method that occurred in 1997 to the upstream construction method was not due to the need for inexpensive construction materials nor was it driven by "economic downturns." It was driven by the need to: 1) satisfy the conditions of the 1988 Consensus Closure Plan coming out of Reserve Mining's bankruptcy; 2) create fine tailings beaches above water; 3) provide sufficient tailings storage while ensuring sufficient freeboard to prevent overtopping of the dams; and 4) manage the production of the dam building materials. *See 1995 Operations Plan for Milepost 7 Tailings Basin (November 28, 1995) at 18-21*.

171. The issue of sufficient building materials referenced by the Petitioners was an early concern with the Facility due to reduced production at Reserve Mining's Peter Mitchel Mine and associated Silver Bay processing facility. These concerns arose well before the modifications to the dam design. Poor economic conditions in the steel market during the late 1970s and early 1980s meant a reduced need for processed taconite ore, which in turn meant reduced production of fine and coarse tailings being managed at Mile Post 7. Water in the tailings basin pond was accumulating faster than the dams could be constructed, so the addition of a water treatment plant and regulated

surface water discharge system was implemented to remove water accumulating in the tailings basin. *See Section 4.3.2.6.2 of the DNR June 2021 ER Need Determination at 44*. The availability of sufficient dam construction materials, however, did come into play again in 2003, when the Proposer determined there was potential lack of sufficient plant aggregate (i.e., coarse tailings) necessary to complete the required dam construction in that year and potentially years beyond. To address the issue, the dam construction method was switched away from the upstream method to the offset upstream or modified centerline dam construction method, which has been used for Dams 1 and 2 since 2003. *See Stability Evaluation of Dams 1, 2, and 5 Report (July 2009) at 1*.

172. Dam construction methods prior to 2003 received limited consideration in DNR's June 2021 ER Need Determination because the offset upstream or modified centerline method has been employed for almost 20 years. As provided in ¶ 170, the Proposer documented in the 1995-1998 Five Year Operation Plan that a change was needed in the original dam construction method for Dams 1 and 2 to accommodate the need to create exposed beaches of fine tailings under the 1988 Tailings Basin Closure Consensus Plan. Creation of these beaches, which were then to be covered with coarse tailings to facilitate growth of vegetation in reclamation, represented a departure from the originally permitted concepts. This closure goal had to be balanced with the need to maintain sufficient freeboard to contain the probable maximum flood to prevent overtopping of the tailings dams. *See 1995 Operations Plan for Milepost 7 Tailings Basin at 18-21*. The Proposer believed balancing these objectives could be accomplished by switching from the downstream to the upstream method, which was approved by DNR and MPCA in 1997.

173. Although the downstream and centerline methods were originally used for dam construction, upstream construction methods were implemented in the late 1990s once the new ownership decided to restart operations. As provided in ¶ 171, circa 2003, the Proposer again shifted the method of construction from the upstream to modified centerline or offset upstream method that has been used since that time. The current method optimizes the use of the centerline and upstream methods to reduce the volume of construction material placed in the downstream slope of the embankment. *See Figure 3; 2004-2008 Five Year Operations Plan at 39*. Under this method, a filter berm is constructed approximately 800 feet upstream of the starter dam and tailings are discharged upstream, thus creating a beach. The area downstream from the filter berm is constructed with plant aggregate placed directly overlying the fine tailings pursuant to the 1988 Consensus Closure Plan. There are fine tailings extending from near the old dam crest extending into the basin that were placed prior to 2003. *See 2019-2023 Five Year Operation Plan at 40*. In short, the upstream construction method was used for a limited time but has not been employed for Dams 1 and 2 at Mile Post 7 since 2003 and is not proposed to be used up to the final dam elevation of 1,315 feet amsl. *See Figure 4 of 2019-2023 Five Year Operation Plan at PDF 45.* The "Proposed Project" will not use the modified centerline or offset upstream methods currently employed for Dams 1 and 2 but will employ the centerline construction method for the extensions of Dams 1 and 2. This means that the new levels of the raises on the dam extensions are built on top of tailings as well as the existing embankment.

174. Petition 2 alleges that "Proposed Project" was not studied in either the state or federal EIS, which studied the effects of a downstream dam. This dam design was changed in 1997, and that change was not subjected to environmental review.

Petition 2 at 14.

175. In addition to the more detailed discussion of dam construction outlined in ¶¶ 169 through 173, it should be noted that the original 1976 design required all fine tailings to be submerged to control airborne fibers. This could be done either by the downstream or centerline method of dam construction depending on the dam. *See 1994 Five Year Operating Plan at 4*. When Reserve Mining went bankrupt, it initiated tailings basin closure procedures under the 1988 Consensus Closure Plan. This allowed for exposed beaches of fine tailings to be formed to eventually provide a surface for revegetation. *Id.* Fine tailings beach formation started in 1990 from Dams 1 and 2 out into the basin (away from the dams), with coarse tailing placed over the beaches to control dusting potential and provide access for spigotting. *See 1997 Five Year Operating Plan at 4*. *See 1997 Five Year Operation Plan/Master Permit Renewal at 1*. The closure plan was abandoned when a buyer for Reserve Mining came forward and restarted operations. The advantage of the work taken in closure meant that the upstream construction method could be considered and eventually used for dam construction. *See 1994 Five Year Operating Plan at 5*.

176. Although the method of dam construction has varied since the EISs and initial permitting, the impacts associated with dam construction and tailings basin operation have not changed from those assessed in 1976 and 1977. In terms of dam safety, the analysis for seepage from and stability of each dam is based on actual field conditions, regular inspections, and regular monitoring reporting. This analysis is independent of dam construction type. Based upon the regulatory reporting requirements in place since 1977, the modeled stability outcomes for the jurisdictional dams at Mile Post 7 have been maintained with a suitable Factor of Safety against failure in conformance with industry standards. As provided in ¶ 27, DNR currently conducts annual site visits and Proposer prepares an Annual Report for the Mile Post 7 dams. The most recent DNR dam safety inspection results indicate the dams are well maintained and are in good condition. There are no major dam safety issues with the present dams at Mile Post 7. Furthermore, DNR's review of the most recent round of geotechnical evaluations of Dams 1 and 2 indicate that both dams are robust with Factors of Safety well above recommended levels.

177. Both Petitions allege that even with the changes since 2003, the existing dams are simply upstream dams that are especially vulnerable to failure by either seismic liquefaction or static liquefaction because the dams are built on top of uncompacted tailings. The Petitioners claim there is a high risk of failure for upstream dams, and an increased risk of failure as dam height increases. Petition 2 notes that where upstream dams have failed, the failure has often had catastrophic effects. It further notes that Brazil, Chile, Peru, and Ecuador have banned construction of upstream dams.

Petition 1 at 10. Petition 2 at 19-20.

178. The assertion made in the Petitions that the dams are "simply upstream dams" is incorrect. Since 2003, Dams 1 and 2 were constructed using the modified centerline or offset upstream method on a lift of fine tailings that are upstream of the starter dam. Because Dams 1 and 2 were constructed on fine tailings, they would not meet the classical definition of downstream or centerline construction. However, because they have been placed significantly upstream and constructed vertically like a centerline dam, they would also not meet the classical definition of an upstream dam. Therefore, the engineering practice that most accurately characterizes this type of dam

construction is the "offset upstream" or "modified centerline" method, which is neither centerline nor upstream in practice. This is not changing under the "Proposed Project" as it pertains to those portions of Dams 1 and 2 constructed to date. The proposed extensions of Dams 1 and 2 however would use the centerline method. See ¶ 47a.

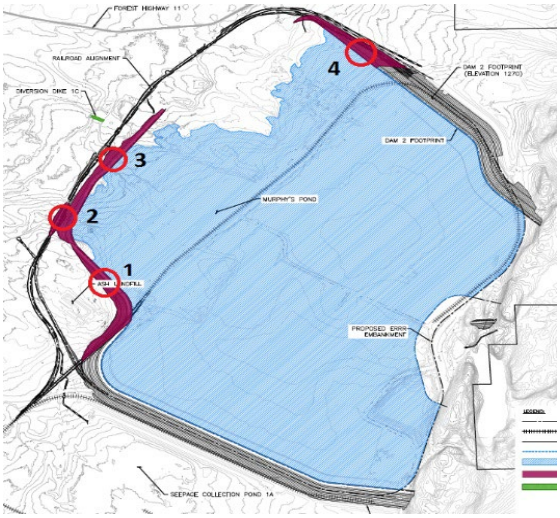
179. The Petitions allege that the Mile Post 7 Dams are susceptible to either seismic liquefaction or static liquefaction as has occurred with other dams. As new information becomes available regarding dam failures in other countries such as Canada and Brazil, DNR has evaluated this data and used it to reassess the stability of the dams at Mile Post 7. This is not a new endeavor; the DNR has been undertaking this ongoing analysis since the 1975-76 Final EIS and issuance of the 1977 Master Permit, including its analysis of the methods of construction, calculated Factors of Safety, and the now most recently the likely geotechnical stability of the proposed extensions. Factors of Safety are consistently assessed at the Mile Post 7 dams under various scenarios using both an Effective Stress Stability Analysis, or ESSA, and an Undrained Strength Stability Analysis, or USSA. These test scenarios include various iterations around block failure, fine tailings yield strength, and liquefied strength. Analysis for seepage and stability are based on the actual field conditions and are independent of dam construction type. DNR accepts the following values for minimum Factors of Safety: ESSA = 1.50; USSA = 1.30; and liquefied = 1.10. Tables 3, 4, and 5 of the 2019-2023 Five Year Operation Plan provide the Computed Factors of Safety for Various Scenarios for all three dams at Mile Post 7. *See 2019-2023 Five Year Operation Plan at 19-26*. The current Factors of Safety for the Mile Post 7 dams exceed the DNR minimum values.

180. The Proposer will use the centerline method for the Dam 1 and 2 extensions as provided in ¶ 47a. All available evidence indicates that the existing dams exceed minimum Factors of Safety. The dam extensions under the "Proposed Project," which are true extensions to the current structures but operating at a substantially reduced scale, are not expected to compromise the greater Factors of Safety of either Dam 1 or Dam 2. To better understand the proposed dam extensions, DNR sought additional project details from the Proposer, including preliminary cross-sections and dam heights at four (4) select locations (three sites for Dam 1 and 1 site for Dam 2). The proposed height at the select locations of the Dam 1 extension will be 30 feet, 60 feet, and 30 feet respectively. The proposed height at the select location of Dam 2 will be 20 feet. *See Section 4.3.2.2.2 of the DNR June 2021 ER Need Determination at 32-33*. These locations are provided in the image below.

DNR June 2021 ER Need Determination

Dam Heights at Select Locations

1 = 30 feet 2 = 60 feet 3 = 30 feet 4 = 20 feet



See DNR June 2021 ER Need Determination at 33.

For comparative purposes, the maximum permitted heights of Dam 1 and Dam 2 are ~180 feet and ~150 feet respectively (at a final dam elevation of 1,315 feet amsl), which is significantly higher than the dam extensions under the "Proposed Project." *See 1975-76 Final EIS at 8.*

181. Both Petitions allege the Factors of Safety at the reclaim dike increase the risk of dam failure, including the possibility that failure of the dike could cause the collapse of Dams 1, 2, and 5 due to overtopping and erosion or liquefaction.

Petition 1 at 10-11. Petition 2 at 22-24.

182. Seepage and stability analysis for the reclaim cell, but not the perimeter dam, are found in Section 4.7.2.4 of the 2019-2023 Five Year Operation Plan. The Factors of Safety for the reclaim pond are for a shallow, upstream failure in the undrained condition. The Proposer's consultant's analysis, who is a qualified structural engineer, is based on available observational data and is included in the 2019-2023 Five Year Operation Plan along with the calculated Factors of Safety. The plan includes measures to improve the Factors of Safety. *See 2019-2023 Five Year Operation Plan at 23-26.* DNR concurs with the Proposer's consultant conclusion that this does not pose a global stability concern. Maintenance measures are also regularly undertaken, such as filling the remaining deep portions of the reclaim pond cell, to ensure safety factors are achieved.

183. Additionally, fear that a release from the reclaim pond would cause Dams 1, 2, or 5 to overtop is speculative and in fact an impossibility. This is because the reclaim pond is lower than the rest of the tailings basin. And while localized liquefaction of the tailings is possible, liquefaction of Dams 1 and 2 (and 5) is highly unlikely. This is because the Factor of Safety values of 1.35 and 1.75 for

liquefaction respectively for Dams 1 and 2 are substantially higher than the minimum value of 1.10 for both dams. This means that even if there should be a liquefaction-associated event at the reclaim pond, a breach of the main dams would be unlikely. The proposed extensions of Dams 1 and 2 under the "Proposed Project" do not alter this analysis because demonstration of appropriate Factors of Safety is an ongoing process over the life of the dam(s), taking into consideration several factors such as regular stability analysis, data from inspections, and ongoing Factors of Safety modeling and updates. It is not a one-time analysis.[9]

184. Both Petitions observed that a dam inspection conducted in 2019 identified malfunctioning piezometers at Dams 1, 2, and the reclaim dikes, including action item recommendations.

Petition 1 at 11. Petition 2 at 24-25.

185. During the 2021 DNR Dam Safety Inspection, several piezometers, mostly at Dam 1, were being replaced while staff were onsite. The Proposer provided an updated status of the instrumentation. *See Northshore Status of Equipment Update (December 2, 2021)*. The updated status for the piezometers shows 14 piezometers as "abandoned or replaced," and 4 piezometers "in process," out of 18 total items cited in the report. For the other items that involve actions around maintenance, instrumentation, or repairs, 13 are identified as "complete or ongoing," 3 are identified as "in progress," with 2 having a mixed status, out of a total of 18 items cited in the report. *Id*. Thus, all malfunctioning piezometers have been or were being addressed.

186. The "Proposed Project's" final design would have a monitoring plan, including installation of new instrumentation, as a continuation of the requirements already in place for the tailings basin dams constructed and operated to date.

187. Petition 1 states that although the currently proposed final dam height of 1,315 feet amsl should not impact the coal ash landfill, a rise of the dam even 15 feet higher would put the coal ash landfill at risk in the event of dam failure. The Petition goes on to state that if the final dam elevation of 1,365 feet amsl were pursued, the failure of a dam taller than the coal ash landfill could result in a cascade of environmental catastrophes in which potentially toxic coal ash is enveloped into a tailings flood. This issue is addressed in Sections 4.3.1.1.2 and 4.3.2.7 of the DNR June 2021 ER Need Determination.

Petition 1 at 15.

188. The "Proposed Project" has not requested any increase in the permitted final dam height above 1,315 feet amsl. See ¶ 47a. Therefore, there is no direct risk to the coal ash landfill associated with the "Proposed Project" as alleged. To assume otherwise would be mere speculation. Speculation cannot form the basis for environmental review. *Iron Rangers for Responsible Ridge Action v. IRRB,* 531 N.W. 2d 874, 881-82 (Minn. Ct. App. 1995), *review denied* (Minn. July 8, 1995).

[9] The reclaim dike is not regulated by the DNR Dam Safety Program because the failure of this dike would not result in the failure of the perimeter dams. This aspect of the tailings management site is regulated by the DNR Permit to Mine.

189. This concern is speculative. The Proposer reports even if Dam 1 were not extended the tailings pond would not reach the ash landfill because the tailings pond is constrained by the 1,305 foot amsl contour. It would, however, come within proximity to the toe of the landfill pad. By extending Dam 1 around the landfill, it is possible to prevent any potential saturation of the landfill perimeter toe, thus ensuring the stability of the landfill pad as sited. Additionally, access needs to be maintained to the leachate building to allow tanker trucks to load and haul leachate for disposal. For these reasons, it is necessary to maintain a separation of the tailings pond from the ash landfill and its associated infrastructure. This is reflected in the configuration of the Dam 1 extension in the vicinity of the ash landfill.

    Furthermore, according to data provided by the Proposer, the lowest point of the landfill liner is at 1,321 feet amsl, and because the extension of Dam 1 would be constructed with a maximum dam height of 1,315 feet amsl, this makes the maximum elevation of the tailings pond itself 16 feet lower than the lowest point of the landfill liner. Therefore, inundation of the landfill by the tailings pond is not possible.

190. Petition 1 claims a tailings basin failure rate of 1 in 600 per year was calculated by the Mount Polley Review Panel.[10] Similarly, the system failure probability approaches 1.0 after several hundred years, or 100%.

    Petition 1 at 12.

191. The Petition has taken the statistic out of context. What the Review Panel actually found was: "in the 46-year period since 1969, there was a total of 4,095 years of active [tailings basin] operation and 7 failures, where failure is considered to be breach of the dam resulting in release of tailings and/or water. This corresponds to a failure frequency of 1.7×10^{-3} per dam per year. In other words, statistically there is approximately a 1-in-600 chance of a tailings dam failure in any given year, based on historical performance over the period of record." Independent Expert Engineering Investigation and Review Panel, *Report on Mount Polley Tailings Storage Facility Breach, at 116* (Jan. 30, 2015) ("*Mount Polley Technical Report*"). Of particular note this analysis did not break down the rate of failure based on the methodology of tailings dam construction. Nor does this statistic take into consideration site-specific conditions that contribute to dam failure including the frequency of inspection, seismic activity in the area, embankment slopes, or the topographical location of the basin, all of which are potential factors in dam failure. Those factors are discussed later in the "Mount Polley Technical Report." *See* ¶ 192.

192. The use of this general statistic does not represent the complexity of different types of dams and site-specific conditions. The Mile Post 7 dams do not fit into a neat category. First, they are constructed in an area of very low seismicity, which presents a significantly lower risk of liquefaction and dam failure. This is because earthquakes create ground motion that can trigger liquefaction of contractive materials; thus, areas of low seismicity have less risk of an earthquake and so present a lower risk of liquefaction and dam failure. Second, the dams exhibit a broad beach with embankment slopes at 6H:1V, which means the water surface is significantly far away

[10] Mount Polley refers to a breach of one of three contiguous embankments of the Mount Polly tailings storage facility located in British Columbia, Canada. The breach occurred on August 4, 2014.

from the dam crest, which reduces the phreatic surface and internal pore pressure within the dam. Third, embankment slopes of 6H:1V are quite gentle where a gentler slope is more stable than a steeper slope, other factors being equal. Fourth, the Mile Post 7 dams include a starter dam that functions as a toe drain, which is beneficial because a granular embankment toe provides strength and stability and lowers the phreatic surface in the toe. Therefore, it is inappropriate to compare Mile Post 7 to other dams with different site conditions, for example dams constructed in high seismic zones with steep slopes and narrow valleys.

This is illustrated by the analysis and conclusions of the Mount Polley Review Panel, which found that the dam design alone was not the cause of Mount Polley Dam failure cited in Petition 1. Major contributing factors included steep embankment slopes and a design that did not properly account for a foundation layer. *See January 30, 2015, Report on Mount Polley Tailings Storage Facility Breach at ES-4* and *Mount Polley Technical Report, at iv and 136 - 138*. In the case of the failure of the Brumahindo Dam also cited in both Petitions, factors contributing to its failure include steep slopes, a short beach leading to the deposition of weak tailings near the crest, and a high-water level within the dam. *See Report of the Expert Panel on the Technical Causes of the Failure of Feijao Dam I, December 12, 2019*. Two contributing failure factors common to both Mount Polley and Brumahindo are the steep slopes and the short beach length between the pond and the dam. Neither of these contributing factors exist at Mile Post 7. In short, the conditions at the sites of the most recent tailings dams are not comparable to the site conditions at Mile Post 7. This issue is addressed in Section 4.3.3.3.C of the *DNR June 2021 ER Need Determination at 63.*

193. Any time a dam is constructed at any location there is a risk of dam failure. Because of that risk DNR has extensive protocols around dam inspection, maintenance, design safety, operations. *See e.g.* Minn. R. 6115.0300 *et seq.* These protocols are incorporated into the Master Permit requirements at Mile Post 7. *See* ¶ 27.

194. The risk of dam failure was a significant part of the EIS analysis in selecting a site for Reserve Mining's tailings basin.[11] *See 1975-76 Final EIS at 12-13, 26-27, and 41-42.* Because of the potential catastrophic impacts of a dam failure at Mile Post 7, Dams 1, 2, and 5 are subjected to extensive ongoing annual inspection and risk analysis. The stability of the Mile Post 7 dams is reviewed every five years as part of the DNR's Five Year Operation Plan approval process. The conditions would be applied to any dam extension at Mile Post 7 and would include the "Proposed Project's" dam extensions. As part of this Permit to Mine Amendment, the Proposer would be required to demonstrate in the facility design report that Dams 1 and 2 as modified would continue to meet stability requirements. There is no substantial change in actual construction measures proposed with the extensions of Dams 1 and 2. The Proposer would continue to use the offset upstream or modified centerline method to build all of the main dams but would employ the

[11] Prior to the selection of the Mile Post 7 tailings basin, Reserve Mining's tailings from the processing of ore from the Peter Mitchell Mine were dumped directly into Lake Superior. This practice and the selection of the Mile Post 7 site as the tailing's basin site for Reserve Mining's tails from the processed ore extracted from the Peter Mitchel Pit was the subject of extensive litigation and analysis. *See generally, Reserve mining Co. V. United States,* 498 F.2d 1073 (8th. Cir. 1974)(enjoining Reserve Mining from disposing tails into Lake Superior) and *Reserve mining v. Herbst,* 256 N.W. 2d 808 (Minn. 1977)(laying out the history of the selection of a disposal site for tailings from ore mined from the Peter Mitchell pit and processed in Silver Bay, Minn. and ordering the state to issue permits for the construction of a tailings basin at Mile Post 7.)

centerline method for the proposed extensions of Dams 1 and 2. All available evidence indicates the existing dams at Mile Post 7 are exceeding minimum Factors of Safety, and it would be speculative to assume that the proposed extensions of Dams 1 and 2 would not meet the required Factors of Safety. It is also speculative to assume that using the remaining permitted capacity of the basin for the deposition of tailings within the basin would compromise the safety of the dams at Mile Post 7, including the extensions thereto.

195. Both Petitions observed that the 1975-76 Final EIS found that a dam breach would have significant adverse environmental effects on the Beaver River and Lake Superior. The effects from dam failure include toxic inundation of downstream waters, and affecting water quality, aquatic life, wildlife and the health and safety of human communities. Petition 2 cited Brumahindo tailings dam failure in Brazil, and a tailings basin breach in Spain, as examples of the significant adverse effects that can result from a dam failure. This issue is addressed in Section 4.3.2.2 of the DNR June 2021 ER Need Determination.

    Petition 1 at 12. Petition 2 at 21.

196. The 1975-76 Final EIS identified the significant adverse environmental effects of a dam breach at Mile Post 7. In fact, this analysis was undertaken for all alternatives that were under serious consideration at the time the EIS was prepared. *See 1975-76 Final EIS at 12-13.*

    The Minnesota Environmental Policy Act (MEPA) requires that adverse impacts be analyzed. For example, Minn. Stat. § 116D.04 required that "[w]hen a project has the potential for significant environmental effects . . . such action shall be preceded by a detailed statement prepared by the responsible governmental unit detailing "the environmental impact of the proposed action," "any direct or indirect adverse environmental, economic, and employment *effects* that *cannot be avoided should the proposal be* implemented," "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented" and applicable government controls. Laws of Minnesota 197 1973, chapter 412, Sec. 4 (codified as Minn. Stat. §116D.04)(emphasis in the original).[12] The fact that the significant adverse environmental effects of dam construction included the alteration of the area in which tailings would be stored, including tailings progression to maximum capacity of the basin, were all studied prior to permitting and commencement of construction at Mile Post 7 does not mean that they need to be restudied now that the Mile Post 7 basin is reaching its permitted capacity.

197. The dams at Mile Post 7 are classified and have always been classified as High Hazard or Class 1 dams. A Class 1 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. This classification would not change if the "Proposed Project" were implemented, nor would the natural resource and environmental

[12] Minnesota Statute §116D.04 was amended in 1980 to repeal subdivision 1(requiring the preparation of environmental impact statements and 2 (requiring the adoption of rules). The requirement to prepare environmental impact statements was recodified in subdivision 2a. Laws of Minnesota 1980, chapter 447, section 1.

impacts from a breach of either Dam 1 or Dam 2 or their extensions change under the "Proposed Project."

198. The Factors of Safety applied and assessed at the Mile Post 7 dams are industry standards that are used by engineers (including dam engineers), dam owners, and regulators as one means to quantify dam safety. Factor of Safety is a means in engineering to capture how much greater the resisting capacity of a structure or component is relative to an assumed load. In other words, how much stronger is a system than it needs to be? In considering slope stability, the Factor of Safety is the ratio of shear resistance to driving force along a potential failure plane. A Factor of Safety greater than 1.0 indicates the available shear strength to resist failure is greater than the driving force that could initiate failure. Minimum Factors of Safety are the minimum required/acceptable ratio of the strength to the applied load.

    The Factors of Safety for Dams 1, 2, and 5 were consistently and regularly assessed at Mile Post 7. The stability assessments include various scenarios for Effective Stress Stability Analysis, or ESSA, and Undrained Strength Stability Analysis, or USSA. These scenarios include various iterations around block failure, fine tailings yield strength, and liquefied strength. DNR accepts the following values for minimum Factors of Safety: ESSA = 1.50; USSA = 1.30; and liquefied = 1.10. Tables 3, 4, and 5 of the 2019-2023 Five Year Operation Plan provide the Computed Factors of Safety for Various Scenarios for Dams 1, 2, and 5 respectively. The current Factors of Safety for the Mile Post 7 dams exceed the DNR minimum values. *See 2019-2023 Five Year Operation Plan at 19-26*. DNR's review of the most recent round of geotechnical evaluations of Dams 1 and 2 indicate that both dams are robust with Factors of Safety well above recommended levels. It is reasonable to expect similar assessments under the "Proposed Project."

199. As the Technical Panel observed in the *Mount Polley Technical Report,* the technical guidelines alone cannot presume that the designer will act correctly in every case, and the guidelines and criteria must be tailored to the site conditions and coupled by prescriptive requirements for site investigations. *See Mount Polley Technical Report at 133*. This is what is done at Mile Post 7. Because the dams at Mile Post 7 are Class 1 dams, they are monitored daily by the basin engineer and other employees working on the dam. A qualified engineering firm is required to perform a dam safety inspection in the spring of each year. Additionally, the qualified engineering firm is required to undertake a thorough detailed inspection conducted over several days in October of each year. The purpose of the annual inspection is to review the performance and condition of the dams. The information is compiled in an Annual Report. This inspection includes a thorough analysis of the monitoring data system.

200. Both Petitions allege the 1975-76 Final EIS did not assess the portion of the tailings basin that will now receive tailings upon completion of the Dam 1 and Dam 2 extensions.

    Petition 1 at 13. Petition 2 at 10.

201. The allegation is incorrect. As provided in ¶¶ 68-71, 74-79, 86, 101-103, the environmental impacts associated with the tailings progressing westward in the remaining 650-acre portion of the tailings basin that would occur at a final dam height of 1,315 feet amsl were evaluated in both the 1975-76 Final EIS and 1977 USACE Final EIS. Furthermore, the impacts of the final 650 acres

of tailings progression would be the same as occurred for the estimated 2,150 acres covered by tailings to date. The Petitions have not alleged that the 1975-76 Final EIS is insufficient. Rather the Petitions treat the completion of the Mile Post 7 basin as if it were a new project not previously subjected to environmental review and not previously permitted in the hopes of remaking a decision made some 40 years ago after extensive litigation, study, and permitting. It is not the purpose of environmental review to revisit a decision made decades ago, and then only after extensive litigation, analysis, and permitting, where in this case the determination that was made occurred when Reserve Mining was directed by court order to cease tailings disposal into Lake Superior and to find an on-land disposal facility. This issue is addressed in Section 3.4.1.2 of the DNR June 2021 ER Need Determination.

202. The 1975-76 Final EIS envisioned and evaluated the entire tailings basin including that portion of the tailings basin which the Petitions claim is a new project. The area proposed to receive fine tailings over the operational life of the Mile Post 7 tailing basin evaluated in the 1975-76 Final EIS is provided in ¶ 201. The 1975 Draft EIS assessed tailings deposition up to a final dam height of 1,280 feet amsl. The 1975-76 Final EIS assessed tailings deposition 30 feet higher or at a final dam height of 1,310 feet amsl. The "Proposed Project" is the work necessary to permit the Proposer to use the remaining capacity of the tailings basin studied in 1975 through 1976 and permitted in the 1977 Master Permit at a final dam height of 1,315 feet amsl. *See* ¶¶ 69 through 71 (discussing the modifications in dam height made between the 1975 Draft EIS, the 1975-76 Final EIS, and the 1977 Master Permit).

203. Both Petitions claim the 1975-76 Final EIS disapproved or recommended against construction of any tailings basin at Mile Post 7, and indicated the risk of dam failure would continue into perpetuity, is not a suitable location for tailings disposal, and would be contrary to law. Therefore, expanding the tailings basin now would intensify the catastrophic effects of a dam collapse, which would be intensified by the addition of massive amounts of tailings to the basin.

    Petition 1 at 13. Petition 2 at 13.

204. As more fully discussed in ¶¶ 205 through 207, these claims are not only incorrect, but these claims ignore the fact that the Minnesota Supreme Court found the administrative hearing officer's determination, and the agencies subsequent reliance on it, to be unsupported by substantial evidence in the record. Several alternative sites were identified for the Reserve Mining Tailings Basin including the Mile Post 7 site. *See Section 4.3.3.1 of DNR June 2021 ER Need Determination at 57*. The environmental impact of locating a tailings basin at each site was analyzed. And while it is true that the 1975-76 Final EIS did not select the Mile Post 7 site as the preferred alternative, and that both DNR and the MPCA preferred the Midway site over Mile Post 7 site, it is a gross mischaracterization of the facts and the long and tortured history that led to the selection and permitting of Mile Post 7 to allege that the selection and permitting of the Mile Post 7 site is contrary to law.

205. Upon completion of the 1975-76 EIS, both the DNR and the MPCA accepted the administrative hearing officer's recommendation that a permit should be denied for Mile Post 7 and that the preferred location was the Midway location or Mile post 20. *Reserve Mining Co. v. Herbst,* 256

N.W. 2d 808, 812 (Minn. 1977). The agencies, therefore, declined to issue Reserve Mining a permit for the Mile Post 7 site. *Id*.

206. Reserve Mining appealed the agencies' decision to a three-judge panel of the Minnesota District Court of Lake County.[13] *Id. at* 7. The district court reviewed the administrative record, received additional evidence, and found that the agencies decision to reject the Mile Post 7 site was neither lawful nor reasonable. In issuing its opinion the district court prefaced its opinion "by alluding to the hearing officer's 'concern with imaginary of speculative possibilities,' suggesting that the agencies became 'preoccupied with remote contingencies.'" *Id*. at 819. Regarding the issue of dam safety and the potential for dam failure at Mile Post 7, the district court found that:

> "[T]he agencies' findings and conclusions were based "not only on unsubstantial evidence but on almost no evidence at all." All of the consulting firms retained by the agencies had concluded that the proposed dams would be safe, but the hearing officer required a showing of 'absolute' safety, a standard which the trial court rejected. . . . Since the PCA had the power and authority to monitor and oversee the construction and maintenance of the dam at Mile Post 7, the court was of the opinion that the health, safety, and welfare of the people would be secure." *Id. at 819-820.*

The district court concluded, after a detailed analysis of the administrative hearing and the evidence presented to the three-judge panel, that the denial of the permits for Mile Post 7 was unlawful, unreasonable, and not supported by substantial evidence. *Id. at 822.*

207. The Minnesota Supreme Court accepted review of the *Reserve* case and the USEPA joined the proceedings as an amicus. In taking the case, the Court agreed to undertake an independent examination of the administrative agency's record and decision and evidence received by the trial court. It also recognized that the decision of administrative agencies to select Mile Post 20 over Mile Post 7 enjoyed a presumption of correctness. *Id. at 824-26* (discussing the requirement that an agency's decision must be supported by substantial evidence and a reasoned analysis). The court then proceeded to analyze the proposed dams at the tailings basin. The court observed that the hearing officer did not express any engineering problem with the dam design that would increase the likelihood of failure beyond that of "any such structure which is well located and well built." Rather in selecting Mile Post 20 as the preferred site, the hearing officer simply concluded that it might be prudent to locate the basin further away from Lake Superior and residences. *Id. at 829*. Likewise, both the MPCA and the DNR had conceded that "if the dams are built according to design and if all unexpected contingencies are properly met the dams cannot fail." *Id.* Nor, the court found, had any expert for any of the parties found the Mile Post 7 dams as designed would be unsafe. *Id.* The court acknowledged that Reserve Mining had an issue with candor in the past but concluded that the agencies had the ability to impose conditions in the permits to guarantee on-going monitoring and supervision. *Id. at 830.* After analyzing dam safety, air quality issues, and impacts on natural resources, the Minnesota Supreme Court held that the DNR and MPCA must issue Reserve permits for the construction at Mile Post 7 because their decision to deny a

[13] Prior to 2011 all environmental review challenges were brought to the Minnesota District Courts. After 2011 all environmental review challenges were venued in the Minnesota Court of Appeals. Laws of Minnesota 2011, chapter 4, section 8

permit for Mile Post 7 was not supported by substantial evidence in support of a finding that Mile Post 20 was less hazardous to public health than Mile Post 7. *Id*. at 846. In short, the decision to permit Mile Post 7 was not contrary to law nor was it found to be unsafe, thus it cannot be presumed that the extension of Dams 1 and 2 would be a continuation of an unlawful act that was previously determined to be unsafe.

208. Both Petitions allege the 1977 USACE Final EIS allowed or assessed a Mile Post 7 tailings basin comprised of a wet tailings basin and dry storage of coarse tailings. The Petitions further claim that the expansion area west of the existing rail line was never studied as a tailings basin site, and was rejected as a location for coarse tailings storage because of USEPA comments. This issue is addressed in Section 4.3.2.3.2 of the DNR June 2021 ER Need Determination.

    Petition 1 at 13. Petition 2 at 10.

209. The 1977 USACE Final EIS states "[t]he ultimate crest of the tailings dams has been set at elevation 1,315, which is sufficient to store: all of the fine tailings, all of the coarse tailings not used in dam construction, and all of the surplus water that is expected to accumulate from the milling process and flow from the net catchment area, assuming a 40-year operating life for the project." *See Section 1.055 of 1977 USACE Final EIS at 13*. As provided in ¶ 82, the capacity of the basin was determined based on the assumption that an estimated average of ~20 million tons of fine tails would be disposed in the basin annually over a 40-year period. Applying simple math, it can easily be established that the fine tails would fill the entirety of the basin studied in the 1975-76 Final EIS and the 1977 USACE Final EIS, and subsequently permitted in the 1977 Master Permit and the 1985 Permit to Mine. To the extent Petitioner's claim that West Ridge Railroad prevented tailings from being deposited in the western portion of the tailings basin, they are wrong. The West Ridge Railroad was never designed or permitted as a tailings impoundment structure; it was a convenience intended to get the necessary construction materials from the property boundary to the dam construction sites. In fact, as provided in ¶ 29, the current base elevation of the West Ridge Railroad is below the 1,315 foot contour at 1,240 feet amsl, where the applicable permits would allow the Proposer to continue placement of tailings above 1,240 feet amsl, thus overtopping and burying the existing rail line. *See DNR June 2021 ER Need Determination at 25*. Consistent with the original plans, the "Proposed Project" would continue to move the materials supply railroad westward as dam construction progresses and the basin would be filled. In other words, it was always anticipated that tailings would progress across the entire basin, including over the present location of the West Ridge Railroad. This is consistent with the project evaluated in the 1977 USACE Final EIS. *See* ¶ 112. It is also consistent with the USEPA's comments because coarse tailings have, in fact, never been stored at Mile Post 7 as provided in ¶ 104.

210. Both Petitions allege that no 1970s EIS or environmental review anticipated dams being built to an elevation of 1,315 feet amsl using upstream dam methods.

    Petition 1 at 13. Petition 2 at 17, 19.

211. As provided in ¶¶ 167, and 170 through 173, the method of dam construction has been modified over time for Dams 1, 2, and 5. Early construction of all three dams was consistent with the 1975-76 Final EIS and 1977 USACE Final EIS. Construction methods shifted in the early 1990s and

late 1990s but changed again circa 2003 and have remained fixed since then. The extensions of Dams 1 and 2 under the "Proposed Project" would be done using the centerline construction method, while the main sections of Dams 1 and 2 would continue to use the modified centerline or offset upstream method in place since 2003. The type of impacts due to dam construction and operation are generally the same regardless of the method of construction and would not change under the "Proposed Project." Because the height of the proposed dam extensions is substantially less than the main sections of dams, the extent of construction impacts under the "Proposed Project" for the extensions are somewhat less than those from the construction of Dams 1 and 2 to date and into the future.

212. Petition 1 alleges the 1970s environmental reviews did not include dam enlargements of the kind presently incorporated in the "Proposed Project." The Petition further notes the extended dams, if constructed, would exceed the largest designs considered in the 1975-76 Final EIS. This means that the "Proposed Project" adds 4,100 feet to Dam 1, and adds 4,900 feet to Dam 2, for a total of 9,000 feet of new tailings dams not subject to any environmental review. This issue is addressed in Section 4.3.1.1 of the DNR June 2021 ER Need Determination.

    Petition 1 at 13.

213. The only mandatory EAW category for tailings storage is set forth in Minn. R. 4410.4300 that requires the preparation of an EAW for the "expansion of a stockpile, tailings basin, or mine by 320 or more acres." *Id. at subp. 11*. As previously provided in ¶¶ 61 through 103, NorthShore is not proposing an expansion of a tailings basin. The tailings basin as completed at the end of the useful life of the Mile Post 7 tailings basin contains the same volume that was studied in the 1975-76 Final EIS and that was permitted in the 1977 Master Permit and the 1985 Permit to Mine. Nor will there be an increase in the acreage of the tailings basin. Thus, there is no expansion of a tailings basin within the meaning of Minn. R. 4410.4300, subd. 11. Nor is there a requirement to prepare a mandatory EAW for the extension of a tailings basin dam. *See generally*, Minn. R. 4410.4300.

214. The 1975-76 Final EIS studied a tailings basin with dams to accommodate the volume of tails that would exist in the Mile Post 7 tailings basin at the end of its useful life. As provided in ¶ 47a, installation of the ash landfill in the 2000s has required the proposed extension of Dam 1 so the tailings basin can accommodate the final planned volume of tailings while simultaneously preventing tailings from being deposited in the vicinity of the existing ash landfill. Dam 1 is currently ~10,000 feet long as compared to its originally estimated length of ~12,600 feet long. The Proposer estimates ~8,100 feet of new dam construction would be needed to avoid the landfill, which results in a net increase of ~5,500 feet of dam construction beyond that considered in the 1975-76 Final EIS. Similarly for Dam 2, it is currently ~6,000 feet long as compared to its originally estimated length of ~5,200 feet. The Proposer estimates ~4,100 feet of new construction is needed to accommodate the relocated material supply railroad. This results in an estimated net increase of ~4,900 feet of new construction for Dam 2 beyond that originally estimated in the 1975-76 Final EIS. Taken together, the total length of new dam construction beyond that anticipated in the 1975-76 Final EIS is 10,400 feet. The impacts of future dam construction under the "Proposed Project" are predicted to be the same as past and ongoing dam construction activities at Mile Post 7. *See Section 4.3.1.1.3 of DNR June 2021 ER Need Determination at 23*. As provided

in ¶ 42, the proposed dam extensions are regulated under the Master Permit and Minnesota's dam safety regulations.

215. The "Proposed Project," if implemented, will not change the classification of the dams as High Hazard or Class 1 Dams with requisite regulatory requirements. *See* ¶ 197. The environmental review documents assumed and studied the dams as Class 1 dams, and the dams were subsequently permitted as Class 1 dams. Furthermore, as set forth in ¶¶ 27, 194, and 199, regulatory controls applicable to these dams are extensive and include but are not limited to: annual inspections; regular geotechnical evaluations; and ongoing monitoring. All evaluations undertaken to date indicate that Dams 1 and 2 are robust with Factors of Safety well above recommended levels. See ¶¶ 176 and 198. These regulatory controls have been applied to each of the dams as extended in the normal course of filling the basin with tails. The Petition provides no evidence that these same regulatory controls would not apply to these extensions in the same manner as they have to all historic dam extensions at Mile Post 7.

216. Finally, it should not go unstated that the 1975-76 Final EIS anticipated the potential extension of these dams throughout Mile Post 7's useful life. The environmental impacts of constructing the tailings basin dams (including their incremental extensions) were studied in the 1975-76 Final EIS. The Petition provides no data to suggest that the impacts associated with extending the tailings basin dams to use the remaining permitted capacity of the basin are different in kind or severity than those anticipated when the Mile Post 7 project was first subjected to environmental review.

217. Both Petitions allege that no EIS studied the potential environmental impacts of miles of upstream dam raises up to 120 feet tall constructed on top of uncompacted, previously deposited tailings. This issue is addressed in Section 4.1.2 of the DNR June 2021 ER Need Determination.

Petition 1 at 13-14. Petition 2 at 18.

218. As provided in greater detail in ¶¶ 176 and 211, multiple methods of dam construction have been employed to date at Mile Post 7. Neither of the proposed dam extensions that are the subject of the Petitions will use the upstream construction method, rather, as provided in ¶ 47a, those extensions would employ the centerline construction method.

219. The allegation is correct that fine tailings may not have been compacted when originally placed, but they have received significant compaction over time. In addition, there has been significant natural static load compaction over the past 25+ years as the dams were constructed on top of the fine tailings. This coupled with the mechanical compaction associated with the movement of heavy equipment during the unloading and smoothing of tailings deposited by rail cars, as well as the migration of the rail lines on top of the dams, has resulted in compaction. This compaction reduces the air voids and results in increased density, and higher density gives higher strength, where soils with higher strength are more stable. This natural static loading is more technically called consolidation, where the pore water is reduced resulting in a higher strength soil. Thus, there is a degree of compaction present in the tails lying under the dams that affords some degree of improved stability.

220. Both Petitions allege the relocated railroad embankment is proposed to be used as a dam, defining the ultimate limit of the tailings basin, thus allowing tailings to be deposited as high as 1,365 feet amsl. The Petitions cite the proposal described in the 2020 USACE Section 404 Public Notice as the basis of this allegation. Because no analysis has occurred, preparation of an EAW is required. This issue is addressed in Section 2.3 of the DNR June 2021 ER Need Determination.

Petition 1 at 14. Petition 2 at 26.

221. As provided in ¶¶ 29 and 111, the purpose of the West Ridge Railroad has always been to transport construction-related materials needed to construct the tailings basin dams to the site of those dams. It is not an impoundment structure. As further provided in ¶ 47c, the Proposer does not now intend for the railroad line to serve a tailings basin dam. This fact is documented in the 1975-76 Final EIS, the 1977 USACE Final EIS, the 1977 Master Permit, and the 1985 Permit to Mine, where none of these documents reference the material supply railroad as some type of dam. The final elevation for Dams 1, 2, and 5, which is provided in ¶¶ 47a and 72, remains as originally permitted at 1,315 feet amsl and this will not change under the "Proposed Project." It is acknowledged that the relocated West Ridge Railroad would abut the outside of Dams 1 and 2 for transporting dam construction materials. See ¶ 47c. Furthermore, as provided in ¶ 94, the Proposer notified the USACE that it did not intend to construct a dam 50 feet more than the permitted elevation of 1,315 feet amsl, while ¶ 47a provides the new dam extensions would rely on the centerline construction method.

222. Both Petitions allege that a modern dam breach study is required to decide on the potential environmental effects of the proposed tailings dam extension because the 1975-76 Final EIS dam breach assessment was entirely inadequate by modern standards. In particular, it is alleged the study was limited to failure of a 1000-foot section of Dam 1 whereas the worst-case scenario of failure would release all the stored tailings from the basin.

Petition 1 at 15. Petition 2 at 22.

223. The suggestion that there has only been one Dam Failure analysis on the Mile Post 7 dams, and that the only analysis was conducted in the 1970s, is incorrect. A Dam Breach analysis for Dams 1, 2, and 5 was completed in 2012 as part of the 2012 Emergency Action Plan (EAP). *See 2012 Dam Breach Analysis*. During that analysis, software created by the USACE was used to compute water surface elevations along the breach flowpaths downstream of the dams. Federal Emergency Regulatory Commission (FERC) guidelines for breach parameters were used to define the breach geometry. *Id. at E-1 and E-4*. That analysis included breach models with the dams at elevation 1,315 feet amsl. *Id. at C-1*. Issues addressed in the EAP include: downstream flow paths; dam break analyses and inundation maps; effects of dam failure; arrival times and time to peak at select locations along the flow path; and emergency notification procedures. *See 2012 EAP generally*.

224. A new two-dimensional dam breach analysis is near completion and is expected to be available in early 2022. Downstream changes since the 2012 assessment were included in the updated dam breach analysis. DNR Dam Safety reviewed preliminary results in late 2021. The preliminary results include a 2D and 3D analysis with mobilized tailings using the estimated dam geometry that will be in place in 2023. The next dam breach analysis will include the "Proposed Project"

elements if the project is authorized. Future five-year operation plans will include an updated dam breach analysis and EAP regardless of whether the "Proposed Project" is ultimately permitted.

225. Worst-case dam failures are required to be analyzed for Class 1 dams. For purposes of modeling, a worst-case dam failure scenario for Class I dams typically analyzes breach widths up to five-times (5x) the height. For Dam 1, this is 5 x 183 feet equating to ~1,000 feet. Therefore, a 1,000-foot-long breach section is likely the worst case.

226. DNR does not dispute that waste material storage facilities could potentially lead to slope or dam failure if incorrectly designed, constructed, and/or managed, or from other unforeseen circumstances. But any Class 1 dam that is incorrectly designed, constructed, and/or managed could result in catastrophic dam failure. The Proposer, with oversight by the state, has regularly taken the steps necessary to assure the safety of the Mile Post 7 dams. The risk of dam failure at the Mile Post 7 tailings dams is demonstrably mitigated through application of design and safety requirements, coupled with ongoing monitoring and continuous reassessment. Based on the data from the ongoing measures and the implementation of the measures themselves, the potential effects of hypothetical failure scenarios are speculative. Nor do materials attached to the Petitions contain anything to suggest that either the existing dams or any extension thereto could potentially compromise the safety of the Mile Post 7 dams. An RGU is not required to undertake environmental review on the basis of speculative information. *Reserve Mining Co. v. Herbst*, 256 N.W. 2d 808, 829-30 (1977).

227. Both Petitions identify the elements believed to be included in a modern dam-breach study, specifically: area covered by the tailings flood; arrival times for the tailings flood at a variety of downstream locations; depth and velocities of the tailings flood; impacts on residences, schools, health-care facilities, roads, bridges, railroads, and infrastructure; impacts on heritage, recreation, community, and cultural assets; impacts on economic infrastructure; impacts on farms and livestock; 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 of Lake Superior and other downstream waters. Petitioners then assert that none of these items were addressed in the federal or state EISs.

Petition 1 at 15. Petition 2 at 14-15.

228. Environmental review is not required simply because a project requires ongoing dam breach analysis. *See generally,* Minn. R. Ch. 4410. Nor does Minn. R. Ch. 4410 dictate the contents of a dam breach analysis. The requirements to undertake dam breach analysis are set forth in federal guidance, in Minnesota's dam safety rules, in the permit requirements, and the reports the Proposer is regularly required to prepare for the Mile Post 7 dams. As provided in ¶ 223, the 2012 EAP includes elements identified by the Petitioners. What the Petitioners believe should be included in a modern dam breach analysis is in no way relevant to whether environmental review is required for the "Proposed Project." Nor does a list of what the Petitioners believe should be included in a dam breach analysis constitute material evidence demonstrating that the "Proposed Project" may

have the potential for adverse environmental effects.[14] In short, the allegation does not constitute material evidence regarding the nature and extent of potential environmental effects with the "Proposed Project."

229. Both Petitions allege the use of upstream dam raises must be viewed in the light of new knowledge, including an understanding that the Mount Polley dam that collapsed in British Columbia in 2014 was because the facility deviated from the centerline construction method, thus affecting dam stability. Based on the event at Mount Polley and the findings of the Independent Panel, they assert that the dam raises at Mile Post 7 would "always consist of construction material placed on top of fine, uncompacted tailings" creating risks to the environment, public health, and safety that must be evaluated in environmental review based on current knowledge.

Petition 1 at 15-16. Petition 2 at 22.

230. The Petitions distort the findings of the Independent Panel. In fact, the Independent Panel concluded the Mount Polley Dam failed not simply because it used the downstream method or the centerline method but because the design "did not take into account the complexity of the sub-glacial and geological environment associated with the Perimeter Embankment foundation." The Panel went on to state: "[t]he specifics of the failure were triggered *by the construction of the downstream rockfill zone at a steep slope* of 1.3 horizontal to 1.0 vertical. *Had the downstream slope in recent years been flattened to 2.0 horizontal to 1.0 vertical, as proposed in the original design, failure would have been avoided*." *Mount Polley Technical Report at iv,* and *Id. at 136-38 (discussing the Panel's conclusion in greater detail)*. Furthermore, the Petitions mischaracterize the type of construction employed at Mile Post 7 as illustrated in ¶¶ 170 through 173. The fact of the matter is that the dams consistently meet and exceed minimum Factors of Safety, which is not expected to change under the "Proposed Project," and since 2003 the modified centerline/offset upstream construction method has been used. There is no proposal to deviate from this approach. Furthermore, as provided in ¶ 47a, the "Proposed Project" extends beyond the limits of the current dam footprints and would be founded on natural ground using the centerline method. Consideration of the design takes place during the review of the next five-year plan. DNR's Dam Safety Program will review the Five Year Operation Plan for compliance with current dam safety standards. Finally, the design employed at Mile Post 7 is required to meet modern design standards. *See* ¶ 27 and 28.

231. Both Petitions allege that modern industry guidance documents recommend re-assessment of the consequences of dam failure at least every five years.

Petition 1 at 16. Petition 2 at 16-17.

232. The Mile Post 7 Master Permit requires the Proposer to submit a Five Year Operation Plan for the Mile Post 7 dams every five years. *See* ¶ 42. The Five Year Operation Plan includes an assessment of the stability of Dams 1, 2, and 5. Independent professional dam engineers review the Five Year

[14] In fact, the elements listed by the Petitioner are either included in the ongoing dam breach analysis, the ongoing reporting required under the permit, other ongoing DNR or MPCA permitting requirements, and in data maintained by the DNR.

Operation Plan for compliance with current dam safety standards. This review includes a dam inspection of the Mile Post 7 dams for field verification of the design. The current Five Year Operation Plan for the dams covers 2019-2023, and Part 4.7.2 of the Plan includes the results of dam safety analyses since 2013. If approved, the next Five Year Operation Plan would include analysis of the "Proposed Project," including dam stability. *See* ¶¶ 27 and 28. Additionally, as noted above in ¶¶ 223 and 224, a dam safety breach analysis was conducted in 2012 and another such analysis is currently underway.

233. Both Petitions allege the project studied in the USACE 1977 Final EIS had a 40-year time horizon and therefore, the potential operation of the basin beyond 40 years as envisioned under the "Proposed Project," increases adverse environmental risks and requires environmental review. The Petitions speculate that if approved, the Mile Post 7 expansion would not be needed until 2057 and would allow tailings storage more than 100 years after the 1977 USACE Final EIS. This issue is addressed in Section 4.3.2.8 of the DNR June 2021 ER Need Determination.

Petition 1 at 14-15. Petition 2 at 15-16.

234. The Mile Post 7 tailings basin was designed to accept tailings from ore mined from the Peter Mitchell Pit and processed in Silver Bay. As set forth in ¶¶ 80 through 84, several factors and assumptions were made in calculating the life span of the Mile Post 7 tailings basin, the most important of which was the volume of tailings that the Mile Post 7 tailings basin was designed and intended to hold. This amount was estimated based on the remaining ore and rate of mining in the Peter Mitchell Mine. The Mile Post 7 tailings basin's remaining volume was calculated by determining the volume of tailings that had been deposited in the tailings basin to date and subtracting that from the total storage capacity. When aggregated to the present, an estimated ~191,118,000 long tons of tailings have deposited to date. Given a total estimated capacity of 753,023,000 long tons of tailings at final dam height of 1,315 feet amsl, this leaves an estimated remaining storage volume of 561,905,000 long tons of tailings. *See Section 3.4.1.3.2 of the DNR June 2021 ER Need Determination at 14-15*. The remaining storage capacity is within the estimated storage capacity considered in the 1977 USACE Final EIS. *See 1977 USACE Final EIS at 11-12*.

235. The Mile Post 7 tailings basin design assumed a steady deposition rate of an estimated ~20 million long tons per year over 40 years (i.e., remaining estimated 40 years of mine life left at the Peter Mitchell Mine in the late 1970s). As provided in ¶¶ 82 and 167, depressed market conditions and Reserve Mining's subsequent bankruptcy between 1986 to 1990, plus two changes in ownership over the 1990s, meant that tailings were never deposited in the basin at the originally projected rate. Between 1985 and 2005 the tailings production rate ranged from ~4.0-5.3 million long tons per year. Once operations stabilized in the mid-2000s, tailings production ranged from ~5.5-7.9 million long tons per year. *See DNR June 2021 ER Need Determination at 14*. Going forward, the most recent operations plan anticipates a tailings production level of ~7 million long tons per year. *See 2019-2023 Five Year Operation Plan at 6*. Because of this reduction in production relative to original projections, mining at the Peter Mitchell Pit is expected to extend several decades beyond that originally estimated although the estimated volume of remaining ore and permitted capacity of the tailings basin has not changed. There is, however, no increase in nor need to increase the capacity of the Mile Post 7 tailings basin because Mile Post 7 was always

intended to hold the tailings from ore mined from the Peter Mitchell Pit. What this means is that the tailings basin is filling at a fraction of the rate assumed in the state and federal EISs, thus extending its operational lifespan accordingly. Although it is taking longer to fill the tailings basin, this does not mean there are new and different unstudied and/or unregulated potential significant environmental effects.

236. Regarding the timing of the "Proposed Project," Northshore reports the rise and progression of the tailings in the basin is continual as tailings are added to the basin. The rate of rise is dictated by both the rate of tailings production and the surrounding topography of the basin. Tailings elevations are projected to increase approximately 2.3 feet per year over the coming five-year period as tailings are placed in the basin. *See 2019-2023 Five Year Operation Plan at 7*. This requires work now to allow the remaining capacity of the basin to be used. This work includes preliminary work on the dam extensions, which includes filling the current topographic low points and ensuring continued containment of tailings in the basin. Other necessary advance work would include but is not limited to: ground preparation for dam extensions; removal of the existing West Ridge Railroad; and development of the final West Ridge Railroad corridor.

237. Both the "Proposed Project" and the greater Facility are subject to ongoing regulation under the Permit to Mine and Master Permit. While the Proposer is authorized to continue construction of Dams 1 and 2 vertically under the existing Permit to Mine and 2019-2023 Five Year Operation Plan, not building the west extensions of Dams 1 and 2 compromises the ability to continue placing tailings in the basin. This is because without the extensions and railroad relocation, tailings would eventually reach the critical infrastructure of the existing West Ridge Railroad and dam building would cease, a consequence of the latter potentially compromising the 10-foot freeboard dam limits (required to be maintained under the current 2019-2023 Five Year Operation Plan). Ultimately, not pursuing the "Proposed Project" and allowing use of the remaining capacity of the basin would require the siting and construction of a new tailings basin. Siting and constructing a new basin would result in significant damage and destruction of natural resources impacts and would grind mining at the Peter Mitchell Pit, and subsequent pellet production at Silver Bay, to a halt. This is because it would take years for Northshore to locate a new tailings basin site, undertake the necessary environmental review, obtain the necessary permits, and construct the basin at the new site.

238. Petition 2 indicates the DNR identified 44 years of remaining capacity at Mile Post 7 in 2015 during the environmental review of a mine expansion project. The Petition states "DNR refused to conduct further environmental review to examine the continued safety of the Milepost 7 basin." Thus, no environmental review has occurred for the Mile Post 7 tailings basin since the 1970s.

    Petition 2 at 3.

239. DNR, as RGU, conducted a proposer-volunteered EAW for the Northshore Mining Company Progression of the Ultimate Pit Limit, which was a 108-acre progression of mining operations at Northshore's Peter Mitchell Pit near Babbitt, MN ("2015 Northshore EAW"). Public comments on the 2015 Northshore EAW included: 1) whether the Mile Post 7 tailings basin had sufficient capacity to handle the increased tailings; and 2) a request to evaluate impacts of tailings dam failure

at Mile Post 7 associated with the placement of increased tailings at Mile Post 7. *See Northshore Pit Progression EAW Record of Decision at 5, 21-22.*

240. First and foremost, it must be remembered that the tailings basin was designed to accommodate tailings from mining the remaining ore body at the Peter Mitchell Mine. Any statement to the contrary is not factually correct. The progression of mining within the pit was anticipated dating back to the time of the construction of Mile Post 7, thus the progression of mining in the Peter Mitchell Mine authorized in the 2015 Permit to Mine Amendment does not require an expansion of the permitted capacity of the Mile Post 7 basin. Second, dam safety issues raised in comments on the 2015 EAW were addressed in the Record of Decision's response to comments where DNR discussed regulation of the dams and dam safety at the Mile Post 7 tailings basin. This included a discussion of how the tailings basin dams are regulated, the "long term tailings basin plan, 5-year operational plans, dam construction plans and ongoing performance including under the Probable Maximum Precipitation event." *Id*. There have not been significant modifications at the tailings basin that have required a new EIS. The DNR did, however, evaluate whether a supplemental EIS was required for Mile Post 7 in the 2021 when the "Proposed Project" was proposed. In June 2021 the DNR issued its needs determination finding that neither a supplemental EIS nor an EAW was required. *See DNR June 2021 ER Need Determination*. A copy of the Needs Determination was sent to legal counsel for each of the Petitioners. Neither Petitioner appealed the DNR June 2021 ER Need Determination.

241. Petition 2 alleges the 1975-76 Final EIS did not address climate change. In addition, the Petition alleges a project itself may have significant climate change effects or be significantly affected by climate change.

Petition 2 at 15.

242. Climate-related variables were addressed in the 1975 Draft EIS in "Part III – Climatology." *See 1975 Draft EIS at 109-112*. Climate was considered to ensure adequate freeboard for flood control and wave protection within the tailings basin. *Id. at 88*. Relevant to the point raised by Petitioners, precipitation and runoff management is a key design and operational feature of all tailings basins. Because changes in precipitation and storm event frequencies are a potential consequence of climate change in northeastern Minnesota, the implication of those events for Mile Post 7, including assurances of adequate flood storage and freeboard requirements, are addressed in Section 4.6 of the 2019-2023 Five Year Operation Plan. *See 2019-2023 Five Year Operation Plan at 15-17*. Sections 3.7 and 3.8 of the 2018 water balance addressed the issues around basin pond level rise. *See 2019-2023 Water Balance Report at 14-17*. The Probable Maximum Precipitation (PMP) event was addressed in the water balance completed in 2008. *See Water Balance Report – Years 2009-2013 at 7-8*. Section 4.6.2 addresses contingencies for both significantly more and significantly less precipitation (and resulting runoff into the basin) than assumed in the Five Year Operation Plan required under the Master Permit. *See 2019-2023 Five Year Operation Plan at 17-18.* Climate-related considerations are therefore an ongoing aspect of Facility management and regulated under the Master Permit and Permit to Mine.

243. Because Minn. R.4410.1100, subp. 6, requires "[t]he RGU shall order the preparation of an EAW if the evidence…otherwise known to the RGU demonstrates that, because of the nature and

location of the proposed project, the project may have the potential for significant environmental effects…," the DNR also reviewed the data available to it on Mile Post 7 to determine whether that data demonstrated that, because of the nature and location of the proposed project, the project may have the potential for significant environmental effects. The data that the DNR reviewed included data on water quality (discussed in ¶¶ 244 through 250), asbestiform fibers (discussed in ¶¶ 251, 260-261, and 265); turbidity impacts (discussed in ¶¶ 252 through 254), impacts to flora and fauna including state listed species (discussed in ¶¶ 255 through 258), air impacts (discussed in ¶¶ 259 through 262), surface water discharges (discussed in ¶¶ 263 through 265), seepage and local groundwater impacts (discussed in ¶¶ 266 through 270), and stream restoration (discussed in ¶¶ 271 through 273).

244. The 1975-76 Final EIS analyzed water quality impacts associated with the various tailings basin alternatives as well as those specific to the Mile Post 7 site proposed for the Facility. The 1975-76 Final EIS indicated that any of the tailings basin alternatives could have impacts on the quality of surrounding waters during construction, operations, reclamation, and closure. These impacts were identified and analyzed across the useful life of the Mile Post 7 tailings basin including the completion of the work necessary to fill the remaining capacity of the tailing basin. *See DNR June 2021 Need Determination at 34-35*. Not only were these impacts analyzed but they have been regulated by ongoing permitting commencing with issuance of the 1977 Master Permit. In short, the proposed dam extensions, retirement/relocation of the West Ridge Railroad, and continued westward progression of tailings, with the "Proposed Project" do not in and of themselves provide any potential for adverse water quality impacts different in kind than those identified in the 1975-76 Final EIS and/or currently regulated through existing permits. *Id.*

245. Water discharges at Mile Post 7 are regulated by the MPCA pursuant to a National Pollution Discharge and Elimination System Permit/State Discharge System Permit (NPDES/SDS Permit). Originally three separate permits were issued for the site, but these permits were consolidated in 1989 when the MPCA issued NPDES/SDS Permit No. MN0055301. In 2005, the MPCA re-issued NPDES/SDS Permit No. MN0055301 to the Proposer. The permit established eight (8) surface discharge stations, seven (7) of which are the sites where the Proposer is required to conduct water quality monitoring of effluent and stormwater coming from Mile Post 7. In addition to the surface discharge stations, the permit established 14 surface water stations, with 13 dedicated to monitoring water quality in streams and the Beaver River in the vicinity of the tailings basin. The specific mix of monitoring parameters at each station varies, but in general targets the constituents predicted to be present in tailings basin effluent and subject to treatment at the water treatment plant. MPCA initiated the permit reissuance process in 2021. Of the types of water quality impacts currently regulated at Mile Post 7, potential seepage and asbestiform fibers impacts are relevant to the "Proposed Project." *Id. at 44-46*.

246. The following potential water quality impacts specific to Mile Post 7 include: introduction of chlorides; pipelines; coarse tailings disposal; seepage; asbestiform fibers; and turbidity impacts from stream diversion and water treatment plant discharges.

247. Chloride is currently used at Mile Post 7 in the winter for road maintenance activities. Construction of the "Proposed Project" will not result in any alteration or increased use of chloride at the site. MPCA monitors chloride levels in the tailings basin discharge and reports that chloride

levels have remained constant and well below the applicable Class 2A Water Quality Standards. No new substantial sources of chloride would be used at the site under the "Proposed Project," therefore, no new water quality impact from the introduction of chlorides is anticipated. *Id. at 38*.

248. The Proposer has not identified the need for any new pipelines. Because no new pipelines are proposed as a part of the "Proposed Project," adverse environmental impacts associated with pipeline construction, maintenance, and spills are not anticipated from the project. *Id. at 38*.

249. Although the 1975-76 Final EIS envisioned the disposal of coarse tailings at the proposed site, coarse tailings have never been disposed of at Mile Post 7 as provided in ¶ 104. This will not change under the "Proposed Project" and, therefore, no water quality impacts associated with coarse tailing disposal are anticipated.

250. New seepage would likely occur along Dam 1 under the "Proposed Project." This seepage would be captured and directed to the existing seepage recovery ponds using the same existing infrastructure. Future seepage along the Dam 1 extension is expected to be similar to existing sources of seepage at the site. Monitoring will continue at the Mile Post 7 site and the Proposer plans to provide additional, limited seepage control infrastructure (similar to that already employed) once the elevation of deposited tailings reaches the area of the dam extensions. Overall, seepage from the basin/seepage recovery ponds would not be expected to substantially increase with the dam extensions under the "Proposed Project." *Id. at 36-37*.

251. Since 1985, the MPCA water quality permit has included an effluent limit for total amphibole fibers contained in the discharge from the water treatment facility. Fiber samples are also taken at several other locations in surface water adjacent to the facility. The MPCA reports there is no identified correlation between sampling values and basin activities. Because the "Proposed Project" would not modify tailings management at the tailings basin, fiber releases to adjacent surface waters are not expected to change. *Id. at 47.*

252. As set forth in ¶¶ 116-117 and 253, the MPCA issued a Section 401 Certification in 2021 for the "Proposed Project," which included specific provisions for water quality monitoring of total suspended solids to measure turbidity in accordance with NPDES/SDS Permit MN 0055301. Two sampling locations were specified for Little Thirtynine Creek, one upstream and one downstream of the tailings basin. The upstream sampling location will be at Little Thirtynine Creek and County Road 15, and the downstream sampling location will be at Little Thirtynine Creek located immediately upstream of its confluence with Big Thirtynine Creek. The MPCA Section 401 Certification required identification and implementation of Best Management Practices or BMPs to ensure runoff and/or erosion from the "Proposed Project" does not cause or contribute to a water quality impairment of a Water of the State. *See MPCA Section 401 Certification at 2-3.*

253. Potential turbidity impacts from the Dam 1 extension and relocation of the West Ridge Railroad to the remnant portions of Little Thirtynine Creek are anticipated to be limited to the construction period and subject to the impact avoidance and control measures required for the "Proposed Project" under the 401 Water Quality Certification as well as the Stormwater Pollution and Prevention Plan (SWPPP). Monitoring requirements under NPDES/SDS Permit MN 0055301 provides assurances that any adverse turbidity impacts (e.g., total suspended solids) that might

occur would be detected and remediated. *Id. at 3.* The MPCA did not identify any substantial concern with turbidity impacts with the "Proposed Project" if the conditions of the 401 Water Quality Certification were met. *See DNR June 2021 ER Need Determination at 37-38.*

254. Potential turbidity impacts are possible from the regulated release of excess water from the tailings basin's water treatment plant. A primary purpose of the water treatment plant is the removal of suspended solids from the effluent stream prior to discharge to natural waters. Monitoring requirements under the MPCA NPDES/SDS Permit include monthly sampling to compile a calendar month average and daily maximum for total suspended solids. The MPCA did not identify any substantial concern with total suspended solids impacts with the "Proposed Project." *Id. at 47*.

255. The 1975 Draft EIS studied the potential impacts to flora, fauna and state listed species associated with the construction, operation, reclamation, and closure of the Mile Post 7 tailings basin. The 1975 Draft EIS identified 64 state listed animal species that merited "special consideration." *See 1975 Draft EIS at 147* citing: "Minnesota animals and plants in need of special consideration, with suggestions for management, Special Publication No. 104, 1974" (hereinafter Spec. Pub. No. 104). These 64 species fell within the following state listing status categories: endangered species; threatened species; species with change or uncertain status; and species of special interest. The 1975 Draft EIS identified 21 animals (excluding fish) that could be found in northeastern Minnesota in the vicinity of the various alternatives. This list included 13 bird species, 5 mammal species, one reptile species, and two amphibian species. Plant species meriting special consideration were not expressly identified in the EIS. Because the 1975-76 Final EIS studied impacts associated with the entire tailings basin project from construction through operation, reclamation, and closure, no new issues are raised by the "Proposed Project." *See DNR June 2021 ER Need Determination at 39*.

256. The primary impact to species identified in the 1975 Draft EIS was that of habitat loss at the site of the various alternatives under consideration, principally due to the complete elimination of vegetation. The 1975 Draft EIS reported that at the Mile Post 7 site, the establishment of a tailings basin would cause a complete loss of forest cover on the site of the tailings basin. Tree species lost would include unmarketable stands of sugar maple, and marketable stands of mature aspen, birch, and balsam poplar. This equated to the loss of ~4,842 acres of land from fiber production. These impacts could possibly be ameliorated at reclamation and closure of the basin if the rehabilitation plans for reclamation included returning the site to fiber production. Because this document studied impacts associated with the entire tailings basin project from construction through operation, reclamation, and closure, no new issues are raised by the "Proposed Project." *Id*.

257. In conjunction with the "Proposed Project," the Proposer reviewed the DNR Natural Heritage system (NHIS) database to identify state-listed endangered species, threatened species, and special concern species located within a one-mile radius of the "Proposed Project." The review identified the potential presence of the following plants and animals: bald eagle (*Haliaeetus leucocephalus*); twig rush (*Cladium mariscoides*); neat spikerush (*Eleocharis nitida*); intermediate sedge (*Carex media*); and alpine woodsia (*Woodsia alpina*). The Proposer also surveyed the site for the existence of these or other species. *Id. at 40.*

258. The potential for the "Proposed Project" to impact each of these species was assessed by DNR's Natural Heritage Program, which determined "given that no state-listed threatened or endangered species were found during either survey, impacts to state-protected plants are not anticipated, and a takings permit is not needed to proceed with the project." *Id. at 41.* Although state-listed species are not expected to be impacted, the general impacts identified in the 1975 Draft EIS (i.e., the reduction or elimination of habitat), would continue under the "Proposed Project," and is expected to be commensurate in type and extent as the impacts that have occurred since the facility was constructed and became operational in the late 1970s and early 1980s. Because the EIS studied impacts to habitat associated with the entire tailings basin project from construction through operation, reclamation, and closure, no new issues are raised by the "Proposed Project." *Id*.

259. The 1975 Draft EIS identified particulate emissions as the primary air impact at the Mile Post 7 project site. These emissions would occur whenever dry earth or tailings were exposed to the atmosphere and subjected to wind or other actions causing fugitive dust. During construction, fugitive dust in the form of total suspended particulates (TSP) may be caused by: 1) wind erosion of cleared lands; 2) material movement during construction of access roads, dams, and plant facilities; and 3) vehicular traffic. During operations, the major sources of fugitive dust is: 1) wind erosion of dry tailings around the basin perimeter; and 2) vehicular traffic on roads. *Id. at 41-42*.

260. Because the tailings that would be disposed at Mile Post 7 were from the same source and process as the tailings that Reserve Mining had previously dumped in Lake Superior, (i.e., from the ore mined from the Peter Mitchell Mine and processed at Reserve Mining's Silver Bay facilities), the 1975-76 Final EIS also modeled predicted concentrations of airborne asbestiform fibers associated with each of the alternatives. Based on an analysis and comparison of the air emission impacts of each of the alternatives, it was determined that total suspended particulates (TSP) levels in population centers, including potentially hazardous fibers, would be greatest if the Mile Post 7 alternative was selected. *Id*. Fibers emissions could be mitigated by keeping fine tailings covered with water. *See 1975-76 Final EIS at 16-17*.

261. Fugitive dust emissions from Mile Post 7, including asbestiform fibers, are currently regulated under MPCA Air Permit No. 07500003-010/-101 issued in May/June 2013 ("MPCA Air Permit"). This permit includes provisions regulating TSP, particulate matter (i.e., PM_{10}; $PM_{2.5}$), and asbestiform fibers. MPCA reports the Mile Post 7 tailings basin currently complies with the provisions of the MPCA Air Permit. *Id. at 42-43*.

262. Implementation of the continued progression of tailings to the maximum dam height of 1,315 feet amsl under "Proposed Project" does not require an amendment to MPCA Air Permit No. 07500003-010/-101. The MPCA has determined that construction and operation of the proposed dam extensions and retirement and relocation of the West Ridge Railroad would not substantially impact air emissions. Adverse air quality impacts associated with development of the clay borrow site is not anticipated. *Id.*

263. The 1975-76 Final EIS did not anticipate any surface water discharge at Mile Post 7. A water recycling system was proposed to remove and use any excess water available at the Mile Post 7

tailings basin. Infrastructure to accomplish this included a floating pumphouse that would direct water through a 24-inch water reclaim pipeline to the processing plant at Silver Bay for reuse. Seepage from the basin to adjacent surface water and groundwater resources was predicted through the tailings, but this was not considered a surface water discharge in terms of impacts or regulation in the 1975-76 Final EIS. *Id. at 44*.

264. Due to an excess water balance that developed in the tailings basin in the early 1980s, Reserve Mining sought and received approval from MPCA to construct and operate a water treatment facility at Mile Post 7. This system treated and released treated water from the basin to restore the water balance. In 2005, the permit was reissued as MPCA NPDES/SDS Permit MN0055301. This permit continues to govern water quality at the Mile Post 7 site. This permit regulates not only the water quality of the treatment plant effluent, but also governs the monitoring requirements for all other potential sources of impacts to surface water and groundwater resources at Mile Post 7 and the Silver Bay processing facilities. This permit is currently undergoing the reissuance process. *Id. at 44-45*.

265. The MPCA NPDES/SDS Permit includes monitoring provisions for turbidity, fibers, fluoride, specific conductance, sulfate, and total mercury along with 19 other parameters. Because the "Proposed Project" does not result in any changes to ore processing itself, nor the rates of processing and tailings deposition at Mile Post 7, it is not expected to result in a substantial change in the volume of water treated, the influent quality, treatment efficiency, or effluent quality of the surface discharges from the water treatment plant. *Id. at 52*.

266. The project evaluated in the 1975-76 Final EIS did not include construction and operation of an industrial solid waste disposal facility. In 2000, MPCA issued the Proposer a Solid Waste Permit SW-409 ("MPCA Solid Waste Permit") to construct a lined solid waste disposal facility for disposal of demolition debris and coal ash in the west corner of the Mile Post site. Construction of Phases I, II, and III of the ash disposal facility have already been completed and filled with waste. A portion of the Phase IV liner, which is designated as Phase IV A, was constructed in 2008 for the purposes of managing stormwater from Phases I-III. The ash landfill is currently permitted through 2027 and is projected to continue to be used for the disposal of coal ash and other approved wastes up to its ultimate design capacity. *Id. at 52-53*.

267. The proposed Dam 1 extension that is included in the "Proposed Project" is necessitated by the placement of the ash landfill in the far western corner of the Mile Post 7 site. Both the ash landfill and proposed Dam 1 extension are within the existing Permit to Mine area of disturbance boundary. The purpose of the reconfiguration of Dam 1 is to ensure an adequate separation between the deposited tailings and the ash landfill (on its southeast and northeast sides). Encroachment of tailings too close to the facility would compromise planned future operations of the landfill as well as reclamation and closure measures at the end of Mile Post 7's useful life. These measures are required by Minn. Stat. Ch. 93 to protect the environment. Likewise, the railroad will be relocated to maintain an adequate separation from the landfill on its southwest and northwest sides. *Id*.

268. The 1975-76 Final EIS anticipated some degree of seepage to occur from the tailings basin dams, including Dam 1. Thus, it is anticipated that seepage would occur along points of the proposed Dam 1 extension. *Id. at 54*.

269. The predominant soils in the areas undergoing construction to extend Dam 1 are comprised of low permeability soils, such as the lean clay and silty sand till present under the existing dam footprint. This means seepage from Dam 1 generally moves away from the ash landfill. Future seepage from the Dam 1 extension is expected to behave similarly. This seepage would be directed to the existing seepage collection and recovery ponds. Given the location of the seepage collection and recovery ponds relative to the ash landfill, no seepage-related impacts to the ash landfill are anticipated. *Id*.

270. In 2016, the Proposer analyzed the potential impact of tailings disposal over time on local groundwater levels at the ash landfill facility. This analysis was undertaken because the Proposer had previously considered raising the final dam height by 50 feet to 1,365 feet amsl, which could affect the local water table under the ash landfill. Modeling at that time demonstrated that the placement and elevation of a drainage ditch placed at the exterior of the Dam 1 extension prevented the additional head pressure on groundwater that might have impacted the ash landfill at the final dam height at the 1,365-foot contour. This 50-foot increase in dam height has since been abandoned by the Proposer and is no longer proposed. Because the "Proposed Project" includes the same location and elevation of the drainage ditch evaluated under the previous project with the proposed 50-foot increase in dam height, no impacts to the existing as landfill as a function of elevated local groundwater levels are anticipated. *Id*.

271. As set forth in greater detail in ¶¶ 54 and 132, the "Proposed Project's" impacts to remnants of Big Thirtynine Creek and Little Thirtynine Creek were subject to USACE Section 404 jurisdiction, including the requirement that MPCA complete a Section 401 Certification for the USACE permit. Mitigation required for the Section 401 Certification included completion of two functional stream restorations per year in 2022, 2024, and 2026, at locations identified in and using plans included in the June 2020 Stream Restoration Plan.

272. Only four of the six sites selected for stream restoration occur in the vicinity of the "Proposed Project:"

- The Big Thirtynine Creek Diversion site occurs approximately 2000-3000 feet west of the relocated West Ridge Railroad, and an additional 1000 feet west of the Dam 1 extension.
- The Little Thirtynine Creek site parallels the relocated West Ridge Railroad and most westward extent of the Dam 1 extension, ranging from 2000 to 1000 feet away.
- The East Branch Tributaries site starts at the base of the proposed Dam 2 extension and proceeds east to the East Branch Beaver River.
- The Berm Removal site is approximately 1,500 feet east of the base of Dam 2.

Of these the Little 39 Diversion Ditch site and East Branch Tributaries sites occur closest to activities to be undertaken in the "Proposed Project." *See Figure 1 of Northshore Mining Stream Mitigation Plan at PDF 29*.

273. Restoration projects are typically confined to the immediate riparian zone where excavation is done and are set at a pre-determined design bankfull width. Activities typical of stream restoration-type projects include: grading and shaping of stream banks; modifications to the streambed; fish habitat improvements; and stabilizing and vegetating disturbed areas. The duration and scale of the stream mitigation projects' activities and relative impacts is orders of magnitude less than those activities associated with the proposed dam extensions, relocation of the materials supply railroad, and the tailings progression. As to the tailings progression, as provided at ¶ 99, the likely impacts of the "Proposed Project" itself are similarly of lesser scale and magnitude relative to historic and present operations at the Mile Post 7 tailings basin.

274. The MPCA Section 401 Certification's measures designed to minimize adverse impacts during and after construction includes: reporting requirements to MPCA; annual stream integrity monitoring; invasive species monitoring and control; adherance to USACE mitigation escrow requirements; maintenance of an adaptive management plan; and application of erosion and sedimentation minimization requirements. *See MPCA Section 401 Certification at 2-8*.

275. According to the schedule identified in the Section 401 Certification, all six of the stream restoration projects are required to be completed by 2026. *Id. at 3.* The Proposer reports basin elevations are projected to increase approximately 2.3 feet per year over the coming five-year period, which first requires beginning the dam extensions by filling the current topographic low point and ensuring continued containment of tailings in the storage facility. Other necessary advance work will include but is not limited to: ground preparation of the dam extensions; removal of the existing west ridge railroad; and development of the final West Ridge Railroad corridor. While there may be overlap in the timing of the stream restorations with the "Proposed Project," this would occur during the earliest stages of the "Proposed Project" with little or no potential for measurable cumulative effects, especially given the relatively small scale of actions associated with the stream restoration projects as provided in ¶ 273.

CONCLUSIONS

1. When determining whether a proposed project may have the potential for significant environmental effects, the RGU considers the evidence from the petition and other information known to the RGU against the criteria in Minn. R. 4410.4300.

   As set forth in ¶¶ 62 through 114, the "Proposed Project" does not constitute an expansion of an existing tailings basin pursuant to Minn. R. 4410.4300, subp. 11B.

2. When determining whether a proposed project may have the potential for significant environmental effects, the RGU considers the evidence from the petition and other information known to the RGU in the context of the following factors:

   A. type, extent, and reversibility of environmental effects;
   B. cumulative potential effects of related or anticipated future projects. The RGU shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions

to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project;

C. *extent to which the environmental effects are subject to mitigation by on-going regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project; and*

D. *the extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by agencies or the project proposer, including other EISs.*

See Minn. R. 5510.1100, subp. 6 (directing the RGU to consider the factors set forth in Minn. R. 4410.1700, subp. 7, in determining whether a project may have the potential for significant environmental effect) (emphasis added).

2. *Type, extent, and reversibility of environmental effects.*

As set forth in ¶¶ 47a to 47d, the "Proposed Project" would extend existing Dams 1 and 2 by 8,100 feet and 4,100 feet respectively, relocate the West Ridge Railway approximately 4000 feet to the northwest, progress tailings onto ~650 acres of additional permitted footprint, and develop a new clay borrow site.

As set forth in ¶¶ 95 and 97, the "Proposed Project" would result in impacts on 30.08 acres of land outside the study area for both the state and federal EISs of the type and extent evaluated in the 1975-76 Final EIS for dam and railroad construction. These effects may be partially reversible post-operations through reclamation and closure measures.

As set forth in ¶¶ 115 to 130, the "Proposed Project" would result in approximately 264 acres of direct wetland impacts and 45 acres of indirect wetland impacts of the type and extent evaluated in the 1975-76 Final EIS and the Wetland Replacement Plan. These effects are non-reversible.

As set forth in ¶¶ 131 to 141, the "Proposed Project" would result in impacts to water resources, including remnant portions of Big Thirtynine Creek and Little Thirtynine Creek, of the type and extent evaluated in the 1975-76 Final EIS, the Wetland Replacement Plan, and the MPCA Section 401 Certification. These effects are non-reversible.

As set forth in ¶¶ 142 to 150, the relocation of the West Ridge Railroad would result in 51.5 acres of new footprint-related impacts of the type and extent evaluated in the 1975-76 Final EIS. These effects may be partially reversible post-operations through reclamation and closure measures.

As set forth in ¶¶ 151 to 155, neither impacts to state-designated trout streams nor impacts to natural watercourses with a total drainage area of ten or more square miles are anticipated.

As set forth in ¶¶ 156 to 158, environmental effects to water quality, aquatic life, and wildlife related to impacts from to "Proposed Project" to wetlands and streams would be of the type and extent evaluated in the 1975-76 Final EIS, the Wetland Replacement Plan, and the MPCA Section

401 Certification. These effects may be partially reversible post-operations through reclamation and closure measures.

As set forth in ¶¶ 159 to 232, the "Proposed Project" would result in impacts from dam construction and safety of the type and extent evaluated in the 1975-76 Final EIS, which is supplemented by information from assessment of the Factors of Safety and other investigation through the series of Five Year Operation Plans. Some of these effects are reversible post-operations through reclamation and closure measures. There is no change in the final dam height of 1,315 feet amsl under the Proposed Project.

As set forth in¶¶ 233 to 240, the environmental effects of the "Proposed Project" operating beyond the original estimated Facility life of 40 years would be of the type and extent evaluated in the 1975-76 EIS and disclosed through the series of Five Year Operation Plans and ongoing monitoring requirements. The Facility would continue to operate for multiple decades if approved. Some of these effects are reversible post-operations through reclamation and closure measures.

As set forth in ¶¶ 241 to 242, the environmental effects from climate change would be of the type and extent evaluated in the 1975-76 Final EIS and the climate-related information gathered through the series of Five Year Operation Plans.

As set forth in ¶¶ 244 to 254, the "Proposed Project" would result in water quality impacts due to seepage, asbestiform fibers, and turbidity of the type and extent evaluated in the 1975-76 Final EIS and known under the monitoring and reporting requirements of MPCA NPDES/SDS Permit No. MN0055301. These effects are limited to the operational period, and some are reversible through reclamation and closure measures. The "Proposed Project" would not result in impacts due to chloride, pipeline construction, maintenance, or spills, or coarse tailings disposal.

As set forth in ¶¶ 255 to 258, the "Proposed Project" would result in impacts to fauna, flora, and state-listed species of the type and extent evaluated in the 1975-76 Final EIS and identified from review of the DNR Natural Heritage Information System database. Impacts to fauna and flora are reversible through reclamation and closure measures. No impacts to state-listed species have been identified.

As set forth in ¶¶ 259 to 262, the "Proposed Project" will result in air quality impacts from fugitive dust of the type and extent evaluated in the 1975-76 Final EIS and known under the monitoring and reporting requirements of MPCA Air Permit No. 07500003-010/-101. These effects are limited to the operational period and reversible through reclamation and closure measures.

As set forth in ¶¶ 263 to 265, the "Proposed Project" will result in impacts to water quality from surface water discharges of the type and extent known from monitoring and reporting requirements of MPCA NPDES/SDS Permit No. 0055301. However, the "Proposed Project" is not expected to result in a substantial change in the volume of water treated, influent quality, treatment efficiency, or effluent quality emanating from the water treatment plant. These effects are limited to the operational period and reversible through reclamation and closure measures.

As set forth in ¶¶ 266 to 270, the "Proposed Project" does not result in seepage or local groundwater level effects to the existing ash landfill.

3. *Cumulative potential effects of related or anticipated future projects.*

   As set forth in ¶¶ 271 to 275, no cumulative potential effects of related or anticipated future projects have been identified.

4. *Extent to which environmental effects are subject to mitigation by on-going public regulatory authority.*

   Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶¶ 95 and 96, are subject to mitigation by ongoing public regulatory authority, as discussed in ¶ 97, under the DNR Master Permit, Permit to Mine, and Wetland Conservation Act.

   Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶¶ 115, 118, 123-126, are subject to mitigation by ongoing regulatory authority, as discussed in ¶¶ 116-117, 119-122, and 127-129, under the MPCA Section 401 Certification, the NPDES Construction Stormwater Permit, the Permit to Mine, the Wetland Conservation Act, and USACE Section 404 Permit.

   Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶¶ 131-136, and 138-139, are subject to mitigation by ongoing regulatory authority, as discussed in ¶¶ 137 and 140, under the Wetland Replacement Plan under the Permit to Mine, MPCA Section 401 Certification, and USACE Section 404 Permit.

   Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶¶ 142-146 and 148, are subject to mitigation by ongoing regulatory authority, as discussed in ¶¶ 147 and 149-150, under the Permit to Mine.

   Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶¶ 156 and 157, are subject to mitigation by ongoing regulatory authority, as discussed in ¶ 158, under the Wetland Replacement Plan under the Permit to Mine, USACE Section 404 Permit, MPCA Section 401 Certification, and MPCA NPDES/SDS Permit No. MN0055301.

   Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶¶ 165-183, 187-192, 195-203, 208-214, 216-223, and 227-231, are subject to mitigation by ongoing regulatory authority, as discussed in ¶¶ 27, 184-186, 193-194, 204-207, 215, 224-226, 232, under the DNR Permit to Mine and Master Permit, including oversight under the DNR Dam Safety Program.

   Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶¶ 233-236, and 238-240, are subject to mitigation by ongoing regulatory authority, as described in ¶ 237, under the DNR Permit to Mine and Master Permit.

Based on the Finding of Fact above, the DNR has determined that the alleged environmental effects, as described in ¶ 241, are subject to mitigation by ongoing regulatory authority, as described in ¶ 242, under the DNR Permit to Mine and Master Permit.

Based on the Finding of Fact above, the DNR has determined that the known environmental effects, as described in ¶¶ 244 through 254, are subject to ongoing regulatory authority under MPCA NPDES/SDS Permit No. MN0055331.

Based on the Finding of Fact above, the DNR has determined that the known environmental effects, as described in ¶¶ 255 through 258, are subject to ongoing regulatory authority under the Permit to Mine and Minnesota Endangered Species Act.

Based on the Finding of Fact above, the DNR has determined that the known environmental effects, as described in ¶¶ 259 through 262, are subject to ongoing regulatory authority under MPCA Air Permit No. 007500003-010/-101 and the Permit to Mine.

Based on the Finding of Fact above, the DNR has determined that the known environmental effects, as described in ¶¶ 263 through 265, are subject to ongoing regulatory authority under MPCA NPDES/SDS Permit No. MN0055331.

Based on the Finding of Fact above, the DNR has determined that the known environmental effects, as described in ¶¶ 266 through 270, are subject to ongoing regulatory authority under the Permit to Mine, Master Permit, and MPCA Solid Waste Permit SW-409.

5. *Extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by public agencies or the project proposer, or other EISs.*

   The following documents provide information that can be used to anticipate and control environmental effects of the Mile Post 7 Tailings Basin Progression Project:

   Minnesota Department of Natural Resources. 1975. Reserve Mining Company's Proposed On Land Tailings Disposal Plan. Draft Environmental Impact Statement. October 1975. 320 pgs.

   Minnesota Department of Natural Resources. 1976. Reserve Mining Company's Proposed On Land Tailings Disposal Plan. Final Environmental Impact Statement. June 1976. 131 pgs.

   United States Army Corps of Engineers. 1977. Power Plant Discharge Structure, Delta Stabilization Dike, and On-Land Taconite Tailings Disposal, Reserve Mining Company, Silver Bay, MN. March 1977. 200 pgs. plus Technical Appendix.

6. The RGU is required to deny a petition for an EAW if the evidence presented by the petitioner fails to demonstrate the project may have the potential for significant environmental effects. Minn. R. 4410.1100, subp. 6. As demonstrated in ¶¶ 47 through 275, the proposed Mile Post 7 Tailings Basin Progression project **does not** have the potential for significant environmental effects.

7. Any Findings that might be properly termed Conclusions and any Conclusions that might properly be termed Findings are hereby adopted as such.

ORDER

Based on the above Findings of Fact and Conclusions:

The Department of Natural Resources determines that an Environmental Assessment Worksheet **will not** be prepared for the proposed Mile Post 7 Tailings Basin Progression project in Lake County, Minnesota, as requested by the petitions submitted to the EQB.

Dated this 4th day of February 2022.

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

JESS RICHARDS
Assistant Commissioner