



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
P.O. Box 100
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Your file - Votre référence
2AM-WTP1830
Our file - Notre référence
CIDM#1293287

February 25, 2021

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
E-mail: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada Review of the Whale Tail Dike Construction Summary Report, submitted by Agnico Eagle Mines Ltd. for the Whale Tail Project, Type A Water Licence No. 2AM-WTP1830

Dear Mr. Dwyer,

Thank you for the January 29, 2021 invitation to review the referenced Construction Summary Report for the Whale Tail Dike, submitted by Agnico Eagle Mines Ltd. for the Whale Tail Project, Type A Water Licence No. 2AM-WTP1830.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at (867) 975-4282 or bridget.campbell@canada.ca.

Sincerely,

Bridget Campbell,
Water Resources Coordinator



Technical Review Memorandum

Date: February 25, 2021

To: Richard Dwyer, Manager of Licensing, Nunavut Water Board

From: Bridget Campbell, Water Resources Coordinator, Water Resources Division, CIRNAC

Subject: Crown-Indigenous Relations and Northern Affairs Canada Review of the Whale Tail Dike Construction Summary Report, submitted by Agnico Eagle Mines Ltd. for the Whale Tail Project, Type A Water Licence No. 2AM-WTP1830

Region: ☐ Kitikmeot ☒ Kivalliq ☐ Qikiqtani

A. BACKGROUND

Agnico Eagle Mines Limited (AEM) operates the Whale Tail Project on the Amaruq property under Water Licence 2AM-WTP1830, as a continuation of mine operations and milling at the Meadowbank Mine. The property is located on Inuit Owned Land, approximately 150 km north of the Hamlet of Baker Lake and approximately 50 km northwest of the Meadowbank Mine in the Kivalliq region of Nunavut.

Water Licence 2AM-WTP1830 was approved in 2018 and authorizes AEM to construct Whale Tail site water management infrastructure including: Whale Tail Dike, Mammoth Dike, Waste Rock Storage Facility Dike, Northwest Dike, Mammoth Channel Culvert, Whale Tail Diversion Channel, IVR Diversion, and IVR dikes. Construction of the Whale Tail Dike occurred between June 16, 2018 and February 19, 2019. As required under Part D of the licence, AEM has submitted a Construction Summary Report to the Nunavut Water Board (NWB) for review.

Crown-Indigenous relations and Northern Affairs Canada (CIRNAC) provides the following comments and recommendations pertaining to the submission. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C. References are listed in Section D.

Table 1: Summary of Recommendations

Recommendation Number	Subject
R-01	Monitoring Requirements

**B. DOCUMENTS REVIEWED**

The following table (Table 2) provides a summary of the documents reviewed under the submission.

Table 2: Documents Reviewed

Document Title	Author, File No., Rev., Date
Assistance during construction of the water management and geotechnical infrastructures and the Amaruq project: As-Built Report of Whale Tail Dike – Report Only	SNC Lavalin Inc. on behalf of Agnico Eagle Mines Ltd., Rev. 0, June 5, 2020
Appendix A: Construction photos	
Appendix B: Technical memoranda and Revised Technical Specifications	
Appendix C: Instrumentation	
Appendix C-1: Calibration sheets	
Appendix C-2: Whale Tail Dike Instrumentation Report	
Appendix C-3: Instrumentation during Construction	
Appendix D: Final construction schedule	
Appendix E: Fine and coarse filter material gradation	
Appendix F: Quality Control (QC) secant piles compilation	
Appendix G: CB slurry laboratory testing	
Appendix G-1: Testing results on Slurry Mixes	
Appendix G-2: Pinhole tests	
Appendix G-3: Unconfined Compressive Strength (UCS)	
Appendix G-4: Permeability tests	
Appendix G-5: Field Vane Shear Strength tests	
Appendix H: Approval Forms	
Appendix H-1: Foundation and Key Trenches	
Appendix H-2: Rockfill placement	
Appendix H-3: Fine filter placement	
Appendix H-4: Coarse filter placement	
Appendix H-5: Dynamic compaction	
Appendix H-6: Secant piles Rock socket depth	
Appendix H-7: Secant piles Approval to drill tertiary piles	
Appendix H-8: Letter for Henry Drilling Demobilization	
Appendix I: Reports	
Appendix I-1: Quality Assurance - Shift Reports	
Appendix I-2: Quality Assurance - Weekly Reports	
Appendix I-3: Daily Construction Meetings	
Appendix I-4: Dynamic Compaction	
Appendix I-5: Secant Piles	
Appendix I-6: Grouting Reports	
Appendix I-7: Quality Control Daily reports	



Document Title	Author, File No., Rev., Date
Appendix I-8: 3-Week Meeting Reports	
Appendix J-1: Dynamic Compaction Menard	
Appendix J-2: Secant Pile Installation KCG	
Appendix J-3: Drilling and Grouting - KCG	
Appendix K: As-built	
Appendix K-1: Dynamic compaction Menard	
Appendix K-2: Secant Piles KCG	
Appendix K-3: As-built Drawings	
Appendix K-4: Final Secant Piles Register	
Appendix K-5: Grout Injection	
Appendix L: RFIs List	
Appendix M: Quality Control Grout Curtain Register	



C. RESULTS OF REVIEW

1. Monitoring Requirements

Comment:

The Whale Tail Dike Construction Summary Report (CSR) is a comprehensive document and includes field photos, notes, decisions, and drawings within a report and thirteen appendices with sub-appendices, consisting of more than 1000 pages. CIRNAC appreciates the breakdown of the 17 attachments to navigate the appendices and attachments, provided by AEM.

While the attachment breakdown was often helpful in finding information within the documents, CIRNAC was unable to locate the following monitoring components of the CSR, which are required under Schedule D of Licence 2AM-WTP1830:

- f) Monitoring undertaken in compliance with Part D of the Licence (which requires AEM to implement the *Water Quality Monitoring and Management Plan for Dike Construction and Dewatering* if TSS levels are exceeded);
- g) Blast vibration monitoring for quarrying activities carried out in close proximity to fish bearing waters;
- h) Monitoring for sediment release from Construction areas; and
- i) Monitoring and reporting on use of Water to manage dust emissions from crushing and Construction activity.

For future reports, CIRNAC would appreciate the inclusion of a concordance table, either within or accompanying the CSRs, which demonstrates where each item listed in Schedule D of Licence 2AM-WTP1830 can be found.

Recommendation:

(R-01) CIRNAC recommends that AEM clarify where in the report and associated appendices the identified monitoring information can be found. If these components were not included in the report, CIRNAC recommends that the information, or the rationale for their exclusion, be provided to the NWB.

D. REFERENCES

Works Cited

Nunavut Water Board Amended Water Licence Number 2AM-WTP1830. Signed by Lootie Toomasie, Nunavut Water Board Chair, May 29, 2018.