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Land and Water Board

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February 26, 2026 File: W2025L2-0001

Sean Sinclair
Diavik Diamond Mines (2012) Inc.
P.O. Box 2498
Suite 300, 5201-50th Avenue
Yellowknife, NT X1A 2P8 Sent by email

Dear Sean Sinclair,

Re: Diavik – Final Closure and Reclamation Plan, Version 1.1 – Approve with Revisions

The Wek'èezhìı Land and Water Board (WLWB or the Board) met on February 24, 2026 and considered Version 1.1 of the Final Closure and Reclamation Plan (FCRP) submitted by Diavik Diamond Mines (2012) Inc. (DDMI) in accordance with Part J, Condition 7 of Water Licence W2015L2-0001[1] . As described in the attached Reasons for Decision, the Board has approved the FCRP Version 1.1 with revisions required and additional direction.

With the end of commercial operations imminent, the Board is proud to see Diavik be the first mine to close as planned within Wek'èezhìı. The Board is confident that the approved FCRP, in combination with Board direction, will meet the expectations set out in the LWB Closure Guidelines. The Board values the working relationship it has developed with DDMI throughout operations and is grateful for the co-management system that will allow for adjustments as needed, as closure progresses. The Board has confidence in the proposed monitoring, adaptive management, and the WLWB process, to adjust as necessary to ensure that closure continues towards achieving the approved closure goals and objectives.

As summarized in Appendices C and D, the Board has approved most sections of the FCRP, including most closure objectives and criteria. In consideration of the imminent closure, the Board has, where possible, tried to provide clear direction that would not require public review if accepted by DDMI. However,

[1] Now Part J, Condition 7 of Water LicenceW2025L2-001.

additional work and information is required to address specific outstanding items. The Board notes that in several instances it has identified that Traditional Knowledge monitoring will be required to support the evaluation of successful closure and understands that additional details about how that will be done is forthcoming. The Board has required a component-specific FCRP to be submitted for both the North Inlet and Processed Kimberlite Containment Facility. A complete list of Board decisions can be found in Section 1.0 of the attached Reasons for Decisions.

Please direct questions or concerns regarding this letter to Ryan Fequet via email.

Yours sincerely,

Mason Mantla
Chair, Wek'èezhìı Land and Water Board

BCC'd to: Diavik Distribution List
Joe Heron – Inspector, GNWT-ECC

Attached: Reasons for Decision

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Reasons for Decision

Reference/File Number:	W2025L2-0001 (Type "A" Water Licence)
Licensee:	Diavik Diamond Mines (2012) Inc. (DDMI)
Subject:	Final Closure and Reclamation Plan (FCRP) Version 1.1

Decision from the Wek'èezhìi Land and Water Board
Meeting of February 24, 2026

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1.0 Decision

At the Wek'èezhìi Land and Water Board's (WLWB or the Board) February 24, 2026 meeting, the Board met to consider the Final Closure and Reclamation Plan (FCRP) Version 1.1 submitted by Diavik Diamond Mines (2012) Inc. (DDMI) on July 18, 2025 as required by its Water Licence (W2015L2-0001) under Part J, Condition 7.

The Board has made the following decisions:

1. The Board has approved the FCRP Version 1.1 with revisions and additional direction.
2. The Board directs DDMI to address Decisions 1 through 37 and Revisions in Appendix A and Appendix B at the respective timelines identified.
3. The Board has not approved appendices to the FCRP as set out in Appendix C.
4. The Board has not approved the closure criteria as set out in Appendix D.
5. With any proposed update to the FCRP, DDMI is to include a change log with hyperlinks to any section of the previously approved FCRP where no updates are proposed.
6. The Board requires DDMI to provide all revisions required for conformity in Appendix A and B to be completed no later than 90 days following this Decision.
7. A minimum 6 months prior to the end of active closure, DDMI is to update the FCRP to include risk communication risk communication planned in accordance with Schedule 8, Condition 1(q).
8. The Board requires DDMI to include a map showing the active and inactive SNP station locations in all future submissions of the Annual Water Licence Report.
9. The Board requires DDMI to assess whether groundwater monitoring should be established following completion of the Phase III ESA and provide further monitoring recommendation(s) in the associated Phase III ESA report.
10. The Board requires the Geotechnical Engineer to include a statement confirming that the inspection frequencies are appropriate in each annual Engineer's Report.
11. The Board has approved the AEMP Design Plan as provided in Appendix VI-2, with revisions required, which is to be submitted as a separate submission within 30 days of decision for conformity, with the exception of the Response Framework.
12. The Board requires DDMI to provide information supporting the use of the 2025 NFC dataset, which includes, but may not be limited to, a comparison of the 95th percentile of the 2025 NFC data to the individual 2025 NFC data, the historical AEMP data, and Effects Benchmarks. DDMI is also to screen the 2025 NFC data for anomalous values, and any anomalous values would be removed prior to the calculation of the 95th percentile. This information is to be submitted to the Board no later than May 1, 2026 for approval.
13. The Board approves the Low Action Levels as proposed in the AEMP Response Framework but requires DDMI to submit a revised Response Framework no later than May 1, 2026.
14. The Board requires DDMI to continue reporting large-bodied fish tissue chemistry under the Traditional Knowledge Studies section of the AEMP Annual Report and include it in the Aquatic Effects Re-evaluation Report.

15. The Board requires DDMI to engage with Indigenous Governments and Organizations (IGOs) regarding potential land use associated with the inland lakes on East Island to inform the revised TKMF.
16. The Board requires DDMI to incorporate assessment of SW1-1 in the SES for decommissioned collection ponds.
17. The Board requires DDMI to include chronic toxicity testing results for the collection pond discharges in relevant PAR submissions and propose this as Schedule 8, Condition 3 requirement in submission required by Part J, Condition 8.
18. The Board has approved Closure Objective SW4.
19. Within six months of this Decision, resubmit FCRP to include necessary revisions to Appendix X-9, Appendix VI, and closure criteria associated with vegetation.
20. The Board has determined that post-closure vegetation monitoring should evaluate the establishment of species native to East Island.
21. The Board requires DDMI to provide an opportunity for IGOs to visit the site to discuss the revegetation plan prior to submission of Appendix X-9.
22. The Board requires DDMI to propose an update to Appendix X-17 and closure criteria related to the South WRSA, once final quantities of waste rock remaining are understood.
23. The Board requires DDMI to submit a component-specific FCRP that is to meet the expectations of the Closure Guidelines (i.e., not be simply the submission of the updated design). The Board expects this will address the direction from the PKCF Closure Design March 1, 2024, Reasons for Decision and updates identified in Attachment B (FCRP Version 1.1 Change Log).
24. If construction of the PKCF cover is not completed during the planned active closure phase (i.e., with continual site presence), DDMI is to provide an update on the status of the PKCF, and propose mitigations, monitoring, and/or deterrents to address current risks in revisions to the FCRP.
25. Within six months of this decision, DDMI is to submit the North Inlet component-specific FCRP.
26. The Board has not considered closure criteria for the North Inlet at this time.
27. The Board has approved the revision to Closure Objective NI1 and removal of Closure Objective NI3.
28. The Board has approved the change in conceptual closure plan for the North Inlet (i.e., full to hydraulic-only reconnection with Lac de Gras)
29. The Board has not approved removal of Closure Objective NI4.
30. Prior to proposing the reconnection approach for the North Inlet, DDMI is to engage with ECCC to ensure its proposal is compliant with the MDMER.
31. The Board requires the North Inlet component-specific FCRP to provide the following information, with sufficient detail of that expected of a final closure plan and with references to supporting evidence as appropriate so that Parties can complete a holistic review. This should include, but not be limited to, the following:
    a) An updated Design for the hydraulic-only connection;
    b) Description of the water management strategy for the North Inlet, including adaptive management and contingencies;

c) Reconnection criteria for water and sediment and evidence to support their achievability as per Schedule 8, Condition 1(p);
d) If reconnection criteria are above water quality objectives for Lac de Gras, address the requirements of the LWB/GNWT Guidelines for Effluent Mixing Zones (2023);
e) Closure criteria for sediment that are consistent with the approved closure objectives and future use, including a systematic process for how parameters were selected;
f) Anticipated water quality in the North Inlet and options to influence this water quality;
g) Anticipated sediment quality in the North Inlet and options to influence this sediment quality;
h) A summary of how the sediment investigation results will be used to determine whether reconnection criteria are met;
i) Proposed closure criterion to evaluate a sheen;
j) Proposed monitoring to evaluate reconnection criteria, closure criteria, and if applicable, the potential mixing zone;
k) SNP Update request; and
l) Engagement record.

32. The Board has approved the change in closure activity to remove enhancement of fish habitat in the pit lakes
33. The Board has approved the revised Closure Objective M3.
34. The Board has approved Closure Objective M9.
35. The Board requires DDMI to complete late-stage back-flooding monitoring to verify water quality is as expected and provide monitoring results for information only (i.e., monitoring program design and reporting are not for approval).
36. Within 90 days of this Decision, revise the Waste Management Plan to reflect DDMI's commitment to reduce the volume of hydrocarbon contaminated soils requiring disposal (e.g., landfarming) through active closure.
37. Following the completion of the Phase II ESA, DDMI shall propose updates to I3 closure criterion and Appendix X-11 with supporting evidence and rationale.

2.0 Background

The Mackenzie Valley Land and Water Board (MVLWB) first approved the Diavik Mine interim Closure and Reclamation Plan (CRP) in 2001. Diavik Diamond Mines (2012) Inc. (DDMI, the Applicant) submitted several versions of an updated interim CRP between 2006 and 2011 until the WLWB approved Version 3.2 on September 21, 2011.[2] In its December 17, 2018 Reasons for Decision on Version 4.0,[3] the Board directed DDMI to submit Version 4.1 of the interim CRP by June 18, 2019. The Board approved

[2] See WLWB Online Registry (www.wlwb.ca) for W2007L2-0003 - Diavik - ICRP - Version 3.2 - Reasons for Decision - Nov 7_11.pdf.

[3] See WLWB Online Registry for Diavik - Closure and Reclamation Plan Version 4.0 - Board Decision Letter and Reasons for Decision - Dec 17_18.pdf.

Version 4.1 on June 10, 2021 and required revisions be incorporated in the Final Closure and Reclamation Plan (FCRP).[4]

Part J, Condition 7 of Water Licence (Licence) W2015L2-0001 requires: "The Licensee shall submit a Final Closure and Reclamation Plan to the Board for approval three (3) years prior to the expiry date of this Licence or a minimum of twenty-four (24) months prior to the end of commercial operations, whichever occurs first." Licence W2015L2-0001 expires December 31, 2025, and the FCRP identified that the end of commercial operations is scheduled for mid-2025. In accordance with Part J, Condition 7 of Licence W2015L2-0001, the FCRP Version 1.0 was submitted on October 13, 2022. On July 19, 2024, the Board issued its Reasons for Decision.[5] This decision did not approve the FCRP Version 1.0, but did approve many aspects, and provide direction for revisions in submission of Version 1.1. In October and December 2024, the WLWB hosted two workshops to advance outstanding issues identified in review of Version 1.0.[6]

On May 16, 2025, DDMI, the Applicant submitted the FCRP Version 1.1 as required by the WLWB's July 9, 2024 Decision and Part J, Condition 7 of Licence W2015L2-0001. A conforming submission was received on July 18, 2025.[7]

The WLWB previously communicated that it intended to host a workshop during the review of DDMI's FCRP Version 1.1 and sought input on Parties availability. This was intended as an opportunity to help inform and focus Parties' comments and recommendations on the FCRP and was not the result of a Board direction. The response from Parties unfortunately identified many conflicts with the proposed dates. Understanding these limitations, DDMI proposed hosting two virtual information sessions during the public review to help Parties understand the proposed changes. In addition, DDMI had committed to making themselves available to answer questions as Parties review and prepare comments and recommendations. As such, the WLWB determined a workshop was not required. DDMI hosted virtual information sessions on August 14th and 18th to provide an opportunity for Parties to ask questions as they prepared comments on FCRP Version 1.1.

Version 1.1 of the FCRP was distributed for public review on July 21, 2025.[8] On October 27, 2025, the reviewer comment deadline was extended from October 29 to November 5, 2025. The proponent response deadline was extended to December 3, 2025. The following reviewers submitted comments and recommendations by the November 5, 2025 deadline:

- Environmental Monitoring Advisory Board (EMAB);
- Environment and Climate Change Canada (ECCC);
- Fisheries and Oceans Canada (DFO);

[4] See WLWB Online Registry for Diavik - CRP - Version 4.1 - Reasons for Decision - Jun 10_21.pdf.

[5] See WLWB Online Registry for Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf.

[6] See WLWB Online Registry for Diavik - Final CRP - Closure Workshop 1 - Agenda - Oct 14_24.pdf; Diavik - Final CRP - Closure Workshop 2 - Agenda - Nov 7_24.pdf; Diavik - Final CRP - Workshops - Facilitator Report - Dec 30_24.pdf.

[7] See WLWB Online Registry for Final CRP Version 1.1.

[8] See WLWB Online Review System for Diavik Final Closure and Reclamation Plan (FCRP) Version 1.1.

- Government of Northwest Territories – Environment and Climate Change (GNWT-ECC);
- Government of Northwest Territories – ECC (GNWT-Inspectors);
- North Slave Métis Alliance (NSMA)
- Tłı̨chǫ Government (TG);
- Yellowknives Dene First Nation (YKDFN); and
- WLWB staff.

On November 28, 2025, the response deadline was extended to December 16, 2025 at DDMI's request. DDMI provided responses to comments and recommendations by the revised deadline.

On October 3, 2025, DDMI submitted the Traditional Knowledge Monitoring Framework (TKMF) Version 1.0 in accordance with the Board's July 19, 2024, Reasons for Decision on FCRP Version 1.0.[9] The TKMF underwent a separate public review process in parallel with this FCRP Version 1.1 review.[10] The WLWB also considered the TKMF at the February 24, 2026 meeting and its Reasons for Decision can be found on the WLWB Online Registry.[11]

The WLWB notes that in its covering letter, DDMI requested that "Based on the limited magnitude of changes proposed in FCRP Version 1.1, DDMI requests that the WLWB target review timelines for the FCRP Version 1.1 that will allow for a final decision at least 4 months prior to the end of commercial operations." As identified by EMAB comment 1, the FCRP was to be submitted by April 15, 2025. A conforming submission was not received until July 18, 2025. This delayed receipt of a conforming submission, combined with requested extensions to both the review and proponent comment deadlines, did not make this request feasible. The Board has dedicated significant effort to evaluate the over 500 comments received on the FCRP Version 1.1 and TKMF prior to the end of operations.

It is noted that both the FCRP Version 1.1 and TKMF Version 1.0 were submitted under Licence W2015L2-0001. Since that time, Licence W2025L2-0001 was issued.[12] Therefore, this decision is filed under the current active licence on the WLWB's Online Registry.

3.0 Reasons for Decision

This Reasons for Decision from the Board's February 23, 2026, meeting is organized by the following main themes that emerged during the review of the FCRP Version 1.1:

- Consideration of FCRP for approval;
- Risk Communication;
- Contingencies and adaptive management;

[9] See WLWB Online Registry for Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf.
[10] See WLWB Online Registry for Diavik - Traditional Knowledge Monitoring Framework - Version 1.0.
[11] See WLWB Online Registry for Diavik - Traditional Knowledge Monitoring Framework - Version 1.0 - Reasons for Decision - Feb 26_26.pdf
[12] See WLWB Online Registry for Diavik - WL Renewal - Issuance Letter and Licence - Dec 12_25.pdf.

- Climate change;
- Closure objectives and Closure criteria;
- Closure and post-closure monitoring and maintenance;
- Site-wide considerations;
- Waste Rock Storage Areas;
- Processed Kimberlite Containment Facility (PKCF);
- North Inlet;
- Open pits, underground, and dike areas;
- Mine infrastructure; and
- Security.

3.1 Consideration of Final Closure and Reclamation Plan for Approval

The Land and Water Boards of the Mackenzie Valley (LWB) *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories* (Closure Guidelines)[13] describe the purpose of final CRPs:

> The final CRP is typically required two years prior to the end of operations or required by a condition of a water licence for an abandoned mine (see figure 5). It provides detailed descriptions of the proposed reclamation activities for the mining operation and must be approved before permanent closure takes place or immediately after unplanned closure. For large, multi-year reclamation projects, the final CRP may include a schedule for updates to the plan during implementation of the work. The proponent should provide these updates in its annual CRP progress report, which may continue to be required post-closure.
>
> As a project advances, the level of analysis and deliberation regarding certain closure options will diminish upon the completion of selected closure activities. Additionally, predicted residual effects of selected closure activities should be increasingly detailed in the final CRP since more information, including monitoring and research results, will be available to determine the duration, frequency, and magnitude of the effects. Proponents should complete the reclamation research and site monitoring required to finalize closure criteria in time to include appropriate closure criteria in the final CRP. The final CRP should fully describe the level of detail and certainty surrounding post-closure monitoring and contingency planning.

The Diavik Mine is scheduled to end operations in March 2026 and commence the active closure phase. In 2024, the Board did not approve the FCRP Version 1.0, stating that integral site-wide consideration required more work. The WLWB specifically noted uncertainties remaining surrounding the incorporation of Traditional Knowledge (TK) into closure monitoring and evaluation, site-wide closure

[13] See WLWB (www.wlwb.ca) "Policies and Guidelines" for LWB (2013) MVLWB Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories.

criteria, the revegetation approach, contaminated sediments, and the North Inlet. Attachment B of the FCRP Version 1.1 includes a change log of what has been updated since FCRP Version 1.0 and identifies sections where future updates are anticipated.

EMAB (comment 1) was the only Party to comment on whether the FCRP could be approved at this time:

> EMAB is particularly concerned because our view is that FCRP version 1.1 is still far from ready for approval, and that Diavik has not made a number of the changes needed for an acceptable final closure plan. Our review recommends many revisions, several of which are quite significant. It is our expectation that Diavik will need to submit another version, and that this second revision may not be approved by the time Diavik ceases operations. We anticipate that there may be pressure placed on regulators and Parties to accelerate the submission and review process to meet the required deadlines for the FCRP. It is EMAB's view that it is most important that a strong Final Closure Plan be in place, and that there be sufficient time available for Parties to undertake a thorough review prior to any approval i.e. that it is more important to have a good Final Closure Plan in place than to meet a schedule.

The Board does not disagree that there are sections of the plan that are not yet ready for approval. However, the Board finds that these issues are distinct and can be addressed without delaying the commencement of active closure. The Board has approved the majority of the FCRP Version 1.1 and identified specific areas where issues remain and additional information and discussion is required. As described in detail in these and the TKMF Reasons for Decision, the Board has identified that the following main outstanding issues remain:

- Closure of the North Inlet;
- Revegetation Approach;
- Post-closure Monitoring and Evaluation of the PKCF; and
- TKMF and Cultural Use Criteria.

Overall, the WLWB is satisfied that the FCRP Version 1.1 meets the requirements of the Closure Guidelines and addresses most outstanding items identified in the FCRP Version 1.0. Where outstanding issues remain, the Board has identified a path forward to address these in a targeted fashion while allowing active closure to commence. The Board is confident that the direction provided will ensure that Diavik is closed responsibly and that successful closure can be evaluated consistent with its approved closure goals and objectives.

- ***Decision #1: The Board has approved the FCRP Version 1.1 with revisions and additional direction.***

Throughout this Reasons for Decision, the Board has identified where uncertainties remain and has provided guidance as to how these uncertainties may be resolved moving forward. The Board recognizes that various factors may influence the feasibility and urgency associated with specific aspects

of the FCRP and notes that it may be useful to submit aspects of the FCRP in isolation for WLWB consideration (see Section 3.1.1). In consideration of the imminent end of operations, and in efforts to provide as much certainty as possible, the Board has tried to provide prescriptive direction to resolve concerns wherever possible. As always, if DDMI wishes to provide new evidence to support reconsideration of these prescriptive decisions, such a request can undergo the Board's public review process. The Board notes that straightforward administrative revisions that did not require discussion are included in Appendix B and not discussed in this Reasons for Decision.

- ***Decision #2: The Board directs DDMI to address Decisions 1 through 37 and Revisions in Appendix A and Appendix B by the respective timelines identified.***
- ***Decision #3: The Board has not approved appendices to the FCRP as set out in Appendix C.***
- ***Decision #4: The Board has not approved the closure criteria as set out in Appendix D.***

The Board notes that 500 comments and recommendations were received on the FCRP Version 1.1, with an additional 74 comments received in review of the TKMF. The Board appreciates the Parties active participation in such an important topic. Despite this lengthy Reasons for Decision, it was not reasonable for the Board to explicitly address every comment received. The Board considered each comment and finds this Reasons for Decision adequately provides direction to the Licensee to advance the FCRP based on the comments and recommendations received. As always, the Board encourages all Parties to reach out to the Proponent when reviewing a submission to focus comments and recommendations, wherever possible.

3.1.1 Future Updates to the Final Closure and Reclamation Plan

The Decisions outlined in Section 1.0, identify future submissions required to address the outstanding items related to FCRP Version 1.1. Where possible, the Board has tried to provide timelines to estimate when DDMI would require certainty in consideration of the timelines for Board consideration and decision. The Board recognizes that various factors may influence the feasibility and urgency associated with aspects of the FCRP and, therefore, understands DDMI may wish to package revisions together based on its internal deadlines and considerations. The Board notes that Part B, Condition 27 of Water Licence W2025L2-0001 requires revisions to a plan are required minimum of 90 days prior to the proposed implementation date for the changes. The Board has tried to specify timelines for submission in instances where 90 days prior may not be sufficient time for consideration prior to implementation (e.g., North Inlet component-specific FCRP).

The Board notes that the FCRP Version 1.1 is a very large document (i.e., 38 documents totaling 9,038 pages) with many interconnections within. The Board anticipates document management can become challenging as updates may influence multiple sections of the FCRP while not influencing others at all. The Board suggests that to ensure relevant documents are readily available, DDMI provide a table of contents hyperlinking any section of the previously approved FCRP section, where no updates are proposed. This could likely be similar to the change log provided in Appendix B of the FCRP Version 1.1 submission with the addition of relevant hyperlinks. If DDMI has any questions about this requirement, please discuss with Board staff.

- ***Decision #5: With any proposed update to the FCRP, DDMI is to include a change log with hyperlinks to any section of the previously approved FCRP where no updates are proposed.***

The Board notes that many revisions in this Reasons for Decision (summarized in Appendix A and B) will not require Board consideration and will simply be to confirm conformity. The Board finds these revisions to be straightforward and can be addressed immediately to reduce confusion in the approved plan.

- ***Decision #6: The Board requires DDMI to provide all revisions required for conformity in Appendix A and B to be completed no later than 90 days following this Decision.***

The Board notes that during the public review, DDMI identified multiple revisions to existing site management plans that will be submitted as it moves into active closure (responses to WLWB staff comment 9, 32, 33, 55, 65; YKDFN comment 15, 16). Given the large number of anticipated incoming submissions, the Board recommends DDMI work with Boards staff to determine the most appropriate timelines to avoid overwhelming reviewers.

3.2 Risk Communication

Parties have repeatedly highlighted the importance of understanding conditions on and around the East Island post-closure and the associated risks, to enable them to confidently use the area for cultural practices. With the recent Renewal Reasons for Decision, the Board required DDMI to propose schedule requirements for the PAR, to include a list of outstanding risks, and to explain how outstanding risks will be communicated, if different than that approved in the FCRP. At that time, the Board included a requirement to discuss risk communication in the FCRP (Schedule 8, Condition 1[q]) and determined that timelines to provide the details of how risk will be communicated can be considered through the FCRP. In addition, Part B, Condition 14 of Licence W2025L2-0001 requires an updated Engagement Plan within six months of issuance of the Renewal Licence to include engagement needs to take place regarding methods of engagement and/or communication to communicate risk

The Board recognizes that risk communication will be most important post-closure, when site presence is limited and remaining risks are continuing to be evaluated through post-closure monitoring. As discussed in Section 3.9, the Board has specifically discussed risks associated with the PKCF, if freezing timelines do not allow cover construction to be completed on schedule. In addition, DDMI identified several items that could be addressed through risk communication (responses to EMAB comments 29, 113, 115).

The Tłı̨chǫ Government (comment 14) recommended a new closure objective of post-closure risks having been thoroughly communicated:

> In recent comments in WLWB proceedings, TG has emphasized the important role of risk communication to inform Tłı̨chǫ citizens' decisions about resuming cultural use activities in and around the closed mine site. The WLWB's recent Reasons for Decision on the renewed Water Licence (sent to the Minister for signature, dated October 17,

> 2025) state that the Board added a requirement for risk communication to be discussed in the FCRP. The Board also required Diavik to engage on this issue. To ensure risk communication plans are developed and implemented before Diavik "walks away" from the site, a closure objective and criteria should be added to address risk communication.

In response, DDMI acknowledged the need for and importance of risk communication but stated that it "does not believe that a new closure objective is an appropriate or necessary approach". DDMI also highlighted the requirement to discuss risk communication in the FCRP. The Board notes that closure objectives and criteria are the tools the Board uses to evaluate the successful implementation of the FCRP. The Board has already required that risk and risk communication be included in the PAR; therefore, it does not seem inappropriate to evaluate this formally through a closure objective. It is noted that a site-wide closure objective for the Giant Mine Remediation Project is included, "SW4. Residual risks are identified, and local residents have been, and continue to be, informed of residual hazards (post-remediation)". It is the Board's opinion that this or a similar requirement would be reasonable for the Diavik mine site.

- ***Decision #7: A minimum 6 months prior to the end of active closure, DDMI is to update the FCRP to include risk communication planned in accordance with Schedule 8, Condition 1(q).***
- ***Revision #1: The Board requires DDMI to revise the FCRP to include a site-wide closure objective and associated criterion to evaluate that residual risks have been identified and appropriately communicated.***

In the Licence Renewal Reasons for Decision, the Board emphasized that continued engagement and relationship building are required to understand the best way to communicate risk to land users. The Board encourages DDMI to be proactive in advancing these conversations throughout active closure.

3.3 Contingencies and Adaptive Management

The Closure Guidelines state:

> As a project advances, the level of analysis and deliberation regarding certain closure options will diminish upon the completion of selected closure activities. Additionally, predicted residual effects of selected closure activities should be increasingly detailed in the final CRP since more information, including monitoring and research results, will be available to determine the duration, frequency, and magnitude of the effects. Proponents should complete the reclamation research and site monitoring required to finalize closure criteria in time to include appropriate closure criteria in the final CRP. The final CRP should fully describe the level of detail and certainty surrounding post-closure monitoring and contingency planning.[23]

As discussed throughout these Reasons for Decision, Parties raised concerns about the level of detail included for contingency options. The Board has reviewed these comments on a case-by-case basis and provided direction where necessary. The Board notes that the Surface Water Action Level Framework

(SWALF) and Contingency Plan are additional tools beyond the FCRP that are used to ensure deviations from expected performance can be responded to.

YKDFN (comment 10) identified the potential use of floc blocs to help control sedimentation when major earthworks are underway. In response, DDMI requested that YKDFN provide this information directly. In the response, DDMI noted "that the Contingency Plan is an approved management plan on the WLWB registry and while some methods are mentioned in the currently approved plans and the FCRP, DDMI does not limit its approaches to what is written in the documents as additional methods, such as floc blocks, may be appropriate for specific circumstances." Based on DDMI's response to comment, the Board has no further direction at this time.

3.4 Climate Change

The Closure Guidelines describe that proponents should consider the possible effects of climate change at mine sites in the Northwest Territories (NWT) as follows:

> The long-term effects of climate change on the annual temperature range, total precipitation, seasonal variation, variability of precipitation, evaporation, permafrost degradation, changing ice conditions, and hydraulic routing are difficult to predict. Consequently, where individual project components have a medium or high potential for environmental impact if failure occurs, it is necessary to select design parameters based on conservative interpretation of historic records and consideration for the changes that may occur in the future to minimize the level of anticipated risk (e.g., for the construction of dams and tailings storage areas, etc.).[14]

Section 5.2.1.10.1, Appendix X-10, Appendix X-24, Appendix X-29 of the FCRP Version 1.1 describe DDMI's approach to considering climate change models in engineering designs. The assessment included in Appendix X-24 was conducted according to the Mining Association of Canada's climate change guidance.[15] In review of FCRP Version 1.0, the WLWB provided several directions to DDMI to incorporate climate change predictions into both closure planning and evaluation. The FCRP Version 1.1 provided a Climate Change Design Sensitivity Analysis as Appendix X-29 to reflect information provided in response to comments on FCRP Version 1.1.

Most comments regarding climate change were regarding thermal conditions of the PKCF, North Waste Rock Storage Area (WRSA), and landfill. All three closure designs were submitted with thermal models, which predicted frozen conditions. As discussed in Sections 3.8, 3.9, and 3.12.3, the Board has accepted the supporting evidence to be sufficient to support the proposed designs. Many Parties commented on the monitoring duration required to assess thermal stability, noting that five years is not sufficient to

[14] See WLWB Online Resources for LWB/GNWT *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*, PDF p. 46.

[15] Mining Association of Canada. 2021. Toward Sustainable Mining Climate Change Protocol. https://mining.ca/towards-sustainable-mining/protocols-guides/climate-change/.

indicate whether thermal conditions are stable and will remain stable in consideration of climate change (GNWT comment 13; EMAB comments 50–53, 204–208; NSMA comments 1, 2; YKDFN comments 66–70). At this time, the Board has not prescribed duration of monitoring and instead accepted DDMI's proposed timelines for submission of the first Performance Assessment Report (PAR). The Board has determined that it is reasonable to submit an initial PAR after five years; however, the Board also anticipates monitoring will be required beyond five years to assess final closure of components influenced by thermal conditions. It is the Board's opinion that an initial PAR submission at five years will provide an opportunity to assess the appropriateness of monitoring and evaluation based on actual conditions and data collected.

NSMA comment 2 asked about contingencies and adaptive management based on thermal conditions. This is consistent with Revision #7 from the FCRP Version 1.0 Reasons for Decision, which required DDMI to revise the FCRP to include the selected adaption pathways that include the triggers and thresholds for future actions for the North WRSA, landfill cover, and PKCF. In response, DDMI described that the existing Surveillance Network Program (SNP) and SWALF in conjunction with the PARs can be used to inform future adaptation pathways if necessary. In addition, DDMI stated that, as directed by the WLWB, future PARs for the North WRSA, landfill and PKCF will include model reports and performance evaluation beyond 100 years.[16] DDMI has also stated that climate change modelling may be updated with these PARs to support long-term assessment. The Board agrees that the biggest risk associated with thermal conditions differing from the model is associated with water quality and, therefore, is addressed by the SNP and the SWALF. However, as discussed in Section 3.9, it is unclear how a thawed Zone 2 area in the PKCF may pose a risk to wildlife. Consistent with previous direction, the Board anticipates details of post-closure adaptive management of the PKCF will be proposed within the component-specific FCRP.

In Appendix XII-20 in response to Revision #5, DDMI described its approach to future model updates:

> The need for updated climate change modelling will be considered during development of Performance Assessment Reports (PARs) where stability assessment of closure criteria may benefit from updated long term climate model based evidence, particularly if new data, improved methodologies, and refined global projections indicate current modelling is incorrect. The current closure plan and designs were informed by up-to-date modelling at that time and updated climate change modelling is not being considered prior to submission of PARs.

This response did not discuss methodology of this update. The Board reiterates that an understanding of how long-term stability will be evaluated in PAR(s) is needed to have confidence in the proposed approach. To align with Parties expectations and streamline future PAR reviews, the Board encourages DDMI to seek input prior to completing updated climate modelling. The Board notes that this could be completed with the review of the proposed PAR schedule in accordance with Part J, Condition 8. The

[16] See WLWB Online Registry for Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf; Revision 6.

Board notes that DDMI stated that updating Appendix X-29 to include Representative Concentration Pathways (RCPs) 6.0 was not feasible as this data is not available from the Canadian Centre for Climate Services data portal. However, this direction can be considered when engaging on future model updates.

Overall, the Board is satisfied with the direction given in review of the FCRP Version 1.0 and is not providing further direction at this time.

3.5 Closure Objectives and Closure Criteria

3.5.1 Closure Objectives

The closure objectives for the Diavik Mine were approved via the Board's Decision on Version 3.2 of the interim CRP in November 2011.[17] At that time, the Board explained that approval of the interim CRP means that the closure objectives are approved and that supporting evidence would be required before the Board would approve changes. It was acknowledged that objectives may need to be modified, but that Parties' input would be required for any changes and these changes would be for approval. It was stated that DDMI or any other Party could propose a change to the objectives. Since then, the WLWB has considered several proposed changes to closure objectives. The approved closure objectives were included in Appendix F of the Board's July 19, 2024, FCRP Version 1.0 Reasons for Decision.

In the FCRP Version 1.1, DDMI proposed the following changes to closure objectives:

- Revisions to SW4, M3, NI1;
- Addition of M9; and
- Removal of NI3 and NI4.

These proposed changes and changes to objectives proposed during the review of Version 1.1 are discussed in Sections 3.7 to 3.12.

Appendix V of the FCRP summarizes the proposed closure objectives and closure criteria, performance assessment periods, and cross-references the relevant monitoring proposed. The Board has reviewed all proposed closure objectives and criteria and provided direction throughout these Reasons for Decision. In consideration of the imminent end of operations, and in efforts to provide as much certainty as possible, the Board has set revised criteria to address identified gaps wherever possible. As always, if DDMI wishes to provide new evidence to support reconsideration of these revised criteria it may do so. DDMI should ensure the FCRP is updated to reflect the decisions in Appendix D of this Reasons for Decision. This would be considered for conformity, if no changes are proposed.

- ***Revision #2: The Board requires DDMI to revise the FCRP to reflect the approved criteria with revisions in Appendix D.***

[17] See WLWB Online Registry for W2007L2-0003 - Diavik - ICRP - Version 3.2 - Reasons for Decision - Nov 7_11.pdf.

3.5.2 Closure Criteria

Appendix V was updated in FCRP Version 1.1 to include the column "measure of stability." Text was added to Version 1.1 to clarify that for performance criteria to be successful, the "closure criteria" and "measure of stability" must both be met. Throughout these Reasons for Decision, the WLWB has made a determination on each proposed closure criterion. Unless otherwise stated, any approved closure criterion was determined to also have an acceptable measure of stability.

Each criterion in Appendix V is identified as being either a performance or design criterion. The FCRP Version 1.1 describes these distinct types of criteria as follows:

- **Performance Criteria**—These are criteria that provide a clear, measurable limit for success/failure, such as maintaining concentrations of a given constituent of concern at a discharge point below x mg/L.
- **Design Criteria**—These are criteria that are used in the design process as a basis for design. Common design criteria include factors of safety for slope stability, design storms (based on probable maximum precipitation or a return period), and design seismic events for dynamic stability.

For all Design Criteria, DDMI has proposed a Measure of Stability linked to the 'Design Intent'. Footnote (a) in Appendix V states:

> Design criteria are the specific, measurable requirements or constraints that a design must meet, while design intent is the underlying purpose or philosophy behind the design, encompassing the broader goals and aspirations. This information will be submitted to the Board as part of the Reclamation Completion Report. The Reclamation Completion Report (i.e., a construction record report) will include documentation of as-constructed closure activities and outcomes relative to closure designs. The closure designs are based on the respective design criteria.

In response to WLWB staff comment 69, DDMI described that Reclamation Completion Reports (RCRs) will continue to contain as-builts, deviation summaries, non-conformance summaries, and requests for information to the Engineer of Record. Through the request for information process, DDMI should always be within design intent and criteria. The Board understands that both the evaluation of design intent and design criteria will inherently be evaluated through the RCR submission. EMAB (comment 3) recommended that deviations to the design should not be implemented without approval from the WLWB. In response, DDMI stated:

> It is common and appropriate for field engineering decisions to be made which alter how the closure activity is conducted to achieve the design. It would be impractical and unnecessary for the WLWB to approve each deviation.

The Board understands that, to some extent, small deviations from design may be unavoidable. These deviations are subject to consideration when evaluating closure criteria and any requests to change

security. However, deviations from design are understood to be completed at the discretion of the Engineer of Record and are completed at the Company's own risk.

Sections 5.2.5.2, 5.2.7.2, and 5.2.8.2 of the FCRP Version 1.1 state that these closure criteria "will be refined over time". EMAB (comment 9) recommended that any proposed change to closure criteria should undergo consultation and approval by the WLWB. The WLWB confirms that any changes to closure criteria would require approval. This is standard Board practice and no changes to the FCRP are required to address this.

The Board has approved criteria where it is satisfied that it is an appropriate measure of the relevant closure objective. It is noted that the Board expects additional evaluation will be required through the TKMF to evaluate the success in meeting several closure objectives.

The Board notes that the level of specificity of closure criteria varies, and the level of detail was not always consistent with the expectations of Parties. The Board notes that any closure criteria lacking specificity leaves the onus on DDMI to demonstrate successful achievement of the respective objective in the PAR, without a level of certainty on how that evaluation should be completed.

3.5.3 Performance Assessment Periods vs. Reduction or Cessation of Monitoring

As noted in Section 3.6.1 of the Reasons for Decision for FCRP Version 1.0, Parties have repeatedly raised concerns with pre-defined reductions in monitoring frequency rather than basing this on a performance measure such as defining stability over a period of time. Decision #12 of the WLWB's Reasons for Decision on the FCRP Version 1.0 required DDMI to monitor until cessation or reduction of monitoring is approved and that this would be assessed and approved through a PAR.

In Appendix V of FCRP Version 1.1, DDMI has again proposed performance assessment periods for the closure criteria. Although DDMI has proposed a span of 5 years for the performance assessment periods for many components, there is some variation with supporting rationale provided. A number of Parties have again raised concerns that setting the performance assessment periods predefines monitoring reduction or cessation (e.g., YKDFN comment 72; EMAB comment 50, 55, 71, 107, 139, 208; GNWT-ECC comments 5, 13). The Board disagrees with this viewpoint. As described previously, the Board understands that this performance assessment can be used as a mechanism to check the status of a given component and confirm results are trending towards the closure criteria as expected. The Board acknowledges that Parties have identified that for many criteria they believe five years will not be adequate to assess stability or long-term performance. The Board reiterates that multiple performance assessment periods that result in additional PARs being submitted are likely necessary for areas of higher risk/uncertainty. Ultimately, reduction or cessation of monitoring will require Board approval and that will be based on the evidence submitted for consideration through a given PAR. The Board has reviewed the performance assessment periods provided in Appendix V and is of the opinion that these are adequate as the submission timeline for an initial PAR. The Board also notes Part J, Condition 7 of

the Licence provides the Board with a mechanism to request additional PARs, if required. For clarity, the Board has not prescribed the duration of monitoring in this decision.

In response to comments on Version 1.0, in review of Appendix VI, WLWB staff (comment 39) asked for clarity on when the performance assessment period would commence. In response, DDMI clarified that the post-closure monitoring for site-wide monitoring will be based on the overarching period of active closure, and component-specific monitoring will be based on the completion of closure for the relevant component. In review of Version 1.1, Board staff noted that it is unclear if "post-closure" is still consistent with this explanation, identifying that the timing of the active closure phase and, therefore, commencement of site-wide post-closure will likely be dependent on the timing of the PKCF Zone 2 cover placement, of which the timing is uncertain based on its reliance on freezing. The Board notes that it is unclear whether DDMI would submit an update to the FCRP if a delay in PKCF closure results in a gap in active closure, where closure is not yet complete, but the post-closure period has not yet begun. As proposed, this would result in several gaps in monitoring. It is unclear whether this needs to be considered at this time. As discussed in Section 3.9.3, if construction of the PKCF cover is not completed during the planned active closure phase (i.e., when there is continual site presence), the Board has required a submission to provide an update and propose revisions to the FCRP. The Board finds that will be an opportunity to consider revisions based on the realized conditions.

3.6 Closure and Post-Closure Monitoring and Maintenance

The following appendices that are related to site-wide closure and post-closure monitoring and maintenance were provided for approval and discussed in the sections noted below:

- Appendix VI-1: Closure and Post-Closure Monitoring Plan and associated attachments VI-1.1 through VI-1.4 (Section 3.6.1);
- Appendix VI-2: Closure and Post-Closure Aquatic Effects Monitoring Design (Section 3.6.2);
- Appendix VI-3: Tier 2 Closure and Post-Closure Wildlife Management and Monitoring Plan for the Diavik Diamond Mine (discussed in Section 3.7.6);
- Appendix VI-4: Post-Closure Maintenance Plan (Section 3.6.3); and
- Appendix VI-5: Diavik PKCF Closure and Post-Closure Monitoring Frequencies (see Section 3.9.4).

The Board notes that additional consideration and direction may be included within the specific sections of this Reasons for Decision. In addition, a TKMF is required by Part J, Condition 10 and is discussed in Section 3.6.4 below.

The Board notes that the monitoring in Appendix VI is summarized and/or duplicated in many places throughout the FCRP. This redundancy creates opportunities for errors. For example, WLWB staff comment 78 identified discrepancies in the post-closure PKCF monitoring in Appendix VI, 3.4.1 and Appendix VI-1, Attachment 1. As described in Section 3.9, the Board has not approved post-closure monitoring associated with the PKCF. Therefore, this example can be resolved in submission of the component-specific PKCF FCRP. However, where a discrepancy exists, DDMI should assume the Board

has considered the more conservative monitoring (i.e., higher frequency) or current operational frequency of monitoring.

3.6.1 Closure and Post-Closure Monitoring Plan (Appendix VI-1)

Appendix VI-1 proposes the monitoring activities and programs planned during closure and post-closure that will support evaluation of compliance with closure criteria in support of meeting closure objectives. DDMI describes this monitoring as follows:

> The monitoring activities described in this appendix are aligned with and suitable for the Final Closure and Reclamation Plan (FCRP). Monitoring duration is difficult to estimate. Each post-closure monitoring activity will be reviewed regularly to revise expected monitoring duration based on monitoring results. Post-closure monitoring is shown for planning purposes as lasting 20 years. The expectation is that some monitoring will end sooner, and some may be required to extend longer. For most closure criteria, performance will be evaluated after five years and a weight of evidence approach will be applied to evaluate if criteria have been successfully met. Monitoring plans will be adaptively updated in the future as necessary to incorporate findings from their implementation. In the instance where evidence indicates closure criteria have been met, DDMI will propose that monitoring is reduced or terminated.

This appendix includes a variety of types of monitoring to assess closure criteria:

- Water quality;
- Sediment quality;
- Hydrology;
- Dust;
- vegetation;
- wildlife; and
- geotechnical.

At this time, it is the Board's opinion that much of the information provided in Appendix VI-1 is adequate, but a number of revisions are required for specific components as explained in various sections of this Reasons for Decision. The Board notes that many of these revisions are considered administrative updates for conformity. However, the Board acknowledges that as described throughout these Reasons for Decision, further details regarding the monitoring are required in some instances (e.g., North Inlet, PKCF post-closure, Vegetation, Wildlife, TK), which will require review and approval. The Board has approved Appendix VI except where noted in this Reasons for Decision.

- ***The Board has approved Appendix VI-1 with revisions.***

3.6.1.1 Water Quality - Surveillance Network Program

Appendix VI-1 was provided with minor updates as noted in the change log included in Attachment B to the covering letter. A number of comments were submitted that identified apparent gaps and discrepancies in the SNP-related information provided in the FCRP compared to the Licence W2025L2-0001 (YKDFN comment 19; ECCC comment 4; GNWT-ECC comments 4, 15, 16; EMAB comment 190; WLWB staff comment 35). The Board notes that the SNP was updated through the Licence Renewal proceeding. Any changes occurring to the SNP in Schedule 9 of Licence W2025L2-0001 as a result of the Renewal would not be captured in the FCRP due to the timing of the submission. The Board believes there is a risk of confusion and potential errors if the details of the SNP are duplicated in the FCRP. The Board is also concerned that updates necessary to keep this information current in the FCRP may become administratively burdensome. Given that the Licence is the legally binding regulatory instrument that dictates the SNP requirements as set out and approved by the Board, this should remain the single source of information for the SNP-related monitoring. The Board requires DDMI to include a map showing the locations of the SNP stations and a summary table of the SNP stations that identifies whether stations were active or inactive in a given year in the Annual Water Licence Report.

- ***Revision #3: The Board requires DDMI to remove specific details regarding SNP requirements from Appendix VI and replace it with a statement that cross-references to the current Licence.***
- ***Decisions #8: The Board requires DDMI to include a map showing the active and inactive SNP station locations in all future submissions of the Annual Water Licence Report.***

YKDFN (comment 71) requested additional information regarding post-closure groundwater monitoring, specifically seeking clarification that the groundwater well configuration would be based on post-closure groundwater flow model and that monitoring points would remain active through the freeze/thaw cycles. DDMI provided the following in response:

> Experience trying to monitor near surface groundwater, i.e., in the active zone, during operations has been extremely challenging with wells typically being frozen or dry most of the year and with very slow recharge when there is flow.
>
> DDMI has not proposed a priori groundwater monitoring stations. Instead, if necessary, stations will be installed downstream of areas with contamination (see Appendix X-11, Section 6.2). The presence or absence of these areas will not be fully known until the Phase 3 [III] ESA [Environmental Site Assessment] is complete.

The Board acknowledges the points raised by DDMI and agrees that it is a reasonable approach to reassess the need for groundwater monitoring following the Phase III environmental site assessment (ESA). The Board requires DDMI to include this as an item for consideration in the associated report.

- ***Decision #9: The Board requires DDMI to assess whether groundwater monitoring should be established following completion of the Phase III ESA and provide further monitoring recommendation(s) in the associated Phase III ESA report.***

3.6.1.2 Surface Water Action Level Framework

The SWALF was adopted as the regulatory mechanism applicable to the discharges associated with the decommissioned collection ponds through the Decommissioning Amendment. DDMI has subsequently provided updates to the SWALF as directed by the Board following issuance of the Amended Licence. The Board notes that the update for conformity was delayed and that DDMI subsequently proposed additional changes for approval in Version 4.0, which is currently undergoing separate review from the FCRP.[18] At this time, the Board does not see the need for further revisions based on the comments received because either the issues were addressed through the Licence Renewal Reasons for Decision or further information based on monitoring results would be required to inform further Board decision(s). As such, the Board considers comments received from YKDFN (comment 8), NSMA (comment 5), and EMAB (comment 180) to be addressed and no further action related to the SWALF is required at this time.

3.6.1.3 Geotechnical Inspections

Geotechnical Inspections are included through Appendix VI and summarized in Appendix VI – Attachment 1. Aside from the questions related to the PKCF and the North Inlet, no concerns were raised with geotechnical inspections proposed. As discussed in Sections 3.9 and 3.10, the Board will consider these holistically with the submission of the relevant Component-specific FCRPs. Section 3.7.7 discusses how these inspection reports will be evaluated in the PAR.

As discussed in Section 3.5.1, it has previously been determined that the Board will not pre-approve reductions and the cessation of monitoring. The Board notes that it is unclear whether this approach would be appropriate for geotechnical inspections. Appendix VI proposes geotechnical inspection frequencies that reduce at set milestones. The Board find these reductions may be appropriate but requires, at minimum, the engineer to confirm that planned inspection frequency remains appropriate in each annual Inspection Report.

- ***Decision #10: The Board requires the Geotechnical Engineer to include a statement confirming that the inspection frequencies are appropriate in each annual Engineer's Report.***

3.6.2 Closure and Post-Closure Aquatic Effects Monitoring Design (Appendix VI-2)

DDMI is required to complete an Aquatic Effects Monitoring Program (AEMP) to assess project-related effects in water, sediment, plankton, benthic invertebrates, and fish in Lac de Gras. The AEMP has been on-going through operations and will continue into closure and post-closure; however, the design of the AEMP needs to be adjusted to enable appropriate monitoring as the site closes. The Board recognized there would be a need for a transitional AEMP to accommodate the decommissioning of collection ponds 2 and 7; which was approved through the Decommissioning Amendment Reasons for Decision. At that time, the Board also required an updated AEMP Design Plan for Closure and Post-Closure to be submitted, with the intent that comments received through the Decommissioning Amendment and the review of the FCRP Version 1.0 could be considered and incorporated, as

[18] See WLWB Online Review System for Diavik SWALF - Version 4.

appropriate. The Board also recognized that DDMI would have further opportunities to engage with Parties on the updated AEMP design.

DDMI provided an updated AEMP design plan for closure and post-closure in Appendix VI-2 with minor updates as noted in the change log included in Attachment B to the covering letter. In consideration of the information provided, the Board has approved Appendix VI-2, with revisions required. In an effort to reduce the size of the FCRP, maintain the file organization on the Online Registry, and address W2025L2-0001 Part I requirements, the Board requires DDMI to submit the revised AEMP Design Plan as a separate submission from the FCRP. Further discussion on the necessary updates is discussed below.

- ***Decision #11: The Board has approved the AEMP Design Plan as provided in Appendix VI-2, with revisions required, which is to be submitted as a separate submission within 30 days of decision for conformity, with the exception of the Response Framework.***

3.6.2.1 Sampling Locations

DDMI has proposed to reduce the number of near-field stations beginning in 2026 and proposed keeping near-field (NF) area station NF5 because it has the longest historical data record. EMAB (comment 172) recommended delaying decommissioning of the near-field stations until discharge from the North Inlet Water Treatment Plant (NIWTP) ceases. Board staff (comment 38) noted that NF5 is located the furthest away from the point of discharge into Lac de Gras and that the NIWTP will continue to discharge during the end of operations and the initial years of closure. Board staff asked DDMI to verify if any spatial trends exist among the near-field stations, which may need to be taken into consideration in light of station reduction. In response, DDMI noted the five near-field stations are located in a relatively small area and are all within approximately 1 km of the NIWTP diffuser. Data from these stations is pooled for data analysis and interpretation as part of the AEMP reporting. DDMI assessed the variability in the existing data from 2024 and determined the average coefficient of variation calculated for all parameters with reliable analytical results was 14%, which indicates low variability. DDMI maintains that reducing the monitoring to the single NF5 station in combination with the addition of nine new NFC stations and re-assigned mid-field (MF) area stations, will result in twelve AEMP stations located around the East Island that will enable verification of changes in water quality resulting from Mine closure activities, including the cessation of the NIWTP discharge. DDMI also noted that the NF5 station has the most complete historical data record of the NF stations, which extends back to baseline for most AEMP components (i.e., not just water quality).

The Board has approved interim mixing zones associated with decommissioned collection ponds, with a final decision on whether permanent mixing zones will be allowed to be determined through consideration of the (specific effects study) SES for decommissioned ponds 2 and 7. Per the LWB/GNWT *Guidelines for Effluent Mixing Zones*, a regulated mixing zone is defined as follows:

> The defined area contiguous with a point-source effluent discharge site or a delimited non-point source effluent where the effluent mixes with ambient water and where

> concentrations of some substances may not comply with water quality objectives that have been established site-specifically for the receiving environment.[19]

The regulated mixing zone allows for elevated concentrations of parameters within a localized area and effluent quality criteria (EQC) are set at the point of discharge in a manner that enables water quality objectives to be met at the edge of this area. To verify that EQC and the mixing zone are functioning as intended, water quality sampling occurs at SNP stations set at the geographical boundary of this area. It is assumed that chronic effects will occur within the mixing zone area; therefore, the presence of mixing zones affects where AEMP stations are located as they must be outside of these areas in the receiving environment. DDMI used the water quality model predictions to determine where AEMP stations should be located. The approach relies on an effluent tracer parameter in the model to determine where the concentration of effluent will occur within the range defined by DDMI as being appropriate (i.e., between 0.5% and 2% effluent concentration). YKDFN (comment 25) asked for clarification regarding the effluent tracer concentration of 0.5% to 2% and why this was considered suitable. In response, DDMI explained that this information is provided to give reviewers a sense of how stations will be used to assess water quality. Having a tighter range of the effluent tracer concentration indicates assessing more similar conditions in the area around East Island, rather than having some stations with higher effluent tracer concentrations (e.g., 50%) and comparing those to stations with lower concentrations (e.g., 0.1%).

The Closure AEMP proposes to discontinue sampling at station LDS-1 in Lac du Sauvage. EMAB (comment 158) noted that sampling at the site at the lake outflow (LDS-4) is being retained, however, will not be conducted in winter. EMAB (comment 159) recommended that LDS-1 be retained if LDS-4 cannot be sampled in winter. In addition, EMAB (comment 159) recommended an additional AEMP station should be added in the bay that will eventually receive discharge from collection pond 3. In response, DDMI noted that the winter access to LDS-4 is a safety concern and this change has already been applied during operations. The Board notes that a reduction in the stations associated with Lac du Sauvage occurred through the 2020 to 2022 Aquatic Effects Re-evaluation Report, and under the current approved AEMP Design Plan Version 6.2 for operations, station LDS-1 is only sampled everything three years during the comprehensive monitoring program.[20] DDMI also noted that the transitional AEMP was already approved by the Board and did not require an additional station associated with collection pond 3. In addition, DDMI does not support adding a station without field-based evidence.

The Board appreciates that DDMI provided an assessment of the variability in the NF station water quality data in response to comments and proposed a configuration of AEMP stations that provide comprehensive coverage. However, there remains a concern with a reduction to a single existing near-field station (NF5) in the early stages of closure while effluent discharge from the NIWTP is still ongoing and the positioning of this station is further out relative to stations NF1 and NF2. Based on the information provided on Figure 4.4.1 of the AEMP Design Plan, station MF1-1would be the next closest

[19] See WLWB Online Resources for LWB/GNWT Guidelines for Effluent Mixing Zones, PDF p. 10.
[20] See WLWB Online Registry for Diavik - AEMP Design Plan - Version 6.2 - Nov 4_24.pdf.

station, which is approximately 2 km away from the diffuser. As noted in Section 3.10.3, DDMI has indicated it anticipates an additional SNP station will be established on the Lac de Gras side of the North Inlet east dam; however, further discussion is required on the North Inlet component and it is unclear when that station will be established. For the interim, the Board requires DDMI to continue monitoring at station NF5 and maintain an additional near-field station at either NF1 or NF2. The Board leaves the determination of which of these two locations to DDMI's discretion but should consider available data and supporting rationale is required in the next version of the AEMP Design Plan. This update would be submitted for conformity.

- ***Revision #4: The Board requires DDMI to update the AEMP Design Plan to include an additional near-field station (i.e., NF1 or NF2), with supporting rationale.***

Regarding discontinuance of sampling at LDS-1, it is the Board's opinion that this station provides the only under-ice cover water quality and eutrophication indicators in Lac du Sauvage, which is done on a reduced sampling frequency (i.e., every three years). At this time, the Board does not have enough information to support a decision to discontinue this monitoring. Therefore, the Board requires DDMI to maintain monitoring at station LDS-1 during comprehensive monitoring years (i.e., every three years) as currently approved in the AEMP Design Plan Version 6.2.

- ***Revision #5: The Board requires DDMI to update the AEMP Design Plan to include station LDS-1 per existing sampling requirements under the current AEMP Design Plan Version 6.2.***

The Board also acknowledges that a transitional AEMP for decommissioned ponds 2 and 7 was approved through the Decommissioning Amendment, but further approval of the AEMP for Closure and Post-Closure was required. The Board notes additional water quality monitoring occurs at the mixing zone boundary stations under the SNP, and that these data can link to the AEMP. Through the recent Licence Renewal, the Board set the requirement for SES to be completed for all catchment drainages unless the Board determines otherwise (Part I, Condition 10). The Board notes that results from these SES may also help inform future SNP and/or AEMP station locations. Part I, Condition 9 stipulates the requirement of an Aquatic Effects Re-evaluation Report, which provides another opportunity for station placement to be reviewed and adjusted, if necessary, based on monitoring results. The Board is confident that the level of coverage proposed by DDMI is adequate and existing mechanisms will enable adjustments (e.g., additional station associated with pond 3) to be made, if warranted. No further changes associated with collection pond 3 are required at this time.

3.6.2.2 Sampling Frequency

The current approved AEMP Version 6.2 includes interim and comprehensive monitoring years. Interim years include monitoring of dust deposition monitoring, water quality, plankton, and eutrophication indicators at a subset of stations located in the near-, mid-, and far-field areas of Lac de Gras and one station at the outflow from Lac du Sauvage. The comprehensive years include the components monitored during the interim years plus monitoring of sediment, benthic invertebrates, and fish (health and tissue chemistry). Comprehensive years include monitoring at the interim monitoring stations plus three additional far-field areas and an additional station at the outflow from Lac du Sauvage.

DDMI proposed monitoring frequencies that would include interim and comprehensive monitoring programs that run on a three-year cycle as currently set out in the approved AEMP for operations. DDMI included proposed reductions in the monitoring frequency to occur after 6 and 12 years of monitoring, with these years coinciding with the comprehensive program, and monitoring would then continue at a reduced frequency until closure year 23. DDMI has qualified these reductions in sampling frequency with the following statement:

> The expected scope and frequency of monitoring during the closure phase and in the early years of post-closure are generally well understood (Section 1.1); however, there is less certainty related to the specific requirements for monitoring over the long-term. Thus, the monitoring durations proposed for the AEMP after the first few years of post-closure are considered as planning estimates. The AEMP schedule will be regularly reviewed to determine the required duration based on closure completion and monitoring results. As such, the duration of monitoring for specific components may differ from the planning estimates.

DDMI also included a footnote to the schedule presented in Appendix VI-2, Table 4.5.-1 that states, "The duration, frequency, and scope of monitoring will be determined based on the results of monitoring during closure and early post-closure, and in consultation with the WLWB (Section 4.5)."

EMAB (comments 20 and 160) recommended maintaining 2032 and 2033 as interim years. EMAB also recommended, at a minimum, to conduct water quality, sediment quality, and benthic invertebrate sampling annually at a subset of stations during the first few years of post-closure. In response, DDMI directed EMAB to the existing qualifying text and that the need for additional monitoring will be determined based on the AEMP results. EMAB (comment 157) expressed some confusion over the transitional AEMP and requested clarification regarding what would be monitored and when at the new proposed AEMP stations. DDMI clarified that implementation of the closure AEMP would commence upon approval by the Board.

As discussed in Section 3.5.1, any reductions in sampling will be determined based on the evidence available at the time and must be approved by the Board before implementing. The Board also acknowledges that DDMI has provided adequate clarification around the intent of the proposed schedule. Although DDMI did not directly respond to EMAB's suggestion of annual monitoring at an additional subset of stations, the Board has not seen evidence that would support the need for this more intensive monitoring. The Board notes that sediment and benthic invertebrates have been monitored on a three-year cycle throughout operations. It is unclear to the Board why more intensive monitoring under a reduced volume of discharge to the receiving environment would be warranted. At this time, the Board considers the proposed schedule information to be adequate and no further action is required.

3.6.2.3 Action Levels

DDMI has proposed to assess the appropriateness of the Low Action Levels for the AEMP components (excluding fish) using 2025 data only. DDMI is proposing to use the 2025 data collected from the existing and new AEMP stations to define pre-closure conditions at the end of operations. DDMI indicated that the new NFC stations associated with the collection pond areas were established and sampled in 2025. The rationale for this approach is that water quality in Lac de Gras is predicted to improve during post-closure compared to operations because of changes in the predicted quality and quantity of minewater released to Lac de Gras. As a result, a reversal of previously documented changes in monitoring endpoints or reduced effects relative to the end of operations are expected to be observed in the receiving environment.

GNWT-ECC (comments 18 to 21) recommended that more than just 2025 data be included to capture interannual variability. GNWT-ECC is concerned that this approach may reduce the ability of the Response Framework to reliably detect changes that would trigger Action Levels. GNWT-ECC requested power analysis be completed on the data for the AEMP components to demonstrate what significant changes would be detectable. EMAB (comment 171) also asked for clarification regarding how trends would be assessed. DDMI provided the following clarification in responses to GNWT-ECC comments 18–21:

> The proposed analytical approach for the interpretation of the Low Action Level for the AEMP components (fish being an exception) does not lend itself to power analysis, because the assessment is not a statistical test. As presented in Section 6 of Appendix VI-1, Low Action Level assessments will consider current year results relative to defined percentiles of pre-closure (2025) data or far-field areas (eutrophication indicators only), AEMP effects benchmarks (water, sediment and eutrophication indicators only) or guidelines for the protection of wildlife consumers of fish (fish tissue only), or normal range. Significant differences relative to far-field areas with consideration of critical effect sizes are considered within the Response Framework for the fish component only. The determination of trends within the Response Framework is associated with a Moderate Action Level, as discussed in footnote (b) to Table 6.3-2, and is expected to be statistics-based (e.g., linear regression, Mann-Kendall). The specific approach for trend analyses will be determined by best professional judgement and scientific practices available at the time of the analysis.

EMAB (comments 168, 169, and 170) raised similar concerns regarding the inclusion of only 2025 data potentially reducing the sensitivity of the Action Level triggers. EMAB noted that it may be possible for a high 95th percentile for a given parameter to mask a trigger even if the station concentration exceeded 75% of the AEMP benchmark and the normal range. EMAB recommended that the Action Level trigger based on comparison to 2025 data be removed. In addition, EMAB (comment 171) and GNWT-ECC (comment 26) noted that discharges from decommissioned collection ponds 2 and 7 began in 2025 and that additional baseline monitoring should occur in 2026 prior to any further collection pond decommissioning.

EMAB (comment 170) also asked for clarification regarding the second trigger for the fish health component, which requires measurement endpoints in the near-field fish to be significantly different than fish from the far-field area sampled within the same year. EMAB noted that the residence time of Lac de Gras is approximately 10 years, and that it took more than 10 years for the effects of the mine effluent to be detected in the far-field areas. As a result, it was unclear to EMAB if this comparison during the initial years of the closure/post-closure AEMP is appropriate because it is reasonable to assume that the effects relating to mine operations may extend into the far-field area for several years post-closure. Therefore, EMAB's opinion is that the same reasoning applied in the operational AEMP (i.e., far-field area comparisons should not be done) would still apply for some time following closure. DDMI provided the following response:

> As stated in Section 6.3.1 (and throughout the other components), the "… 95th percentile concentrations are intended to represent the estimated maximum concentrations of the [2025 data set]." This statistic ties the Action Level assessment back to conditions present at closure of the Mine, which must be the case, with expectations that conditions in closure and post-closure will be an improvement of conditions in Lac de Gras water and sediment quality. Therefore, DDMI does not agree with excluding trigger 1.
>
> DDMI acknowledges the potential for anomalous data (high or low concentrations) in the 2025 NFC dataset to result in a threshold that does not reflect conditions at the end of operations (which is the goal of the comparison). To address this concern, DDMI proposes to include a comparison of the 95th percentile of the 2025 NFC data to the individual 2025 NFC data, the historical AEMP data, and Effects Benchmarks within the upcoming 2023 to 2025 Re-Evaluation Report. As part of this comparison, the 2025 NFC data would be screened for anomalous values, and any anomalous values would be removed prior to the calculation of the 95th percentile. The goal of the comparison would be to show that the 95th percentile of the 2025 NFC data reflects the conditions at the end of operations.
>
> The purpose of using the 2025 data in the response framework is to reflect conditions at the end of operations rather than explicitly reflecting conditions prior to any closure activities. The ponds discharging in 2025 as part of DDMI's progressive reclamation efforts do not change the purpose or value of the data towards monitoring for future changes and trends relative to conditions at the time of closure. The 2025 data provide an appropriate check backwards for future monitoring. DDMI does not agree that additional pre-breach collection pond monitoring data is required.

YKDFN (comment 27) asked for further information to support choosing 2025 as the reference year. DDMI provide the following in response:

> Mine dewatering, discharge rates, and other variables that could affect Lac de Gras are not expected to be different enough to make 2025 a poor choice as a baseline. Additionally, acceptability or goodness of 2025 conditions is understood to be immaterial as 2025 is the last full year of operations prior to the start of closure and regardless of the conditions, it serves as an operational baseline to which closure will be measured against.

The Board understands the need to define the end of operations as the starting point for closure and that changes associated with water management (i.e., minewater dewatering and ore processing will cease in early 2026). The Board notes DDMI's commitment to completing a comparison of the 2025 NFC data to verify these data reflect conditions at the end of operations as part of the 2023 to 2025 Aquatic Effects Re-evaluation Report. While the 2023 to 2025 Aquatic Effects Re-evaluation Report is due in 2026, the Board is concerned that this submission will occur too late to enable Parties to be able to review and consider this information in advance of the 2026 AEMP Annual Report. This approach also inhibits the potential of collecting additional data, if determined to be necessary based on the review of the 2025 data. As such, the Board requires DDMI to submit all information supporting the use of the 2025 NFC dataset as a separate submission no later than May 1, 2026.

- ***Decision #12: The Board requires DDMI to provide information supporting the use of the 2025 NFC dataset, which includes, but may not be limited to, a comparison of the 95th percentile of the 2025 NFC data to the individual 2025 NFC data, the historical AEMP data, and Effects Benchmarks. DDMI is also to screen the 2025 NFC data for anomalous values, and any anomalous values would be removed prior to the calculation of the 95th percentile. This information is to be submitted to the Board no later than May 1, 2026 for approval.***

While the Board acknowledges EMAB's and GNWT-ECC's recommendations to collect more baseline data it does not agree with EMAB's recommendation to delay closure to allow more baseline monitoring to occur in 2026, the Board does not consider this to be reasonable. The AEMP is designed to be adapted based on results. Should the results of the 2025 data comparison prove not appropriate to meet the needs of the AEMP design, then DDMI will be required to propose an alternate approach. At this time, the Board has authorized decommissioning of collection ponds 1 and 13 to proceed and anticipates decisions regarding further pond decommissioning once the SES Report for the decommissioned ponds 2 and 7 is submitted. The Board cannot provide an indication of the timing of these decisions due to the lack of information regarding the schedule of the SES Report submission; however, it is the Board's opinion that the starting point for closure is not the same as baseline conditions, which is based on a definitive period. Progressive reclamation is allowed and DDMI could have progressively decommissioned collection ponds earlier had approval be received. In that scenario, the conditions in the receiving environment would be altered due to additional discharges. While DDMI has proposed to essentially draw a line at the end of operations based on 2025 NFC data, it is possible that this data set may not be adequate and additional data may need to be considered. The Board recommends DDMI consider an alternate term for the end of operation data because it does not seem to fit the term "baseline" but is rather more of a measure of current condition.

DDMI has proposed Action Levels for fish tissue chemistry that are based on detecting effects in mercury concentrations to address risks related to fish consumption. YKDFN (comment 29) asked for clarification why the Action Level was based on mercury given the effluent is not a likely source of mercury. YKDFN asked if the Action Level could instead be based on tissue selenium concentrations and noted there are Federal Environmental Quality Guidelines for egg/ovary and whole-body tissue concentration of selenium.[21] DDMI provided the following explanation in its response to comment:

> As stated, the fish tissue Action Level assessment focuses on addressing risks related to mercury concentrations and consumption of fish. This is consistent with the operational AEMP Design Version 6.2 and the associated Response Framework. The inclusion of mercury in the Action Level assessment for fish tissue was a directive from the WLWB (Revision #7 per WLWB 2024)[22].
>
> The direct effects of tissue metals concentrations on fish health are generally poorly understood and, apart from mercury and selenium, suitable guidelines are unavailable. In contrast, various water and sediment quality guidelines, including CCME [Canadian Council of Ministers of the Environment], consider toxicity testing to determine exposure concentrations of various metals that may impact fish health, and these analyses (i.e., water quality and sediment quality) are included in the AEMP Action Level assessment for these components in the form of Effects Benchmarks. A focus on methylmercury by including the Canadian Tissue Residue Guideline for Methylmercury for the Protection of Wildlife Consumers of Aquatic Biota (CCME 2000)[23] is an appropriate Action Level for fish tissue given these considerations, and effects in fish health should drive the Action Level assessment with fish tissue chemistry providing supporting information.
>
> The FEQG [Federal Environmental Quality Guidelines] referenced by the reviewer for selenium in egg/ovary and whole-body tissues (ECCC 2022)[24] is related to fish health and population monitoring rather than consumption of fish. The FEQG indicate that fish tissues sampled for selenium analysis are preferred to be eggs/ovaries, and these must be mature. The timing of the fish health program for Diavik in the fall has been consistent throughout the operations phase of the Mine and does not coincide with the possibility of collecting mature eggs. Whole body analysis for selenium concentrations (and other metals) has been completed as part of the operational AEMP since 2007,

[21] ECCC (Environment and Climate Change Canada). 2022. Canadian Environmental Protection Act, 1999 – Federal Environmental Quality Guidelines – Selenium.

[22] See WLWB Online Registry for Diavik - AEMP - 2020 to 2022 Aquatic Effects Re-evaluation Report - Version 1 - Reasons for Decision - Sep 5_24.pdf.

[23] CCME (Canadian Council of Ministers of the Environment. 2000. Canadian Tissue Residue Guidelines for the Protection of Wildlife Consumers of Aquatic Biota. Canadian Environmental Quality Guidelines.

[24] ECCC (Environment and Climate Change Canada). 2022. Canadian Environmental Protection Act, 1999 – Federal Environmental Quality Guidelines – Selenium.

> and no increasing trends have been reported in any part of Lac de Gras in recent years (e.g., Figure 10-29, WSP 2024)[25].

The Board agrees with DDMI and is of the opinion that the proposed Action Levels for fish tissue chemistry are set appropriately. The Board notes that Action Levels are regularly reviewed through the AEMP Annual Report and the Aquatic Effects Re-evaluation Report and can be adjusted if warranted. No further action is required at this time.

While DDMI included a Response Framework in the AEMP Design Plan, Board staff (comment 41) noted the following regarding the absence of proposed Moderate and High Action Levels:

> DDMI has included response actions to define Moderate and High Action Levels based on exceedances of the Low and Moderate Action Levels, respectively. Board staff note that Section 4.2.2 of the LWB/GNWT *Guidelines for Aquatic Effects Monitoring Programs* (AEMP Guidelines) states that "Based on experience with the Response Framework to date, the Boards and GNWT recognize that Moderate and High Action Levels are more complex and, therefore, more challenging to set than the Low Action Level. For this reason, it important to have those levels defined as well early on (i.e., before significant environmental change has occurred) but with the understanding that they will likely require refinement over time or after an exceedance of the Low Action Level." In addition, Table 1 of the AEMP Guidelines identifies that "proponents must set Low, Moderate, and High Action Levels (i.e., pre-defined levels of environmental change or effect) for chemical, biological, and/or physical parameters that are monitored in the AEMP. A set of minimum actions, to be taken by the proponent in response to the exceedance of any Action Level, must also be provided." Finally, as noted in Section 4.4 "is anticipated that Moderate and High Action Levels that are set as part of the *initial Response Framework design* [emphasis added], may need to be revised after the exceedance of the related Low Action Level". At this time, DDMI has not included Moderate or High Action Levels for any AEMP component, which is not inline with the AEMP Guidelines.
>
> Board staff understand that DDMI anticipates an improvement in the water and sediment quality with the onset of site closure, which DDMI expects would reduce potential biological-related effects. The Board typically does not require Response Plans to be submitted for Low Action Level exceedances, as these are reported though the AEMP Annual Report, which is consistent with the approach proposed by DDMI in this AEMP Design Plan. Although DDMI has proposed to provide notification of Action Level exceedances, submission of Response Plans would only occur if a Moderate or High Action Level was exceeded per Section 7.4. Deferring the development of the Moderate

[25] See WLWB Online Registry for Diavik - AEMP - 2020 to 2022 Aquatic Effects Re-evaluation Report - Part 1 of 3 - May 8_24.pdf, Diavik - AEMP - 2020 to 2022 Aquatic Effects Re-evaluation Report - Part 2 of 3 - May 8_24.pdfDiavik - AEMP - 2020 to 2022 Aquatic Effects Re-evaluation Report - Part 3 of 3 - May 8_24.pdf.

> Action Level until a Low Action Level is triggered results in the Moderate Action Level being submitted through the AEMP Annual Report, which would then be tied to the review timelines of that report. Depending on the complexity of the AEMP results and reporting, there is a potential risk that the Board's decision could be delayed, which would cause a delay in establishing an approved Moderate Action Level. As such, continued escalation of effects could occur but no response action be triggered.

DDMI provided the following in response to this comment:

> DDMI acknowledges the AEMP guidance that suggests the development of Moderate and High Action Levels and proposes to do so as part of the next iteration of the closure and post-closure AEMP Design Plan. At that time, and after approval of the proposed definition for the Low Action Level triggers, the Moderate and High Action Levels can be defined with more consideration or insight (including initial closure data), as they must relate to the magnitude of change that would first trigger the Low Action Level. In other words, having confidence in the Low Action Level triggers being appropriately set (i.e., following approval) better enables the establishment of appropriately sensitive and/or scaled Moderate and High Action levels.

GNWT-ECC (comments 23 and 24) noted that the trigger threshold of 75% of AEMP benchmarks is one of three required simultaneous triggers and raised a concern that this sets high unconservative triggers that may inhibit triggering of a Low Action Level. GNWT recommended that the Low Action Level triggers be connected by an “or” statement rather than an “and”, as this would result in a Low Action Level being exceeded if parameters vary significantly from baseline data, or end-of-operation data, or if concentrations begin to approach the AEMP benchmarks. In response, DDMI indicated preference to retain the use of the word “and” to avoid unnecessarily triggering Low Action Levels and that the proposed triggers were in line with the Snap Lake Mine and Gahcho Kue Mine AEMPs. DDMI noted that it “prefers to use 75% of the benchmark for the DDMI AEMP for reasons of consistency with other approved northern diamond mine AEMPs, and because it represents a percentage that is well below concentrations causing toxicity to aquatic life.”

Overall, the Board’s opinion on the low action levels that DDMI has proposed is that they appear to be reasonable and are consistent with thresholds currently approved for the Snap Lake mine, which is in closure, as well as the operating Gahcho Kué mine. The Board also acknowledges that changes to the low action level may be required and recognizes that the annual AEMP reporting, the Aquatic Effects Re-evaluation Report, and updates to the AEMP Design Plan provide regulatory mechanisms for these updates to occur. At this time, the Board approves the Low Action Levels as proposed by DDMI but requires the Response Framework to be revised to include Moderate and High Action Levels. The Board reserves the right to revisit the Low Action Levels once the Moderate and High Action Levels are proposed and, therefore, the entire Response Framework will be subject to review and Board approval.

- ***Decision #13: The Board approves the Low Action Levels as proposed in the AEMP Response Framework but requires DDMI to submit a revised Response Framework no later than May 1, 2026.***
- ***Revision #6: The Board requires DDMI to revise the AEMP Response Framework to include Moderate and High Action Levels. Once submitted, the entire AEMP Response Framework will be subject to review and Board approval.***

3.6.2.4 Fish Tissue Chemistry

DDMI has proposed to continue using the small-bodied fish, Slimy Sculpin, as the sentinel species for fish health and fish tissue chemistry. GNWT-ECC (comment 25) noted that recent issues have occurred at the Ekati Mine:

> [Slimy Sculpin] failed to trigger action levels prior to serious large-bodied fish increases in mercury concentrations resulting in High Action Level exceedances (Ekati, Fish Response Plan V. 4.0). In this case, water quality, sediment quality and small-boded fish sampling failed to trigger appropriate management action to protect large-bodied fish species. Without a large-bodied fish sampling program, it is unclear how long this issue would have gone unnoticed and what the consequences of further delays to management action may have been.

GNWT-ECC (comment 25) recommended large-bodied fish sampling be included as part of the Closure AEMP to reflect the importance of this issue for traditional users of Lac de Gras. In response, DDMI noted that Lake Trout monitoring has not been included in the AEMP since 2014 and that Slimy Sculpin have successfully been used as the sentinel species. Unlike Slimy Sculpin, due to the large home ranges that Lake Trout have, they do not stay within one area throughout their lifetime. This makes Lake Trout poor sentinel species, particularly when assessing effects within specific areas of the lake (e.g., near-field area). DDMI also noted that Lake Trout tissue monitoring occurred during operations through the AEMP TK Study and expects something similar will continue through on-going TK-based monitoring. Therefore, DDMI does not agree with adding large-bodied fish sampling as part of the AEMP. The Board recognizes that Lake Trout tissue monitoring may transition to be completed as part of the TKMF. Schedule 7, Condition 4 requires the AEMP Annual Report include "a description of integration between the AEMP and Traditional Knowledge monitoring and any applicable next steps." Given the previous expressed preference for integration of the TKMF and AEMP,[26] and current reporting of fish tissue in the AEMP, the Board has determined that large-bodied fish tissue monitoring results should continue to be reported in the AEMP Annual Report and considered through the Aquatic Effects Re-evaluation Report for the time being. If it is determined that this monitoring will be completed through TKMF, then removing it as an AEMP requirement can be done at that time.

- ***Decision #14: The Board requires DDMI to continue reporting large-bodied fish tissue chemistry under the Traditional Knowledge Studies section of the AEMP Annual Report and include it in the Aquatic Effects Re-evaluation Report.***

[26] See WLWB Online Registry for Diavik - WL Renewal - RFD and Recommendation to the Minister - Oct 17_25.pdf, PDF pp. 249–250.

The Board agrees with DDMI's position that large-bodied fish sampling can be completed through the TKMF and no changes to the AEMP design are necessary at this time. The Board notes that the Ekati Mine Response Plan referred to by GNWT-ECC is still undergoing review and no Board decision has been made.

- ***Revision #7: The Board requires DDMI to add a statement to the AEMP Design Plan to note that large-bodied fish tissue chemistry sampling will be completed as part of the TKMF and included in the AEMP Annual Report and Re-evaluation Report.***

In addition, GNWT-ECC (comment 28) noted the following monitoring requirement:

> The Comprehensive Study Report [CSR], section 9.5.3 directed DDMI to "monitor metal concentrations in fish flesh for lakes on East Island lakes and if consumption guidelines are exceeded, Diavik will develop a plan to warn people from fishing (e.g. posting signs) and will include this in its final closure plans". The Closure and Post-closure Aquatic Effects Monitoring Plan Design Version 1.1 submitted with the FCRP outlines monitoring DDMI will undertake in Lac de Gras but does not include any monitoring of metal concentrations in fish flesh for lakes on East Island. Questions around the CSR direction to monitor metal concentrations in fish flesh have been raised in previous document reviews but a definitive response has not been provided. For example, in response to EMAB comment #16 in review of DDMI's Type A Water Licence Application, DDMI stated that signage is planned/required to advise people that the area is a closed mine.
>
> GNWT-ECC requests that DDMI explain if the direction in the CSR to monitor metal concentrations in fish flesh in East Island lakes and to develop a fish consumption advisory plan is still valid. In addition, ECC requests information on whether there are fish present or expected to return to the lakes on East Island. If there are fish present, how has DDMI been monitoring metal concentrations in fish flesh, and what are the findings of this monitoring in relation to consumption guidelines? Finally, GNWT-ECC recommends DDMI provide a comprehensive response to help inform both the FCRP and ECC's review of security held under the environmental agreement.

DDMI provided the following in response to GNWT-ECC comment 28:

> DDMI is not aware of any regulatory requirement for monitoring fish flesh for lakes on the East Island. DDMI is not aware of any baseline data for fish flesh for lakes on the East Island. While there are lakes on the east island that have fish, DDMI is not aware of any security held under the Environmental Agreement related to monitoring inland lake fish flesh metals levels. DDMI will be pleased to discuss this security issue with the GNWT-ECC directly, if necessary.

The Board understands that this statement from the Comprehensive Study Report was to ensure that necessary risk communication is in place post-closure. To date, the Board has not set requirements for fish tissue monitoring in the inland lakes on East Island. The Board notes that these waterbodies are

identified in Figure 4-1 of the FCRP Versions 1.1, which indicates that DDMI is aware of which inland lakes are fish bearing. It is unclear to the Board whether land users would fish in these small inland lakes. The Board is of the opinion that DDMI should seek input on whether eating fish from these lakes is a reasonable future land use. If so, DDMI may need to collect samples and communicate risk (e.g., posting signs) as required. It is also the Board's opinion that determination of any monitoring requirements for the inland lakes should be determined through engagement with all Parties and requires this to be given further consideration through the development of the TKMF. The Board expects that the risk communication plan (discussed in Section 3.2) can document the results of engagement and any resulting monitoring.

- ***Decision #15: The Board requires DDMI to engage with Indigenous Governments and Organizations (IGOs) regarding potential land use associated with the inland lakes on East Island to inform the revised TKMF.***
- ***Revision #8: The Board requires the Risk Communication Plan required by Decision #7 to document the results of engagement regarding fishing in inland lakes and any resulting monitoring.***

3.6.2.5 Specific Effects Studies

The Board notes that YKDFN (comments 15 and 16) asked for further details regarding the SES for ponds 1,2, 7, and 13. The Board notes that study design for the ponds 2 and 7 SES was previously approved in the March 20, 2025, Reasons for Decision.[27] In addition, through the Licence Renewal, the Board set the requirement for the SES reporting related to ponds 2 and 7 to be submitted separately from the AEMP to avoid potential delays in providing this information for approval. The Board also set the requirement for submission of an SES design plan for ponds 1 and 13 for approval prior to proceeding with decommissioning of these ponds. The Board notes that the SES requirements, including reporting, are separate from the FCRP and will be available through the Online Registry, which the Board feels addresses YKDFN's comments; therefore, resubmission of this material in an updated version of the FCRP is not required at this time.

3.6.3 Post-Closure Maintenance Plan (Appendix VI-4)

A post-closure maintenance plan was included in Appendix VI-4. This plan identified potential maintenance that may be required to address impacts of erosion or settlement on the closed facilities. A schedule for maintenance activities was not proposed as it is designed to be needed only on an as-needed basis. Closure criteria were said to be used as a guide to assess the requirement for maintenance action in response to the recommendations of engineers conducting site inspections, however, no additional information was provided. Overall, this conceptual maintenance plan appears to be supporting information to the security estimate, where no changes have been proposed.

Attachment B of DDMI's FCRP Version 1.1 submission identifies that Appendix VI-4 will be updated with the PKCF Component-specific FCRP. Comments related to post-closure maintenance were discussed in

[27] See WLWB Online Registry for Diavik - SES Design Plan - Version 1.1 - Reasons for Decision - Mar 20_25.pdf.

the Updated PKCF Design Decision.[28] As discussed in the FCRP Version 1.0 Reasons for Decision, additional information on perpetual maintenance requirements of dams is needed. In addition, the performance holdbacks outlined in Appendix VI-4 have not been approved and will be considered with supporting information based on actual closure (i.e., RCR and PAR). The Board anticipates this can be revisited with the PKCF Component-specific FCRP.

- ***The Board has not approved Appendix VI-4.***

3.6.4 Traditional Knowledge Monitoring Framework

A lack of Traditional Knowledge incorporation was a key consideration when the WLWB did not approve FCRP Version 1.0. Since that time, Licence W2025L2-0001 was issued and required the submission of the TKMF for approval, submission of cultural criteria, and formally linked the return of financial security to achievement of cultural use criteria. The Board is confident that the Renewal Licence establishes the high-level requirements to advance these Licence conditions. DDMI submitted the TKMF Version 1.0 in accordance with the Board's July 19, 2024, Reasons for Decision on FCRP Version 1.0.[29] The TKMF was considered at the February 24, 2026, Board meeting, and the associated Reasons for Decision can be found here.[30]

Part B, Condition 3 of the Licence states the following:

> In each submission required by this Licence or by any directive from the Board, the Licensee shall identify all recommendations based on Traditional Knowledge received, describe how the recommendations were incorporated into the submission, and provide justification for any recommendation not adopted.

EMAB comment 7 states that "many instances in FCRP 1.0 where Diavik did not appear to have taken TK Panel recommendations into account in the FCRP, or to have provided a rationale for not including them". However, EMAB did not identify any specific examples in this comment. In response, DDMI stated that past recommendations from the TK Panel with respect to the contents of FCRP Version 1.0 and Version 1.1 are found in Appendix IX-2. The Board notes that this 146-page appendix identifies recommendations received and whether they were accepted, the status of those accepted, and DDMI's responses. It is unclear how EMAB considered Appendix IX-2 when making this high-level comment. The Board finds Appendix IX-2 addresses Licence requirement Part B, Condition 3.

During the public review of the FCRP Version 1.1, the following closure objectives were identified as incorporating TK into their evaluation:

- **SW1**—Surface runoff and seepage water quality that is safe for humans and wildlife (Response to YKDFN comment 77);

[28] See WLW Online Registry for Diavik - FCRP - PKC Closure Design - WLWB Decision - Mar 1_24.pdf, pp. 19–20.
[29] See WLWB Online Registry for Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf; Decision 14.
[30] See WLWB Online Registry for Diavik - Traditional Knowledge Monitoring Framework - Version 1.0 - Reasons for Decision - Feb 26_26.pdf

- **SW4**—Dust levels do not adversely affect use and safety of vegetation consumption by wildlife (Response to TG comment 38);
- **SW8**—Predation of caribou is not associated with residual features of the site (WLWB staff comment 71);
- **SW10**—Safe passage and use for caribou and other wildlife (WLWB staff comment 71);
- **SW11**—Mine areas are physically stable and safe for use by people and wildlife (DDMI response to TG comment 25);
- **North Inlet**—Hydrocarbon sheen (GNWT comment 12); and
- **M1**—Water quality in the flooded pit and dike area that is similar to Lac de Gras or, at a minimum, protective of aquatic life (DDMI response to WLWB staff comment 79).

Although details as to how these closure objectives will be evaluated using TK have not been provided at this time, the Board anticipates the TKMF program will provide valuable input for consideration in the evaluation of the closure objectives identified above. These clear linkages between successful closure and TK evaluation are a starting point and provide the Board with confidence in DDMI's approach to evaluating successful closure. A comprehensive discussion on the expectations of the TKMF and cultural use criteria can be found in the TKMF Reasons for Decision.[31]

Several recommendations were made by Parties regarding what the TKMF should evaluate (GNWT-ECC comment 12; NSMA comments 8, 11; TG comment 1; YKDFN comments 49, 75–77). In response, DDMI stated that it does not decide what will be monitored through the TKMF, but rather that it is up to the Indigenous groups participating in the closure TK-based monitoring under the TKMF to recommend. The Board trusts that these conversations and necessary site visits will happen as part of the TKMF and documented in engagement logs to accompany future submissions. The Board has not provided direction regarding the TKMF through this decision.

3.7 Site-Wide Considerations

Some closure activities, objectives, and criteria are applicable across the Diavik site. To avoid repetition, those issues that apply to multiple components, including site-wide objectives and criteria, are discussed together in Section 3.7.

The Board notes that many component-specific criteria cross-reference site-wide criteria. In instances where a site-wide criterion has not yet been approved, the Board has also not approved any criteria that reference it.

3.7.1 Site-Wide Issue #1: Water Quality

Final closure of the Diavik mine site will require long-term evaluation of surface water. Section 5.2.3 of the FCRP states:

[31] ADD POST MEETING

> DDMI understands that water quality closure criteria for the protection of aquatic life are likely the most important closure criteria for the Mine given the site's location on an island in Lac de Gras and the fact that many of the closure designs/concepts have water quality as a key driver. As such, DDMI revised the approach for developing water quality closure criteria from that proposed in ICRP [Interim Closure and Reclamation Plan] V3.2 and since CRP V4.1 has conducted additional water quality modelling and analysis to further refine and support the derivation of water quality closure criteria. The approach used to derive water quality closure criteria is described in Appendix V.

DDMI has two site-wide objectives that apply to water quality at closure:

- **SW1**—Surface runoff and Seepage water quality that is safe for humans and wildlife.
- **SW2**—Surface runoff and Seepage water quality that will not cause adverse effects on aquatic life or water uses in Lac de Gras or the Coppermine River.

In addition, component-specific evaluation of water quality is proposed through many closure objectives and associated criteria (i.e., M1, M2, M5, M9, W3, W4, P1, NI2, NI5, I2, and I3). Appendices X-10, X-19, X-20, X-21, and X-22 provide predictions of water quality and a risk assessment was provided in Appendix X-25. Section 5.2.5.7 and Appendix VI of the FCRP propose monitoring that will be implemented to gather information that will be used to evaluate whether the closure criteria and objectives have been met. The WLWB notes that all of this supporting information was previously submitted and previously considered as part of the Decommissioning Amendment, review of FCRP Version 1.0, and the Licence Renewal, and no new information was provided in this submission for FCRP Version 1.1.[32]

In the Reasons for Decision for the Decommissioning Amendment, the Board concluded that the SW1 and SW2 closure criteria could not be approved at that time. Further consideration was given to Closure Criterion SW2-1 through the Licence Renewal. Ultimately, the Board did not approve the numeric criteria proposed by DDMI, required they be reset to align with the approved EQC included in Annex A of Licence W2025L2-0001, and use this as a new starting point for further engagement with Parties on the SW2-1 numeric criteria. Given discussion related to Closure Criterion SW2-1 is ongoing, the Board has not given further consideration to comments on this item (e.g., TG comment 36; EMAB comments 13–16) to this item through this Reasons for Decision.

- ***The Board has not approved Closure Criterion SW2-1.***

The Board has given further consideration to SW1-1 numeric criteria and provides discussion below. The Board acknowledges that DDMI has proposed new Closure Objective M9, which includes water quality-based closure criteria as detailed in Appendix V, Tables 1-39, 1-40, and 1-41. The Board has considered this information and further discussion is provided in Section 3.11.2. In addition, the Board

[32] See WLWB Online Registry for Diavik - WL Amendment - Decommissioning - RFD and Recommendation to the Minister - Mar 19_24.pdf; Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf; Diavik - WL Renewal - RFD and Recommendation to the Minister - Oct 17_25.pdf.

acknowledges that DDMI has proposed Closure Criterion SW2-3, which provides an assessment of stability in site-wide water quality that will be assessed through the AEMP. This updated information was included in Appendix V, Table 1.5, and further discussion related to Closure Criterion SW2-3 is provided below.

The following issues related to site-wide water quality are discussed in the following sections:

- Human Health and Ecological Risk Assessment (HHERA);
- Site-Wide (SW) Closure Criterion SW1-1;
- Chronic Toxicity as a Closure Criteria;
- Site-Wide Closure Criterion SW2-3; and
- Collection Ponds.

3.7.1.1 Human Health and Ecological Risk Assessment

DDMI submitted the HHERA (Appendix X-25) as supporting information to the FCRP, and only included changes directed by the Board through the Reasons for Decision on FCRP Version 1.0. These changes were itemized in Appendix XII-20. An addendum to Appendix X-25 was added in Version 1.1 to include an evaluation of risk associated with a hypothetical exposed processed kimberlite (PK) scenario (Appendix X-25.1). This is discussed in Section 3.9.

YKDFN provided a number of comments seeking clarification on specific details of the HHERA or identifying minor errors that did not alter the conclusions (YKDFN comments 78–80, 83–85, 87, 89, 90). DDMI provided responses to these comments, which the Board considers to be adequate to address the concerns raised; therefore, the Board considers these comments to be resolved. In addition, YKDFN identified some information that has been updated and that certain values should be re-evaluated:

- YKDFN comment 81: US EPA [United States Environmental Protection Agency] have updated the toxicity value for noncancer outcomes associated with inorganic arsenic exposure;
- YKDFN comment 82: re-evaluate the risks associated with the potential exposures to inorganic arsenic in traditionally harvested subsistence foods;
- YKDFN comments 86, 88, and 90: incorporate the 2022 data for sediment, benthic invertebrates, and fish; and
- YKDFN comment 91: request for supplemental information related to the F3 petroleum hydrocarbons (PHC) benchmark derivation.

DDMI provided responses to these comments that the Board considers adequate for addressing the concerns raised by YKDFN. No further action in relation to these comments is considered necessary at this time.

The Tłı̨chǫ Government (comment 40) acknowledged that concerns have been noted by the Tłı̨chǫ Government, other Parties, and Board staff and stated the following:

> To ensure that Tłı̨chǫ citizens can have confidence in any future repetition of the risk assessment, the FCRP should identify how the risk assessment will be improved, if it is

repeated. Importantly, this should include meaningful engagement on the problem formulation.

This does not mean the risk assessment must be repeated. But if Diavik is going to rely on it to demonstrate that the closure criteria have been met or to communicate risks, it will need to be repeated and improved.

In response, DDMI acknowledged this recommendation but disagreed that significant issues requiring an update to the HHERA exist. In addition, DDMI indicated their opinion that no changes to the FCRP are required at this time given this is a supporting document but committed to engaging with the Tłı̨chǫ Government if a future update to the HHERA is required. The Board acknowledges DDMI's commitment to further engagement and requires this to be captured in Section 9.7 of the FCRP or an alternate location if DDMI determines a more appropriate place.

- ***Revision #9: The Board requires DDMI to add a statement to Section 9.7 of the FCRP, or an alternate location if DDMI determines a more appropriate place, to capture the commitment for further engagement if a future update to the HHERA is required.***

EMAB provided a number of comments that focused on specific details of the HHERA (comments 209–219). In response, DDMI noted that the HHERA had not been updated, with the exception of specific revisions required from the Reasons for Decision for FCRP Version 1.0, which were itemized in Appendix XII-20 and were not related the current set of comments provided by EMAB. DDMI noted that no further direction to update or review the HHERA was directed by the Board in the Reasons for Decision for FCRP Version 1.0. DDMI also noted that the HHERA was identified "as supporting information" and not "for approval" by the WLWB. For these reasons, and in an effort to move forward, DDMI did not respond to EMAB 209 through 219.

The Board acknowledges that the HHERA has been submitted as supporting information and is not for Board approval; however, it informs and provides supporting evidence other aspects of the FCRP. While the Board understands that there are some limitations in this information and that Parties have identified some concerns, the Board agrees with DDMI that these do not appear to be significant enough to warrant the need to update the HHERA at this time. As such, the Board considers the HHERA as submitted to be adequate for the purpose it is intended. The Board's opinion is that required monitoring and reporting through the various monitoring programs and PARs should provide sufficient information to determine if a future update to the HHERA is necessary and what the scope of that update would entail. If an updated HHERA is required, the Board recommends that DDMI consider any revised information identified through the various reviews of the HHERA and incorporate this information, along with any new data acquired since the completion of this version of the HHERA was completed, as appropriate. The Board also recommends that DDMI verify that any minor errors are corrected at that time.

3.7.1.2 Site-Wide Closure Criteria – SW1-1

The Board notes that further engagement occurred regarding Closure Criterion SW1-1 through the Closure Workshop facilitated by Board staff in late 2025. DDMI proposed no changes to the proposed SW1-1 numeric criteria in FCRP Version 1.1. Only two comments were received on the proposed numeric criteria for SW1-1. EMAB (comment 10) remains of the opinion that "it is reasonable to expect that people will drink water from the North Inlet, or from at the shoreline in the area where collection ponds discharge to Lac de Gras, or potentially from collection ponds and collection pond drainage channels." EMAB recommended that criteria for SW1-1 should be set to the more stringent of Canadian Drinking Water Guidelines or AEMP benchmarks. In response, DDMI maintained their position that evidence and rationale for the use of Drinking Water Guidelines for Recreation has been provided and that the proposed criteria are meaningful, measurable, and achievable for determining if Closure Objective SW1 has been met. The Tłı̨chǫ Government indicated support of the proposed numeric criteria:

> Provided the Board verifies DDMI's approach (multiplying guidelines by 20) is reasonable for "recreational use", and that DDMI has used the most recent and appropriate Health Canada Guidelines, the SW1-1 numeric closure criteria could be approved.
>
> Note that this comment does not apply to the issue of seepage and runoff that may have little dilution in shallow, near-shore areas of mixing zones in Lac de Gras. It is our understanding that this issue will be part of the determination of whether permanent mixing zones are acceptable.

As discussed in Section 3.7.1.1, the Board has accepted the HHERA as supporting information. At this time, the Board sees no evidence indicating that the proposed approach is not reasonable for recreational use associated with the surface runoff and seepage from the site, but excluding application within the near-shore areas of mixing zones in Lac de Gras as stated by the Tłı̨chǫ Government. If evidence becomes available that indicates otherwise, then the HHERA can be revisited and updated, as required. In addition, the Board recognizes that discussion surrounding the permanent mixing zones in Lac de Gras is ongoing and a final decision regarding the presence of these areas will occur through the consideration of the SES Report for decommissioned collection ponds 2 and 7. Therefore, the Board has approved the numeric criteria associated with Closure Criterion SW1-1 for human health for recreational use. It is the Board's intent to revisit further application within Lac de Gras through the upcoming SES Report. The Board has also considered the North Inlet separately (see Section 3.10 for details).

- ***The Board has approved Closure Criterion SW1-1.***
- ***Decision #16: The Board requires DDMI to incorporate assessment of SW1-1 in the SES for decommissioned collection ponds.***

3.7.1.3 Chronic Toxicity as a Closure Criteria

EMAB (comment 12) noted that DDMI has not proposed any chronic toxicity testing to evaluate Objective SW2 and views this as a gap. EMAB recommended adding chronic toxicity testing for *Ceriodaphnia dubia* and an early life stage fish species. DDMI did not agree with this recommendation and does not support having both chemistry and chronic toxicity closure criteria. DDMI noted that use of *Ceriodaphnia dubia* without chemistry criteria was previously proposed, but this was not supported. DDMI also clarified that chronic toxicity testing with Rainbow Trout is not practical for regulatory purposes and that a decision on this was provided by the Board in the Licence Renewal Reasons for Decision.

The Board agrees that a decision regarding chronic toxicity of a fish species was previously provided through the Licence Renewal and does not see the need to revisit that at this time. The Board also acknowledges that DDMI was required to complete further engagement on Closure Criterion 2-1, which was completed through the Board staff facilitated Closure Workshop in late 2024. As previously stated, the Board is deferring further consideration of the proposed numeric criteria for SW2-1 at this time; however, the Board notes that there is a possibility where numeric criteria could be met but sublethal effects could still be observed in 12.5% discharge concentration. The Board acknowledges that chronic toxicity testing of the decommissioned collection pond discharges and at the mixing zone boundaries is required under the SNP and this information is reported through the Annual Water Licence Report (per Part B, Condition 5 and Schedule 1, Condition 1). This data is also considered through the AEMP. Although further consideration of the need for setting a closure criteria for chronic toxicity may occur through review of the SES Report for decommissioned ponds 2 and 7 in conjunction with consideration of permanent mixing zones and also through further consideration of the numeric criteria for SW2-1, the Board is of the opinion that at minimum, including the chronic toxicity results for the collection pond discharges in the PAR would be beneficial. The Board notes that all PARs are submitted to the Board for approval and will undergo the Boards' standard public review process. The Board also notes that chronic toxicity testing as closure criteria may be further considered in relation to the North Inlet through the North Inlet component-specific CRP.

- ***Decision #17: The Board requires DDMI to include chronic toxicity testing results for the collection pond discharges in relevant PAR submissions and propose this as Schedule 8, Condition 3 requirement in submission required by Part J, Condition 8.***

3.7.1.4 Site-Wide Closure Criterion – SW2-3

In FCRP Version 1.1, DDMI proposed a new site-wide closure criterion (SW2-3): "Closure results show stable or improving conditions in Lac de Gras relative to operations and background conditions". DDMI has proposed the following measures of stability to be assessed through the AEMP:

- Trend analysis must indicate that year-over-year concentrations in Lac de Gras (based on annual 95th percentiles of all data collected in Lac de Gras in a single year) will not exceed the AEMP benchmarks in less than 50 years.

- Further statistical trend analysis will be performed on concentrations of parameters that may be increasing to confirm that values do not show an ecologically significant increasing trend during post-closure.
- Exceedances of AEMP benchmarks or increasing trends that can be demonstrated to not be Diavik Mine-related (e.g., due to natural conditions or regional effects like climate change) would still allow closure criteria to be met.

DDMI has proposed monitoring frequencies and durations through the AEMP, which are discussed in detail in Section 3.6.2. DDMI has proposed the initial performance assessment period for Closure Criterion SW2-3 to be set to coincide with Closure Year 5. This would encompass a total of six years of AEMP monitoring and encompass two years of comprehensive monitoring and four years of interim monitoring. Subsequent performance assessment periods would coincide with the proposed reduced monitoring frequency years until Closure Year 23.

DDMI has proposed the following criterion for assessing temporal trends:

> Trend analysis must indicate that year-over-year concentrations (based on average concentrations of all data collected from a catchment in a single year) will not exceed the criteria in less than 20 years. Trend analysis should consider the last 10 years of historical Operational SNP data.

The Tłı̨chǫ Government (comment 35) and GNWT-ECC (comment 7) identified concerns with incorporating the last 10 years of operational data in the trend analysis. Specifically, there is concern that including the operational data may skew the results. There is also the potential that increasing trends may be present, but masked because values are below operational concentrations. In response, DDMI clarified that the intent of including this data is not to misrepresent post-closure trends. The Board understands and agrees with this concern raised by the Tłı̨chǫ Government and GNWT-ECC but acknowledges there is an aspect of comparing to operational aspect that needs to be taken into consideration when assessing temporal trends. The Board expects that DDMI will consider this potential biasing when assessing the results and notes that temporal graphs will be provided. As such, the Board feels that DDMI can manage the concern raised through reporting and no further direction is required at this time.

The Board agrees with setting the initial performance assessment period to coincide with Closure Year 5. The Board acknowledges the intent to align the performance assessment periods with the AEMP reporting schedule and agrees with this in principle; however, as discussed in Section 3.6.4 and as identified in Licence Renewal Reasons for Decision, the Board cannot approve pre-prescribed reductions in monitoring without consideration of evidence to support this request. The Board appreciates that DDMI has provided their anticipated reduction in monitoring requirements, as it is helpful to have an understanding of what DDMI envisions as the timelines. Based on the information provided, the Board understands that DDMI will propose a reduction in monitoring frequency in the first PAR and the Board will reconsider reductions in monitoring frequency at this time.

Regarding the proposed wording of Closure Condition SW2-3, the Tłı̨chǫ Government (comment 32) noted the following:

> [the wording] makes sense in that closure success can be achieved if conditions are stable or improving, but improvement does not need to be relative to operations or background concentrations. Improvement relative to operations is expected, and necessary for successful closure, but does not mean water quality is acceptable.
>
> This criteria, which will eventually be accompanied by closure criteria for discharge to Lac de Gras (if permanent mixing zones are approved), should be changed to "water quality data shows stable or improving conditions in Lac de Gras."

DDMI indicated that they did not object to this recommendation, but clarified their understanding is that the stable or improvement in conditions are relative to current conditions. DDMI also noted the possibility that conditions in Lac de Gras could worsen for reasons unrelated to the Diavik Mine, which is addressed under the column heading “Measures of Stability”. The Board acknowledges the Tłı̨chǫ Government’s opinion but agrees with DDMI’s understanding of the stability or improving condition being relative to conditions at the end of operations. It is the Board’s opinion that a starting point from which stability or improving trends are measured needs to be defined, which would be end of operations. The Board has determined that the wording as proposed by DDMI is adequate and no changes are required at this time.

The Tłı̨chǫ Government (comment 34) observed that seepage and runoff are anticipated to be present for a limited period each year and questioned the need for using the 95th percentile data to complete the trend analysis when so few samples will be collected. In response, DDMI noted that using all samples “would essentially default to the maximum sample and is considered conservative. Looking at all samples may be considered if this conservative approach becomes too conservative.” The Board agrees that use of the 95th percentile data is reasonable and that the adequacy of this approach can be reassessed through the review of the PAR; therefore, the Board accepts the assessment approach as proposed by DDMI.

EMAB (comments 17, 18, 19, and 187) and GNWT-ECC (comment 11) recommended DDMI to specify how trends would be analyzed. DDMI did not agree that additional details regarding how the trend analysis would be completed was required in the closure criteria and that pre-defining this level of detail may result in an unnecessary restriction on analysis. DDMI noted that the analysis detail will be determined by a qualified scientist based on the specific data and detailed methods documented with the analysis. EMAB asked for clarification whether the mixing zones would be included in the analysis, and if so, how they would be included. EMAB recommended that the mixing zones, near-field, mid-field, and far-field areas be assessed separately and that open-water and ice-covered conditions be assessed separately. In response, DDMI confirmed that open-water and under-ice data will be assessed separately but noted that some of EMAB’s recommendations are related to and already considered through the AEMP design. In addition, DDMI clarified that mixing zone data will not be included in the

data analysis for SW2-3 as they are considered as part of the basis for Closure Criterion SW2-1 and in the SWALF.

EMAB (comments 17, 18, 19) and GNWT-ECC (comment 11) ask for clarification regarding how an ecologically significant increasing trend would be determined. GNWT-ECC also asked how this would differ from a temporal trend. DDMI provided the following in response to GNWT-ECC comment 11:

> The intended difference between an "ecologically significant increasing trend" and a trend analysis indicating that "year-over-year concentrations in Lac de Gras will not exceed the AEMP benchmarks in less than 50 years" relates to timing. The two measures of stability consider the intensity or magnitude of an effect (i.e., "right now") and a hypothetical duration of the trend if it continued (assuming a consistently increasing effect for 50 years). An "ecologically significant increasing trend" may be considered in terms of intensity or magnitude of an effect as measured currently. The implementation of a critical effects size (CES) approach may be used as part of the measure of stability to determine an ecologically significant trend, where assigned CESs, similar to those defined by the Metal and Diamond Mining Effluent Regulations [MDMER] for biological monitoring under the Environmental Effects Monitoring program, may be considered. A result with a magnitude of change exceeding a CES would be considered ecologically significant. For the second item, where year-over-year concentrations will not exceed benchmarks in less than 50 years, this analysis is expected to consider a temporal extension of sorts, where an existing trend (e.g., slope of a regression line with current data used most recently building upon previous and historical data) would be extrapolated out 50 years for comparison to AEMP benchmarks at the end of that period of time (i.e., 50 years). To summarize, an ecologically significant increasing trend considers magnitude of change now (i.e., the current year results) while the year-over-year trend considers the slope of a trend line and its proximity to exceeding AEMP benchmarks if extrapolated to 50 years.

Regarding the wording of the measure of stability, i.e., "Further statistical trend analysis will be performed on concentrations of parameters that may be increasing to confirm that values do not show an ecologically significant increasing trend during post-closure", DDMI noted that before the closure criteria can be met, the absence of an ecologically significant increasing trend will be met.

It is the Board's opinion that DDMI's responses are adequate to answer the questions raised and no further action related to these items is required at this time. It is the Board's opinion that DDMI has proposed an approach that will be sufficient to assess chemical stability over time and has approved Closure Criterion SW2-3. At this time, the Board has not prescribed the details regarding how the trend analysis will be carried out as the Board agrees with DDMI that doing so in advance of considering the actual data may result in unnecessary restrictions on the analysis. However, the Board also notes that without a defined approach to trend analysis provided within the FCRP, the onus is on DDMI to prepare a PAR that appropriately evaluates SW2-3 in a scientifically defensible way. The Board also recognizes

that DDMI has the ability to provide this information with respect to approach in advance, for approval, through an update to the FCRP, and/or may engage Parties on this in advance of any submission.

- ***The Board has approved Closure Criterion SW2-3.***

3.7.1.5 Collection Ponds

The Board acknowledges that Parties submitted a number of comments associated with the collection ponds. Through the recent Licence Renewal conditions were set for the collection ponds that encompass requirements for breaching, EQC, monitoring, and the SWALF, which address some of these comments (e.g., TG comment 22; NSMA comment 4, 6, 7, EMAB comments 88, 97–102, 104–106, 109, 191; WLWB staff comments 1, 4). In the Licence Renewal Reasons for Decision, the Board deferred a decision on the presence of permanent mixing zones associated with the decommissioned collection ponds until the SES Report for ponds 2 and 7 is submitted. At this time, the Board does not see the merit of addressing specific comments without the context of that SES Report. To avoid the risk of setting requirements that may later be determined to not be necessary or invalid, the Board has not considered comments related to the collection ponds at this time. The Board recommends that DDMI review these comments and consider whether to incorporate them or not in future collection pond-related submissions.

An apparent discrepancy was noted in the information submitted regarding the screening for parameters of potential concern (POPC) in Appendix 28 (WLWB staff comment 6). DDMI confirmed that an incorrect version of the technical memorandum was included but there were no changes to conclusions, methodology, or parameter screening results between the two versions. The Board notes that changes were made to the POPC screening approach through the Decommissioning Amendment and that further modifications to the list of POPCs identified through the Licence Renewal have occurred. As such, the information contained within the appendix is inconsistent with what has been accepted by the Board in these previous proceedings; therefore, the Board requires DDMI to update Appendix X-28 to reflect how the POPC screening was completed and include a revised list of POPCs for each pond catchment. The Board will consider this approved with confirmation of conformity.

- ***The Board has approved Appendix X-28 with revisions required.***
- ***Revision #10: The Board requires DDMI to provide an updated Appendix X-28 that reflects the POPC screening approach associated with the decommissioned collection pond discharges as accepted through the Decommissioning Amendment and subsequent changes to POPCs identified in these discharges as approved through the Licence Renewal. This updated version of Appendix X-28 will be for conformity.***

3.7.2 Site-Wide Issue #2: Drainage

The approved Closure Objective SW6 requires the following: “Ground surface designed to drain naturally following predevelopment drainage patterns”. The FCRP identifies that water collection structures and culverts will be decommissioned and natural drainage channels re-established to achieve Closure Objective SW6. Appendix X-12 of the FCRP includes the design for Surface Water Management and includes the proposed design for all collection pond breaches. All breaches, with the exception of

pond 3, were approved with the FCRP Version 1.0. The design for pond 3 was included in Appendix X-12 of the FCRP Version 1.1 for approval. No comments were received on the proposed pond 3 Design and the Board has determined no changes are required at this time.

- ***The Board has approved the pond 3 Design as provided in Appendix X-12.***

EMAB (comment 110) recommended a general revision to the designs in Appendix X-12 to consider rainfall events with durations that are "more consistent with the time-of-concentration and lag time of the watersheds" and suggested 1-hour events. In response, DDMI noted the following

> the structures in Appendix X--12 were designed with consideration of storm events including those under 100-year climate change scenarios. It is unclear on what technical basis EMAB's consultant is challenging the designs in X-12. With the exception of adding Pond 3 details, Appendix X-12 has also not been revised since FCRP V1.0 and is already approved by the WLWB.

EMAB (comment 111) also recommended revising the approved breach locations for pond 10 noting that the notes in Appendix X-12, Table 9 "identify an option for the pond 10 breach that would lower the erosion risk because the receiving environment is naturally armoured." EMAB suggested that relocating the breach rather than implementing adaptive management based on monitoring as proposed by DDMI and provided the following opinion:

> Instead of taking this more conservative approach, the Table 9 notes confirm that Diavik preferred the option of "monitoring and adaptive management." Adaptive management should not be considered as an acceptable option for long-term, post-closure at a mine site unless there are no other practical options. If adaptive management is necessary, it should be supported by long-term monitoring and maintenance plans. Diavik has not provided evidence that placing the breach in a more stable location is not practical or feasible.

DDMI's response noted that this design has already been approved by the Board. The Board agrees with DDMI that these designs were already considered and approved through FCRP Version 1.0 and does not believe it is necessary to revisit that decision at this time.

DDMI proposed two closure criteria to evaluate SW6:

- **SW6-2**—Inspections at freshet indicating that no obstructions or erosion are present in the drainage that are either:
    a) generating a reversal in flow direction, or
    b) causing changes in the drainage that significantly modify channel locations or the pathway of flow through the topography.

The Tłı̨chǫ Government (comment 26) noted the following concern:

> For any approved ponds breaches, it will be important that over the long-term, drainage blockages don't create ponding. Ponding would contain seepage and runoff that could

result in exposure to wildlife or humans in the long-term. Diavik's proposed closure criteria (for SW6) do not address this possibility.

The Tłı̨chǫ Government recommended that the criteria for Closure Objective SW6 should confirm that runoff and seepage is not expected to accumulate in the long-term. DDMI provided the following in response:

> Pond breaches and where necessary site grading are designed to prevent ponding. Closure criteria SW6-1 is to confirm the drainages have been constructed as designed. Closure criteria SW6-2 is to assess the performance of the drainages to ensure no blockages that would create ponding. DDMI believes SW6-1 and 6-2 already address this recommendation.

The Board notes that surface runoff and seepage is considered through site-wide criteria under Closure Objective SW1 and these criteria are set at levels that are safe for recreational use for humans and safe use for wildlife. While it is the Board's expectation that DDMI will make every effort to avoid ponding from occurring, it is the Board's opinion that application of criteria under Closure Objective SW1 would be sufficient to address the Tłı̨chǫ Government's concern. The Board also acknowledges that weekly sampling for chemical analysis and monthly sampling for toxicity is required when there is sufficient flow volume to sample. It is the Board's opinion that the sampling requirements and the applicability of Closure Objective SW1 address the concern raised by the Tłı̨chǫ Government. Therefore, the Board has approved Closure Criterion SW6-2.

- ***The Board has approved Closure Criterion SW6-2.***

3.7.3 Site-Wide Issue #3: Dust

Appendix VI, Section 3.2.1 describes that air emissions from operation and closure phases of the mine include combustion emissions (e.g., generators, haul trucks, and blasting) and emissions of fugitive windblown dust (e.g., fugitive road dust and wind erosion of ore and waste rock stockpiles). DDMI describes that combustion and fugitive dust emissions are expected to be lower during closure than during operations; post-closure air emissions are expected to be negligible.

Two approved site-wide objectives are related to levels of dust at post-closure:

- **SW3**—Dust levels safe for people, vegetation, aquatic life, and wildlife.
- **SW4**— Dust levels do not affect palatability of vegetation to wildlife.

Appendix VI includes dust, vegetation, and lichen monitoring to evaluate Closure Objectives SW3 and SW4 in both the closure and post-closure period.

3.7.3.1 Site-Wide Closure Objective SW3

Approved Closure Objective SW3 evaluates whether dust levels are safe for people, vegetation, aquatic life, and wildlife by the following two proposed closure criteria:

- **SW3-1**—Dustfall below the Northwest Territories Ambient Air Quality Objectives and Guidelines (GNWT 2023)[33] for residential/parkland areas (1.75 mg/dm^2-day).
- **SW3-2**—Post-closure dustfall is below 665 mg/dm^2/year.

In review of the CRP Version 4.1 and the FCRP Version 1.1, it was noted that the SW3-1 criterion is based on a guidance value developed for aesthetics and, therefore, was unclear how it would evaluate the proposed objective. In review of FCRP Version 1.0, Parties recommended total suspended particulates (TSP) or fine particulate matter that is less than 2.5 microns in diameter (i.e., PM2.5) be evaluated for health. DDMI provided references to support its statement that TSP, which includes dust-sized particulates (e.g., PM 2.5), were monitored at Diavik Mine during 2014 to 2018, and measured values were "well below the NWT Ambient Air Quality Guideline mean daily and annual values". In response to WLWB staff comment 87, DDMI clarified that operational monitoring specific to PM2.5 has never been conducted and it was not included specifically during the 1998 Environmental Assessment (EA). The Board is satisfied with this clarification. GNWT-ECC comment 29 implied its support for the proposed criterion and no other comments were received.

- ***The Board has approved Closure Criterion SW3-1.***

The Board notes that the reference to support SW3-1 was not updated in Version 1.1 and requires revisions to reflect the 2023 GNWT guidance in place of the 2021 draft guidance previously referenced.

- ***Revision #11: The Board requires DDMI to revise Appendix V Section 6 to reflect the 2023 guidelines referenced in Closure Criterion SW3-1.***

Closure Criterion SW3-2 was proposed in response to FCRP Version 1.0 Revision #18 to consider additional closure criterion for SW3 that confirms a reduction in dustfall in post-closure with rationale. This Board required revision was a result of EMAB's concerns that Closure Criterion SW3-1 does not consider the much lower baseline conditions and DDMI's statement at the time that Closure Criterion SW3-1 had not been exceeded during operation of the mine. At that time, the Board recognized that the post-closure conditions may never completely return to baseline conditions; however, determined that it may be reasonable to add a criterion that confirms a decrease in dustfall in the post-closure phase. The WLWB stated that this requirement was consistent with DDMI's statement "If dust does not rapidly decrease and meet closure criteria following the two-year program an extension may be warranted" (response to WLWB staff comment 17).

Closure Criterion SW3-2 proposes a single pass/fail event to confirm annual post-closure dustfall is below 665 mg/dm^2/year. This specific criterion value (i.e., 665 mg/dm^2/year) is calculated as a 90% reduction from the maximum recorded annual dust deposition from any station at any time during operations. WLWB staff comment 68 noted that this maximum data point is significantly higher than any other in the data set, which makes the added value of Closure Criterion SW3-2 unclear, and whether a different value could reasonably be used to confirm a decrease in dustfall post-closure. In response,

[33] GNWT. 2023. Ambient Air Quality Monitoring Guideline. April 2023. Available at: https://www.gov.nt.ca/ecc/sites/ecc/files/resources/ambient_air_quality_monitoring_guideline.pdf

DDMI agreed that the "SW3-2 threshold value of 665 mg/dm^2/year is almost identical to the SW3-1 threshold of 1.75 mg/dm^2/day which converts to 639 md/dm^2/year". DDMI stated its preference would be to remove Closure Criterion SW3-2 and requested that specific direction be provided if not approved. The Board finds there is no added value to the proposed Closure Criterion SW3-2. In review of the maximum dustfall evidence submitted to support Closure Criterion SW3-2, it appears that Closure Criterion SW3-1 has previously been exceeded through operations, which is contrary to previous interpretation of DDMI's response to GNWT-ECC comment 30 on the FCRP Version 1.0. It is, therefore, unclear whether the stability of conditions trend analysis for Closure Criterion SW3-1 (i.e., confirming that Closure Criterion SW3-1 will not exceed the threshold value after 20 years) can also confirm a decrease in dustfall during the post-closure phase. Several Parties (GNWT-ECC comment 9; EMAB comment 26; TG comment 37) suggested specific ways this could be evaluated; however, DDMI did not provide specific feedback on any approach. The Board trusts that DDMI can provide a trend analysis that includes operational data to support a more generic Closure Criterion SW3-2 to reflect Revision #18 to confirm the assumption that dustfall has decreased post-closure. The Board anticipates the same monitoring can be used to evaluate SW3-1 and SW3-2 in the PAR.

- ***The Board has approved revised Closure Criterion SW3-2 as "Trend analysis confirms a decrease in dustfall post-closure compared to operations."***

The Board notes that dustfall monitoring described at a high level in Appendix VI-I is described in greater detail in the AEMP (Appendix VI-2). The Board notes that the level of detail in Appendix VI-I makes it difficult to understand which stations in Figure 3-1 will be monitored following operations and at what frequency.

- ***Revision #12: The Board requires DDMI to update Appendix VI-1 to include specific dust monitoring stations associated with the closure and post-closure monitoring frequency described in Section 5.2.2.2 of the AEMP Design Plan.***

3.7.3.2 Site-Wide Objective SW4

The approved SW4 closure objective was "Dust levels do not affect palatability of vegetation to wildlife." FCRP Version 1.1 proposes the following revision: "Dust levels do not adversely affect use and safety of vegetation consumption by wildlife." EMAB (comment 27) was the only Party to comment on the revised wording for Closure Objective SW4, suggesting it be expanded to consider both wildlife and human receptors where applicable. The Board finds that Closure Objective SW4 has been revised to address the challenge to evaluate palatability of vegetation previously been identified.[34] The Board finds no evidence has been put forward to expand Closure Objective SW4 beyond wildlife and the Board has determined the revised wording is acceptable.

- ***Decision #18: The Board has approved Closure Objective SW4.***

The FCRP Version 1.1 proposes two criteria to evaluate Closure Objective SW4:

[34] See WLWB Online Registry for Diavik - CRP - Version 4.1 - Reasons for Decision - Jun 10_21.pdf, p. 57.

- **SW4-1**—Monitoring evidence of post-closure wildlife use of area. (approved with FCRP Version 1.1).
- **SW4-2**—Metals concentrations measured in soils and lichens during post-closure will not significantly exceed metals concentrations measured during operations.

The Tłı̨chǫ Government (comment 38) noted that DDMI and the Tłı̨chǫ Government collaborated on a lichen study in 2013. It identified that one of the study conclusions was as follows:

> The study assessed locations near the mine and at locations 30-40 kilometers from the mine site. The research showed that lichen around the mine site was in poor condition. Caribou will avoid using the area in close proximity to the mine as their migration route, as the caribou recognize a difference in the lichen quality (by smell and taste). The area around the mine was an important location for the fall migration route, but caribou has decreased the use of this migration route, due to the poor forage conditions, and will travel to other areas with preferable forage.[35]

The Tłı̨chǫ Government recommended that the FCRP be revised to include a repetition of this study to help determine whether Closure Objective SW4 is achieved. In response, DDMI supported this recommendation describing that it could possibly be completed in conjunction with DDMI's chemical sampling proposed for Closure Criterion SW4-1 and more appropriately considered within the TKMF. The Board finds that consideration as part of the TKMF to be appropriate as it would allow the opportunity for input from other section 35 rights holders. Regardless of where the final monitoring occurs (i.e., TKMF or otherwise), the Board finds this commitment should be reflected in Appendix VI. The Board finds this commitment may also support YKDFN's request for additional monitoring (YKDFN comments 50 and 61).

- ***Revision #13: The Board requires DDMI to revise Appendix VI-I to include commitment to repeat the 2013 Lichen Study.***

In review of FCRP Version 1.1, the Board approved Closure Criterion SW4-1 but required DDMI to engage and propose a criterion to confirm DDMI's assumptions regarding the safety of vegetation for consumption by wildlife. Both EMAB (comments 27 and 28) and WLWB staff (comment 70) noted that it was unclear how significance identified is Closure Criterion SW4-2 would be evaluated. In response, DDMI described that a qualified scientist will compare data collected in operations against the data collected post-closure and reviewers will have an opportunity to provide input for consideration both during engagement prior to and during the review. The Board is satisfied with this response and notes that any closure criteria lacking specificity leaves the onus on DDMI to demonstrate it has been met in the PAR without a level of certainty on how that evaluation should be completed.

- ***The Board has approved Closure Criterion SW4-2.***

[35] Traditional Knowledge Study for the Diavik Soil and Lichen Sampling Study. https://research.tlicho.ca/research/traditional-knowledge-study-diavik-soil-and-lichen-sampling-study.

As noted in Section 3.7.6, additional wildlife monitoring is required (e.g., through wildlife cameras and TKMF). The WLWB anticipates this will contribute to the evaluation of Closure Criterion SW4-1.

3.7.4 Site-Wide Issue #4: Vegetation

Appendix X-9 of the FCRP (i.e., Reclamation Closure Feasibility) proposes an overview of DDMI's revegetation strategy including the design approach, planting density, and a list of preferred species for revegetation of the Diavik site. In the WLWB Decision on FCRP Version 1.0 the revegetation of the site was identified as a major uncertainty. In that Reasons for Decision, the Board stated:

> Multiple Parties, including DDMI, identified that ideally the revegetation strategy would reflect the community guidance received. However, DDMI describes that consensus on the best approach was not reached. It is clear to the Board that additional work is required by both DDMI and Parties to advance this design. The Board does not believe the proposed revegetation strategy includes the details and evaluation metrics (i.e., closure criteria) that would be expected in a final plan. Conversely, it appears Parties have not yet decided what they wish to see in a revegetation strategy which makes it difficult for DDMI to advance. The Board is disappointed with the lack of progress and requires this be discussed at a Workshop prior to resubmission. The Board anticipates that Parties will come prepared to provide input on this topic. The Board does not anticipate it will be directing further discussions in the review of the next revegetation plan and encourages Parties to provide specific recommendations both at the Workshop and in the review of a revised revegetation strategy.

The approach to revegetation was discussed among Parties at the December 2024 Workshop required by the WLWB decision on the FCRP Version 1.0. DDMI has included the Facilitators Report as Appendix IX-6 and summarized the workshop outcomes in Appendix IX-8.1. In its covering letter, DDMI identified Appendix IX-8.1 to have moderate changes including shallower ripping depth per IGO feedback and additional detail on selected methods and seeds including consideration of research outcomes. Appendix IX-8.1 does not identify any additional changes as a result of the Workshop.

Several Parties implied (TG comment 1) or explicitly stated (EMAB comment 121; NSMA comment 11) that they did not believe that Appendix X-9 could be approved at this time. Parties identified the following concerns which are further discussed in the sections below:

- Revegetation Approach;
- Species Selection;
- Evaluation of Successful Revegetation; and
- Monitoring and Adaptive Management.

DDMI states that it has primarily taken direction from IGOs to form this plan (response to TG comment 1), describing that "unfortunately, but understandably, there are many differing IGO views and some IGO views are still being developed". EMAB (comment 121) stated that the proposed approach does not align with recommendations provided at the FCRP Workshop with consensus among

Parties (e.g., the use of species native to East Island). Unlike in review of FCRP Version 1.0, the WLWB was pleased to see that in review of FCRP Version 1.1, Parties did provide specific recommendations on what they would like to see changed in the revegetation approach. DDMI noted that the nine specific recommendations from the Tłı̨chǫ elders were not provided formally prior to this submission. It is clear that not all input received from IGOs was able to be captured in this submission and the Board finds appropriate rationale to support the design was not provided.

Many comparisons to industry best practice, northern sites, and specifically the Snap Lake Revegetation Plan[36] were made by Parties (e.g., EMAB comment 123, 135, 153, NSMA comment 11), with a common theme stating that it was unclear how these existing examples, research, or guidance were considered in Appendix X-9. In addition, EMAB stated it was unclear how TK recommendations have informed the plan (EMAB comment 146). The Board notes that it has reviewed the approved Snap Lake Revegetation Plan and finds that it is much clearer how the proposed approach was determined, and how best practice, other northern sites, and Traditional Knowledge were considered. Although quantity is not always reflective of quality, DDMI's 25-page Appendix X-9 offers substantially less details than the 107-page Snap Lake Revegetation Plan. The Board notes that the Snap Lake Revegetation Plan succinctly summarizes the findings of DDMI's own research and how it was considered, which is currently lacking from DDMI's Appendix X-9. It is the Board's opinion that this is not acceptable. It is unclear to the Board how much of the proposed approach itself is unacceptable to Parties, and how much can be attributed to the limited detail and rationale provided in Appendix X-9. Based on the concerns identified, revisions required, and the Board's opinion regarding the lack of detail, the Board has determined that Appendix X-9 cannot be approved at this time. However, in an effort to take steps towards an approved plan, the Board has attempted to provide direction, where possible.

The Tłı̨chǫ Government (comment 1) provided suggestions as to how to approach the unresolved issues associated with vegetation:

> If the WLWB finds that there are too many outstanding issues to finalize revegetation plans with this version of the Final CRP, the WLWB could consider establishing a third party expert revegetation panel (or individual). This third party could review Diavik's plans, scientific research at Diavik, research and revegetation plans at other Northern mines, past input from IGOs, and relevant revegetation guidelines documents (e.g., Northern Revegetation Studies, Lowe and Hewitt, 2021; Yukon Revegetation Manual, 2013, etc.). The WLWB could develop a process for the third party and TK holders to collaborate and work towards recommendations. For example, Diavik could host a site visit with the independent panel (or individual), TK holders and IGO staff, to collaboratively develop recommendations. If the Board finds that this option is not feasible, an alternative would be for Diavik to prepare a plan and schedule for how it will resolve outstanding revegetation issues, for Board approval.

[36] See MVLWB Online Registry at www.mvlwb.ca for De Beers Snap Lake - FCRP V1.4 Appendix J (Revegetation Plan) - Nov 15_23.pdf.

In response, DDMI stated that it does not support the recommendation of a third-party expert revegetation panel. DDMI committed to ongoing collaboration and stated that collaboration with IGOs will take time and likely will require an adaptive approach with IGO/TK Monitors. DDMI recommended that the WLWB consider approving the current re-vegetation plan as the regulatory requirement and recognize that additional re-vegetation effort can be taken outside of the regulatory process in collaboration with IGOs and TK Monitors. Given the minimal changes to Appendix X-9 in FCRP Version 1.1, the Board is still of the opinion that the proposed revegetation strategy does not include the details that would be expected in a final plan. The Board recommends DDMI review the approved Snap Lake Revegetation Plan to better understand the level of detail that is expected. The Board is concerned that simply requiring the resubmission of the plan, with additional collaboration as suggested by DDMI, will not advance this plan to where it needs to be. The Board appreciates the Tłı̨chǫ Government's creative recommendation and sees value in an independent expert being made available to IGOs in combination with a site visit, prior to resubmission of the plan.

The Board understands that seeding has benefits to both erosion and dust and does not want to unnecessarily delay closure activities. Appendix X-9 describes the anticipated timing of procuring seed mixes for closure:

> Seeding programs must be planned at least one year in advance, preferably two years, to give commercial seed suppliers time to collect the necessary species and volumes of seed. DDMI will work with seed suppliers to determine an exact mix for each seed lot based on commercial availability

Figure 8-1 of the FCRP Version 1.1 identifies that re-vegetation will begin in 2028, therefore, the Board understands that DDMI is aiming to work with seed suppliers in 2026 or 2027. The Board notes that the Tłı̨chǫ Government comment 10 identified that Tłı̨chǫ Elders see a benefit to a period of rest after operations cease and stated that "It should not be assumed that active vegetation plans, once finalized should be implemented quickly". In response, DDMI simply stated "Acknowledged". It is, therefore, unclear to the Board how urgent a decision on the vegetation approach is. The Board is unclear the most appropriate timelines for submission, and it understands it is a priority that DDMI gain certainty and understands that a snow-free site visit would be necessary prior to preparing for a subsequent submission. The Board has set a timeline for resubmission to reflect this.

- ***The Board has not approved Appendix X-9.***
- ***Decision #19 Within six months of this Decision, resubmit FCRP to include necessary revisions to Appendix X-9, Appendix VI, and closure criteria associated with vegetation.***
- ***Revision #14: The Board requires DDMI to revise Appendix X-9, in consideration of the level of detail provided in the Approved Snap Lake Revegetation Plan.***

The Board notes that much of DDMI's rationale references the 2018 University of Alberta Study (Naeth et al. 2018).[37] EMAB (comment 139) stated its position that some of these results are

[37] See WLWB Online Registry for Diavik - Closure and Reclamation Plan - Version 4.1 - Appendix X(16-21)-XIII - Dec 17_19.pdf; Appendix X-16.

misrepresented and recommended DDMI append the full 2018 University of Alberta Study revegetation study to its submission. EMAB also recommended that DDMI point viewers to the exact location in the text for independent verification when citing findings from this report. Given the large quantities of research that have been provided over the years and given the size of the FCRP, the Board finds that a hyperlink to the results would be sufficient. The Board however agree with EMAB and sees value of the intent of the second part of the recommendation.

- ***Revision #15: The Board requires DDMI to revise Appendix X-9 to include the hyperlink to the University of Alberta revegetation study. To assist Parties' review and in accordance with previous Board direction on providing more specific and helpful references, moving forward DDMI is to include specific references to sections of the study that support DDMI's statements.***

3.7.4.1 Revegetation Approach

The general approach to reclamation for each mine area is included in Table 1 of Appendix X-9. The FCRP includes one approved closure objective directly linked to revegetation at closure: "SW5—Re-vegetation targeted to priority areas". The effectiveness of closure objective SW5 has been questioned in the previous CRP reviews. The WLWB identified that the purpose/goal of the proposed revegetation approach was unclear and, therefore, difficult to understand how success should be measured (i.e., closure criteria). However, it has been acknowledged that this approved objective aligns with the similar closure objective for Snap Lake's revegetation.

In response to Revision #21 from the Version 1.0 Decision, DDMI states:

> Purpose of revegetation is to increase vegetation growth as compared with natural recovery processes, maximize vegetation cover in re-vegetated areas, and promote soil development and sustainable vegetation growth. The re-vegetation closure activity will be considered successful based on achieving the seed germination criteria (SW9). No additional criteria are proposed or necessary. Any amount of seed germination will improve vegetation growth, cover and soil development compared with natural recovery processes. DDMI has discussed the general topic of landscape over the last several years and the outcome was general direction to grade the site to be physically safe, stable, allow for use by people, wildlife passage and match landform aesthetics to the surrounding environment to the extent practicable. DDMI has incorporated this feedback into various designs, most obviously the Site Wide Grading Plan. DDMI expects there remains opportunity for adaptive management of micro scale site aesthetics related to future use that is anticipated to connect with the TK Watching Program. Also see response to XII-1 Item 4.

The approved SW-5 relies on agreement about the targeted areas and as identified by EMAB does not require revegetation of the entire site (EMAB comment 148). As stated in Appendix X-9, both Closure Objectives SW5 and SW9 (i.e., Landscape features [topography and vegetation] that match aesthetics and natural conditions of the surrounding natural area) were considered in the design basis of Appendix X-9. EMAB (comment 148) recommended that the WLWB require active revegetation of the

entire impacted mine site, which is 798 ha, rather than just the currently proposed 324 ha. NSMA (comment 11) identified a concern with the amount of active revegetation proposed, however, did not indicate that active revegetation of the entire site was necessary. The Board notes that active revegetation of the entire site does not appear to align with the input provided by other Parties who have identified a preference for both active and passive revegetation and identified the PKCF as an area to be avoided.[38]

As DDMI has identified, the WLWB agrees the challenge continues to be that Closure Objective SW5 requires decisions regarding (1) what are the priority areas for re-vegetation and (2) what level of effort is appropriate (response to TG comment 1) to be an effective closure objective. Although the Board notes that Closure Objective SW5 on its own does not guide the selection of closure activities, additional site-wide Closure Objectives SW9 and SW11 do provide guidance. In an effort to align with the approved Closure Objective SW5, the Board has attempted to provide input on the proposed areas targeted for revegetation and level of effort expected, but as described, the Board believes additional information is required to understand how DDMI chose the proposed approach. Appendix X-9 identifies active revegetation of the airstrip, roads that are not proposed to remain post-closure, and areas with infrastructure; leaving the WRSAs, PKCF, and potentially contaminated areas to naturally revegetate without any changes to the substrate. Based on the evidence received to date, the Board finds that it may be appropriate not to actively revegetate the PKCF. Potential for active revegetation of the WRSAs and contaminated areas are discussed below.

Similar to the review of the FCRP Version 1.0, both the Tłı̨chǫ Government (comments 3 and 9) and EMAB (comment 135) stated they would like the WRSA to be revegetated. The Tłı̨chǫ Government comment 1 noted that the original revegetation plan for the WRSA, as noted in the Comprehensive Study Report was intended to implement the following:

> to establish pioneer island communities of vegetation at closure. These islands would be created using the lake bottom till and vegetation/seed material taken from patches of undisturbed tundra within the mine area.[39]

The Tłı̨chǫ Government described that earlier versions of the interim CRP (e.g., going back to 2011 and earlier) identified the need to engage on and develop revegetation areas but stated that it was unaware of meaningful engagement on this issue until the Tłı̨chǫ Government's site visit in 2022. The Tłı̨chǫ Government comment 9 stated it was still working with Elders to determine how this could best be done:

> Although Elders recommend re-vegetating the WRSAs, the main activity to achieve this is to improve the substrate, at a minimum in islands. This will assist long-term revegetation whether it is passive or active. Additional verification with Elders is needed

[38] Appendix IX-6 of the FCRP Version 1.1 states "participants agree that a mix of active and passive revegetation is appropriate"; TG comments 1 and 8.

[39] See WLWB Online Registry for N7L2-1645 - Diavik - Comprehensive Study Report - Jun 99,.p. 30.

for TG to make a final recommendation on whether to actively vegetate (seeding, transplants, tree saplings, etc.) or passively vegetate (by improving the substrate and surface conditions) the WRSAs.

In response to the Tłı̨chǫ Government comment 4, DDMI states that it will discuss these directly with the Tłı̨chǫ Government and will share concern with the erodibility of till if placed on side slopes of the North Country Rock Pile (NCRP; also referred to as the North WRSA) and the merits in disturbing undisturbed tundra areas as material borrow sources. The Board understands the vegetation islands to be a consistent recommendation from Parties. Although the Board may not fully understand limitations to implementing this approach, it seems reasonable that DDMI propose a realistic revegetation approach to the North WRSA with sufficient supporting information to understand the design and rationale. Whether the proposed approach is passive or active, the Board understands that closure activities are required to revegetate the WRSA (similar to TG comment 9). It is currently unclear whether the South WRSA will exist post-closure (see Section 3.8). The Board is of the opinion that this area could likely be revegetated and further discussion is required, noting that the approach may differ from the North WRSA.

- ***Revision #16: The Board requires DDMI to propose revegetation methods at both WRSAs including a thorough consideration of feasibility and options to passively or actively revegetate both WRSAs. This should include at minimum consideration of vegetation islands as proposed in the CSR.***

The Board notes that several comments were received by EMAB (comments 139 to 141, 152) and the Tłı̨chǫ Government (comments 4 and 11) with respect to soil amendments. Given the direction to further discuss and propose vegetation islands on the WRSA, DDMI will need to evaluate appropriate soil amendments for the WRSA at minimum.

Appendix X-9, Table 1 notes that approximately 15 ha of potentially contaminated areas are included within the total 324 ha of airstrip, laydown areas, and other areas of site infrastructure. The FCRP Version 1.1 proposes that these areas will not be scarified or seeded. EMAB (comment 147) asked DDMI if they had ever considered phytoremediation for its contaminated areas to "speed up soil remediation efforts at the site in an economical, safe way and much faster than letting the site 'heal itself' which, in a subarctic environment, could take decades to centuries". EMAB identified that it did not believe the approved plan allowed for contaminated soils left in situ as the revegetation plan seems to imply. In response to EMAB comment 147, DDMI stated that leaving material above the depth-applicable CCME agricultural standard is not being proposed at this time. The Board finds that such a recommendation could be considered in the future if leaving contaminated soils in situ is proposed following the Phase III ESA (see Section 3.12.1).

3.7.4.2 Species Selection

Appendix X-9 proposes to seed the targeted areas with a seed mix that will include at least four grass species (75% of the mix by weight) and two forb species (25% of the mix by weight) as follows:

> The selected grass and forb species are native to the Northwest Territories and the subarctic tundra, although not all are found naturally in the Diavik area. Grass and forb species were chosen based on their availability from commercial suppliers and their ability to revegetate quickly and support natural succession over time.

Several Parties identified that they disagreed with the proposed plant species and indicated a preference for plants native to East Island to be used in revegetation (EMAB comments 136 and 137; NSMA comment 11; TG comments 5 and 6). EMAB identified that "At the FCRP workshop, all Parties agreed that that species used in revegetation should be those native to the Island (e.g., Lichen, Blackberry, Willow, Blueberry, Cranberry, and medicinal plants in general)" and stated that the DDMI 1998 EA confirms these species as native to the island. It was noted that none of the aforementioned species recommended by Parties were included in Appendix X-9. In response to Parties recommendations, DDMI stated:

> These plant communities will be early pioneer successional communities dominated by graminoids (i.e., grass species) that will allow for natural succession over time into plant communities more similar to those found naturally at and surrounding Diavik (i.e., climax species). Results from progressive reclamation monitoring have shown that grass and forb seeding is an effective way to accelerate reclamation success. There is an expected difference between early pioneer successional plant community species and the climax plant communities that existed prior to disturbance which may take hundreds of years to fully develop. One of the UofA conclusions was that after ten years the soil and plant communities were not similar to undisturbed tundra, but they appeared to be self-sustaining and vigorous. This supports the general objective of having early pioneer species that will add to organic material through leaf litter and establish a trajectory towards climax species.

In addition, these same Parties all identified that a seeding-only approach did not align with their expectations, and recommend cuttings be implemented as part of active revegetation (EMAB comments 136 and 137; NSMA comment 11; TG comments 5 and 6). EMAB noted that, along with reseeding, Snap Lake's approved FCRP involves the following:

> ...planting 5,600 seedlings of native plants found at site – 1,400 each of lingonberry, bog birch, bog bilberry and northern Labrador tea. Snap Lake will also be planting 913 willow cuttings and 913 bog bilberry cuttings. For context, the area being actively revegetated with seedlings and cuttings at Snap Lake is about 72 ha., the area Diavik [DDMI] will be revegetating is more than four times that amount.

In response to EMAB comment 136, DDMI states that it has not proposed use of seedlings and cuttings at this time due to the high level of effort, limited return on aesthetics, and low chance of success. DDMI has acknowledged its understanding that because re-vegetation is principally for aesthetics, and for that to be meaningful, the closure criteria should include a measure of the expected level of effort. The Board notes that as identified by DDMI in Appendix X-9, "SW9: Landscape features (topography and

vegetation) that match aesthetics and natural conditions of the surrounding natural area" is important not only for aesthetics but because "revegetation can aid in establishing aesthetics and land uses that are typical of the region".

The Board notes that the seed selection proposed is very similar to that used at the Snap Lake Mine and has overlap with species used in the 2017 University of Alberta revegetation study.[40] The WLWB notes that DDMI's identified challenge with procurement of commercially available seed mixes is validated in that report:

> Only a few suppliers carry native seeds for arctic and alpine species, and they are often of too small quantities and/or consist of grasses and legumes which lack the diversity necessary for large scale revegetation projects (Forbes and Jefferies 1999, Matheus and Omtzigt 2012).

The Board notes that no alternative grass species were suggested by Parties. It is, therefore, unclear, whether there is an issue with the proposed early pioneer successional communities or whether the issue is primarily that no additional species are proposed to be more reflective of the baseline plant communities. The Board finds that clearer rationale on the selection of species would be beneficial to this conversation. Section 3.4.1 of the Snap Lake Revegetation Plan offers a good example of clear communication of rationale for species selection. However, the Board notes that the native species identified for Snap Lake considered species to be native if they met one of the following criteria:

- Recorded within the EA (De Beers, 2002a) as being present when baseline studies were conducted;
- Recorded during the ongoing vegetation monitoring program (Golder, 2007); or
- Present in the "NWT Native Seed Development Species List" developed by the Aurora Research Institute in Inuvik (Aurora Research Institute, 2014).

The Board notes that this does not mean that all Snap Lake selected species were necessarily found within the project area at baseline. However, Snap Lake's Plan includes shrubs found on East Island (e.g., willows). The Board encourages DDMI to provide access to its baseline vegetation report and summarize the native grass species identified with rationale for why they were not considered through this process. This could be done by including a table similar to Table 9 of the Snap Lake Revegetation Plan, which includes identification of baseline species.

- ***Revision #17: The Board requires DDMI to include clear description of what candidate species were considered and rationale for the species selected. This is to include species identified in the baseline studies as candidate species.***

The Board has considered Parties' requests for species found within the Project area to be used in revegetation efforts via live cuttings and Appendix X-9 addressed the rationale for not using dwarf

[40] See WLWB Online Registry for Diavik - Closure and Reclamation Plan - Version 4.1 - Appendix X(16-21)-XIII - Dec 17_19.pdf; Appendix X-16.

shrubs or cuttings in its reclamation plan describing the challenge identified in the University of Alberta revegetation study. The Board notes that in review of the University of Alberta revegetation study findings, Snap Lake still determined cuttings of plants, some of which are native to East Island, to be feasible. The WLWB recognizes there may also be opportunities for DDMI to learn from Snap Lake's revegetation efforts.

While Appendix X-9 has described that shrubs are expected to continue to ingress and spread through reclaimed areas over time, it is clear that Parties do not have confidence that the proposed approach will re-establish the vegetation native to the island. Although the Board recognizes the use of dwarf shrubs or cuttings will have a lower success rate and higher level of effort than grasses, the Board finds that establishment of vegetation native to East Island is necessary for successful closure.

The Board notes that EMAB (comment 143) identifies the challenges with passive revegetation in a subarctic environment:

> EMAB's expert consultant Justin Straker (memo attached) notes that "passive revegetation" of subarctic mine sites is unheard of in a modern context. This is likely due to the fact that it's an ineffective approach. For example, in Ficko and Naeth's (2021) Root development on cuttings of seven arctic shrub species for revegetation, which was based on research conducted at Diavik, it states: "Natural recovery of these disturbances is predicted to take hundreds to thousands of years, as plant growth is inhibited by short growing seasons, low temperatures and rainfall, low species diversity, limited seed production and dispersal, low soil water, and low nutrient concentrations."

The Board finds that a seed-only approach is likely not acceptable and has determined that additional effort is required to re-establish the vegetation native to the island. Understanding the timelines for establishment of shrubs is much different than grasses, the Board notes that this is likely a much longer-term criterion that could be evaluated either through a western science or TK program.

- ***Decision #20: The Board has determined that post-closure vegetation monitoring should evaluate the establishment of species native to East Island.***
- ***Revision #18: The Board requires DDMI to revise Appendix X-9 to include active/passive approach to revegetation of species native to East Island with supporting rationale. Propose/revise a performance criterion to evaluate these species.***

The Tłı̨chǫ Government comment 11 identified that the Tłı̨chǫ Elders recommend that "No seeds, soils, fertilizers or other materials should be brought from the south for revegetation," stating that this will "protect against invasive species and foreign materials". In response, DDMI stated that it was "not aware of a local seed source that could practically provide the qualities of seed required for the proposed re-vegetation plan". The Board notes this is related to EMAB comment 138 recommendation that community members be directly involved in seed collection and revegetation efforts. Given the scale of the Diavik site and re-vegetation efforts, the Board does not find it practicable to find local sources for all seeds, soils, fertilizers or other materials. However, the Board sees an opportunity to evaluate both community involvement and local sources to address Revision #18 above.

Section 5.1 of Appendix X-9 describes that scarification will include both recontouring and deep ripping. Recontouring will be completed in areas where slopes or landform shape needs to better match the natural surroundings, while deep ripping will be completed in areas that have received heavy traffic throughout their operational life (e.g., roads, building pads) prior to contouring or seeding. The one notable change to Appendix X-9 in the FCRP Version 1.1 identified by DDMI was to reduce the depth of ripping to reflect community feedback. The Tłı̨chǫ Government (comment 12) recommended that "scarification should be as shallow as possible while still promoting revegetation, similar to areas around the mine site where caribou walk and graze" and requested that the Tłı̨chǫ Elders see another trial area with shallower ripping. In response, DDMI stated that it can discuss plans for additional site visits with the Tłı̨chǫ Government directly. The Board sees value in IGO feedback on this scarification approach to understand what the landscape will look like post-closure and whether areas without a design will align with Closure Objective SW9.

- ***Decision #21: The Board requires DDMI to provide an opportunity for IGOs to visit the site to discuss the revegetation plan prior to submission of Appendix X-9.***

3.7.4.3 Evaluation of Successful Revegetation

Although Parties had many concerns with the submitted revegetation plans. It appears there was some improvement in the proposed closure criteria to evaluate successful revegetation efforts. The FCRP includes one approved closure objective directly linked to revegetation at closure, with five associated criteria.

- **SW5**—Re-vegetation targeted to priority areas.
    - **SW5-1** – Final re-vegetation procedures applied to priority areas as established with communities and approved by Wek'èezhìi Land and Water Board.
    - **SW5-2** –Seed applied according to final revegetation procedures at a minimum rate of 25 kg/ha.
    - **SW5-3** - Achieved 5% mean plant coverage on revegetated areas, resulting in a mean plant coverage of approximately 35% (land only) over East Island
    - **SW5-4** – Minimum of four plant species are present in active seeding areas at year 5 post-closure and five plant species are present in active seeding areas in year 10 post-closure
    - **SW5-5** – No invasive alien plant species present.

Closure criterion SW5-1 and SW5-2 are design criteria proposed to evaluate whether Appendix 9 was implemented as proposed. The Tłı̨chǫ Government (comment 28) asked DDMI to provide rationale for the selected seed rate. In response, DDMI stated that the seed rate was recommended by a qualified reclamation specialist based on likelihood of success. The Board is unclear of the value of Closure Criterion SW5-2 given that the design Closure Criterion SW5-1 requires revegetation to be completed in accordance with approved procedures, which includes the minimum rate of seed application. Although the revegetation methods are not being approved at this time, the Board has approved SW5-1

as acceptable design criterion to evaluate Appendix X-9, once approved. For the overlap described above, the Board has not approved Closure Criterion SW5-2.

- ***The Board has approved Closure Criterion SW5-1.***
- ***The Board has not approved Closure Criterion SW5-2.***

Closure criteria SW5-3, SW5-4, and SW5-5 are performance criteria to evaluate the success of revegetation efforts. As discussed above, although the Board did not accept EMAB's suggestion that the entire mine site must be revegetated, and the Board has required additional areas (i.e., WRSAs) to be passively or actively revegetated that would likely influence these criteria. Additional details regarding how Closure Criterion SW5-3 will be evaluated should be provided with updated monitoring required by Revision #19 below. The Board will determine the appropriateness of SW5-3 at that time.

- ***The Board has not approved Closure Criterion SW5-3.***

Closure Criteria SW5-4 and SW5-5 were added to be consistent with the Snap Lake closure criterion. Both Tłı̨chǫ Government and EMAB noted the improvement of their inclusion (EMAB comments 154 and 155; TG comment 30). The Board has determined these criteria can be approved at this time.

- ***The Board has approved Closure Criteria SW5-4 and SW5-5.***

The Tłı̨chǫ Government highlighted additional criterion that could be added to improve evaluation of Closure Objective SW5 (e.g., use of a third-party expert and Qualified Professionals, pre-defined reclamation sample plots). In response, DDMI identified that a qualified professional prepared Appendix X-9 and that sample plots are proposed in the evaluation of several criterion. The Board finds this to highlight the need for a more clear and detailed revegetation plan. However, these gaps appear to be addressed by the revisions directed above.

As noted above, a criterion to evaluate species native to East Island is required. The Board notes this could be considered as a potential cultural use criterion.

3.7.4.4 Monitoring and Adaptive Management

The proposed monitoring to evaluate Closure Objective SW5 is described in Appendix VI, Section 3.1.5. The Board finds that the level of detail is not sufficient to understand how the proposed closure criteria will be evaluated. Based on Parties' comments, they were unclear how vegetation would be used, the number of plots, and how percent cover (Closure Criterion SW5-3) would be evaluated. In addition, Parties were unsatisfied with the lack of contingencies or response actions if revegetation efforts are unsuccessful. The Board notes that level of detail provided in the approved Snap Lake Revegetation Plan is more consistent with its expectations on level of detail, noting that it includes an adaptive management framework as Table 20. The Board recognizes that this revegetation monitoring will be supported by the TKMF; however, as proposed it is not sufficient to give confidence that the monitoring will appropriately evaluate the closure criteria. The Tłı̨chǫ Government (comment 7) and EMAB (comments 131–133) both commented on the duration of monitoring, noting that monitoring of vegetation will require a significant amount of time. The Board notes that reestablishment of vegetation

is not a short-term outcome and, therefore, it is important that adaptive management practices are in place to respond accordingly to vegetation monitoring results.

- ***The Board has not approved vegetation monitoring in Appendix VI.***
- ***Revision #19: The Board requires DDMI to revise Appendix VI to reflect the level of detail in the approved Snap Lake Revegetation Plan Section 6.0, including a response framework.***

3.7.5 Site-Wide Issue #5: Landscape and Aesthetics

The Closure Guidelines describe the four closure principles including: "Future Use (including aesthetics and values) – The site should be compatible with the surrounding lands and water bodies upon completion of the closure activities." In addition, DDMI has three site-specific closure goals which speak to final landscape:

- Final landscape guided by TK.
- Final landscape guided by pre-development conditions.
- Final landscape that is neutral to wildlife – being neither a significant attractant nor significant deterrent relative to pre-development conditions.

DDMI has three approved site-wide objectives specifically related to landscape and aesthetics:

- **SW6**—Ground surface designed to drain naturally following pre-development drainage patterns.
- **SW7**—Areas in and around the site that are undisturbed during operation of the mine should remain undisturbed during and after closure.
- **SW9**—Landscape features (topography and vegetation) that match aesthetics and natural conditions of the surrounding natural area.

Closure Objective SW6 is discussed in Section 3.7.2. Closure Objective SW7 and its associated criterion were previously approved and are not revisited in this Reasons for Decision.

The Board approved Closure Criteria SW9-1 and SW9-2 in review of FCRP Version 1.0. In FCRP Version 1.1, DDMI proposed a new closure criterion (SW9-3) that requires an engineer to verify that areas without closure designs have a "low instability hazard rating" under the Waste Dump and Stockpile Stability Rating and Hazard Classification (WSRHC) System. This criterion is also proposed for the South WRSA (W1-3) and discussed in Section 3.8. EMAB (comment 30) and the Tłı̨chǫ Government (comment 31) both identified that this criterion appears to be more linked to physical stability (Closure Objective SW11) rather than aesthetics (Closure Objective SW9). In response to the Tłı̨chǫ Government comment 31, DDMI clarified the purpose and rationale for this criterion:

> The purpose of including the low instability hazard rating to closure criteria is to assist with confirming that the landform will remain as constructed over time. DDMI acknowledges this could also be considered under SW9 [should be SW11] but is unsure if this duplication is necessary. This assessment is completed by a qualified professional

> and a low classification generally means the structure is stable with minimal geotechnical concerns and no special risk controls are required.

The Board understands that DDMI proposed Closure Criterion SW9-3 to evaluate the stability of landforms to maintain the intended aesthetic. However, given Closure Criterion SW9-3 is proposed to apply to only areas without closure designs, the intended aesthetic was not explicitly proposed and approved through the FCRP and, therefore, it is unknown whether the proposed Closure Criterion SW9-3 would evaluate Closure Objective SW9. The Board has determined this criterion is more appropriate to evaluate Closure Objective SW11 and has approved it as Closure Criterion SW11-5. The Board notes that aesthetics of areas without closure designs can be evaluated as part of the TKMF.

- ***The Board has approved the proposed Closure Criterion SW9-3 as Closure Criterion SW11-5.***

Recommendations were made by EMAB (comment 54) and the Tłı̨chǫ Government (comment 21) regarding placement of boulders at the North WRSA and North Inlet to encourage/discourage wildlife as appropriate. The Tłı̨chǫ Government comment 13 stated:

> It is our understanding that important decisions regarding smaller landscape features (e.g., boulder placement, localized contouring, etc.) have yet to be made. Some of these decisions can be best made as active closure progresses and the final landscape takes shape. Elders and TG wildlife experts can make recommendations during site visits, with wildlife, cultural use, aesthetics and other factors in mind.
>
> Regarding how to address this work in the Final CRP, one option is to revise the Final CRP in the future to include these modifications, although this may be slower and require more resources. Alternatively, these modifications could be managed adaptively throughout closure, collaboratively with Diavik [DDMI]. We are open to either possibility, provided the Final CRP addresses this issue sufficiently to ensure the TG can provide input, and the landscape will be shaped so that all closure criteria (scientific and cultural use) can be met. Note that we have not commented on cultural use criteria for any of the closure objectives, as we understand the renewed licence awaiting Minister signature will address this issue.

The Tłı̨chǫ Government comment 13 stated that the Final CRP should be more explicit that improvements to small, localized features (e.g., boulder fences, localized contouring) will be needed and that cultural use criteria will be developed to ensure these modifications meet closure objectives for aesthetics, cultural use, safety, and wildlife movement (e.g., Closure Objectives SW9, SW10, SW11). DDMI stated that it views this as a good example of smaller landscape features that can be implemented collaboratively rather than through regulatory processes. DDMI stated that it intends to collaborate with IGO and TK Monitors on these types of details and does not believe it is practical or necessary to include this level of detail in a regulatory closure plan. The Board agrees that it may not be practicable to include this level of detail in the FCRP and could be incorporated in RCR reporting to identify where TK recommendations have been adopted and where they were considered and not adopted in accordance with Part B, Condition 3.

3.7.6 Site-Wide Issue #6: Wildlife

One of DDMI's approved closure goals is "Land and water that is physically and chemically stable and safe for people, wildlife and aquatic life". DDMI has three approved site-wide objectives with proposed criteria that require wildlife monitoring:

- **SW4**—Dust levels do not adversely affect use and safety of vegetation consumption by wildlife.
  - **SW4-1**—Monitoring evidence of post-closure wildlife use of area.
  - **SW4-2**—Metals concentrations measured in soils and lichens during post-closure will not significantly exceed metals concentrations measured during operations.
- **SW8**—Predation of caribou is not associated with residual features of the site.
  - **SW8-1**—No regular or systemic predation of caribou associated with residual features of the Mine site as would be suggested by repeated year over year observation of predation or remains at the same former mine feature.
- **SW10**—Safe passage and use for caribou and other wildlife.
  - **SW10-1**—Wildlife use of reclaimed areas will be assessed based on the recording of signs of wildlife activity using incidental observation, remote cameras, or collar data once there is no longer a site presence.

The WLWB's consideration of Closure Objective SW4 is discussed in Section 3.7.3. The criteria associated with the other two closure objectives are discussed below.

Section 3.1.7 of Appendix VI-I includes an overview of wildlife monitoring to evaluate Closure Objectives SW4, SW8, and SW10. DDMI has submitted a closure and post-closure Wildlife Management and Monitoring Plan (WMMP) as Appendix VI-3. The WMMP proposes monitoring to evaluate Closure Objectives SW8 (Section 6.2.3) and SW10 (Section 6.2.4). The WMMP is a requirement of the *Wildlife Act* and updates are approved by the Minister. The GNWT conducted a concurrent public review of the WMMP to inform its decision;[41] however, no Ministerial decision has been communicated to date. In its decision on the FCRP Version 1.0, the WLWB stated:

> Overall, the Board finds that the proposed criteria related to wildlife are rather non-prescriptive and rely heavily on the proposed WMMP to outline the monitoring and assessment by which they will be evaluated. This is difficult as the monitoring is included through either the WMMP, which will be finalized through a separate GNWT-ECC process, or the TK Watch Program, which has not yet been proposed. The Board finds that although this is an FCRP, insufficient information has been provided to understand whether the proposed closure criteria for wildlife are appropriate. The Board is unable to approve the criteria as proposed as they are reliant on a monitoring plan that is still in draft form. The Board recognizes the efficiencies in using the WMMP, which is approved by the GNWT-ECC, to support the FCRP evaluation of success related

[41] See Online Review System for Diavik - Tier 2 Closure and Post-closure Wildlife Management and Monitoring Plan.

to wildlife. However, if the GNWT-led process timelines impede the submission of an approved WMMP prior to DDMI seeking certainty, DDMI may have to propose more specific criterion and associated monitoring as part of the revised FCRP.

Revision #26 in the WLWB's July 19, 2024, FCRP Version 1.0 Reasons for Decision required DDMI to submit the WMMP to the Board once approved by GNWT. It is unclear the timelines by which this process will be completed and a final WMMP be available to support the FCRP. In addition, the WLWB required DDMI to revise Closure Criteria SW8-1 and SW10-1 to reflect a longer duration of monitoring and clear measurable criteria. No comments regarding wildlife were received from the GNWT.

Most of the recommendations received were about whether the proposed monitoring was adequate to evaluate Closure Objectives SW8 and SW10. The Tłı̨chǫ Government (comment 46) stated that "the WMMP does not describe an appropriately detailed methodology to achieve site wide objectives for closure and post-closure monitoring for detecting caribou predation events (SW8) or passage and use for caribou and wildlife (SW10)".

A key issue is that the WMMP relies on incidental monitoring, which will not provide a systematic or stratified search effort of the mine area through the closure and post-closure phases. Section 6.1.5.1 of the WMMP states: "As incidental data are biased by observer effort and location (i.e., no standardized sampling design), no formal analysis of these data are proposed." In response to EMAB comment 182, DDMI describes that Closure Criterion SW8-1 includes annual monitoring for three years in addition to the continuous incidental monitoring. The Board notes that this appears to be a discrepancy from the five years of post-closure annual monitoring that is included in Section 3.1.7 of the FCRP Version 1.1. As discussed in Section 3.6, approval would be required prior to the cessation of monitoring to demonstrate sufficient information had been collected. DDMI should review Appendix VI to ensure it is consistent with the WMMP, once approved.

Parties expressed concern that the periodic collection of wildlife use data is contingent upon the presence of staff on site and suggested additional continuous monitoring is required in post-closure (EMAB comments 183 and 184; TG comments 47 and 48; YKDFN comments 51, 53 to 55, and 58). In response, DDMI identified that both remote cameras and the TKMF would be used to supplement the monitoring outlined in the WMMP. The Board agrees that as proposed the WMMP is not sufficient to evaluate Closure Objectives SW8 and SW10 and has therefore not approved Appendix VI-3. However, it supports the use of both the remote cameras and the TKMF to provide evidence to evaluate these closure objectives. The Board agrees that the WMMP does not include sufficient detail to understand the use of remote cameras or TK-based monitoring. It is therefore unclear, whether these additional items identified by DDMI would be sufficient to address Parties' concerns. The Board finds this would be best addressed once an understanding of the TKMF and cultural use criteria are known. The Board anticipates that approval of remote camera locations should not prevent DDMI from installing cameras in the interim, and a decision can be provided prior to reduced site presence. The Board has not approved Appendix VI-3 because additional details are required to understand the evaluation of wildlife-related Closure Objectives (i.e., SW8 and SW10). It appears Parties' wish to see additional

monitoring and the Board does not anticipate changes to the proposed monitoring, beyond additional monitoring, would be required by the WLWB. The WLWB emphasizes the importance of wildlife monitoring to land users and finds the proposed wildlife monitoring should not be delayed by this decision. The Board anticipates the WMMP will be implemented once approved by the Minister.

- ***The Board has not approved Appendix VI-3.***
- ***Revision #20: Within three months of submission of the deadline for the updated TKMF, DDMI is to revise Appendix VI and/or WMMP as appropriate to propose a more thorough evaluation of Closure Objectives SW8 and SW10.***

Few comments were received regarding the actual proposed criteria. The Tłı̨chǫ Government comment 27 states that the criteria to evaluate Closure Objective SW10 (safe passage and use for caribou and other wildlife) were improved from the previous version of the FCRP Version 1.0 but noted the following concerns:

> The newly proposed criterion is: "SW10-1 – Wildlife use of reclaimed areas will be assessed based on the recording of signs of wildlife activity using incidental observation, remote cameras, or collar data once there is no longer a site presence." However, the criteria still lacks detail. For example, how will DDMI monitor use of the site by birds and small mammals? How will DDMI scientifically assess how wildlife use compares before the mine was built and after closure? How will DDMI know if the designed closure features resulted in unanticipated hazards?

In response, DDMI stated that it does not intend to scientifically assess how wildlife use after closure compares to before the mine was built and has, therefore, not proposed closure criteria that relate to use returning to pre-development levels. DDMI identified that birds, small mammals, and other wildlife will be monitored through incidental observation, use of remote cameras, and likely TK-based monitoring. With the understanding that the TKMF will be used to evaluate Closure Objectives SW8 and SW10, the Board has determined that the proposed closure criteria are appropriate. The Board finds the update required by Revision #20 above will provide an opportunity to consider additional criteria in consideration of remote camera details and TKMF linkages.

- ***The Board has approved Closure Criteria SW8-1 and SW10-1.***

3.7.7 Site-Wide Issue #7: Physical Stability

One of the four standard closure principles in the LWB Closure Guidelines is physical stability. The LWB Closure Guidelines state that “Closure and reclamation will not be successful in the long-term (e.g., 1000 years) unless all physical structures are designed such that they do not pose a hazard to humans, wildlife, aquatic life, or environmental health and safety”. Closure Objective SW11 has three associated proposed criteria:

- **SW11**—Mine areas are physically stable and safe for use by people and wildlife.
    - **SW11-1**—Final inspection by a professional engineer confirming construction according to design.
    - **SW11-2**—Inspections by a professional engineer where:

- no failure scarps resulting in vertical faces over 1.2 m(b) in height have been identified; and
- no tension cracks greater than 0.5 m in width across opening and deeper than 1.2 m have been identified.

- **SW11-3**—Confirmation by the designated authority that closure of Mine openings was completed in accordance with the *Mine Health and Safety Act*.[42]

Closure criterion SW11-1 is an approved design criterion that requires a Professional Engineer to confirm construction was completed according to the approved design.

SW11-3 is a new closure criterion that proposes formal confirmation that closure of mine openings was completed in accordance with the *Mine Health and Safety Act*. No concerns were raised regarding Closure Criterion SW11-3. The Board sees value in this confirmation being provided to evaluate Closure Objective SW11 and has approved Closure Criterion SW11-3. The Board notes that it has revised the reference to no longer specify the GNWT department.

- ***The Board has approved Closure Criterion SW11-3.***

SW11-2 is a performance criterion limited to the evaluation of scarps and failure cracks by a professional engineer. Closure Criterion SW11-2 is cross-referenced to evaluate Closure Objectives M5, W1, P2, NI6, and I2. In review of the FCRP Version 1.0, the Board required DDMI to propose a new criterion that provides linkage between successful post-closure geotechnical inspections and evaluation of success. In review of FCRP Version 1.1, Board staff comment 72 noted that Snap Lake Closure Criterion SW4-1(a) requires the following:

> Acceptable performance results as assessed by a Professional Engineer through geotechnical investigations in snow free conditions. Acceptable results are defined as a concluding statement in the record report signed off by a Professional Engineer that landforms are performing as designed and are physically stable, and acceptable results of visual monitoring conducted in Post-Closure as part of the geotechnical inspections will be demonstrated for 5 years. The stability will then be verified at 10 years from Closure.
>
> In response, DDMI stated that it would accept the following as the closure criteria for SW11-2: Acceptable performance results as assessed by a Professional Engineer through geotechnical investigations in snow free conditions. Acceptable results are defined as a concluding statement in the record report signed off by a Professional Engineer that landforms are performing as designed and are physically stable. See also area specific criteria Cross referenced by: M5, P2, and NI6.

The Board understands this statement would expand beyond the two criteria (failure scarps and tension cracks) currently proposed for Closure Criterion SW11-2 to include other parameters identified in

[42] Mine Health and Safety Act. SNWT1994, c 25. https://www.justice.gov.nt.ca/en/files/legislation/mine-health-and-safety/mine-health-and-safety.a.pdf.

Attachment 1 of Appendix VI. The Board has determined there is value to this confirmatory statement being provided by a Professional Engineer and has included this condition as Closure Criterion SW11-4. The Board has updated the cross-references for Closure Criterion SW11-2 to also include reference to Closure Criterion SW11-4.

- ***The Board has approved Closure Criterion SW11-4 to reflect DDMI's response to Board staff comment 72 (see Appendix C).***
- ***The Board has revised cross-references to SW11-2 under Closure Criteria M5, P2, W1, NI6, and I2-3 to include reference to both SW11-2 and SW11-4. The Board has included the criteria approved with revisions in Appendix C.***

In its comments on SW11 criteria, the Tłı̨chǫ Government stated that closure criteria for safe use by people and wildlife (SW11) should ensure there are no cracks, failure scarps, or other features that could harm people or wildlife or appropriate mitigations are put in place (TG comment 25). The Tłı̨chǫ Government described that "the degree to which small scarps and cracks are hazardous will depend not just on the height and width but the location (e.g., proximity to preferred routes for wildlife and people), visibility, and frequency" and described that Traditional Knowledge monitoring and cultural use criteria should play a role in assessing this closure objective. In response, DDMI described that the 1.2 m depth criterion corresponds to the maximum acceptable fall height according to the NWT Workers Safety and Compensation Commission. DDMI agreed that TK Monitoring can play a role in making smaller landscape adjustments or repairs if they occur in higher use areas where they present a greater potential hazard and committed to collaborate with the Tłı̨chǫ Government, other IGOs, and the TK Monitors to identify these types of improvement opportunities but does not believe this should be completed through a regulated process. The Board agrees that the evaluation of whether cracks, failure scarps, or other features that could affect wildlife may not be as straightforward as Closure Criterion SW11-2 suggests and, therefore, could benefit from a TK-based evaluation. The Board sees value to Closure Criterion SW11-2 including evaluation by a Professional Engineer to assess safety to humans and has approved Closure Criterion SW11-2 as proposed. As noted in Section 3.6.4, the Board anticipates the TKMF will provide evidence to contribute to the evaluation of Closure Criterion SW11.

- ***The Board has approved Closure Criterion SW11-2.***

As discussed in Section 3.7.7, the Board has included an additional criterion to evaluate physical stability of areas as SW11-5. The Board notes that EMAB comment 208 recommended that DDMI's criteria for Closure Objective SW11 "must take the effects of climate change into account by continuing monitoring over a much longer term" than the five years proposed. Similar to other recommendations related to the performance assessment period (see Section 3.5.1), the Board has not determined the appropriate duration of assessment of monitoring but has accepted the proposal for the first PAR to be submitted after five years.

3.8 Waste Rock Storage Areas

Two WRSAs, the North WRSA and South WRSA (also referred to as the North Country Rock Pile and South Country Rock Pile [SCRP] in DDMI documents), were developed throughout mine operations and

have been anticipated to remain on land at closure. The North WRSA contains waste rock and till from mining the A154 and A418 pits and the South WRSA contains waste rock and till from mining the A21 pit. The North WRSA has been fully constructed and is currently undergoing progressive reclamation, while the development of the South WRSA began in 2017 and is ongoing.

The North WRSA CRP Version 1.2 was approved as an interim plan by the WLWB in 2018.[43] The North WRSA contains potentially acid generating (PAG) rock. The closure plan for the North WRSA is to re-slope the surface to allow placement of a 1.5-m-thick till and a 3-m-thick waste rock cover. At closure, construction of wildlife access/egress ramps on the surface is planned. DDMI has completed progressive reclamation of a portion of the North WRSA, which has been documented within the 2017, 2018, 2019, and 2021 RCRs.[44]

The FCRP Version 1.0 included a design for the South WRSA (Appendix X-17) and described that the South WRSA does not contain PAG rock and, therefore, a cover for this rock pile is not proposed at closure. In addition, it described that the South WRSA material is being actively remined for use across the site as a reclamation material. The WLWB directed DDMI to engage on the proposed slope, height and shape of the South WRSA and required the final South WRSA design to reflect the slope of the North WRSA unless new evidence suggests that this steeper slope is supported by Parties. In FCRP Version 1.1, Appendix X-17 has been removed. Version 1.1 states, "that the South WRSA is being strategically re-mined to reflect similar slopes to the NCRP" and "Any additional SCRP closure design work will be considered following the completion of re-mining". In response to WLWB staff comment 66, DDMI states that it will have a clearer sense of quantities remaining once the FCRP is approved and the PKCF construction and demolition works are completed. DDMI states that it is possible no design will be required as the South WRSA may essentially be gone. The Board is pleased by DDMI's efforts to minimize the rock remaining at the South WRSA to reflect Parties' input. To ensure that the success of closure activities can be evaluated in a timely manner, the WLWB encourages DDMI to submit an updated South WRSA Design and any proposed changes to closure criteria as soon as reasonably practicable. DDMI is to propose an update to Appendix X-17 and closure criteria related to the South WRSA, once final quantities are understood. In the absence of a final design, the expects a closure criterion related to final sloping to reflect its previous Decision would be required.

- ***Decision #22: The Board requires DDMI to propose an update to Appendix X-17 and closure criteria related to the South WRSA, once final quantities of waste rock remaining are understood.***

[43] See WLWB Online Registry for Diavik - Closure and Reclamation Plan - WRSA - Directive and Reasons for Decision - Feb 9_18.pdf.

[44] See WLWB Online Registry for CPR Version 4.1 Appendix VII(1), Appendix VII(2), Appendix VII(3), Appendix VII(4), Appendix VII(5)-IX; Diavik - 2019 WRSA Reclamation Completion Report - Jun 19_20.pdf; Diavik – Security Refund Request – North WRSA and Treatment Chemicals RCRs - Nov 2_21.pdf; Diavik - Annual CRP Progress Report - 2021 - VI-1 2021 RCR North WRSA Part 1 - Jul 20_22.pdf.

Reviewers provided recommendations regarding the WRSAs, which have been grouped into the following topics:

- Freezing and Associated Thermal Monitoring (North WRSA);
- Physical Stability; and
- Landscape Aesthetics.

3.8.1 Issue #1: Freezing and Associated Thermal Monitoring (North WRSA)

The FCRP includes two approved closure objectives specific to the North WRSA to evaluate potential of waste disposal areas to contaminate land and water (W3 and W4):

- **W3**—Contaminated soils and waste disposal areas that cannot contaminate land and water. (North WRSA only).
- **W4**—PAG rock stored so that it does not contaminate the land and water.

These two objectives and associated criteria do not apply to the South WRSA, which does not contain PAG rock or contaminated soils. Section 2.2 of the North WRSA Closure Design, describes that the cover is designed to have frozen conditions occurring at the base of the till zone of the cover. The WLWB's approval of the North WRSA Closure Design was based on frozen conditions occurring below the cover material and, therefore, freezing of the PAG rock. The FCRP Version 1.1 proposed revised criteria to evaluate the potential influence of PAG material on water quality in both frozen and unfrozen conditions:

- **W3-2**—Thermal monitoring (supplemented with thermal modelling as needed) demonstrates that potential sources of contamination are contained within the frozen zone, below the active layer. If thermal monitoring indicates that material may not remain frozen, surface water downstream must meet SW2-1. If PAG material is not predicted to remain contained within the frozen zone, water quality predictions demonstrate that freezing is not required.
- **W4-1**—Thermal monitoring (supplemented with thermal modelling as needed) continues to demonstrate W3-2 is met.

Although many questions of clarification were asked, no Party identified major concerns with the proposed Closure Criteria W3-2 and W4-1. EMAB is correct that SW2-1 must be met regardless of what thermal modelling indicates (EMAB comment 33). SW2-1 is evaluated at the collection pond breaches downstream of the WRSA and will evaluate the water quality from an entire catchment. In response to EMAB comment 52, DDMI states "DDMI is confident that the data from these five clusters combined with potential future samples of runoff and seepage will effectively demonstrate how the cover is performing and no additional thermistors have been installed." The WLWB agrees that regardless of freezing, evaluation of site-wide water quality criteria should be provided as evidence to support cover performance and W3. It is noted that W3-3 already refers to Closure Objective SW1 and SW2 for additional information on criteria applicable to water sampling. However, these criteria are not directly cross-referenced as done in P1-2, P1-3, I2-1, I2-2. The Board has revised W3-2 and added criteria W3-4 and W3-5 to be consistent with expectations of SW1 and mirror the wording used in PKCF- and Infrastructure- related criteria. The WLWB is not aware of a reason that SW1 would not apply to surface

runoff and seepage water from the North WRSA and, therefore, does not see the revision to W3-2 and addition of SW3-4 and SW3-5 criteria below as a material change.

- ***The WLWB has approved the following revised closure criteria:***
    a. ***W3-2: Thermal monitoring (supplemented with thermal modelling as needed) demonstrates that potential sources of contamination are contained within the frozen zone, below the active layer. If PAG material is not predicted to remain contained within the frozen zone, water quality predictions demonstrate that freezing is not required.***
    b. ***W3-4 (NEW): Surface runoff and seepage water quality that meets SW1-1 criteria.***
    c. ***W3-5 (NEW): Surface runoff and seepage water quality that meets SW1-2 criteria.***

The Board notes that the SW2-1 numeric criteria are still under discussion and will undergo a separate review. The Board expects that Closure Criterion SW2-1 will be evaluated in each PAR submission.

EMAB comment 207 identified that Figure 3-2 of Appendix VI does not show any monitoring on the north side of the North WRSA, other than via collection ponds. EMAB recommended that seepage stations be established, inspected by the Engineer of Record, and continue being monitored in the long-term to evaluate potential for acid rock drainage. In response, DDMI stated that seepage monitoring locations are established where seepage is regularly observed, no regular seepage has been observed on the north side of the North WRSA, and inspections are conducted by both the Engineer of Record and the DDMI Geotechnical team. The approved Waste Rock Management Plan (WRMP) Section 3.2.5 states that seepage surveys of the WRSAs are completed weekly and if waste streams are identified, they are sampled and reported to the Inspector.[45] The Board finds that regular surveys provide an opportunity to collect samples that can be compared to SW1 criteria (W3-4 and W3-5), if seepage is identified. As DDMI identified in response to EMAB comment 207, inspections will continue until the PAR has been approved by the WLWB. Changes to the approved Waste Rock and Ore Management Plan (WROMP) would require public review and WLWB approval.

Monitoring of the thermal conditions of the waste rock pile are completed using five clusters of thermistors installed within the North WRSA cover as shown in Figure 3-5 of Appendix VI. EMAB stated that "there is strong potential for these instruments to fail over time" and recommended that that the FCRP state that DDMI will replace any failed instrumentation required for thermal monitoring of the North WRSA within a year (EMAB comment 52). In response DDMI described that because Closure Criteria W3-2 and W4-1 rely on the results of thermal monitoring, the onus remains on DDMI to ensure that sufficient monitoring can take place to provide evidence through a PAR (for approval by the WLWB) of these criteria being met. WLWB agrees that the onus is on DDMI to ensure that instrumentation is functional to enable sufficient thermal data to be collected to reasonably support the PAR evaluation of Closure Criterion W3-2. The Board notes that inoperable equipment is not the same as reduced monitoring and the Board expects DDMI to make reasonable effort to fix issues in a reasonable

[45] See WLWB Online Registry for Diavik - Waste Rock Management Plan (WRMP) - Version 11.2 - May 16_24.pdf; it is noted that this frequency differs from that included in Schedule 5, Condition7.

timeframe. The Board also notes that the risk of not collecting sufficient data may mean that DDMI is directed to collect additional data or satisfy the alternative part of the condition (i.e., water quality predictions demonstrate that freezing is not required). The Board expects that inoperable monitoring equipment would be reported in the Annual Water Licence Report in accordance with Schedule 1, Condition 1(ff)(vii).

EMAB recommended that the FCRP include requirements for long-term (i.e., at least 100 years) monitoring of thermal conditions for the North WRSA (EMAB comment 205). EMAB highlighted that it was unclear how useful the initial five years of monitoring proposed would be to evaluate thermal conditions in the long-term. The WLWB has not required 100 years of monitoring at this time. DDMI has proposed that the first PAR be submitted 5 years post-closure. The Board will consider evidence submitted at that time; however, agrees that five years is unlikely to provide sufficient data to evaluate thermal performance of the cover post-closure. Similarly, the GNWT-ECC flagged that if waste material is not frozen or not predicted to remain frozen, the monitoring duration must account for the lag time for contact water to migrate to the monitoring locations (GNWT-ECC comment 10). In response, DDMI stated that the best place to discuss this would be the PAR. The Board agrees, it is not possible to provide direction to address all potential scenarios. The Board has determined that W4-1 are appropriate and decisions on sufficient monitoring can be assessed through the PARs and the evidence available at that time (see Section 3.5.1).

- ***The Board has approved Closure Criterion W4-1.***

The W3-3 criterion is "no hydrocarbon impacts (TPH [total petroleum hydrocarbons] <3.0 mg/L) in surface water downstream of the contaminated materials facility (Pond 1)". EMAB (comment 34) noted that 3.0 mg/L of TPH in surface water would result in a sheen on the surface and is indicative of free product. EMAB recommended that the closure criteria should be based on the protection of aquatic life and that Atlantic Risk-Based Corrective Action has a Tier 1 Environmental Quality Standard for freshwater of 100 µg/L for modified TPH (which is defined as #2 diesel and #6 oil),[46] which would be similar to CCME F3. EMAB stated that this value is risk-based and is considered protective of aquatic life. In response, DDMI does not agree with this recommendation, noting that this value has already been approved by the Board and that this value is the EQC from the Licence that is intended to be a measure of a similar operations waste management objective. DDMI notes that they do not see why it should be different at closure.

The Board acknowledges that EMAB provided a similar comment on the review of FCRP Version 1.0 (i.e., EMAB comment 57). The Board also acknowledges that Closure Criterion W3-3 was previously approved but notes the unanticipated TPH sources was identified as a potential concern in the Reasons for Decision for FCRP Version 1.0:

> The Board recognizes that this limit has been used throughout operations with larger volumes of Discharge to Lac de Gras, which has been considered protective of aquatic

[46] See Atlantic Risk-Based Corrective Action. 2021. Atlantic RBCA (Risk-Based Corrective Action) for Impacted Sites in Atlantic Canada. Version 4.0. [accessed February 12, 2025]. https://atlanticrbca.com/document/atlantic-rbca-v4-user-guidance/.

life. However, the Board notes that repeated concentrations of TPH close to the proposed limits could be indicative that an unanticipated TPH source exists and additional mitigation may be necessary. The Board acknowledges that clarity on potential sources of contamination is required (see section 3.14.3) and a decision has to be made regarding disposal of contaminated soils in the landfill, but the Board considers the proposed W3-3 to be appropriate and approves this closure criterion.

Given this closure criterion value has already been approved and noting that further information regarding contaminated soil management is required (see Section 3.12.1). it remains the Boards opinion that the TPH value set at <3.0 mg/L is reasonable and does not see the need to revisit this at this time. Should monitoring results indicate a problem or concern, this value can be revisited based on the evidence provided at the time. The Board also notes that further consideration of including monitoring for a surface sheen could occur through the TKMF, similar to that discussed for eth North Inlet (see Section 3.10).

3.8.2 Issue #2: Physical Stability

The approved Closure Objective W1 evaluates physical stability of the WRSAs: Physically stable slopes to limit risk of failure that would impact the safety of people or wildlife. The design criterion W1-1 was previously approved for the North WRSA, and two additional criteria were included in the FCRP Version 1.1.

- **W1-1**—Final inspection by a professional engineer confirming construction according to design.
- **W1-2**—Geotechnical performance meets closure criteria SW11-2.
- **W1-3**—Final inspection by professional engineer confirming WRSA-SCRP meets Waste Dump and Stockpile Stability Rating and Hazard Classification (WSRHC) System Low Instability Hazard rating.

Closure Criterion W1-3 was added to evaluate stability of the South WRSA. No concerns were raised with this additional criterion. It is noted that DDMI has proposed that the design criterion W1-1 not apply to the South WRSA. Without any information on the remaining volume of waste rock at the South WRSA, the Board has not yet determined whether a design for the South WRSA is required. Regardless the Board sees value to Closure Criterion W1-3 and has approved this criterion.

- ***The Board has approved Closure Criterion W1-3.***

Closure Criterion W1-2 cross references Closure Criterion SW11-2. As discussed in Section 3.7.7, the Board has added Closure Criterion SW11-4 to evaluate physical stability based on successful inspections by a geotechnical engineer outlined in Appendix VI Attachment 1. The Board has expanded Closure Criterion W1-2 to include reference to Closure Criterion SW11-4 and approved it based on this revision at this time.

- ***The Board has approved criterion with revisions: "W1-2 – Geotechnical performance meets Closure Criteria SW11-2 and SW11-4".***

Revision #30 of the Board's July 19, 2024, Reasons for Decision on FCRP Version 1.0 required DDMI to provide additional details to understand how till piles will achieve Closure Objective W2, and site-wide criteria under Closure Objectives SW7 through SW11. In response, DDMI expects that no till piles will remain at post-closure (i.e., all till piles will have been exhausted); therefore, additional details have not been added at this time. The Board notes that it understands Closure Criterion SW11-5 would evaluate the stability of any stockpiles that may remain; therefore, it has determined that no further action on this item is required at this time.

3.8.3 Issue #3: Landscape Aesthetics

In the FCRP Version 1.1, DDMI included two criteria to evaluate the approved closure objective W2—Rock and till pile features (shape and appearance) that match aesthetics of the surrounding natural area:

- **W2-1**—~~Continued~~ Demonstration that W1-1 and W1-3 are met. *[strike through indicates change from approved criterion]*
- **W2-2**—Inspections indicate NCRP continue to meet W1-1 and W1-2; SCRP continues to meet W1-3 and W1-2.

EMAB comment 30 recommended that closure criteria for Closure Objectives SW9 and W2 be revised "to ensure that the evaluation of performance addresses the specific factors that are the focus of the objectives rather than just physical stability: aesthetics and natural conditions of the surrounding area".

The Board understands that Parties have considered Closure Objective W2 in evaluation for the North WRSA design, which led to the determination of an appropriate slope. Therefore, confirmation that it was built as designed and remains stable appears to confirm that the desired landscape was achieved of the engineered design. The Board notes that other criterion (e.g., for Closure Objective SW5) will also evaluate this. However, without a design or proposal for the South WRSA, Parties have not had the opportunity to consider whether South WRSA will achieve Closure Objective W2 at closure. Without any details on the shape and appearance of the South WRSA, the Board cannot yet determine whether Closure Criteria W2-1 or W2-2 are appropriate. The proposed Closure Criterion W2-2 cross references the design (W1-1) and geotechnical performance (W1-2) criteria for the North WRSA. No comments were received on this criterion. With respect to W2-2, the proposed criterion is appropriate for the North WRSA.

- ***The Board has approved W2-2 for the North WRSA.***

The proposed Closure Criterion W2-1 cross references the design (W1-1) and stockpile stability (W1-2) criteria. Board staff comment 73 identified that Closure Criterion W2-1 is "Continued demonstration that W1-1 and W1-3 are met." However, both W1-1 and W1-3 are single event criteria. Therefore, it is unclear how DDMI will evaluate the continual evaluation for Closure Objective W2 through Closure Criterion W2-1. In response, DDMI stated that the word "continued" in W2-1 should be removed so the closure criterion reads "demonstration that W1-1 and W1-3 are met". The Board has determined that this is appropriate.

- ***The Board has approved W2-1 for the North WRSA.***

3.9 Processed Kimberlite Containment Facility

The PKCF is the on-land disposal location for PK generated during mine operations. The PKCF is an engineered containment area surrounded by dams on all sides to contain the PK. During operations, coarse PK is deposited within the facility by truck and fine PK is discharged to the facility or pit A418 (see Section 3.11) through a pipeline as a slurry. The approved PKC Facility rockfill cover is divided into two zones (Zone 1 and Zone 2) based on PK properties and the anticipated requirements for construction of the closure cover:

- Zone 1 is defined as areas with coarse PK and competent fine PK beach around the perimeter of the facility that will allow rockfill placement directly over PK materials in either thawed or frozen conditions.
- Zone 2 is defined as the portion of the PKC Facility where extra fine PK will exist at closure and development of a frozen cap will be required prior to cover placement.

The PKCF closure spillway will consist of an inlet channel, closure spillway, and a downstream chute discharging to collection pond 3. Three collection ponds (ponds 4, 5, and 7) are located downgradient of the PKCF dams that collect seepage water. Interception groundwater wells have been installed in the east, west, and south dams to also manage seepage water from the PKCF.

In March 2024, the WLWB approved the change to the conceptual change to the PKCF closure activity (i.e., from wet to dry cover), the licence requirements related to engineered structures, and required revisions be included in a final PKCF component-specific CRP.[47] With submission of FCRP Version 1.1, DDMI stated the following:

> DDMI is not submitting an updated PKCF-specific CRP at this time DDMI is following a performance-based and risk-informed design approach which means that some aspects of the design remain uncertain and are only resolved as work progresses. This approach was required to initiate PKCF closure work progressively rather than wait until an uncertain future date to start work. Based on what DDMI understands the Board expects in an updated PKCF-specific CRP, DDMI does not anticipate this Plan can be submitted until reclamation is complete or near complete. Monitoring is being proposed now based on all current and available information and as described in the FCRP. Monitoring plans for the PKCF may be updated when the PKCF design is next updated.[48]

In addition, FCRP Version 1.1 included new risk information related to exposure of PK as Appendix X-25.1. In Attachment B of the FCRP Version 1.1, DDMI identified the following sections of the FCRP would be anticipated to be updated with submission of next PKCF Design:

[47] See WLWB Online Registry for Diavik - FCRP - PKC Closure Design - WLWB Decision - Mar 1_24.pdf.
[48] Appendix XII-24.

- Appendix V (Detailed Tabulation of Closure Objectives and Criteria);
- Appendix V-1 (Design Alignment with Closure Objectives and Criteria);
- Appendix VI-1.1 (Closure and Post-closure Geotechnical Monitoring Requirements);
- Appendix VI-1.2 (Closure and Post-closure SNP);
- Appendix VI-1.4 (Closure and Post-closure Performance Monitoring Schedule);
- Appendix VI-1.5 (Diavik PKCF Closure and Post-Closure Monitoring Frequencies);
- Appendix VII (Expected Cost of Closure and Reclamation);
- Appendix X-15 (Diavik Processed Kimberlite Containment Facility); and
- Appendix X-15.1 (Diavik Geotechnical Review Board Final Report No. 41A).

Although DDMI identified theses future updates, information provided in the conformity table in Appendix XII-25 stated that it would still like the PKCF closure criteria considered through this review. This is discussed in Section 3.9.2.

The PKCF has three approved closure objectives:

- **P1**—No adverse effects on people, wildlife, or vegetation.
- **P2**—Physically stable processed kimberlite containment area to limit risk of failure that would affect safety of people or wildlife.
- **P3**—Prevent processed kimberlite from entering the surrounding terrestrial and aquatic environments.

As requested by DDMI, the Board has considered each proposed criterion for approval as discussed below. These criteria are intended to address the three primary closure risks that have been identified by DDMI:

- Outlet water quality/quantity that is not adequate for release into Lac de Gras;
- Seepage water quality/quantity that is not adequate for release into Lac de Gras; and
- Significant continued consolidation of the PK post-closure that could result in:
    - Cracking and slumping of the surface, creating unsafe conditions for people and wildlife, particularly in the central soft fine PK; and
    - Creation of a permanent or intermittent pond in the centre of the facility.

As stated in the PKCF Closure Design March 1, 2024, Reasons for Decision, the WLWB expects a final PKCF component-specific FCRP to address the identified gaps and uncertainties.[49] For clarity, the component-specific FCRP is to meet the expectations of the Closure Guidelines and not be simply the submission of the updated design. The Board expects this will address the direction from the PKCF Closure Design March 1, 2024, Reasons for Decision and updates identified in Attachment B (FCRP Version 1.1 Change Log).

- ***Decision #23: The Board requires DDMI to submit a component-specific FCRP that is to meet the expectations of the Closure Guidelines (i.e., not be simply the submission of the updated***

[49] See WLWB Online Registry for Diavik - FCRP - PKC Closure Design - WLWB Decision - Mar 1_24.pdf.

design). The Board expects this will address the direction from the PKCF Closure Design March 1, 2024, Reasons for Decision and updates identified in Attachment B (FCRP Version 1.1 Change Log).

3.9.1 Issue #1: Comments on Approved Design

In March 2024, the WLWB determined that although it could not consider the final closure design (Appendix X-15) at that time, the Board supported DDMI advancing construction of the PKCF and has approved the requirements associated with engineered structures. As detailed in the March 1, 2024, Reasons for Decision, the Board anticipated that the details of monitoring/maintenance, adaptive management, and closure criteria would be determined with the FCRP submission. The Board therefore anticipated these topics to be the unresolved issues. In review of FCRP Version 1.1, no changes to the Appendix X-15 design were proposed.

As described in response to WLWB comment 63:

> Implementation of a performance-based and risk-informed design (i.e. the PKCF Closure Design) inherently requires strong adaptive management processes that are executed and adjusted regularly based on observations during construction. It is not practical for DDMI to include these details in a design plan that requires WLWB approval due to the lengthy review timelines that would prevent the strong and necessary adaptive management processes in place. DDMI reviews progress and performance with the EoR daily and weekly and responds to recommendations from the Engineer of Record including adjustments to the construction approach to best manage risk. As stated in FCRP v1.1 DDMI expects a Final PKC Plan will be submitted once design assumptions and uncertainties are resolved which will be near the completion of the project. Revisions I,K,L,M will be addressed at that time. An earlier response is unlikely to satisfy the expectations DDMI understands have been set out by the WLWB.

The WLWB notes that EMAB submitted approximately 20 comments (EMAB comments 56–70, 74, and 75) related to the approved design, assumptions, and construction schedule. In response, DDMI stated:

> DDMI does not intend to respond to EMAB #56 through 70, 74, and 75. This level of information will be provided in the PKCF FCRP. Not only do these comments/recommendation not relate to changes in FCRP v1.1 (the current review), they have also been made without consideration of direct observations made during progressive reclamation work that has been proceeding over the last several years. DDMI provided opportunity for EMAB and their consultants to engage on FCRP v1.1 and progressive reclamation progress to date (e.g. PKC cover) but EMAB declined both. DDMI does not believe that this ORS [Online Review System] review process should be used as a substitute for direct engagement.

The WLWB finds it challenging to consider comments on an approved design/approach that is currently undergoing construction. In its March 1, 2024, Reasons for Decision, the WLWB accepted DDMI's risk-informed approach to construction. The Board understands that EMAB has asked for additional details related to contingencies, consolidation, and long-term risk. The WLWB finds that these can better considered when updated information on construction and associated observations are available, likely with the component-specific FCRP submission. To ensure these comments are explicitly addressed, the Board has determined that DDMI should respond to them in its submission of the PKCF Component-specific FCRP.

- ***Revision #21: The Board requires DDMI to include a table that identifies how EMAB comments 56 to 70, 74, and 75 will be addressed by the additional information provided in the PKCF component-specific FCRP.***

In the Diavik Geotechnical Review Board (DGRB) letter provided with the PKC Closure Design, the DGRB identified three "key short term issues" regarding settlement, pond storage capacity, and dust management. DDMI described that the settlement data to date continues to track in regards to design. DDMI described that pond 3 has the capacity to safely manage the inflow design flood for the PKCF during the period prior to the completion of the PKCF cover and contingencies for pond 3 storage will be addressed through Water Management Plan. Implementation of the closure design rockfill cover will manage dust from the surface of the facility and dust will be monitored against other closure criteria (see Section 3.9.2.1) and DDMI does not anticipate exceeding these criteria. The Board is satisfied that the pond 3 capacity and evaluation of dust have mechanisms in place to assess and respond to any concerns as they arise. The Board anticipates that settlement and resulting drainage will be assed in evaluation of the P2 criterion (discussed below). DDMI has identified Appendix X-15.1 (Diavik Geotechnical Review Board Final Report No. 41A) as something it anticipates would be updated with the FCRP. The WLWB anticipates that the DGRB's updated perspective will provide confidence during the review of the FCRP.

3.9.2 Issue #2: Closure Criteria and Influence of Thermal Conditions

Frozen conditions are required to safely construct the PKCF cover over the central Zone 2 area containing extra-fine PK (sometimes referred to as "slimes"). DDMI has reiterated that thermal performance or frozen conditions are not a long-term requirement for closure of the PKCF. Rather, the WLWB understands this to be linked to the bearing capacity required to accommodate the pressures from rockfill and equipment to place the rock cover in Zone 2.

In review of the PKCF Closure Design, the Board directed DDMI to ensure that proposed criteria reflect required metrics to evaluate P1, P2, and P3 in either a frozen or thawed scenario (e.g., water quality of potential pond and potential exposure of fine PK in pond). In Appendix XII-24 of FCRP Version 1.1, DDMI has described that the current P1, P2, P3 criteria are applicable to the PKCF in both a frozen and thawed scenario. The Board has attempted to consider whether the proposed closure criteria are appropriate to evaluate both frozen and thawed scenarios below. The Board notes that if new evidence is presented, these can be further discussed in review of the PKCF FCRP.

The WLWB understands that if thermal conditions are different than expected, it is possible that a pond may form in the PKCF. In its comments, the Tłı̨chǫ Government (comment 39) states that the slimes could be hazardous for people or wildlife and recommended that a closure criterion is needed to address this issue. In response, DDMI described that the inlet channel is designed to drain the central region (Zone 2) over the extra-fine PK to reduce the likelihood of a central pond forming. DDMI also reiterated that extra-fine PK is not chemically hazardous to people and wildlife. The Type I waste rock cover is being constructed to reduce the potential for erosion of the PK and to improve physical safety related to extra-fine PK. There are closure criteria related to water quality (P1), physical stability (P2), and exposed PK (P3).

3.9.2.1 Pond Water Quality

Closure Objective P1 is "No adverse effects on people, wildlife, or vegetation". There are three associated closure criteria proposed to evaluate Closure Objective P1, all which are simply cross references to site-wide closure criteria:

- **P1-1**—Dustfall meets closure criteria SW3-1 for closure and post-closure.
- **P1-2**—Surface runoff and seepage water quality that meets SW1-1 criteria.
- **P1-3**—Surface runoff and seepage water quality that meets SW1-2 criteria.

The management of dust from the surface of the facility was identified as a key short-term issue by the DRRB. Appendix VI-I Section 3.4.2 describes that "No additional closure monitoring for dust is specifically proposed for the PKC area during closure" and "an updated PKC facility Closure Reclamation Plan will be submitted at a future date that will detail perpetual maintenance requirements." As discussed in Section 3.7.3, Closure Criterion SW3-1 was approved to evaluate dust fall sitewide. The Board notes that it is integral adequate dust fall monitoring continues post-closure of the PKCF to confirm the rock cover is functioning as designed. No comments were received specific to P1-1 and the Board has determined it to be appropriate.

- ***The Board has approved Closure Criterion P1-1.***

Although, the influence of thermal conditions on the ability to meet water quality criteria was raised (EMAB comment 204), no Parties raised concerns with the proposed closure criteria to evaluate Closure Objective P1. In response to WLWB staff comment 76, DDMI described that if a pond formed post-closure, it could be assessed to see whether it would be safe for wildlife (i.e., SW1-1). The Board notes that although WLWB staff comment 76 referenced Closure Criteria SW1-1, SW1-2 would be the reference most applicable to wildlife. The Board has approved the revised Closure Criteria P1-2 and P1-3 to include evaluation of pond water quality, if one were to form.

- ***The Board has approved revised Closure Criteria P1-2 and P1-3 to include a requirement to evaluate of pond water quality, if applicable.***

3.9.2.2Physical Stability of the Processed Kimberlite Cover

The proposed criteria to evaluate stability of the PKCF surface (Closure Objective P2) are that it is to be constructed in accordance with the approved design (approved Closure Criterion P2-1) and the geotechnical performance meets site-wide Closure Criterion SW11-2 (Closure Criterion P2-3). Closure Criterion P2-3 proposes that geotechnical performance of cover meets Closure Criterion SW11-2, which is a performance criterion limited to the evaluation of scarps and failure cracks by a Professional Engineer (see Section 3.7.7). EMAB (comment 185) and the Tłı̨chǫ Government (comment 39) commented on the potential risk to wildlife if Zone 2 does not remain frozen in the long-term. In response to WLWB 75, DDMI stated that a criterion that requires acceptable performance results as assessed by a Professional Engineer through geotechnical investigations could be appropriate. The Board has therefore added a cross reference to Closure Criterion SW11-4 to Closure Criterion P2-3 reflect this.

- ***The Board has approved revised Closure Criterion P2-3 that includes a cross-reference to new Closure Criterion SW11-4.***

However, given the concerns related to wildlife safety in Zone 2, the Board has determined that criteria to evaluate P2 (Physically stable PK containment area to limit risk of failure that would affect safety of people or wildlife) are not sufficient as proposed to cover a situation where the PKCF does not remain frozen. The Board has determined that an evaluation of the physical stability of PKCF to wildlife safety is required. The Board finds this can be resolved in review of the PKCF Component-specific FCRP and notes that a criterion to evaluate the bearing capacity is an example of evaluating the physical stability of the extra-fine PK based on the already proposed monitoring. Appendix VI-1 Attachment 1 identifies that bearing capacity of the surface will be evaluated through closure and post-closure periods.

- ***Revision #22: The Board requires DDMI to propose additional criterion (P2-4) to evaluate physical stability of the Zone 2 region (e.g., bearing capacity) including supporting rationale for why this criterion would limit risk of failure that would affect safety of people or wildlife, in its submission of the PKCF Component-Specific FCRP.***

As previously discussed in Section 3.9.1, a major source of uncertainty with the PKCF Closure Design is the long-term settlement of the closure cover in areas with extra-fine PK. In review of the PKCF Design, the Board supported the adaptive approach proposed to make adjustments in consideration of monitoring and observation and identified that the design may require updates in the future as a result. EMAB highlighted this uncertainty in its comments (EMAB comments 64 to 67, 165, 166). The Board understands that differential settlement and consolidation of PK are areas of uncertainty that could be further influenced by thermal conditions. However, no new evidence has been provided by DDMI for consideration and outstanding Board direction will be addressed in the component-specific FCRP (e.g., Revisions I and L of PKCF Decision). The Board will consider this uncertainty to ensure that appropriate monitoring and adaptive management are in place post-closure.

3.9.2.3 Exposed PK

The approved Closure Objective P3 is "Prevent processed kimberlite from entering the surrounding terrestrial and aquatic environments". In review of the PKCF Closure Design, both the Tłı̨chǫ Government and EMAB recommended the new proposed P3-1 criterion not be approved and that the criteria should require that there be no visible PK inside or outside the PKCF.[50] At that time, the WLWB stated that if DDMI is confident that there is no risk to people and/or wildlife from exposed PK within the PKCF, this needs to be supported by additional information. As a result, DDMI was required to revise Closure Criterion P3-1 to limit exposure of PK within the PKCF, or provide the following:

- Evidence to support its statement that exposed PK is not considered to pose a physical, chemical, or health risk to wildlife or people; and
- Description of the mobility of PK within the facility and mechanisms by which it could enter the surrounding environment.

To address this requirement, DDMI submitted an addendum to the HHERA to consider the risks associated with exposed PK as Appendix X-25.1 of the FCRP Version 1.1. This PK-focused risk assessment concluded that in a scenario where the PKCF is not covered with mine rock and the PK is completely exposed, the results are still consistent with the conclusions of the HHERA for post-closure for both wildlife and humans, which was provided in Appendix X-25.

EMAB was the only Party to comment on this new evidence provided in Appendix X-25.1. EMAB comments 219 to 221 asked for additional rationale to support aspects of this PK-focused risk assessment and associated conclusions. In addition, EMAB comments 38 and 39 stated that "as PK material is a waste, the Closure Criterion P3 should not allow any exposures to PK material at surface whether inside or outside the PKC [Facility]". EMAB highlighted that the evaluation of exposure to PK material in Appendix X-25.1 relied on approaches for identification of contaminants of concern and exposure methods (i.e., the British Columbia Special Waste Extraction Procedure [SWEP]) that may underestimate risks. In response, DDMI reiterated the scenario evaluated in Appendix X-25.1 is a hypothetical case where the PKCF was not covered by mine rock and the PK is completely exposed. It was noted that exposure to arsenic and uranium in the PK Upper Bound Contribution scenario resulted in risk estimates above acceptable threshold levels. However, this is consistent with the post-closure HHERA provided in Appendix X-25, which considered the scenario where PK was not exposed. The Board agrees this is a conservative assumption, and based on the evidence provided to date, the Board does not anticipate the PKCF will become a chemical hazard to wildlife of humans. While not a specific criterion requirement, the Board anticipates the PAR will document the amount of exposed PK observed through the post-closure monitoring period. In addition, the Board finds that this risk assessment can be used to determine appropriate risk communication post-closure.

- ***The Board has approved Closure Criterion P3-1.***

[50] See WLWB Online Registry for Diavik - FCRP - PKC Closure Design - WLWB Decision - Mar 1_24.pdf.

A single criterion is proposed to evaluate P3: "P3-1—Geotechnical inspections indicating no visible fine PK outside the PKC facility". EMAB (comment 31) recommended that Closure Criterion P3-1 should be revised to evaluate environmental exposure to PK in all locations, both inside and outside of the PKCF. The Board finds that the proposed criterion is appropriate to evaluate whether PK is entering the surrounding terrestrial and aquatic environments. However, the Board notes that the monitoring described in Sections 3.4.1.2 and 3.4.1.3 of the Appendix VI-I of FCRP Version 1.1 are unclear regarding the frequency and methods to assess Closure Criterion P3-1. As discussed in Section 3.9.3, the Board has not approved post-closure monitoring of the PKCF and has determined that clarification on how and when Closure Criterion P3-1 will be assessed is required in the PKCF component-specific FCRP.

- ***Revision #23: The Board requires DDMI to clarify the frequency and methods by which Closure Criterion P3-1 will be assessed post-closure, in its submission of the PKCF Component-Specific FCRP.***

3.9.2.4 Schedule Implications of Freeze Timelines

As previously noted, the approved PKCF Design identifies that the timing by which it is possible to place the Zone 2 rock cover may extend active closure timelines at the Diavik site, which could have implications for the timelines to close other parts of the site (e.g., water treatment, pond 3, camps, airstrip). The WLWB notes that this could have large implications for the timelines for active closure on site and associated risks that remain while there is no longer a continual site presence. If DDMI wishes to reduce the continual site presence prior to completion of construction of the Zone 2 rock cover, risks to wildlife may exist that were not considered as part of this submission. The WLWB finds that consideration of the necessary mitigations and/or deterrents would be required and could be considered as part of the PKCF component-specific FCRP update or provided as an earlier submission, depending on which approach DDMI finds to be most appropriate. The Board notes that the proposed monitoring during the closure for the PKCF includes weekly inspections. As written, the Board anticipates this weekly monitoring will continue until the Zone 2 cover is completed.

- ***Decision #24: If construction of the PKCF cover is not completed during the planned active closure phase (i.e., with continual site presence), DDMI is to provide an update on the status of the PKCF, and propose mitigations, monitoring, and/or deterrents to address current risks in revisions to the FCRP.***

EMAB (comment 112) recommended that Diavik should not be allowed to breach collection pond 3 until PKCF closure work is complete. In addition, EMAB (comment 32) describes that additional monitoring is required to understand the effectiveness of the rock cover on water quality. The WLWB notes that this timing consideration was raised through the Renewal proceeding. In its Reasons for Decision on the Water Licence Renewal, the Board included Decision #12: The Board requires DDMI to update the FCRP to include the following statement: Board approval would be required if DDMI were to propose decommissioning of collection pond 3 prior to the completion of closure of the PKC Facility. At that time, the WLWB included the decommissioning requirements, monitoring, and adaptive management that it deemed appropriate. No new evidence has been provided to reconsider this item at this time. As reiterated in Section 3.5.1 and by DDMI in response to EMAB comment 55, WLWB approval is required

for any reduction or cessation of monitoring and the proposed Performance Assessment Periods. Therefore, the Board considers this concern addressed with the administrative update per Decision #12 from the Renewal Reasons for Decision.

3.9.2.5 Processed Kimberlite Containment Facility Dams

No comments were received on the proposed Closure Criterion P2-2, which evaluates physical stability of the PKCF dams. As discussed in the Board's March 1, 2024, Reasons for Decision, it is unclear whether the PKCF dams will ever achieve a stable landform status or be declassified as a dam (response to WLWB staff comment 112) and additional information regarding relinquishment is required to understand long-term implications to DDMI. The WLWB anticipates additional information on the long-term monitoring and maintenance and adaptive management of the PKCF dams will be submitted with the PKCF component-specific FCRP to address Revision M. The Board understands that this will provide opportunity to determine whether Closure Criterion P2-2 is inclusive of all requirements to successfully close the PKCF dams or if revisions are required.

- ***The Board has approved Closure Criterion P2-2.***

3.9.3 Issue #3: Monitoring and Adaptive Management

Appendix VI-5 was added to the FCRP to outline closure and post-closure monitoring of the PKCF. This monitoring includes visual inspections and instrumentation monitoring. Appendix VI-5 states that "The expectation is that the monitoring effort will be reduced as the PKC Facility enters post-closure. A nominal frequency of monitoring in post-closure has been indicated for some instruments in Table 2." The Table 2 footnote (a) describes that a nominal frequency has been proposed for the post-closure phase that will be further assessed during closure phase. Footnote (b) of Table 2 describes that the weekly visual inspections will be reduced to monthly "once new closure plan is approved". WLWB staff comment 63 asked for clarification as to what this footnote is referring to and the associated rationale for this change. In response, DDMI stated that the intent of the footnote (b) is to state that visual monitoring will remain at a weekly frequency until either FCRP Appendix VI-5 or a separate PKCF component-specific FCRP is approved. The Board notes that this does not appear to align with the geotechnical visual monitoring of the PKCF proposed for closure in Attachment 1 of Appendix VI. The Board notes that Attachment B to the FCRP identifies updates to the monitoring and inspections of the PKCF with the Component-specific FCRP. The Board has therefore not approved post-closure monitoring of the PKCF at this time. Therefore, Board approval is required prior to any reductions from PKCF-related closure monitoring or inspections.

- ***The Board has not approved the post-closure monitoring of the PKCF in Appendix VI.***

Several comments were received on the proposed duration of monitoring and lack of adaptive management (e.g., EMAB comments 71 to 73, 204). As discussed above, the Board will consider post-closure monitoring of the PKCF with submission of the component-specific FCRP. The Board has already provided direction for this submission to address monitoring and adaptive management that should address thermal conditions and differential settlement (e.g., Revisions I, J, K, M of March 1, 2024, Reasons for Decision). The Board has not provided additional direction at this time.

3.9.4 Issue #4: Wildlife Access

Section 5.2.7.8 of the FCRP Version 1.1 describes the approved PKCF design and states "DDMI accepts that the final landscape could change, in particular wildlife routings, final contours, and surface textures, as a result of future TK considerations." The Tłı̨chǫ Government described that Elders have noted repeatedly that the steep sides of the PKC Facility appear very unnatural and block safe passage for caribou, specifically identifying that the steep area of the northwest corner of the North WRSA may have difficulty meeting Closure Objective W2 regarding aesthetics (TG comment 15). The Tłı̨chǫ Government asked DDMI to discuss the possibility of using A21 pit rock to build out additional localized areas of the PKC Facility dams to create more caribou ramps. In response, DDMI stated that it has been clear about the unavoidably steep sides of the engineered PKCF dams, identifying that these landscape features are shown in the approved closure designs, which have considered safe caribou movement across this landscape. DDMI identified that buttressing of the southeast corner of the PKCF was constructed as 3:1 slopes to improve wildlife access based on feedback from the Tłı̨chǫ Government and other IGOs. The Board understands that buttressing of this dam area was possible due to the thickness of material outside the dam and that this may not be feasible in other locations.

DDMI stated that the steep dam areas remaining post-closure is not new and is consistent with the approved design, and DDMI requested that the WLWB not direct landform changes of this scale to already approved closure designs. The Board notes that this concern was previously raised in review of the PKCF closure design, at which time the Board stated that "If ongoing engagement regarding wildlife ramps may have implications to configurations of the facility, this should be acknowledged in future submissions and addressed at the soonest possible opportunity". The Board understands that there are limitations to what can be done to ensure other closure requirements of a dam (e.g., physical stability) are met and ideally relinquished (see Section 3.9.2). Regardless, DDMI has stated that it will discuss this recommendation to discuss improvement to the northwest corner of the facility directly with the Tłı̨chǫ Government. The WLWB is not requiring specific changes to the PKCF closure design at this time; however, the Board supports the ongoing collaboration with the Tłı̨chǫ Government and other IGOs to ensure that landscape features can achieve Closure Criteria SW8 and SW10.

3.10 North Inlet

The North Inlet was designed to function as both an initial settling pond and as an equalization basin before treatment in the NIWTP and discharge to Lac de Gras. As highlighted in previous WLWB Decisions,[51] whether or not the North Inlet can be reconnected to Lac de Gras after the mine closes has been an outstanding issue since the 1998 EA. At that time, the Responsible Authorities stated, "The fate of the North Inlet at closure has not yet been established. DDMI's closure options will depend on the

[51] See WLWB Online Registry for Diavik - Closure and Reclamation Plan Version 4.0 - Board Decision Letter and Reasons for Decision - Dec 17_18.pdf; p. 18.; Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf

quality and quantity of sediments in the inlet at that time."[52] Despite this ongoing uncertainty, the WLWB's Final CRP Version 1.0 Reasons for Decision highlighted that the approved closure objectives appear not to have changed since the interim CRP Version 3.2. There are six approved closure objectives associated with the North Inlet, these are discussed further below.

The FCRP Version 1.1 proposed a conceptual change to the closure plan for the North Inlet (i.e., change from complete reconnection to hydraulic-only connection). DDMI proposed that additional details, including an updated design would be provided following approval of this preferred closure option. In review of Version 1.1, multiple Parties identified additional detail and clarification that was required to consider the North Inlet closure (e.g., DFO comment 1; ECCC comment 5; EMAB comments 80, 81, 84; NSMA comment 3; TG comment 17). In response to ECCC comment 1, DDMI states the following:

> DDMI understands the challenges for a reviewer with the way the change to the North Inlet has been presented. To correct this DDMI recommends that any remaining discussions and approval be considered separate from the FCRP and once finalized clearly and consistently incorporated into a future FCRP. It is very difficult for all parties to consider changes in one element of the closure plan within the FCRP where information is referenced in numerous places within the document.

The Board agrees with this approach and has provided only high-level direction related to the North Inlet. As requested, the Board has considered the change to the conceptual closure plan (i.e., hydraulic only connection) and has discussed the related proposed changes to closure objectives. In addition, the Board has provided direction where it has determined necessary to inform the next submission.

DDMI states that a final CRP-level of detail for the North Inlet could be provided in 2026 (response to WLWB staff comment 51). The Board notes that this should not be simply an update to the Appendix X-7 design, but a component-specific CRP that holistically proposes the details of closure activities, schedule, criteria, contingencies, and monitoring as set out in the Closure Guidelines.[53] This is reflected in the Decision to require a component-specific FCRP below. The Board has not considered closure criteria for the North Inlet at this time.

- ***Decision #25: Within six months of this decision, DDMI is to submit the North Inlet component-specific FCRP.***
- ***Decision #26: The Board has not considered closure criteria for the North Inlet at this time.***

The Board has discussed the following issues related to closure of the North Inlet in the sections below:

- Proposed change in conceptual closure plan;
- Reconnection approach;
- Water and sediment quality;

[52] See WLWB Online Registry for W2007L2-0003 - Diavik - CEAA Comprehensive Study Report - Jun 1_99.pdf, PDF p. 174.

[53] See WLWB Online Resources for LWB Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories, pp. 24–25.

- Water treatment; and
- Geotechnical inspections.

3.10.1 Issue #1: Change in Conceptual Closure Activity for North Inlet

The approved conceptual closure plan for the North Inlet is to breach the east dam and allow fish passage and water circulation. This is consistent with the design provided in Appendix X-7, which was not updated with submission of FCRP Version 1.1. DDMI identified the change to the closure activities for the North Inlet as a major change in Version 1.1 for Board consideration. Version 1.1. proposes a conceptual change to the closure of the North Inlet to breach the east dam for a hydraulic-only re-connection to allow water circulation with Lac de Gras but excluding fish access to the North Inlet. Limited details on this flow-through structure were provided in Version 1.1. DDMI states that an updated design for a flow-through rock structure will be provided following approval of this preferred closure option.

The WLWB notes that the approved Closure Objectives NI1 and NI3 do not align with the proposed hydraulic-only reconnection. The Board has considered the proposed revisions to these objectives to understand whether the proposed closure activity is appropriate. The Board notes that discussion regarding the reconnection of the North Inlet and appropriateness of the North Inlet for fish has been ongoing since the 1998 EA. Discussions on the appropriateness of North Inlet Closure Objectives NI1 and NI3 have occurred over the last several closure plans.[54]

DDMI proposed changes to the approved closure objectives for the North Inlet, which are outlined in the table below (see grey highlighted cells).

Approved Objective	**Proposed Objectives in Version 1.1**
NI1: Reconnect the NI [North Inlet] with Lac de Gras;	**NI1.** Reestablish flow between North Inlet and Lac de Gras.
NI2. Water quality and sediment quality in the North Inlet that is safe for aquatic life, wildlife, and people.	No changes to approved objective
NI3. Suitable fish habitat in the North Inlet.	[propose removal]
NI4. Water quality in the North Inlet that is as similar to Lac de Gras as possible.	[propose removal]
NI5. Water and sediment quality in the North Inlet that will not cause adverse effects on aquatic life or water uses in Lac de Gras or the Coppermine River.	No changes to approved objective
NI6. Physically stable banks of the North Inlet to limit risk of failure that would impact the safety of people or wildlife.	No changes to approved objective

[54] Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf; Diavik - CRP - Version 4.1 - Reasons for Decision - Jun 10_21.pdf.

The approved Closure Objective NI1 is to reconnect the North Inlet with Lac de Gras. In consideration of the interim CRP Version 4.1, the Board did not approve the removal of this objective because it captured the preferred or ideal outcome at that time, which was not adequately reflected in the interim CRP otherwise (i.e., as the selected closure activity). Since that time, the Tłı̨chǫ Government raised concern with big fish entering the North Inlet post-closure.[55] In review of FCRP Version 1.1, the Tłı̨chǫ Government described that Elders visited the site this summer [2025] and spent significant time discussing the closure of the North Inlet (TG comment 16). The Tłı̨chǫ Government states that even if water quality meets AEMP benchmarks and sediment quality meet closure criteria, Elders prefer a permeable fish barrier, stating that this would build more confidence that it is safe to fish in Lac de Gras. The Tłı̨chǫ Government further clarified that "although removal of the dam (the current closure objective for the North Inlet) would best restore the area to its original state, full reconnection would not best support future cultural use".

EMAB was the only other Party to provide a position directly on NI1 and whether this conceptual change should be approved. EMAB (comment 76) recommended that the WLWB "require DDMI to pursue bioremediation of the NI [North Inlet] sediments with the objective of a full reconnection, and all other appropriate remediation efforts." EMAB's opinion is that it is premature to make this decision to change the activity and that it should not be considered until DDMI can provide data, to the satisfaction of the WLWB, to show they have made best efforts to meet this objective of full reconnection and it is not feasible. The WLWB acknowledges EMAB's position and is cognizant that it is contrary to that provided by the Tłı̨chǫ Elders, which described that even if closure criteria are met, full reconnection would not best support future cultural use. DDMI has indicated that the North Inlet will meet performance closure criteria (i.e., AEMP benchmarks and sediment criteria; response to WLWB staff comment 52); therefore, the choice between full and hydraulic-only reconnection appears to be a values-based decision that considers future use of the North Inlet for fish. As noted by DDMI in response to WLWB staff comment 27, Lac de Gras includes plentiful fish habitat. The Board does not want to compromise the cultural use of Lac de Gras because it required fish habitat be created within the North Inlet, which forms such a small portion of the lake.

Although the GNWT did not state a position on whether the conceptual change should be approved, it noted concerns that would need to be addressed should the closure option for the North Inlet result in full reconnection of the North Inlet to Lac de Gras with allowed fish passage. GNWT did not raise concerns associated with the proposed hydraulic-only reconnection.

Very few details were submitted to support the proposed conceptual change to the North Inlet. As a result, many Parties asked for details about how fish would be excluded from the North Inlet and whether there would be a risk to any fish that inadvertently managed to make their way into the North Inlet despite the fish barrier (e.g., fish and fish egg transfer by birds or wildlife; DFO comment 1; EMAB comments 79–84; NSMA comment 3; WLWB staff comment 52). In response, DDMI stated:

[55] See WLWB Online Review System for Diavik Final Closure and Reclamation Plan (FCRP); TG comment 36.

> The purpose of the hydraulic connection rather than the full connection is to provide a fish barrier so that the Lac de Gras fish population does not access the North Inlet, risk exposure to North Inlet sediments and then return to Lac de Gras. Preventing fish movement in and out of the North Inlet is the intended function of the barrier. DDMI does not see a significant concern with the possibility of isolated fish being found in the North Inlet. DDMI has not observed fish in the NI [North Inlet] over the 20 years it has operated the facility. While not preferred fish habitat post-closure, the North Inlet is not expected to be detrimental to fish.
>
> The flow through structure is envisioned to be constructed with a matrix supported rocky material that physically will not allow fish passage. Performance criteria for the North Inlet include meeting AEMP benchmarks and sediment criteria such that if fish do end up in the area it will be safe for them. DDMI does not expect that it would be a requirement to permanently keep fish out of the Inlet (or remove fish if they were identified), rather the objective of this design is to prevent regular fish transfer back and forth between the Inlet and LDG [Lac de Gras] which is the concern/risk raised by IGOs which this design aims to manage.

Parties expressed that regardless of the hydraulic-only connection, water quality in the North Inlet should be safe for aquatic life (DFO comment 1; EMAB comment 84; YKDFN comment 13). This is consistent with Closure Objective NI2. EMAB comment 79 recommended that Closure Objective NI3 be retained to consider the high likelihood of fish entering the North Inlet. The Board agrees with DDMI that if an appropriate design to exclude fish is approved, there is no need to create suitable fish habitat in the North Inlet. However, it is still required that the North Inlet be safe for fish (i.e., meets Closure Objective NI2). The Tłı̨chǫ Government recommended that DDMI submit a design or otherwise demonstrate that a permanent fish barrier will achieve its objectives of blocking fish and allowing enough flow to maintain water quality in the North Inlet. The Tłı̨chǫ Government comment 17 stated that modelling or supporting calculations may be needed to show that, in the long-term, there will be enough flow into the North Inlet to maintain good water quality in all seasons. The Board anticipates these details can be provided in the Component-specific FCRP.

- ***Decision #27: The Board has approved the revision to Closure Objective NI1 and removal of Closure Objective NI3.***

Without details of the design or reconnection being proposed in the FCRP Version 1.1, it is difficult to holistically evaluate the proposed change in conceptual closure plan. At this time, the WLWB understands the following about the proposed conceptual closure change:

- The hydraulic-only connection will prevent regular fish transfer back and forth between the North Inlet and Lac de Gras.
- The flows between North Inlet and Lac de Gras will be sufficient at closure to maintain acceptable water quality in the North Inlet.

- The post-closure criteria for the North Inlet include meeting AEMP benchmarks and sediment criterion such that if fish do end up in the area, it will be safe for them; however, DDMI has stated AEMP benchmarks will not be achievable prior to reconnection.
- The change to hydraulic-only reconnection does not appear to influence contingency options.

The WLWB has determined that if the conditions above can be met, a hydraulic only connection can achieve the proposed closure objectives. By maintaining Closure Objective NI2, DDMI must ensure that if a fish were to unexpectedly end up in the North Inlet the water and sediment quality would be safe. The Board acknowledges that DDMI must provide substantial information to advance this component and that there is a risk that consideration of more detailed information may prove this to not be a viable option for closure of the North Inlet. However, the Board also recognizes that DDMI needs some certainty before advancing the design.

> ➢ ***Decision #28: The Board has approved the change in conceptual closure plan for the North Inlet (i.e., full to hydraulic-only reconnection with Lac de Gras).***

Page 5-5 of FCRP Version 1.1 proposes removal of Closure Objectives NI3 and NI4 "because the North Inlet will only be hydraulically re-connected to Lac de Gras and fish will be prevented from entering the North Inlet. Therefore, fish habitat criteria for the North Inlet were not relevant." The approved Closure Objective NI4 was "Water quality in the NI [North Inlet] that is as similar to Lac de Gras as possible." The Board notes that the NI4-1 criterion was also previously approved as "NI4-1 – Water quality that meets criteria NI2-1 and is trending toward reference conditions." WLWB staff identified that it was unclear why NI4-1 would only be applicable to fish habitat and asked DDMI to clarify the rationale for removal of Closure Criterion NI4-1 (WLWB staff comment 58). In response, DDMI stated that the “North Inlet will only be hydraulically re-connected to Lac de Gras and fish will be prevented from entering the North Inlet. North Inlet water quality is already covered under NI2 and NI5.” The WLWB notes that DDMI has stated in response to EMAB comment 96, “Once reconnected this passive exchange of water is expected to allow the North Inlet water quality to gradually become more like Lac de Gras water”. The Board is not convinced that NI4 is not applicable to the revised closure plan for the North Inlet. The Board has determined that the appropriateness of removing NI4 can be considered in review of the component-specific FCRP.

> ➢ ***Decision #29: The Board has not approved removal of Closure Objective NI4.***

3.10.2 Issue #2: Reconnection Approach

Overall, FCRP Version 1.1 did not propose a clear approach to reconnect the North Inlet to Lac de Gras, nor did it identify the associated criteria for reconnection. Many Parties asked for additional information regarding when and how this closure activity would be completed (e.g., ECCC comments 1, 2, 5; EMAB comment 84; TG comment 20; WLWB staff comments 55, 56). In response to ECCC comment 1, DDMI states:

> DDMI understands the challenges for a reviewer with the way the change to the North Inlet has been presented. To correct this DDMI recommends that any remaining discussions and approval be considered separate from the FCRP and once finalized

> clearly and consistently incorporated into a future FCRP. It is very difficult for all parties to consider changes in one element of the closure plan within the FCRP where information is referenced in numerous places within the document.

The Board agrees that it would be more productive and reasonable to consider all changes to the North Inlet, beyond the change in a conceptual plan, with a future-focused submission. To assist with ensuring the future submission includes information that will be helpful to the Parties and the Board, the WLWB has provided high-level direction to inform the level of detail in DDMI's next submission on this issue.

3.10.2.1 An Explanation About Whether Dilution Will be Used and Compliance with the Metal and Diamond Mining Effluent Regulations

Section 5.2.8.4 of FCRP Version 1.1 provides a description of the activities envisaged for advancing and implementing the preferred closure plan for the North Inlet, including the statement that "Lac de Gras water will be allowed to seep into the NI [North Inlet] through the decommissioned NI west dam to replace the volumes removed for treatment".

In response to WLWB staff comment 56, DDMI states that the "previously identified mechanism to allow seepage through the dam to backfill the North Inlet is unlikely to be practical or the base case plan and these references can be removed". Instead, DDMI has now proposed that "If the [North] Inlet needed to be backfilled with Lac de Gras water it would be far more practical to pump or siphon the water". Similarly, in response to WLWB staff comment 55, DDMI has now proposed the option to pump Lac de Gras water into the North Inlet prior to reconnection. DDMI states that "If necessary, and as recommended by some reviewers, DDMI proposes to improve water quality in the North Inlet by treating and discharging the North Inlet water while replacing it with water from Lac de Gras. This approach is expected to gradually improve the North Inlet water quality. If necessary DDMI requests the ability to commence this water quality improvement option as soon as mine water pumping ceases."

In ECCC comment 2, ECCC asked DDMI to "Discuss whether they [DDMI] are proposing dilution of North Inlet water with freshwater to meet North Inlet closure criteria." The WLWB interprets this as a question of whether the proposed closure activity contravenes section 6 of the Metal and Diamond Mining Effluent Regulations (MDMER), namely the prohibition on diluting effluent. Section 6 of the MDMER states: "The owner or operator of a mine shall not combine effluent with water or any other effluent for the purpose of diluting effluent before it is deposited."

The WLWB understands that the MDMER will continue to apply at Diavik throughout the anticipated active closure phase and will likely apply at the proposed time of reconnection of the North Inlet.[56] It is not clear whether DDMI considers the material in the North Inlet at the time of reconnection with Lac de Gras to be effluent. The Board recommends this be clarified by DDMI in DDMI's next submission.

[56] See WLWB Online Registry for Diavik - WL Renewal - Public Hearing - Day 3 Transcript - Jun 12_25.pdf, p. 122.

As the approaches discussed above were not part of FCRP Version 1.1, Parties have not had the opportunity to consider and comment on the proposed changes. As a result, the Board cannot consider the proposed changes to the North Inlet closure plan at this time.

Further, from the information available, it is unclear whether the sole purpose of pumping water into the North Inlet would be to dilute the North Inlet water.

The WLWB requires DDMI to engage with ECCC to ensure that the proposal for the North Inlet reconnection is not in contravention of federal legislation, including the MDMER. The WLWB further requires DDMI to provide a detailed explanation in its future submissions about how the proposed approach is consistent with the requirements of the MDMER.

- ***Decision #30: Prior to proposing the reconnection approach for the North Inlet, DDMI is to engage with ECCC to ensure its proposal is compliant with the MDMER.***
- ***Revision #24: The Board requires that the North Inlet component-specific FCRP clarify and provide fulsome rationale as to whether it considers the contents of the North Inlet at the time of reconnection with Lac de Gras to be effluent.***

3.10.2.2 Reconnection Criteria

In review of the FCRP Version 1.0 (response to WLWB staff comment 70), DDMI clarified that water and sediment quality closure criteria for Closure Objectives NI2 and NI3 would be met prior to reconnection. However, through the Renewal proceeding, DDMI indicated that it was no longer proposing these criteria be met prior to reconnection.[57] In its Reasons for Decision, the WLWB identified the remaining uncertainties associated with the North inlet and included Part G, Condition 43 which requires sediment and water sampling results must demonstrate that the requirements of the criteria as specified in the FCRP have been met prior to reconnection. The Board noted at that time that it "expects that a better understanding of what this evidence is and when this could be provided to address this will be possible once the Board considers the change to the proposed closure activity in the FCRP Version 1.1". As identified in Section 3.10.1, the Board has approved the change in conceptual closure activity and has determined the remaining details can be determined in review of the North Inlet component-specific FCRP.

No criteria for when the North Inlet can be reconnected to Lac de Gras were proposed in FCRP Version 1.1. The WLWB notes that in response to EMAB comment 84, DDMI proposed water quality reconnection criteria that would not require meeting Lac de Gras water quality objectives prior to reconnection. DDMI has stated that it "does not expect a measurable mixing zone will exist outside the east dam for a period of time." However, there is currently no evidence to support this, nor proposed monitoring to confirm this position. If DDMI proposes reconnection criteria that may result in a mixing zone, this will need to be addressed in (Decision #31 below).

[57] See WLWB Online Registry for Diavik - WL Renewal - RFD and Recommendation to the Minister - Oct 17_25.pdf.

3.10.3 Issue #3: Water and Sediment Quality and Associated Monitoring

In its Renewal Reasons for Decision, the WLWB determined that "The Board has determined that confirmation of acceptable water quality and sediment quality by an Inspector is the minimum requirement prior to reconnection of the North Inlet". As discussed above, reconnection criteria were not proposed in FCRP Version 1.1, and no Parties had the chance to provide input on those provided in response to EMAB comment 84. FCRP Version 1.1 proposes that DDMI conduct a single final sediment quality survey prior to hydraulic reconnection to confirm the level of PHC remediation and compare the water quality at one station in the North Inlet to AEMP benchmarks (Closure Criteria NI2-1 and NI5-1) for at least five years. Several Parties commented on this proposed monitoring (e.g., EMAB comments 24, 87, 88, 188, 193–195; GNWT comment 15; TG comment 20; WLWB staff comments 60, 61; YKDFN comments 22–24). As discussed in Section 3.5.1, the Board reiterates that discontinuance of monitoring would require Board approval. Because an understanding of the reconnection approach and applicable criteria are required to determine the appropriateness of proposed monitoring, the Board has not considered monitoring associated with the North Inlet at this time. However, the WLWB notes that hydraulic reconnection is dependent on mixing with Lac de Gras to meet water quality closure criteria, and sufficient monitoring will be needed to demonstrate this. It is the Board's opinion that the proposed single sampling station is inadequate to demonstrate the stability of water quality in the North Inlet and potential influence on Lac de Gras in the long-term. The Board acknowledges that only one sample was taken prior to discharge during operations (response to WLWB staff comment 60). However, the WLWB does not think operational discharge is a comparable scenario to passive reconnection in a closure scenario where water treatment is not occurring.

It is noted that DDMI will need to address Schedule 8, Condition 1(p) of the Licence, "evidence to demonstrate that reconnection criteria and closure criteria of the North Inlet are achievable" with submission of its North Inlet component-specific FCRP. In addition, DDMI should provide rationale as to how the proposed criteria were determined to be consistent with the end use and closure objectives for the North Inlet.

Bioremediation of hydrocarbon-contaminated sediments within the North Inlet to acceptable levels has been discussed for many years. DDMI has proposed that results would be provided to the Inspector demonstrating criteria are met without an additional regulatory process. Sediment-related reconnection criteria were not proposed in the submission, however, in response to WLWB staff comment 82, DDMI stated, "As the base case for the NI [North Inlet] is for hydraulic reconnection only, there should not be a requirement to meet any type of benchmark in the sediment." The Board notes that this statement is inconsistent with the expectations set out by the WLWB in the Renewal Reasons for Decision, which stated "The Board has determined that confirmation of acceptable water quality and sediment quality by an Inspector is the minimum requirement prior to reconnection of the North Inlet". If DDMI does not provide clear criteria with supporting rationale, the WLWB may consider whether 'approval or results of sediment investigation by the Board" is a required reconnection criterion.

The only proposed closure criteria for North Inlet Sediment is, "Sediment F3 hydrocarbon levels[(a)] below 1,500 mg/kg.", with footnote (a) stating that, "Other parameters (beyond F3 criteria) may be screened in based on North Inlet water or sediment sampling results." However, no clarity was provided on the process by which other parameters may be screened in. The WLWB notes that to date there has been a lack of clarity as to how the sediment closure criteria parameters were selected. The Board notes that DDMI previously identified sediment POPCs and proposed metal sediment criteria in CRP Version 4.1, yet no criteria in addition to F3 were proposed. Multiple Parties recommended additional sediment quality criteria beyond F3 hydrocarbons (EMAB comments 86, 90, 93; GNWT comment 12; YKDFN comment 24). The WLWB understands that prior to reconnection, DDMI intends to complete a final sediment investigation, following the same methods as the 2015 Investigation (response to EMAB comment 89). Although this investigation would include monitoring beyond PHC, without a clear link to reconnection criteria, an Inspector cannot consider the results of this sediment investigation report in approval of reconnection. The WLWB expects DDMI to outline the purpose and design of the final sediment investigation and how this data will be used with submission of the next version of the FCRP. In the North Inlet component-specific CRP, DDMI is to ensure that comprehensive rationale, with links to the necessary reports, is provided to support reconnection and closure criteria for sediment that are consistent with end use. This should include a systematic process for how parameters were selected (See Decision #31 below).

In addition, the Board also notes that ECCC (comment 6) recommended DDMI establish an additional monitoring station on the Lac de Gras side of the decommissioned east dam. The purpose of this station is to provide additional data to increase the understanding of the water movement and exchange between the North Inlet and Lac de Gras and to help assess whether parameters exhibit higher concentrations within the North Inlet. In response, DDMI indicated that it intends to sample at this location as recommended, with the purpose to verify the lack of a mixing zone. The Board requires this to be captured in a proposed update to the SNP. The Board has determined it cannot approve the monitoring for the North Inlet at this time. DDMI is to continue operational monitoring until closure monitoring is approved.

- ***Not approve North Inlet monitoring outlined in Appendix VI, operational monitoring shall continue until approved otherwise.***

In the Reasons for Decision for FCRP Version 1.0, Workshop Requirement #14 was for DDMI to discuss the criterion for no visible sheen. The Diavik Closure Workshop Report states: "Parties agreed that a closure criterion associated with sheen should be included, possibly as a cultural use criterion and/or monitored via the TK Monitoring Program." The GNWT-ECC comment 12 identified it was unclear why this was not included in the FCRP Version 1.1. GNWT-ECC supports the inclusion of a closure criterion associated with sheen, possibly as a cultural use criterion and/or monitored via the TK Monitoring Program, and as outlined below believes potential mitigation options should also be identified.

GNWT-ECC's stated its concern regarding the presence of a sheen is a result of the potential risk to aquatic life. GNWT-ECC stated that the risk assessment justified the 1500 mg/kg benchmark. However, a sheen (which could result from agitating sediment and releasing lighter PHC fractions) may occur and result in PHC-related impacts to surface water. In response, DDMI stated:

> DDMI notes that no sheen has been observed during operations when the sludge in the North Inlet has had concentrations higher than 1500 mg/kg and while this sludge is being actively disturbed through ongoing deposition.
>
> As noted in the TKMF, program specifics will vary each monitoring cycle depending on participants. DDMI has an active contingency plan on the WLWB registry. If a hydrocarbon-related sheen was to occur the contingency plan would be followed. Potential responses could include the deployment of floating booms to absorb the hydrocarbons.

The Board finds that the presence/absence of a sheen to be a straightforward criterion that has been repeatedly raised by Parties. The Board finds at minimum, the presence/absence of sheen will need to be evaluated through a monitoring program and discussed in the PAR. The Board has determined this can be finalized in consideration of the Component-specific FCRP.

The Board has included Decision #31 to reflect the additional information Parties will need to consider the North Inlet component-specific FCRP.

- ***Decision #31: The Board requires the North Inlet component-specific FCRP to provide the following information, with sufficient detail of that expected of a final closure plan and with references to supporting evidence as appropriate so that Parties can complete a holistic review. This should include, but not be limited to, the following:***
  - ***a) An updated Design for the hydraulic-only connection;***
  - ***b) Description of the water management strategy for the North Inlet, including adaptive management and contingencies;***
  - ***c) Reconnection criteria for water and sediment and evidence to support their achievability as per Schedule 8, Condition 1(p);***
  - ***d) If reconnection criteria are above water quality objectives for Lac de Gras, address the requirements of the LWB/GNWT Guidelines for Effluent Mixing Zones (2023);***
  - ***e) Closure criteria for sediment that are consistent with the approved closure objectives and future use, including a systematic process for how parameters were selected;***
  - ***f) Anticipated water quality in the North Inlet and options to influence this water quality;***
  - ***g) Anticipated sediment quality in the North Inlet and options to influence this sediment quality;***
  - ***h) A summary of how the sediment investigation results will be used to determine whether reconnection criteria are met;***
  - ***i) Proposed closure criterion to evaluate a sheen;***
  - ***j) Proposed monitoring to evaluate reconnection criteria, closure criteria, and if applicable, the potential mixing zone;***
  - ***k) SNP Update request; and***

l) Engagement record.

3.10.4 Issue #3: Water Treatment

In response to WLWB staff comments 32, 33, and 55, DDMI provided additional information to address the uncertainties associated with the North Inlet were identified during the Licence Renewal proceeding. DDMI describes that it will be transitioning from the current NIWTP to a more compact plant will allow demolition of the current facility to continue on schedule in 2027 while retaining the contingency for water treatment. DDMI states that further details on this system will be provided in a 2026 update to the North Inlet Water Treatment Operations Plan, which the Board notes is currently under review.[58] In accordance with Part B, Condition 27, DDMI should ensure that this plan is submitted a minimum of 90 days prior to the proposed implementation date for the changes.

DDMI provided the following in response to WLWB staff comment 33:

> 1) Water treatment will no longer be necessary at such time as all water management ponds and other containment structures (i.e., dikes and North Inlet dam) have been breached and there is no contained or managed water left that requires treatment prior to safe discharge. The Water Licence can be considered the authoritative reference for the reconnection criteria that determine when these water management/containment structures can be decommissioned. If there are delays in breaching of these structures beyond 2028 that could result in delays to decommissioning of the NIWTP. Given DDMI will be transitioning to a smaller NIWTP, decommissioning could be delayed into 2029 with manageable impacts to the schedule.
>
> 2) DDMI expects that an updated Water Management Plan will be provided, however if the reconnection criteria in the Water Licence have been met and DDMI is able to breach final water management/containment structures DDMI does not consider that the revised Water Management Plan without water treatment would separately require approval. Water Management Plan updates, which are anticipated regularly as DDMI continues with planned/staged reconnection of natural drainages, are intended for information rather than for approval of the activities.

The Board agrees with DDMI that information related to all decommissioned water containment structures would be considered administrative updates and not for approval, if approved elsewhere.

[58] See WLWB Online Review System for NIWTP Operations Plan (Version 3) and Water Management Plan (Version 18).

3.10.5 Issue #5: Geotechnical Inspections

Without an updated design, the Board is unable to consider what geotechnical requirements may be reasonable for the North Inlet during closure or post-closure. The Board expects operational inspections to continue until appropriate closure requirements are determined.

- ***The Board has not approved geotechnical requirements for the North Inlet set out in Appendix VI.***

3.11 Open Pit, Underground, and Dike Areas

The Diavik site includes three open pits (A154, A418, and A21), which are separated from Lac de Gras by engineered dikes. Mining at all three open pits also includes underground mine workings. For pit A418, the deposition of PK was approved through a 2021 Licence Amendment. The FCRP describes that at closure the diked areas will be flooded and reconnected to Lac de Gras once water quality has been confirmed. The updated closure schedule indicates flooding is anticipated to commence in 2026.

Similar to Version 1.0, the FCRP Version 1.1 describes that fish habitat construction within the dike areas has been reconsidered with DFO and Indigenous communities, and the decision has been made to avoid encouraging fish into the pit lakes; therefore, DDMI is no longer proposing to construct the designed fish habitat enhancement.

There are eight approved closure objectives for the Open Pit, Underground, and Dike Areas:

- **M1**—Water quality in the flooded pit and dike area that is similar to Lac de Gras or, at a minimum, protective of aquatic life;
- **M2**—Pit and dike closure that do not have adverse effects on water uses in Lac de Gras, the Coppermine River, or groundwater use;
- **M3**—Fish habitat compensation projects to off-set fish habitat temporarily lost during operations;
- **M4**—Safe small craft navigation through dike and pit area;
- **M5**—Physically stable pit walls and shorelines to limit risk of a failure impacting people, aquatic life or wildlife;
- **M6**—Pit fill rate that will not cause adverse effects on water levels in Lac de Gras and Coppermine River;
- **M7**—Pit fill rate that will not cause adverse effects on fish or fish habitat in Lac de Gras and Coppermine River; and
- **M8**—Wildlife safe during filling of pits.

In FCRP Version 1.1, DDMI proposed an additional closure objective (M9) with three closure criteria (M9-1 to M9-3).

The following appendices related to pits were provided:

- Appendix X-1: Diavik Fisheries Act Offsetting Plan – Frame Lake;

- Appendix X-2: Diavik Fisheries Act Habitat Accounting;
- Appendix X-3: A418 Pit Crest Ramp Design;
- Appendix X-4: Pit Fill Piping Design;
- Appendix X-5: Open Pit and A21 Causeway Closure Design;
- Appendix X-6: Openings to Surface Closure Design;
- Appendix X-23: Effects of Pumping During Pit filling Period on Lac de Gras Water Volumes and Lake Outflow Rates;
- Appendix X-30: Diavik Diamond Mines Back-Flooding Plan; and
- Appendix X-31: Total Suspended Solids and Turbidity Monitoring Plan for In-Lake Construction at the Diavik Diamond Mine.

Appendix X-1 includes the fish habitat units impacted by the development of the mine and Appendix X-2 proposes a plan to remediate Frame Lake to offset these fish habitat impacts Appendix X-2 and includes the fish habitat units impacted by the development of the mine. The Board notes that this information is provided as supporting information and is not for approval.

The issues related to Open Pits, Underground, and Dike Areas are discussed below under the following headings:

- Change to Closure Activity – No Enhanced Fish Habitat;
- Closure Objective M9 – Access to Fish Habitat;
- Pit Back-Flooding – Design and Approach;
- Pit Decommissioning Requirements;
- In-Lake Monitoring During Dike Decommissioning; and
- Pit Lake Post-Closure Monitoring.

3.11.1 Issue #1: Change to Closure Activity – No Enhanced Fish Habitat

Historically, the approved closure activities include the creation of fish habitat within the A154, A418, and A21 dike areas. In the Reasons for Decision for FCRP Version 1.0, the Board considered DDMI's proposed change to remove the creation of fish habitat in the pit lakes as a closure activity. At that time, Parties raised concerns regarding no enhanced fish habitat being created in the pit lakes and also concerns associated with the proposed offsetting at Frame Lake. As noted in that Reasons for Decision, the WLWB does not hold jurisdiction to regulate activities within Frame Lake. The Board did not approve the proposed change in closure activity for the open pits and required DDMI to complete further engagement regarding fish habitat in the diked areas.

The Board notes that the Tłı̨chǫ Government acknowledged that DDMI completed additional engagement regarding fish habitat at the Closure Workshop facilitated by WLWB staff in late 2024 and site visits with Elders and other Parties in 2024 and 2025. The Tłı̨chǫ Government (comment 23) provided a number of perspectives regarding enhancing fish habitat in the pit lakes and indicated an overall acceptance of DDMI's proposal that no fish habitat enhancements be created.

EMAB (comments 4 and 5) identified concerns related to Frame Lake and recommended that "Further description and justification should be provided about the benefits expected from the Frame Lake fish habitat enhancement, especially for Indigenous people" and that these benefits should be confirmed before approving the change to the closure activity. While the Board understands the concerns related to Frame Lake raised by EMAB, it remains the Board's position that offsetting proposed at Frame Lake is beyond the WLWB's jurisdiction. It is the WLWB's opinion that it is inappropriate for the Board to comment on DFO's decision to accept Frame Lake as the revised "offset plan" required by the Fisheries Authorization. The Board is confident in DFO's ability to ensure adequate offsetting is completed and will make its decision on the reclamation requirements for the Diavik open pits independent of the DFO process.

It is the Board's opinion that DDMI has further engaged on the change to no longer propose enhancement of fish habitat in the pit lakes. DDMI has demonstrated that safe fish habitat will still be achieved in the pit lakes post-closure and, as noted by the Tłı̨chǫ Government (comment 2), Appendix X-2 "states that the closed pits will have nearly 90% (62.4 out of 70.5) of the habitat units that were lost due to mining." In consideration of all of the information provided by DDMI, the Board approves the proposed change in closure activity.

- ***Decision #32: The Board has approved the change in closure activity to remove enhancement of fish habitat in the pit lakes.***

The Board notes that DDMI has revised Closure Objective M3 and Closure Criterion M3-1 in Appendix V, Table 1-29 to reflect that offsetting is no longer occurring in Lac de Gras. The Board agrees with these revisions and has approved Closure Objective M3 and Closure Criterion M3-1.

- ***Decision #33: The Board has approved the revised Closure Objective M3.***
- ***The Board has approved Closure Criterion M3-1.***

The Board acknowledges that comments were submitted requesting further information regarding the Frame Lake offsetting (YKDFN comments 43–45); however, given the WLWB does not hold jurisdiction to regulate activities within Frame Lake, these comments were considered to be out of scope. The Board notes that DDMI could submit information to be posted on the registry and enable it to be publicly accessible, but this would be strictly for information only and not a formal requirement. In addition, the Board recommends that interested Parties seeking more information regarding the Frame Lake offsetting to contact DDMI directly.

3.11.2 Issue #2: Closure Objective M9 – Access to Fish Habitat

In the FCRP Version 1.1, DDMI proposed an additional closure objective (M9): Reconnection allows access to fish habitat inside pit lakes. Three new closure criteria were proposed in conjunction with this closure objective:

- **M9-1**—Breaches in dikes to be a minimum of 30 m wide by 2 m deep.
- **M9-2**—AEMP Benchmark within the top 40 m of water column.
- **M9-3**—Pit lake habitat is safe for fish.

No comments were received regarding the proposed Closure Objective M9. This new objective is consistent with the revised closure activity to provide access but not create new habitat within the diked areas and adequately addresses Revision #41 of the FCRP Version 1.0. The Board considers the information provided sufficient and has approved Closure Objective M9.

- ***Decision #34: The Board has approved Closure Objective M9.***

EMAB (comment 25) asked for clarification for closure criterion M9-3—pit lake habitat is suitable for fish—and asked DDMI to "provide a description of the closure criteria, including a description of the potential concern, and a detailed description of proposed monitoring for Closure Criteria M9-3." DFO (comment 2) and EMAB (comment 23) noted that the proposed visual survey monitoring would provide limited information on fish mortalities but not live fish presence. DFO noted that a lack of fish presence may indicate avoidance of the area and visual observation of live or dead fish could provide important information regarding external health conditions. DFO "recommended that DDMI include a plan for simple and opportunistic visual surveys for live fish presence/absence in the pit areas, noting any indications of fish external health if observed." DFO clarified that this is intended to be opportunistic monitoring to be carried out concurrently with other post-closure monitoring rather than as standalone surveys. In response, DDMI agreed to "include simple/opportunistic visual surveys for fish as suggested during other boat access sampling in the pit lakes." DDMI did note "that it may be challenging to identify indications of health through this method however DDMI expects it can adequately capture mortalities or strandings."

The Board notes that the intent of the closure activities for the pits is not to create enhanced fish habitat but simply safe fish habitat. As such, the lack of fish presence in the area may be less informative than observations of fish mortalities or stranding. However, the Board agrees with DFO's suggested opportunistic monitoring and acknowledges DDMI's agreement to incorporate this into existing monitoring programs. The Board requires DDMI to incorporate this commitment into the relevant monitoring programs and provide that information in an updated table for conformity.

- ***Revision #25: The Board requires DDMI to revise the relevant monitoring programs to include reference to opportunistic visual monitoring of fish.***

During the public review, Board staff noted that the proposed Closure Criteria M9-1 and M9-2 are identical to Closure Criteria M1-1 and M4-2, respectively, which have already been approved by the Board (WLWB staff comments 17 and 18). Board staff further noted that when the same metric is applied to more than one closure objective, DDMI has included cross-reference rather than repeating the criteria (e.g., the metric of meeting AEMP benchmarks in the top 40 m of the water column was previously approved as Closure Criterion M1-1 and the wording of Closure Criterion M2-1 (Water quality meets closure criteria M1-1) links to Closure Criteria M1-1 rather than repeating the same metric as a separate item). Board staff inquired whether a similar approach could be taken for Closure Criteria M9-1 and M9-2. In response, DDMI indicated they would be amenable to this change if deemed appropriate

by the Board. This cross-referencing approach should be applied throughout the FCRP including relevant appendices (e.g., Appendix VI-1).

It is the Board's opinion that the information provided is sufficient and has approved the Closure Criteria M9-1 and M9-2. The Board believes that the use of cross-references rather than repetitive text will reduce the chance of potential confusion and requires DDMI to revise the proposed Closure Criteria M9-1 and M9-2 throughout the FCRP including relevant appendices. Regarding Closure Criterion M9-3, the Board agrees with EMAB comment 25 that additional information could be added to provide better clarity regarding the metrics associated with the criterion. The WLWB notes that text currently included under the Measure of Stability column (i.e., "No pit lake habitat-associated fish mortalities or fish stranding observed") is more specific than the proposed criterion and should be incorporated into a revised Closure Criterion M9-3.

- ***The Board has approved Closure Criteria M9-1, M9-2, and M9-3 with revisions.***
- ***Revision #26: The Board requires DDMI to revise the wording of Closure Criteria M9-1 and M9-2 to cross-reference meeting Closure Criteria M1-1 and M4-1, respectively. This revision should be applied throughout the FCRP including relevant appendices (e.g., Appendix VI-1).***
- ***Revision #27: The Board requires DDMI to revise the wording of Closure Criterion M9-3 to incorporate that no pit lake habitat-associated fish mortalities or fish stranding observed.***

3.11.3 Issue #3: Pit Back-Flooding and Closure Criteria M6-1, M7-1, and M7-2

In FCRP Version 1.1, DDMI proposed revisions to Closure Criterion M6-1: "Water levels in Lac de Gras remain above historic daily minimum Lac de Gras water level to ensure Lac de Gras and Coppermine River remain within natural fluctuations". DDMI also proposed revisions to Closure Criterion M7-1 to cross-reference Closure Criterion M6-1. The Board notes that no comments were received on the revised wording and is of the opinion the revisions to these criteria are appropriate. Therefore, the Board has approved the revised Closure Criteria M6-1 and M7-1.

- ***The Board has approved the revised Closure Criteria M6-1 and M7-1.***

DDMI also revised the wording of Closure Criterion M7-2 to cross-reference the previously approved Closure Criterion M6-2, which states, "Flows in the Coppermine River are protected through adherence of pumping rates to Fisheries and Oceans Canada's Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada". The Board notes that no comments were received on the revised wording and is of the opinion the revision to the criterion is appropriate. Therefore, the Board has approved the revised Closure Criterion M7-2.

- ***The Board has approved the revised Closure Criterion M7-2.***

DDMI submitted Appendix X-4 (Pit Fill Piping Design) for approval and noted in the change log provided in Attachment B to the covering letter that a minor update to include the NT/NU Association of Professional Engineers and Geoscientists (NAPEG) Stamp (previously provided as an attachment to the FCRP Version 1.0 Online System Review (ORS) review) was completed. In addition, DDMI stated that this appendix was to be considered in conjunction with Appendix X-30 (Back-Flooding Plan), which DDMI

submitted for approval. In the change log provided in Attachment B to the cover letter, DDMI noted that moderate changes had been made to Appendix X-30. Specifically, the trigger action response plan to adjust back-flooding rates and manage Lac de Gras and Coppermine River water levels was added and verification of DFO support on the plan was included. In addition, DDMI indicated that "Appendix X-30 will be submitted separately as early back-flood approval and undergo a separate review." In the covering letter, DDMI stated the following:

> It is a top priority of DDMI's closure planning works to resolve any outstanding regulatory approvals associated with the ability to back flood the mines with clean lake water. While DDMI's plan is to continue operating until March 2026, the Diavik operation is undergoing continuous review to ensure it remains a safe and profitable operation. To mitigate the risk of early closure, DDMI is installing the back flood siphon systems in the summer of 2025 such that initiation could begin prior to freeze up in the fall of 2025, if required. Commencement of mine back flooding activities are limited to the open water season which for planning purposes ends in September. DDMI is seeking to manage this critical schedule risk through preapproval to initiate the siphon systems. DDMI is currently in the process of updating the Processed Kimberlite to Mine Workings (PKMW) Modelling Plan and has re-engaged the Independent Review Panel (IRP) to report on Stage 2 updates. DDMI has not identified any changes to the inputs or assumptions used in the approved PKMW Modelling Plan that are likely to materially affect the Stage 1 model predictions and importantly DDMI is advancing all reasonable efforts to reduce decant water quantity in the A418 mine to proactively mitigate the pit lake water quality risk as the mine transitions into closure. A complete submission to the WLWB requesting this final approval is anticipated in early August 2025.

WLWB staff (comment 9) asked DDMI for clarification regarding what a "complete submission to the WLWB requesting this final approval" for pit back-flooding would include, how it would differ from information provided in the FCRP Version 1.1, confirmation that it will address applicable Licence and EA Measure requirements, and the anticipated timing of the identified separate submission. DDMI provided the following in response:

> In accordance with EA measures DDMI has updated the PKMW modelling ("Stage 2") and this model is currently undergoing a review with the Independent Review Panel. Once this review is complete DDMI will be submitting the updated model and IRP review to the WLWB with a request to approve back flooding of the A418 mine (which contains PK) with clean lake water in 2026 open water season. DDMI now anticipates this will be submitted by February 2026 to ensure flooding with clean lake water can proceed on schedule with initiation of siphons post-decommissioning of the underground mine.

Given that DDMI identified that Appendix X-30 would be submitted separately for the A418 pit, it is unclear whether Parties considered Appendix X-30 in their review of FCRP Version 1.1. The Board is, therefore, unable to consider Appendix X-30 for the A418 pit approval at this time. As such, the Board

has deferred this decision until such time as DDMI provides the future pit back-flooding submission, which will undergo a separate review process once received. It is the Board's opinion that the information provided in Appendix X-30 is sufficient to enable DDMI to proceed with back-flooding the non-PK containing pits (i.e., A21 and A154); therefore, the Board has approved Appendix X-30 for application to the non-PK containing pits and authorizes the back-flooding of the A21 and A154 pits to proceed.

- ***The Board has approved Appendix X-30 for application to the non-PK containing pits for the back-flooding of the A21 and A154 pits.***
- ***The Board has not approved Appendix X-30 for the back-flooding of the A418 pit.***

The Board acknowledges that EMAB (comments 45 and 46) requested further information be provided regarding how erosion would be controlled at siphon exit points. In response, DDMI indicated that "The siphon pipelines have been constructed so that the exit is located above the open pit area rather than along the infield area." The Board considers this response to be adequate and no further action is required.

Regarding Appendix X-4, although DDMI has identified that this appendix is to be considered in conjunction with Appendix X-30, the Board notes that no concerns have been raised in relation to Appendix X-4 through this review and DDMI has addressed the required revision in the July 19, 2024, FCRP Version 1.0 Reasons for Decision. At this time, the Board considers the information provided in Appendix X-4 to be adequate for the purpose that this appendix serves. As such, the Board has approved Appendix X-4 with the understanding that if changes occur in Appendix X-30 that affect Appendix X-4, then an update will be required for approval.

The Board notes that a discrepancy in the number of back flooding siphons was noted between Appendix X-4, which stated ten siphons, and Appendix X-30, which stated nine siphons was identified (WLWB staff comment 14). DDMI acknowledged this discrepancy in their response to comment and confirmed that back flooding will use a total of nine siphons, with the number of siphons associated with A418 pit having been reduced by one. Diavik further noted that this change did not materially impact the plan for back flooding and did not recommend a change to Appendix X-4 was necessary. The Board agrees with DDMI that the discrepancy does not result in material impact to the back flooding plan and does not warrant an update to an engineered design. No further action is required at this time.

3.11.4 Issue #4: Pit Decommissioning Requirements

The approved Closure Objective M1 requires water quality in the flooded pit and dike area that is similar to Lac de Gras or, at a minimum, protective of aquatic life, which is assessed through two approved closure criteria:

- **M1-1**—AEMP benchmarks within the top 40 m of water column; and
- **M1-2**—Cultural use criteria are met within the top 40 m of water column of the A418 pit containing processed kimberlite.

Closure Criterion M1-2 applies only to the A418 pit and is consistent with EA Measure 2. The Board notes that Water Licence W2025L2-0001 Part J, Condition 12 requires that once the cultural use criteria identified in Part G, Condition 12(b) and Part J, Condition 11(a) are approved these will be included with and form part of any future submissions of the FCRP. The Board anticipates M1-2 to be a placeholder until the approved culture use criteria are added to the FCRP.

- ***Approve Closure Criterion M1-2 as a placeholder for cultural use criteria.***

While Closure Criterion M1-2 applies only to the A418 pit, Closure Criterion M1-1 applies to all three pit lakes. All pit lakes will require Inspector approval of meeting this closure criterion prior to breaching per Licence W2025L2-0001, Part G, Condition 42. In the FCRP Version 1.0 Reasons for Decision, the Board included Revision #38 that required DDMI to revise the monitoring duration associated with assessing post-breach water quality stability in the pit lakes. In FCRP Version 1.1, DDMI provided revised text in Appendix VI-1, Section 3.2.3.2 Closure Monitoring, which stated "This final sampling event would occur only once regular monitoring indicates that water quality in areas behind the dikes has met closure criteria and at least three months prior to reconnecting the flooded pits to Lac de Gras." EMAB (comment 43) and Board staff (comment 25) noted that no information regarding how long or how many sampling events will be required to determine stability of the pre-breach water quality in meeting the closure criteria had been provided. DDMI provided the following in response to Board staff comment 25:

> The SNP describes the frequency of monitoring. DDMI cannot confirm the number of sampling events at this time because the start, duration, and end of backflooding is not currently known. A minimum of one sampling event is required. It is important to note that there is no evidence to suggest pit lake water quality will not be immediately stable and/or that a period of settling/stabilization is required prior to reconnection. DDMI will be filling the pit lakes rapidly with clean lake water to establish the best practical water quality conditions prior to reconnection. This good water quality will be established immediately after filling and reconnection is recommended to maintain good quality long term. Any delay to reconnection may result in a slow degradation of pit lake water quality. For this reason, DDMI intends to complete the reconnection as soon as practical.

DDMI further clarified in the response to EMAB comment 43:

> As explained in Appendix XII-20, "a specific or minimum pre-breach monitoring duration has not been recommended because evidence and results from engagements indicate that the pit lakes should be reconnected to Lac de Gras once criteria are met as expeditiously as practical because water quality of an isolated pit lake is expected to degrade, not improve, over time. For the case of the A418 pit lake with contained PK an additional step of water quality modelling is required, and this model will be informed by actual pit lake conditions and verify stability prior to breaching."

The Board understands DDMI's position regarding the challenge in defining the exact number of sampling events that will occur as the duration of back-flooding is not known. In addition, through the Licence Renewal W2025L2-0001, wording associated with SNP stations 1645-89 (A21 pit) and 1645-90 (A154 pit) was revised to remove reference to monitoring of a chemocline because no PK has been deposited in these pits. Licence W2025L2-0001, Schedule 9, Part E specifies the SNP sampling frequency and parameters to be quarterly during closure following *completion of the back-flooding* [emphasis added]. Although the Board did not set SNP requirements for water quality monitoring during back-flooding, it is the Board's opinion that periodic monitoring outside of the SNP during the later stages of back-flooding should be completed to verify that water quality is either meeting or trending as expected to meet AEMP benchmarks. The Board understands DDMI's position that a prolonged delay in breaching may lead to degradation in the back-flooded pit area. At this time, the Board is not setting formal monitoring requirements for this late-stage back-flooding monitoring for approval but requires DDMI to provide the monitoring information to the Board for information and to continue engagement with Parties to discuss the results, with the intent to help inform TK-based closure criteria, and ideally, to help foster confidence in the implementation of the closure activity. Once back-flooding is complete, the SNP requirements will apply and monitoring and reporting will continue until such time as AEMP benchmarks are met and provided to the Inspector for approval to breach the dikes per Part G, Condition 42 of the Licence. Given the reduced complexity associated with the closure of the A21 pit and the A154 pit, the Board believes this approach combined with on-going monitoring requirements as defined in the SNP and AEMP will be sufficient and provide appropriate regulatory mechanisms to address potential issues should the closure activities not proceed as planned or expected.

- ***Decision #35: The Board requires DDMI to complete late-stage back-flooding monitoring to verify water quality is as expected and provide monitoring results for information only (i.e., monitoring program design and reporting are not for approval).***

The Board acknowledges the additional complexity associated with A418 pit due to the presence of PK deposited in the mine workings; however, as previously noted, requirements were set through the Processed Kimberlite to Mine Workings (PKMW) EA1819-01, and the Licence Renewal that considered this complexity and additional modelling and monitoring has been defined. In particular, the Board notes that Licence W2025L2-0001, Part G, Condition 16(c) requires submission of and updated PKMW Modelling Plan three months prior to the reconnection (partially of fully) of each pit lake containing PK to the receiving Environment for WLWB approval. The requirements of this plan are detailed in Schedule 5, Condition 8, and the Board acknowledges that this modelling plan requires a separate review process with the Independent Review Panel prior to submission to the Board for approval. It is the Board's opinion that these existing requirements are adequate for verifying conditions are appropriate for breaching and has determined no additional monitoring requirements prior to breaching are deemed necessary at this time.

Board staff (comments 24 and 26) also noted that DDMI includes reference to revising AEMP benchmarks if constituent parameters do not meet the existing values and that these revisions would involve a risk assessment. Board staff requested confirmation that a risk-based approach was being proposed, if DDMI could clarify if the timing of such revisions would apply pre-breach, post-breach, or

both, and if these would be restricted to the pit lakes or apply to the broader area of Lac de Gras. DDMI provided the following in response:

> If there are ever instances of AEMP Benchmarks being regularly exceeded DDMI has stated, the option to propose a change to the benchmark (for WLWB approval) based on an assessment of site-specific risk. This could apply to an AEMP benchmark applied specifically to the pit lakes or at any location. DDMI understands that adjusting benchmarks to be site specific and risk based is already an accepted practice.

The Board acknowledges that updates to the AEMP benchmarks can be proposed and these would require Board approval. The Board is confident that the established process for making changes like this is adequate and any future Board decision will be based on the evidence submitted at the time. Therefore, no further action is required at this time.

Board staff (comment 81) noted that the wording of the PKMW EA Measure 1 required that water in at least the top 40 metres of the pit lake(s) at closure and post-closure meets the following objectives: Water quality objective 1: safe for people, aquatic life, and wildlife. The footnote associated with this Measure specifies that safe for people means "Canadian Drinking Water Quality Guidelines". Board staff noted that the wording of Closure Objective M1 uses AEMP benchmarks to assess Closure Objective M1 (i.e., protective of aquatic life) and asked DDMI if the wording should be revised to state that it is safe for people, aquatic life, and wildlife. In response DDMI suggested that Measure 1 is already reflected because the AEMP Benchmarks are not limited to aquatic life and include drinking water criteria which are primarily based on Canadian Drinking Water Guidelines. If a parameter has more than one guideline, then the AEMP benchmark is set at the lowest of the guideline values. Therefore, these values are set in a manner that is inclusive of freshwater aquatic life, wildlife consumption, and human drinking water. It is the Board's opinion that the wording of Closure Objective M1 should reflect the legally binding requirements of the PKMW EA Measure 1. The Board agrees that as DDMI has indicated, the approved criteria already meet this PKMW EA Measure and no changes are required. Although no Party had an opportunity to comment on this change, the Board is satisfied that it is appropriate as it is reflective of a legally binding EA Measure and is consistent with expectations of SW1 and SW2. Therefore, the Board requires the wording of this closure objective to be administratively updated.

- ***Revision #28: The Board requires DDMI to update the wording of Closure Objective M1 to reflect the requirement of the PKMW EA Measure 1 that water quality be "safe for people, aquatic life, and wildlife".***

3.11.5 Issue #5: In-Lake Monitoring During Dike Decommissioning

The FCRP Version 1.1 included a new appendix (Appendix X-31) to address Revision #40 of the Board's July 19, 2024, FCRP Version 1.0 Reasons for Decision. Appendix X-31 outlines the in-lake monitoring associated with the decommissioning of the pit dikes. The Board considers the information provided in Appendix X-31 sufficient to meet the purposes of the in-lake monitoring and has approved the plan, but requires revisions, which are discussed below.

- ***The Board has approved Appendix X-31 with revisions.***

Through the Licence Renewal, the Board set the total suspended solids (TSS) limit in Part E, Condition 24 and approved SNP station locations for this monitoring. As such, the Board considers comments 35 and 36 from YKDFN and comments 196 and 197 from EMAB to be resolved.

Board staff (comment 29) noted that the response framework included in Appendix X-31 includes a purple zone that is defined as TSS concentrations greater than 25 mg/L TSS above background, which would result in implementing response actions such as enhanced monitoring and slowing work, as well as notifying the Inspector and considering stopping in-lake construction, based on evaluation with the Inspector. Board staff noted that the TSS criteria are set in a licence condition, which means that these criteria cannot be exceeded, and that it was unclear why stopping work would not be the anticipated response action until TSS levels decrease below the criterion limit. EMAB (comment 150) also recommended that a turbidity trigger for stopping work should be identified. DDMI provided the following in response to WLWB staff comment 29:

> Stopping work may be an appropriate response action but DDMI expects that this level of response would be decided by the Inspector and is within their authority based on an evaluation of compliance against licence conditions and danger to the environment. DDMI anticipates there may be case-by-case situations where the Inspector could decide a full work stoppage is not required and would not be the most appropriate response and other corrective actions (such as further slowing of work or alternating work fronts) may be appropriate first responses. A similar approach was approved and carried out for A21 dike construction and protected LDG [Lac de Gras] during much larger in-lake works.

The Board understands that the Response Framework is designed to provide early warning and should avoid escalating TSS levels. The Board also understands that DDMI will manage and mitigate earthworks in a manner that minimizes the release of sediment. However, it remains the Board's expectation that the TSS criteria as set out in Part E Condition 24 will not be exceeded. It is the Board's opinion that a response action to stop work when TSS or turbidity levels within the purple zone in the Response Framework are encountered should be included. The Board trusts the Inspectors' discretion to determine whether continuation of a stop work order is necessary.

ECCC (comment 7) and Board staff (comment 30) identified that DDMI had not proposed to implement remote turbidity monitoring but no supporting rationale was included. In response, DDMI explained that given shorter term duration and smaller scale of decommissioning, remote monitoring was not deemed necessary. DDMI also noted that "A similar scaled back monitoring approach was approved and carried out for the A21 causeway light vehicle road construction (more similar in scale to dike breaches) and was protective of LDG [Lac de Gras]." The Board appreciates that the scale of the dike decommissioning is of a smaller scale and shorter duration; however, the Board notes that DDMI has proposed TSS and turbidity monitoring once per day. While this may be in line with what was approved for the A21 causeway light vehicle road construction, the Board notes that at the Public Hearing for the

Licence Renewal, DDMI clarified that there are a total of eight breach locations, each breach is anticipated to take two to three weeks of excavation and backfilling work, and work will occur around the clock as it will occur during the open-water season when there is essentially continuous daylight. While the Board acknowledges DDMI provided this clarification in response to a line of questioning related to determining the numeric TSS criteria for the in-lake work, the Board still considers this to be relevant in relation to determining monitoring requirements. Given the intensity of the decommissioning work, it is the Board's opinion that Appendix X-31 should be revised to include remote monitoring that is inline with previous remote monitoring.

- ***Revision #29: The Board requires DDMI to update Appendix X-31 to include implementation of remote turbidity monitoring and at a greater frequency than what is currently proposed.***

YKDFN (comment 34) and WLWB staff (comment 31) noted that turbidity barriers were mentioned but no details were provided regarding what this would entail or what alternate options were considered. DDMI provided the following in response:

> DDMI will procure commercially available turbidity curtains. The procurement process is not yet complete, so specific product details are not available. The turbidity barriers will be Type 1 or Type 2 design type similar to what has been used on site previously. Curtains are the primary mitigation. Alternate mitigations could be changing work fronts, slowing down or pausing work, or adding additional curtains if problematic areas are identified.

The Board requires DDMI to revise Appendix X-31 to incorporate the information provided in this response. This will be considered an administrative update for conformity***.***

- ***Revision #30: The Board requires DDMI to update Appendix X-31 to include information regarding the turbidity barriers and alternate mitigations.***

3.11.6 Issue #6: Pit Lake Post-Closure Monitoring

DDMI has proposed 20 years as the measure of stability for Closure Objectives M1 and M2, with the performance assessment period set at 5 years. ECCC (comment 3) noted the proposed wording of "trend analysis must indicate that year-over-year concentrations will not exceed the criteria in less than 20 years" but stated that does not necessarily indicate stability because a parameter concentration could be increasing over time but not exceed the closure criteria within 20 years. GNWT-ECC (comment 5) recommended that the performance assessment periods for post-closure monitoring associated with Closure Objectives M1 and M2 be modified from the proposed 5 years for the PAR to align with the modelled timeframe for constituents to stabilize. GNWT-ECC noted that the model predicted stability in 10 to 30 years and further recommended that the monitoring timeline change from the proposed 20 years to 30 years to ensure that modelling/trend analysis indicates that concentrations will not exceed criteria in less than 30 years. DDMI disagrees with GNWT-ECC and provided the following in response:

> The onus is on DDMI to prepare a PAR that satisfies the WLWB. Twenty (20) years is indicative of stability. Projecting water quality results past 20 years has an increasing degree of uncertainty.
>
> The PAR will likely incorporate comparison of monitoring results to the model. If monitoring results are on track or better, then projecting further than 20 years should not be required. Also, DDMI notes that concentrations are predicted to meet criteria from day 1 so a requirement for an improving curve to "flatten" when data is already always below criteria does not seem necessary.

DDMI noted in their response to ECCC comment 3 that 20 years is indicative of stability and projecting beyond that results in increased uncertainty. DDMI also noted that monitoring under the AEMP is planned for approximately 20 years and should results indicate conditions are not tracking as predicted, the WLWB could direct DDMI to continue monitoring.

EMAB (comment 21) also recommended changes to the measure of stability including extending the water quality projection to 50 years in the future, assess open-water and ice-covered conditions separately, and assess the water depths separately. EMAB also asked for further information regarding the trend analysis to be used. DDMI disagreed with these recommendations and clarified that the "trend analysis will be completed by a qualified scientist who will determine the appropriate analysis based on the data at the time."

As discussed in Section 3.5.1, the Board believes that a five-year performance assessment period is appropriate and discontinuation of monitoring will be considered based on the evidence provided in the PAR. It is the Board's opinion is that the 20-year timeline is an appropriate starting point and should results indicate that an extended timeline is required for stability, then the Board has the ability to request additional PARs per Part J, Condition 7 and if the evidence suggested necessary, an adjustment can be completed on the predictive timeline at that time. However, the Board does note there appears to be a discrepancy in that the timeframe proposed for Closure Criterion SW2-3 is set for 50 years, so the argument of increased uncertainty seems inconsistently applied (see Section 3.7.1 for further details). Despite this inconsistency, the Board's opinion remains that the proposed 20-year timeframe is a reasonable starting point and that there are regulatory mechanisms in place to allow this to be revisited once monitoring data is available. Therefore, the Board has approved the measure of stability and performance assessment periods associated with Closure Objectives M1 and M2 as provided in Appendix V, Tables 1 26 and 1-28.

FCRP Version 1.1 includes proposed Closure Criterion M5-3—No sudden unexpected change to chemocline, if present, based on comparison of observed water quality data to predicted chemocline. WLWB staff asked for clarification regarding how a water quality-related criterion was relevant to a physical stability-related closure objective. DDMI provided the following in response:

> This is in the unlikely event that part of a pit wall could fail and the mass of rock falling through the water column in the pit which could then disturb the chemocline. It is likely

this is the only way that this M5 objective event could be measured as physical observations of deep underwater pit walls are not possible.

The Board accepts this explanation and has approved Closure Criterion M5-3.

- ***The Board has approved Closure Criterion M5-3.***

YKDFN (comment 6) indicated support for achieving meromixis in the A418 pit lake but that DDMI should consider alternate contingencies if meromixis is not achieved. DDMI provided the following in response:

> Stratification of the A418 pit lake is not proven to be required to meet AEMP benchmarks in the top 40 m. The volume of water below the chemocline is small relative to the volume of the pit lake. Complete mixing during the slow process of pore water expulsion may result in worse water quality throughout the pit lake, but water is still expected to meet AEMP benchmarks and stabilize from exchange with LDG [Lac de Gras]. While there is no evidence to suggest this may be needed, DDMI reiterates that the ultimate contingency measure would be closing pit dike breaches in extreme scenario.

The Board agrees with DDMI and does not deem it necessary to propose additional contingencies at this time. The Board is confident that adequate monitoring is in place and adaptive management and additional contingencies can be considered if results indicate water quality in the A418 pit lake is not tracking as anticipated. Therefore, no further action is required at this time.

Board staff (comment 23) identified the hydrodynamic model provided in Appendix X-21 includes mixing zones in the pit lakes but that it was unclear whether anticipated runoff will occur in a manner that can be sampled. It was also unclear how the presence of these mixing zones will be determined through monitoring and what, if any, influence they may have on meeting AEMP benchmarks in the top 40 metres in the pit lakes prior to breaching, as required by the Report of EA Measure 1. Further clarification is required. In response, DDMI provided the following points of clarification:

> (A) No distinct discharge points into the pit lakes are expected rather it will be a diffuse boundary along the shoreline and therefor no runoff or mixing zone monitoring is proposed.
> (B) Distinct mixing zones are not expected, and monitoring will be central to the pit lakes. The exact TK verification process for meeting cultural use criteria in the top 40m of the A418 pit lake with PK is still to be determined by IGOs. In the highly unlikely event that runoff resulted in the A418 pit lake partially or wholly exceeding AEMP benchmarks.
> (C) DDMI does not expect this would be in contradiction to EA Measure 1 as it would not be related to the PK deposited in the pit lake.

At this time, the Board is satisfied with the clarification that DDMI has provided but notes that if monitoring identifies distinct mixing zones with concentrations exceeding AEMP benchmarks, then this may need to be revisited. The Board is confident that this can be assessed through the PARs and further direction or requirements can be provided by the Board through the decision on the PARs.

NSMA (comment 10) noted a discrepancy in the wording included in Appendix V, Table 1-33, Closure Criterion M5-3 for monitoring depths with the draft Licence that was circulated for review through the Licence Renewal proceeding. The Board set the monitoring requirements for the pit lakes in Licence W2025L2-0001, Schedule 9, and requires DDMI to update the text in Appendix V, Table 1-33 to align with the SNP requirements.

- ***Revision #31: The Board requires DDMI to update the text in Appendix V, Table 1-33 for the monitoring requirements associated with Closure Criterion M5-3 to align with the SNP requirements in Licence W2025L2-0001. This will be considered an administrative update for conformity.***

In the FCRP Version 1.0, the Board included Revision #39 to revise the Closure and Post-Closure Monitoring Plan (FCRP Appendix VI-1) to propose monitoring for verifying that no deep-water seepage is occurring within the pit lakes. In Appendix XII-20 (Concordance with WLWB FCRP Version 1.0 Revisions), DDMI provided the following response to this revision:

> Deep-water seepage monitoring has not been proposed as this is not considered to be a credible source of contamination post-closure. Once the pit lakes are flooded there will no longer be a hydraulic gradient driving advective flow of groundwater from the surrounding bedrock into the pit lake. This is why the back-flooding process must be initiated as soon as practical and the filling rate with clean lake water from Lac De Gras must be maximized to limit the proportional contribution of poorer quality groundwater and ensure that the water quality in the final flooded pit lake is similar to the water quality of Lac de Gras. Once flooded the long term movement of dissolved substances in groundwater will only occur through diffusion from areas of high concentration to areas of low concentration and this not anticipated to be measurable. For these reasons, DDMI is unable to propose a monitoring program and requests the WLWB reconsider this direction or provide detailed direction on a program design that can address this.

Comments on the lack of deep-water seepage monitoring were provided by GNWT-ECC (comment 6) and YKDFN (comment 74), and Board staff (comment 20) asked if any of the existing monitoring requirements could be used as a metric to verify the assumption regarding the lack of sewage was correct. GNWT-ECC (comment 6) recommended the following:

> that DDMI continue to conduct monitoring 2 m off the bottom of Lac de Gras at AEMP stations (i.e., in addition to monitoring within the decommissioned pits) closest to the decommissioned underground workings, to verify that no deep-water seepage occurs from within the pit lakes. Monitoring should persist for a minimum of five consecutive

> years following the completion of pit flooding. Stations at which these recommendations would apply include NF5, MF3-1, MF3-2 and NFC-8.

DDMI provided the following in response to the comments related to deep water seepage monitoring:

> Once flooded and reconnected the pit lakes will be part of LDG [Lac de Gras]. DDMI is not making an assumption about hydraulic gradients between the pit lake and LDG, bedrock hydraulic conductivity, or long-term groundwater migration as these are facts. Diffusion of porewater from the PK within the A418 is accounted for within the modelling. If the diffusion of constituents across the chemocline boundary layer is aggressive enough that it is able to reach the near surface of the pit lakes such that it is released to Lac de Gras, then DDMI anticipates this would first be observed in the pit lake monitoring data (particularly the top 40 m) and later would be measurable at the mid depth stations in LDG. If this water was dense enough to only be measured 2 m above LDG bottom, then it would not have been released from the pits to LDG because the breach connections are only 3 m deep.
>
> Regardless, DDMI collects YSI profiles at AEMP stations including conductivity and if a high conductivity layer was observed it would trigger a sample at that depth (in this example at 2 m from bottom) which may address this GNWT concern. No evidence has been provided as to indicate that the sampling program is insufficient and would not capture this unlikely outcome. No new evidence has been provided in response to DDMI response to the referenced comment #14.

The Board understands DDMI's position and appreciates the additional context provided in the response. In consideration of the existing SNP monitoring requirements within the pit lakes as well as the on-going monitoring through the AEMP, it is the Board's opinion that additional monitoring is not required at this time. The Board is confident that the existing monitoring requirements will be sufficient to detect the presence of elevated constituents that likely indicate deep water seepage is occurring. If this occurs, then existing regulatory mechanisms exist to enable additional monitoring to be implemented. As such, the Board no longer requires verification monitoring for deep water seepage to be included in the FCRP but may require this to be reconsidered pending submission of monitoring results.

3.11.7 Issue #7: Cultural Use Criteria

Board staff (comment 79) noted that the PKMW EA Measure 1 required that water in at least the top 40 metres of the pit lake(s) at closure and post-closure meets water quality objective 2: suitable for cultural use. Closure Criterion M1-2 assesses cultural use criteria through a single event prior to reconnection, but it does not appear that these criteria will be assessed during post-closure as specified in Measure 1. To ensure EA Measure 1 is addressed, Board staff asked DDMI to clarify whether M1-2 will be assessed during post-closure, where those monitoring details would be held, and how M1-2 would be updated to be consistent with the measure. In response, DDMI explained it expects that Closure Criterion M1-2 will also be assessed post-closure and that this will be considered under the

TKMF. DDMI anticipates this would likely be a separate performance criteria similar to Closure Criterion M1-1. DDMI committed to adding this once the TKMF is sufficiently mature and noted that the Licence includes Part J, Condition 11, so this is not considered a regulatory gap.

The PKMW EA Measure 2 required DDMI to develop criteria to assess suitability of pits containing PK for cultural use. These criteria were submitted and approved as part of the PK Management Plan Version 7.0. Board staff (comment 80) identified that these criteria were not explicitly provided in FCRP Version 1.1. In the Licence Renewal Reasons for Decision, the WLWB included a new licence condition (Part J, Condition 12) that requires "Once the cultural use criteria identified in Part G, Condition 12(b) and Part J, Condition 11(a) are approved these will be included with and form part of any future submissions of the Final Closure and Reclamation Plan." Board staff asked DDMI for a timeline as to when this update could be provided. DDMI provided the following in response:

> It is DDMI's understanding the PKMW cultural water use criteria that have been approved for the A418 open-pit water still has to be approved by the WLWB for application beyond the PKMW project (e.g. to Lac de Gras wholly). Once this step is complete DDMI could then add these criteria to closure objective SW2. However, like closure criteria SW2-1, before the cultural water use criteria can be approved as a closure criteria DDMI would need a decision on permanent mixing zones which the WLWB has paused pending consideration of the SES for Pond 2/7. In summary, DDMI expects that a revised Appendix V could be submitted to address the cultural water use criteria at the same time as finalizing SW2-1 closure criteria.

The Board acknowledges that additional engagement regarding the TKMF and cultural criteria is required. The Board also acknowledges that the decision regarding the presence of permanent mixings zones is required to further inform the TKMF and Closure Criterion SW2-1. Although the Board agrees that these updates are required, they require additional information to be completed. Therefore, the Board will reserve these items for future consideration.

3.12 Mine Infrastructure

The FCRP Version 1.1 describes that mine infrastructure will be removed and either salvaged or buried on site. Roads, except those required for post-closure monitoring and maintenance will be recontoured, scarified, and targeted for revegetation. The FCRP describes that mine infrastructure will be one of the last areas to be closed because of the need for basic infrastructure including roads, accommodation, truck shops, and power plants to support the closure activities.

There are three approved objectives related to Mine Infrastructure:

- **I1**—Opportunities for communities to re-use infrastructure, where allowable under regulation and where liability is not a significant concern;
- **I2**—On-site disposal areas that are safe for people, wildlife, and vegetation; and
- **I3**—Prevent remaining infrastructure from contaminating land or water.

Table 5-6 of the FCRP Version 1.1 identifies closure activities related to each objective. Appendix X-8 (Site-wide Grading Plan), Appendix X-11 (Remedial Strategy Report), and Appendix X-13 (Landfill Cover Design) all relate to the closure of Building and Equipment. None of these appendices were approved as part of the consideration of the FCRP Version 1.0.

The Board notes that no comments were received in relation to Closure Criteria I1-1, I2-1, I2-2, I2-3, I3-1, and I3-2. With the exception of Closure Criterion I1-1, these closure criteria are simply cross-referenced to approved site-wide closure criteria. Closure Criterion I1-1 is proposed as "Conditions of Socio-Economic Monitoring Agreement (SEMA) met". Based on the evidence at this time, the Board has determined these closure criteria are appropriate.

- ***Approve Closure Criteria I1-1, 2-1, I2-2, I2-3, I3-1, and I3-2.***

The issues related to Mine Infrastructure are discussed below under the following headings:

- Remedial Strategy Report and Contaminated Soils;
- Site-Wide Grading Plan; and
- Landfill Cover Design.

3.12.1 Issue #1: Remedial Strategy Report and Contaminated Soils

Appendix X-11 (Remedial Strategy Report) of the FCRP Version 1.1 describes the approach to remediation of PHC- and non-PHC surficial materials at closure for areas of the site that were identified as "areas of potential concern". The Remedial Strategy Report submitted with FCRP Version 1.0 proposed to remediate soils that do not meet the proposed closure criteria following a risk management approach, depending on the degree and extent of contamination. At that time, the Board did not approve this approach and outlined expectations for the information required for the Board to consider with in situ or landfill disposal of soils above the approved closure criteria. In response to FCRP Version 1.0 Revision #45, DDMI stated:

> While the remedial strategy identifies the opportunity to dispose of certain non-inert materials in the landfill, DDMI is not requesting approval to dispose of non-inert waste in the landfill at this time. DDMI understands that the WLWB has set specific requirements to be fulfilled if/when disposal of non-inert waste is requested. This detail cannot be provided as this time as there is no present request. This information will be provided if/when there is a request.

Since the FCRP Version 1.0 decision but after submission of the FCRP Version 1.1, the Board approved a one-time deep burial of hydrocarbon-contaminated soils in the WRSA.[59] The Tłı̨chǫ Government (comments 42 and 43) stated that it is its understanding that additional approvals would require DDMI

[59] See WLWB Online Registry for Diavik - Waste Management Plan - Version 8 - Reasons for Decision - Oct 1_25.pdf

to provide more information (as required by Revision #48 to the FCRP) and noted that as part of the Board's decision, the Board required DDMI to do the following:

> …to assess practical methods by which to reduce the volume requiring disposal in the landfill in accordance with the revised remedial strategy (WSP 2025). Reductions in disposal quantities will reduce potential contaminant loading to seepage water quality, if seepage water is encountered.

EMAB provided several comments on disposal of hydrocarbon-contaminated soils in the landfill (EMAB comments 118, 119, 120). As part of the Board's decision, the Board required DDMI "to assess practical methods by which to reduce the volume requiring disposal in the landfill in accordance with the revised remedial strategy (WSP 2025)." Despite referencing it in response to comments on the request,[60] the Tłı̨chǫ Government comment 42 and WLWB staff comment 50 identified that no assessment of methods by which to reduce the volume requiring disposal in the landfill was included in the Remedial Strategy Report. In response to the Tłı̨chǫ Government (comment 43), DDMI stated:

> DDMI considers that the WLWB has all the information required to approve on-site disposal of material at or below the CCME (2008) Agricultural Management Limit for Coarse-Grained Subsoils in the site landfill/NCRP at this time (see EMAB #113, EMAB #117, TG #42). On-site disposal of material above that limit is not proposed at this time (see EMAB #113) and would be either excavated and undergo ex situ treatment (e.g. landfarming) or disposed of offsite in line with Appendix X-11. DDMI expects that for any remaining material above this limit late in the closure phase the decision to treat ex-situ until landfill disposal requirements are met versus offsite disposal would be made based on a balance of time, cost, and equipment availability of potential continuation of onsite presence vs cost and truck availability for offsite disposal. Any other options would have to be approved by the WLWB based on information provided at that time. This question cannot be further answered at this time without details on characterization and quantities of material that have yet to be discovered.

And, in response to WLWB staff comment 50:

> At this time DDMI does not known whether additional onsite disposal of material will be required. The Phase II/III ESA requirements outlined in Appendix X-11 that will confirm this cannot occur until the closure phase as the majority of potentially contaminated areas are inaccessible for sampling and assessment during operation. The specific disposal criteria in the referenced Waste Management Plan V8 decision are CCME agricultural criteria applicable to the characteristics (i.e., depth) of the proposed disposal area (landfill/NCRP). These are the same criteria as are proposed in Appendix X-11. Although volumes and characterization of hydrocarbon impacted material cannot be provided in advance of the discovery of that material, considering that this disposal limit is in line with federal criteria, exceeds the depth requirements of that criteria by a

[60] See WLWB Online Registry for Diavik - Waste Management Plan - Version 8 - Reasons for Decision - Oct 1 25.pdf, p. 11–12.

significant margin, and is already approved practice at Ekati, DDMI considers that the WLWB has the information required to approve disposal of material up to CCME Agricultural Management Limits for Coarse Grained Subsoils in the onsite landfill/NCRP as part of this FCRP (See EMAB #113, EMAB #117). Further reductions below the applicable CCME agricultural standard (subsoils) are not warranted, especially considering that CCME does not require frozen conditions, which are expected long-term at the disposal depth and provide an additional risk mitigation factor. The referenced technical memo also modelled for material treated to the CCME Industrial Management Limit for Coarse Grained Subsoils rather than the Agricultural limit, adding an additional layer of conservativism. DDMI considers that the most effective method to reduce volume requiring disposal in the landfill is through prevention of and rapid response to spills and other sources of contamination (as outlined in its Contingency Plan), to which DDMI remains committed throughout the remainder of operations and through closure.

The Board notes that it is unaware of discussion of subsoil limits being discussed or applied at Ekati, and Diavik appears to have identified a vague CCME reference. The Board notes that without any intention to reduce the volume requiring disposal in the landfill, it cannot provide a blanket approval of disposal limits for the landfill without an understanding of volumes. The Board will consider a request that meets the specific requirements for disposal of non-inert waste outlined in the FCRP Version 1.0 Reasons for Decision if requested. The Board finds the Waste Management Plan should be revised to reflect DDMI's commitment to reduce the volume of hydrocarbon-contaminated soils requiring disposal (e.g., landfarming).

- ***Decision #36: Within 90 days of this Decision, revise the Waste Management Plan to reflect DDMI's commitment to reduce the volume of hydrocarbon contaminated soils requiring disposal (e.g., landfarming) through active closure.***

In the Board's Reasons for Decision for FCRP Version 1.0, Decision #20 was "The Board has not approved Appendix X-11 and requires DDMI to complete a Phase I Environmental Site Assessment (ESA) prior to resubmitting Appendix X-11." In FCRP Version 1.1, DDMI provided a limited Phase I ESA in Appendix X-11, which included a review of locations with chemical handling and storage, spill records, and historic areas of contamination. GNWT-ECC (comment 27) noted that Figure 1 in Appendix X-11 shows the areas of potential environmental concern (APECs) and assigned risk categories (low to very high); however, it is unclear why the assigned risk category was applied, or what primary factors or activities informed the classification at each site. GNWT-ECC notes this information is important to provide a more comprehensive understanding of site risks and how risk categories were assigned. The GNWT-ECC noted that it would be helpful for DDMI to identify whether the potential to impact water discharged from the site was a consideration in determining the risk category. In response, DDMI described that Figure 1 is a tool for communicating expected level of effort that will be required during the Phase I and II ESA. The Board notes that although not identified in response to GNWT comment 27, Figure 1 also identifies that a Phase III ESA will be completed during closure. Areas with higher potential concern are typically parking areas where minor leaks are known to occur or where a spill reported to

the NWT Spill Line has occurred, while areas of lower concern typically do not see much traffic (e.g., laydown areas). The Board understands that better information will be available following the ESA and DDMI can request Board approval for any hydrocarbon-contaminated soils above the approved closure criteria it wishes to leave on site post-closure.

The Tłı̨chǫ Government (comment 41) states that it understood hydrocarbon contamination under buildings will be left in place, identifying that the FCRP states, "The results from perimeter samples and the history of the building in question will be considered to determine the approach to risk management if contaminated surficial material is expected to be underneath the slab." The Tłı̨chǫ Government asked about potential influence on water quality and what mitigations DDMI has considered. In response, DDMI stated:

> Unless a building with a concrete slab was built over top of a contaminated site, which is not known to have occurred at Diavik, the only way for hydrocarbon contamination to migrate beneath a slab would be through a spill or other means of introducing contamination at or near the perimeter of the building. There is not a feasible mechanism whereby hydrocarbon contamination could be beneath a concrete slab without an explanation from either the history of the building or as informed by perimeter sampling. DDMI notes that many buildings at Diavik (e.g. dorms, lift stations, muster stations) are modular and do not sit on concrete slabs.
>
> The only building with a concrete slab currently known to have had verified hydrocarbon contamination (now excavated and treated) in proximity, with the potential for migration beneath the slab, is the A21 Mine Air Heater building. Perimeter sampling will be conducted once infrastructure critical to mine operations has been decommissioned and the area characterized through a Phase II (and Phase III if required) Environmental Site Assessment (ESA) to determine if excavation beneath the slab is required. Any other areas of potential contamination beneath different building slabs will also be identified through the closure phase ESA process. A rock cover will be placed over all building foundations remaining in place. DDMI expects that any areas with potential contamination identified in the ESA process would require submission of the additional info (for approval) required by the WLWB for in-situ disposal of hydrocarbon-contaminated soils (See Reasons for Decision for FCRP Version 1.0 Revision # 49).

The Board believes the response provided is satisfactory and will allow for future Board consideration if in situ disposal of hydrocarbon-contaminated soils is appropriate.

The Board has previously identified that more than just hydrocarbon and glycol parameters need to be considered when assessing contaminated soils. In review of Version 1.0, the Board directed DDMI to provide evidence in the form of a systematic screening to support the identified POPCs, if it wishes to propose removal of organic and inorganic parameters listed in Tables 3 and 4 of the Remedial Strategy

Report. In Appendix XII-20, DDMI described the revisions text in Section 5.1 – Process for Site-Specific Characterization of Appendix X-11:

> Section 5.1 – Process for Site-Specific Characterization of Appendix X-11 has been included to describe the systematic approach for identifying and evaluating the contaminants of concern following standard environmental site assessment practices (e.g., Phase I, II, and III Environmental Site Assessments). Specifically, a statement has been added to clearly indicate contaminants of concern will be identified and the applicable closure criteria will be established based on the results of the Phase II ESA. In addition, the Management Strategy for Contaminated Surficial Materials (Section 5.3) has been revised to include the approach for the incorporation of contaminants of concern not identified in the limited Phase I ESA (which formed the basis of the Management Strategy).

Section 5.3 describes the management of contaminated surficial materials will be based on Table 3 (PHC-contaminated) and 4 (Non-PHC contaminated). Appendix X-11 recognizes that the additional specific requirements identified by WLWB (Revisions 48 and 49) for the disposal of impacted surficial materials in the landfill or in situ, will be addressed on a case-by-case basis and not in detail under this strategy. Section 5.3 identifies several potential screening options including the Government of the Northwest Territories (GNWT) Environmental Guidelines for Contaminated Sites Remediation (GNWT 2003), CCME standards (CCME 1999), and background conditions. While this general approach may seem reasonable, without clarity on screening values the Board is unable to preapprove an approach to Non-PHC Contaminated Surficial Materials. Without a defined screening approach to trigger development of closure criteria, the Board is unable to evaluate whether the proposed criteria for I3 are sufficient to evaluate the closure objective until the ESA II has been completed. The Board anticipates that an update to Appendix X-11 will be required to propose closure criteria following the Phase II ESA.

- ***Decision #37: Following the completion of the Phase II ESA, DDMI shall propose updates to I3 closure criterion and Appendix X-11 with supporting evidence and rationale.***

EMAB comment 116 recommended that DDMI provide design information to demonstrate that the inert landfill is appropriate for containment of glycol contaminated materials. The Board agrees with DDMI's response to EMAB comment 116 that material below the agricultural standard for glycol does not require landfill design considerations. This is consistent with the Reasons for Decision on the FCRP Version 1.0, which identified that "it is unclear when glycol-contaminated materials would be above closure criterion for glycol and disposed of on site".[61]

Overall, the Board finds the Remedial Strategy Report consistent with its previous direction and reflective of the strategy based on information available to date. However, without a clear approach to

[61] See WLWB Online Registry for Diavik - Final CRP - Version 1 - Reasons For Decision - Jul 19_24.pdf; p. 108.

how contaminated soils will be managed its unclear the value to approving something at this time. The Board is not approving Appendix X-11 with the understanding that further approvals are required to leave soils above approved criteria onsite and DDMI has already identified steps moving forward following ESAs.

- ***The Board has not approved Appendix X-11.***

Closure Criterion I3-4 – If contaminated surficial material associated with site infrastructure are left in situ, piezometric wells downstream of contaminated surficial material location(s) show no free PHC product and show no migration of TPH through groundwater (i.e., TPH <3.0 mg/L and there is no visible hydrocarbon sheen). Board staff recognize that this limit is consistent with the EQC in the Diavik Water Licence. However, it is unclear how DDMI determined that a TPH concentration <3.0 mg/L would be indicative of "*no migration of TPH through groundwater*" [emphasis added]. It is unclear whether DDMI has groundwater data that indicates a baseline concentration of TPH to support this concentration being acceptable. In addition, it is unclear what other hydrocarbon parameters would be measured and reported to the WLWB.

No Party identified concerns with Closure Criterion I3-4. As identified in response to WLWB staff comment 83, Closure Criterion I3-4 is consistent with operational EQC for large volume discharge to Lac de Gras as the measure of acceptability. The Board anticipates that if water quality data in groundwater wells indicate migration of TPH through groundwater, then further investigation could be required in review of the PAR.

- ***The Board has approved Closure Criterion I3-4.***

3.12.2 Issue #2: Site-Wide Grading Plan

The Site-Wide Grading Plan (Appendix X-8) states that its goal is to indicate the post-closure surface for the site that is expected to be physically safe, stable, allow for wildlife passage, and match landform aesthetics to the surrounding environment to the extent practicable.

In review of the FCRP Version 1.1, the Tłı̨chǫ Government identified three new recommendations from Tłı̨chǫ Elders:

1. Flatten roads to improve wildlife safety and passage. We recommend that Diavik build a demo of a closed road to get more specific input from Tłı̨chǫ Elders before closing all the roads.
2. Remove the A21 causeway at closure to restore this area closer to its natural condition. Animals can swim and people can boat if they need to cross the water.
3. Slopes of laydown pads are too steep for safe passage. Slopes may need some combination of flattening and boulder fences to protect wildlife.

In response, DDMI agreed with recommendation 1, and acknowledged recommendations 2 and 3, stating that Appendix X-5 includes breaching of the causeway (addresses recommendation 2), and that recommendation 3 is an example of smaller landscape features that can be considered collaboratively rather than through regulatory processes. The Board is satisfied with DDMI's responses and has not

directed specific revisions at this time. The Board sees value to having the TKMF evaluate final grading to evaluate Closure Objective SW9 and anticipate this can form part of the TKMF.

- ***The Board has approved Appendix X-8.***

3.12.3 Issue #3: Landfill Cover Design

The current landfill was designed to contain inert wastes during operations and closure.[62] The proposed Landfill Cover Design (Appendix X-13) estimates a landfill storage volume of 497,000 m^3 to include building demolition waste, laydown waste, and operational waste between 2021 and 2025. The design describes that the landfill cover was designed to accommodate some flexibility in waste volumes and, if necessary, additional waste material could be placed along the east and/or west edges of the landfill prior to cover construction. Section 5.1.1 of the Landfill Cover Design (Appendix X-13) informs that summer placement of waste should be limited to maintain a landfill facility in a frozen condition after 100 years. In response to comments on FCRP Version 1.0, DDMI provided a consultant report to support its thermal predictions (response to WLWB staff comment 98); however, no Party had the opportunity to consider this new evidence. This Report was included as Appendix X-13.1 in FCRP Version 1.1. Aside from a discussion of the disposal of contaminated materials in the landfill (see Section 3.12.1), no comments were received on the proposed landfill cover.

- ***The Board has approved the Landfill Cover Design (Appendix X-13).***

The outstanding concern associated with W3-1 was associated with the disposal of non-inert materials being disposed in the landfill. Given the case-by-case approval approach put forward, the WLWB has determined that W3-1 is appropriate based on the evidence at this time.

- ***The Board has approved Closure Criterion W3-1.***

3.13 Security

Currently, Licence W2025L2-0001 requires DDMI to maintain a security of $184,770,000 with the GNWT. The Closure Guidelines outline that a detailed closure and reclamation liability costs and financial security estimates based on achieving approved closure objectives and closure criteria should be provided with a final CRP. Appendix VII proposes no changes to the current closure cost estimate. It is unclear how DDMI considered implications of the proposed changes in the FCRP Version 1.1 (e.g., conceptual change to North Inlet, Revegetation Strategy) when determining that no adjustments to RECLAIM were necessary. No Party commented on security through this public review; Board staff asked a few questions for clarification (WLWB staff comments 84 to 86).

In response to WLWB staff comment 84, DDMI suggests that the concepts revised in FCRP Version 1.1 are not material to the current estimate and in particular given DDMI is "heavily oversecured due to the lag in return of security for completed work to date (i.e. DDMI nearing 80% completion of closure earthworks with a fraction of security returned)". DDMI identified that it has been working with

[62] See WLWB Online Registry for Diavik – Final CRP – Technical Workshop - DDMI Response to IR - Apr 18_23.pdf.

GNWT-ECC for many months on preliminary review of a security refund request and to date no discrepancies of concern have been identified. The Board understands that DDMI has completed substantial closure-related work and that it has not yet asked for an associated return of security.

Moving forward, the WLWB anticipates most requests to adjust security will be reductions to security to reflect completed closure work. It will, therefore, become increasingly important that the security holdbacks be finalized. DDMI has stated that it is actively engaged with GNWT-ECC on contingency and holdbacks as part of the security adjustment reviews. The Board is not requiring an additional update at this time but reiterates the expectation that March 1, 2024, Reasons for Decision on the PKCF Design Report and Revision #53 from the FCRP Version 1.0 Reasons for Decision in that submission.

The Board reiterates that to inform any request for changes to security, DDMI must conduct a holistic re-evaluation of the closure cost estimate.[63] The Board expects this to include confirmation that the approved FCRP Version 1.1 is appropriately reflected in the estimate.

Signed the 26th day of February 2026, on behalf of the Wek'èezhìi Land and Water Board

_____ _____

Witness

Mason Mantla
Chair, Wek'èezhìı Land and Water Board

[63] LWB/GNWT/CIRNAC Guidelines for Closure and Reclamation Cost Estimates for Mines (2022).

Appendix A: List of Revisions #1 through 31

As described in the Reasons for Decision, DDMI must include the revisions into the revised FCRP.

Revision Number	Description	Section Reference	Submission	
1	The Board requires DDMI to revise the FCRP to include a site-wide closure objective and associated criterion to evaluate that residual risks have been identified and appropriately communicated.	3.2	Risk Communications Plan	Public Review Required
2	The Board requires DDMI to revise the FCRP to reflect the approved criteria with revisions in Appendix D.	3.5.1	Next submission	Conformity
3	The Board requires DDMI to remove specific details regarding SNP requirements from Appendix VI and replace it with a statement that cross-references to the current Licence.	3.6.1.1	Next submission	Conformity
4	The Board requires DDMI to update the AEMP Design Plan to include an additional near-field station (i.e., NF1 or NF2), with supporting rationale.	3.6.2.1	AEMP	Conformity
5	The Board requires DDMI to update the AEMP Design Plan to include station LDS-1 per existing sampling requirements under the current AEMP Design Plan Version 6.2.	3.6.2.1	AEMP	Conformity
6	The Board requires DDMI to revise the AEMP Response Framework to include Moderate and High Action Levels. Once submitted, the entire AEMP Response Framework will be subject to review and Board approval.	3.6.2.3	Response Framework	Public Review Required
7	The Board requires DDMI to add a statement to the AEMP Design Plan to note that large-bodied fish tissue chemistry sampling will be completed as part of the TKMF and included in the AEMP Annual Report and Re-evaluation Report.	3.6.2.4	AEMP	Conformity
8	The Board requires the Risk Communication Plan required by Decision #7 to document the results of engagement regarding fishing in	3.6.2.4	Risk Communications Plan	Public Review Required

	inland lakes and any resulting monitoring.			
9	The Board requires DDMI to add a statement to Section 9.7 of the FCRP, or an alternate location if DDMI determines a more appropriate place, to capture the commitment for further engagement if a future update to the HHERA is required.	3.7.1.1	Next Submission	Conformity
10	The Board requires DDMI to provide an updated Appendix X-28 that reflects the POPC screening approach associated with the decommissioned collection pond discharges as accepted through the Decommissioning Amendment and subsequent changes to POPCs identified in these discharges as approved through the Licence Renewal. This updated version of Appendix X-28 will be for conformity.	3.7.1.5	Next submission	Conformity
11	The Board requires DDMI to revise Appendix V Section 6 to reflect the 2023 guidelines referenced in Closure Criterion SW3-1.	3.7.3.1	Next submission	Conformity
12	The Board requires DDMI to update Appendix VI-1 to include specific dust monitoring stations associated with the closure and post-closure monitoring frequency described in Section 5.2.2.2 of the AEMP Design Plan.	3.7.3.1	Next submission	Conformity
13	The Board requires DDMI to revise Appendix VI-I to include commitment to repeat the 2013 Lichen Study.	3.7.3.2	Next submission	Conformity
14	The Board requires DDMI to revise Appendix X-9, in consideration of the level of detail provided in the Approved Snap Lake Revegetation Plan.	3.7.4	Vegetation Submission	Public Review Required
15	The Board requires DDMI to revise Appendix X-9 to include the hyperlink to the University of Alberta revegetation study. To assist Parties' review and in accordance with previous Board direction on providing more specific and helpful	3.7.4	Vegetation Submission	Conformity

	references, moving forward DDMI is to include specific references to sections of the study that support DDMI's statements.			
16	The Board requires DDMI to propose revegetation methods at both WRSAs including a thorough consideration of feasibility and options to passively or actively revegetate both WRSAs. This should include at minimum consideration of vegetation islands as proposed in the CSR	3.7.4.1	Vegetation Submission	Public Review Required
17	The Board requires DDMI to include clear description of what candidate species were considered and rationale for the species selected. This is to include species identified in the baseline studies as candidate species.	3.7.4.2	Vegetation Submission	Public Review Required
18	The Board requires DDMI to revise Appendix X-9 to include active/passive approach to revegetation of species native to East Island with supporting rationale. Propose/revise a performance criterion to evaluate these species.	3.7.4.2	Vegetation Submission	Public Review Required
19	The Board requires DDMI to revise Appendix VI to reflect the level of detail in the approved Snap Lake Revegetation Plan Section 6.0, including a response framework.	3.7.4.4	Vegetation Submission	Public Review Required
20	Within three months of submission of the deadline for the updated TKMF, DDMI is to revise Appendix VI and/or WMMP as appropriate to propose a more thorough evaluation of Closure Objectives SW8 and SW10.	3.7.6	TKMF	Public Review Required
21	The Board requires DDMI to include a table that identifies how EMAB comments 56 to 70, 74, and 75 will be addressed by the additional information provided in the PKCF component-specific FCRP.	3.9.1	PKCF Component-specific FCRP	Public Review Required
22	The Board requires DDMI to propose additional criterion (P2-4) to evaluate physical stability of the Zone 2 region (e.g., bearing capacity) including supporting rationale for why this	3.9.2.1	PKCF Component Specific FCRP	Public Review Required

	criterion would limit risk of failure that would affect safety of people or wildlife, in its submission of the PKCF Component-Specific FCRP.			
23	The Board requires DDMI to clarify the frequency and methods by which Closure Criterion P3-1 will be assessed post-closure, in its submission of the PKCF Component-Specific FCRP.	3.9.2.2	PKCF Component Specific FCRP	Public Review Required
24	The Board requires that the North Inlet component-specific FCRP clarify and provide fulsome rationale as to whether it considers the contents of the North Inlet at the time of reconnection with Lac de Gras to be effluent.	3.10.2.1	North Inlet	Public Review Required
25	The Board requires DDMI to revise the relevant monitoring programs to include reference to opportunistic visual monitoring of fish.	3.11.2	Next submission	Conformity
26	The Board requires DDMI to revise the wording of Closure Criteria M9-1 and M9 2 to cross-reference meeting Closure Criteria M1-1 and M4-1, respectively. This revision should be applied throughout the FCRP including relevant appendices (e.g., Appendix VI-1).	3.11.2	Next submission	Conformity
27	The Board requires DDMI to revise the wording of Closure Criterion M9-3 to incorporate that no pit lake habitat-associated fish mortalities or fish stranding observed.	3.11.4	Next submission	Conformity
28	The Board requires DDMI to update the wording of Closure Objective M1 to reflect the requirement of the PKMW EA Measure 1 that water quality be “safe for people, aquatic life, and wildlife”.	3.11.4	Next submission	Conformity
29	The Board requires DDMI to update Appendix X-31 to include implementation of remote turbidity monitoring and at a greater frequency than what is currently proposed.	3.11.5	Next submission	Conformity
30	The Board requires DDMI to update Appendix X-31 to include information	3.11.5	Next submission	Conformity

	regarding the turbidity barriers and alternate mitigations.			
31	The Board requires DDMI to update the text in Appendix V, Table 1-33 for the monitoring requirements associated with Closure Criterion M5-3 to align with the SNP requirements in Licence W2025L2-0001. This will be considered an administrative update for conformity.	3.11.6	Next submission	Conformity

Appendix B: Administrative and Minor Clarifications

Revision Number	Description	Comment Reference
1	Update text in the FCRP, Section 5.2.8.9.2 (Surface Water Management) and Appendix VI-1 to reference Table 3-6 and Table 3-7 not Table 5-10 and Table 5-11.	WLWB staff 5
2	Update the SNP station label for the pond 3 mixing zone station to read " 1645-76MZ" on Figure 3-2 of Appendix VI-1, Section 3.1.4.3 Post-closure Monitoring and Figure 4.4-1 of Appendix VI-2, Section 4.4.2 Sampling Locations.	WLWB staff 7
3	Update Appendix VI-1 Section 3.1.4.4 Comparison to Closure Criteria to remove reference to using a weight of evidence approach and that water quality results from the decommissioned collection ponds will be compared to the numeric criteria and specific measures for stability once approved to assess Closure Criteria SW1 and SW2.	WLWB staff 8
4	Update text in Appendix X-30, Section 4.4 Other Mitigation Measures Water to read "Water withdrawn from Lac de Gras will be discharged from the lake into the dike infields."	WLWB staff 12
5	Update text in Appendix X-30, Section 4.4 Other Mitigation Measures to define the term "SLR" (i.e., sub level retreat, which is a specific method of underground mining employed at Diavik and the open void remaining after mining is complete is referred to as the SLR).	WLWB staff 13
6	Update text in Section 5.2.5.3.3 of the FCRP (Open Pit and Underground Flooding - Pit Breaching Requirements) to specify that reconnection criteria as defined in the Water Licence will be satisfied prior to commencing breaching of the pit dikes.	WLWB staff 14
7	Update text in the FCRP, Section 5.2.5.3.3 Open Pit and Underground Flooding - Pit Breaching Requirements to reference the appropriate Licence requirements and remove ambiguity of having to meet AEMP Benchmarks or being to the satisfaction of the Inspector.	EMAB 41 WLWB staff 16
8	Update column headers in Table 1 in Appendix X-31, Section 2.1 Monitoring Locations to correctly identify coordinates as Easting and Northing.	WLWB staff 28
9	Update in-text version references in Appendix VI-2 to align with the correct version or rephrase the text to eliminate version references, as appropriate.	WLWB staff 34
10	Update text in Appendix VI-2, Section 3.3 Stressors of Potential Concern - Backflooding Pit Lakes to include reference to Appendix X-30 in addition to the SNP for back-flooding monitoring and management requirements.	WLWB staff 36
11	Update text in Appendix VI-2, Section 6.3.1 Water Quality Action Levels, Section 6.3.2 Sediment Quality Action Levels, and Table 6.3-1 - Response Actions to include revisions of existing Effects Benchmarks as a response action to a Low Action Level exceedance.	GNWT-ECC 22 WLWB staff 42

12	Update text in Appendix VI-2, Section 6.3.5 Benthic Invertebrates and Table 6.3-1 - Data Comparison Clarification to include clarification on the direction of change as provided in the response to comment.	WLWB staff 44
13	Update text in Appendix VI-2, Sections 4.4.2 Sampling Locations to specify that dust deposition monitoring will continue for the first five years of post-closure to align with Section 5.2 Dust Deposition - Monitoring Duration and Appendix V, Table 1.6	WLWB staff 45
14	Update text in Appendix VI-2, Section 5.2.4.1 Data Screening to add the following statement "The duplicate snow core and dust fall gauge samples will only be used to validate data quality and will not be included in the data analysis (i.e., duplicate samples will not be averaged)."	WLWB staff 47
15	Update text in Appendix VI-2, Section 5.3.4.4.1 Source Water Quality and Quantity to remove outdated text and add the following statement "Closure criteria defined for closure objectives pertaining to the protection of aquatic life will be assessed based on the results of chemistry and toxicity testing of source water (surface runoff) discharged to Lac de Gras at post-closure conducted under the approved Water Licence (i.e., SNP and SWALF)."	WLWB staff 48
16	Update text in the FCRP, Section 5.2.4.2.1 to specify Section 5.2.8.9.3 as the cross-reference for water treatment contingencies.	YKDFN 9
17	Update text in Section 3.4.3 to clarify the results of lead, strontium, and uranium as provided in the response to comment.	YKDFN 37
18	Update Appendix VI-2, Section 5.3.4.6, Source Water Quality and Quantity to clarify that during interim years, time series plots will be generated for the NFC area only. However, if increasing trends are observed at NFC area stations during an interim year, time series plots will also be developed for the relevant mid-field and far-field stations.	EMAB 167
19	Update Appendix VI-2, Section 5.3, Water Quality to include analysis of dissolved organic carbon.	EMAB 163
20	Update text in Appendix VI-2, Section 5.3.4.3 to incorporate the following into the bulleted list: Criterion 4: Variables that trigger the Low Action Level or greater in the Response Framework (Section 6.3).	EMAB 165
21	Update text in Section 4.4.7.8.1 to reflect recent removal of hydrocarbon-contaminated material from WTA.	GNWT Inspector 1
22	Revise Table 3-27 to indicate water quality SNP station in the NI will be active in the post-closure phase.	EMAB 193
23	Revise column "How Design Will Meet Closure Criteria" associated with closure objectives M1and NI6 in Appendix V, Attachment 1 to remove commentary included in error.	GNWT 14
24	Revise text in NWRSA - objective W2 - Activities to reflect response provided.	EMAB 37
25	Correct table reference to reflect response provided.	EMAB 36

26	Revise p. 129 it states that the PKC pond will be pumped down and beaches allowed to freeze back to align with the approved closure activity.	EMAB 2

Appendix C: Final Closure and Reclamation Plan Decision Summary

Appendix	WLWB Decision
FCRP Body	Approved except where the concepts/activities/monitoring were not approved as discussed in this Reasons for Decision.
Appendix I- Glossary of Terms	The Board considers this supporting information.
Appendix II – List of Acronyms	The Board considers this supporting information.
Appendix III – List of Abbreviations	The Board considers this supporting information.
Appendix IV – List of Units and Symbols	The Board considers this supporting information.
Appendix V – Detailed Tabulation of Closure Objectives and Criteria	See Appendix D for summary of WLWB Decisions on closure criteria and appropriate cross references. Revisions required.
Appendix VI – Monitoring and Maintenance	Appendix VI-1: Approve with revisions except as noted for vegetation (section 3.7.4.4), PKCF post-closure (section 3.9), and the North Inlet (Section 3.10); see section 3.6.1 Reasons for Decision. Appendix VI-2: see section 3.6.2 – Approved with revisions required Appendix VI-3: Additional information required; see section 3.7.6. Appendix VI-4: Approved; see section 3.6.3. Appendix VI-5: Approve closure monitoring only. see section 3.9.
Appendix VII Expected Cost of Closure and Reclamation	The Board considers this supporting information.
Appendix VIII Reclamation Research Status Tracking Table (2021)	The Board considers this supporting information.
Appendix IX Traditional Knowledge Panel Reports and Community Engagement Summaries	The Board considers this supporting information.
Appendix X-1: Diavik Fisheries Act Offsetting Plan – Frame Lake	The Board considers this supporting information.
Appendix X-2: Diavik Fisheries Act Habitat Accounting	The Board considers this supporting information.
Appendix X-3: A418 Pit Crest Ramp Design	Approved with FCRP Version 1.0 and no changes identified.
Appendix X-4: Pit Fill Piping Design	Approved; see Section 3.7.4.
Appendix X-5: Open Pit and A21 Causeway Closure Design	Approved with FCRP Version 1.0 and no changes identified.
Appendix X-6: Openings to Surface Closure Design	Approved with FCRP Version 1.0 and no changes identified.

Appendix	WLWB Decision
Appendix X-7: North Inlet Closure Design	Not approved see Section 3.10.
Appendix X-8: Site-Wide Grading Plan	Approved; see Section 3.12.2.
Appendix X-9: Revegetation Strategy Report	Not approved; see Section 3.7.4.
Appendix X-10: Diavik Mine Site – Current Projected Climate Parameters	The Board considers this supporting information.
Appendix X-11: Remedial Strategy Report	Not approved; see Section 3.12.1.
Appendix X-12: Surface Water Management	Approved; see Section 3.7.2.
Appendix X-13: Landfill Cover Design	Approved; see Section 3.12.3.
Appendix X-14: Diavik Processed Kimberlite Contained facility Closure Design Zone 1 Cover Placement Methodology	Removed in Version 1.1.
Appendix X-15: Diavik Processed Kimberlite Containment Facility Rockfill Option Closure Design	Approved design as part of the WLWB's March 1, 2024 Reasons for Decision.
Appendix X-16: Diavik Diamond Mine North Country Rock pile Closure Design	Design was previously considered with 2018 approval, no changes identified.
Appendix X-17: South Country Rock Pile Closure Design	Removed.
Appendix X-18: Hydrocarbon Bioremediation of Sludge Generated by a Wastewater Treatment System in the Canadian Arctic	The Board considers this supporting information.
Appendix X-19: Closure Site-water Balance Model	The Board considers this supporting information.
Appendix X-20: Diavik Diamond Mines Closure Feasibility Study Site Water Quality Model	The Board considers this supporting information.
Appendix X-21: Hydrodynamic and Water Quality Modelling of Pit Lakes and Lac de Gras	The Board considers this supporting information.
Appendix X-22: Rationale for Assessed Runoff Mixing Zones During Post-Closure	The Board considers this supporting information.
Appendix X-23: Effects of Pumping During Pit-filling Period on Lac de Gras Water Volumes and Lake Outflows	The Board considers this supporting information.
Appendix X-24: Diavik Diamond Mines Climate Change Assessment	The Board considers this supporting information.
Appendix X-25: Human Health and Ecological Risk Assessment	The Board considers this supporting information.
Appendix X-26: Hilfiker Wall and Highwall Buttressing Slopes Closure Design	Approved with FCRP Version 1.0 and no changes identified.
Appendix X-27: Surveillance Network Program	The Board considers this supporting information.
Appendix X-28: Parameters of Potential Concern Screening	Approved with revisions required; see Section 3.7.1.5

Appendix	WLWB Decision
Appendix X-29: Climate Change Design Sensitivity	The Board considers this supporting Information
Appendix X-30: Diavik Diamond Mines Back-Flooding Plan	Approved for A21 and A154 pits; see Section 3.11.3 Defer Decision to back-flooding submission for A418 pit
Appendix X-31: Total Suspended Solids and Turbidity Monitoring Plan for In-Lake Construction at the Diavik Diamond Mine	Approved with revisions; see Section 3.11.5
Appendix XII: Concordance Tables	The Board considers this supporting information.
Appendix XIII: Excerpts from: Environment Canada. 2009. Environment Canada Code of Practice for Metal Mines. PRS, 1/MM/17 E. April 2009; and INAC. 2007. Mine Site Reclamation Guidelines for the Northwest Territories. January 2007	The Board considers this supporting information.

Appendix D: Closure Criteria Summary

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
SITE-WIDE			
SW1. Surface runoff and seepage water quality that is safe for humans and wildlife.	**SW1-1** – Surface runoff and seepage water quality that meets Human Health – Recreation Use Guidelines (Table 2).	Approved	FCRP Version 1.1 Section 3.7.1.2
	SW1-2 - Surface runoff and seepage water quality that meets Wildlife Direct Consumption (Table 2).	Previously approved	FCRP Version 1.0 Reasons for Decision
SW2. Surface runoff and seepage water quality that will not cause adverse effects on aquatic life or water uses in Lac de Gras or the Coppermine River.	**SW2-1** –Surface water and seepage quality concentrations are less than Closure Surface Runoff and Seepage Closure Criteria listed in Table 4(a).	Not approved. Decision deferred To be considered with mixing zone decision through the SES Report for decommissioned collection ponds 2 and 7.	FCRP Version 1.1 Section 3.7.1.
	SW2-2 – No acute toxicity (96 hr Rainbow Trout, 48 hr *Daphnia Magna*).	Previously approved	FCRP Version 1.0 Reasons for Decision
	SW2-3 – Closure results show stable or improving conditions in Lac de Gras relative to Operations and background conditions.	Approved	FCRP Version 1.1 Section 3.7.1.4
SW3. Dust levels safe for people, vegetation, aquatic life, and wildlife.	**SW3-1** – Dustfall below the Northwest Territories Ambient Air Quality Objectives and Guidelines (GNWT 2023)	Approved	FCRP Version 1.1 Section 3.7.3.1

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	for residential/parkland areas (1.75 mg/dm2-day).		
	SW3-2 – Trend analysis confirms a decrease in dustfall post-closure compared to operations.	Approved with revisions	FCRP Version 1.1 Section 3.7.3.1
SW4. Dust levels do not adversely affect use and safety of vegetation consumption by wildlife. [REVISED]	**SW4-1** - Monitoring evidence of post-closure wildlife use of area.	Closure Objective SW4 and Closure Criterion SW4-1 approved.	FCRP Version 1.1 Section 3.7.3.2
	SW4-2 – Metals concentrations measured in soils and lichens during postclosure will not significantly exceed metals concentrations measured during operations	Approved	FCRP Version 1.1 Section 3.7.3.2
SW5. Re-vegetation targeted to priority areas.	**SW5-1** – Final revegetation procedures applied to priority areas as established with communities and approved by WLWB.	Approved	FCRP Version 1.1 Section 3.7.4.3
	SW5-2 – Seed applied according to final revegetation procedures at a minimum rate of 25 kg/ha.	Not approved	FCRP Version 1.1 Section 3.7.4.3
	SW5-3 – Achieved 5% mean plant coverage on revegetated areas, resulting in a mean plant coverage of approximately 35% (land only) over East Island	Not approved	FCRP Version 1.1 Section 3.7.4.3
	SW5-4 – Minimum of four plant species are present in active seeding areas at year 5 postclosure and five plant species are present	Approved	FCRP Version 1.1 Section 3.7.4

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	in active seeding areas in year 10 post-closure		
	SW5-5 – No invasive alien plant species present.	Approved	FCRP Version 1.1 Section 3.7.4.3
SW6. Ground surface designed to drain naturally follow pre-development drainage patterns.	**SW6-1** – Satisfactory final inspection of drainage construction by a professional engineer, confirming that the works have been carried out in accordance with the final approved detailed design.	Previously Approved	FCRP Version 1.0 Reasons for Decision
	SW6-2 – Inspections at freshet indicating that no obstructions or erosion are present in the drainage that are either: a) generating a reversal in flow direction, or b) causing changes in the drainage that significantly modify channel locations or the pathway of flow through the topography.	Approve	FCRP Version 1.1 Section 3.7.2
SW7. Areas in and around the site that are undisturbed during operation of the mine should remain undisturbed during and after closure.	**SW7-1** – Mine footprint area less than 13 km2 post-closure (Footprint is the directly disturbed area as used in the Wildlife Effects Monitoring Program for direct habitat/ vegetation loss.)	Previously approved	See June 10, 2021 WLWB Decision; Section 3.9.5 Site-Wide Issue #5: Landscape and Aesthetics
SW8. Predation of caribou is not associated with residual features of the site.	**SW8-1** – No regular or systemic predation of caribou associated with residual features of the Mine site as would be	Approved	FCRP Version 1.1 Section 3.7.6

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	suggested by repeated year over year observation of predation or remains at the same former mine feature.		
SW9. Landscape features (topography and vegetation) that match aesthetics and natural conditions of the surrounding natural area.	**SW9-1** – Satisfactory final inspection of construction by a professional engineer, confirming that works have been carried out in accordance with the final approved detailed designs.	Previously Approved	FCRP Version 1.0 Reasons for Decision
	SW9-2 Annual inspections to verify that landscape features continue to conform to design, and that there are no visible buildings, equipment, residual construction waste or other non-local materials on site. See SW5 for revegetation criteria.	Previously Approved	FCRP Version 1.0 Reasons for Decision
		Removed and included as SW11-5.	FCRP Version 1.1 Section 3.7.5
SW10. Safe passage and use for caribou and other wildlife.	**SW10-1** – Wildlife use of reclaimed areas will be assessed based on the recording of signs of wildlife activity using incidental observation, remote cameras, or collar data once there is no longer a site presence.	Approved	FCRP Version 1.1 Section 3.7.4.6

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
SW11. Mine areas are physically stable and safe for use by people and wildlife.	**SW11-1** – Final inspection by a professional engineer confirming construction according to design.	Previously approved	FCRP Version 1.0 Reasons for Decision
	SW11-2 – Inspections by a professional engineer where: a) no failures scarps resulting in vertical faces over 1.2 m in height have been identified and b) no tension cracks greater than 0.5 m in width across opening and deeper than 1.2 m have been identified. See also area specific criteria M5, P2, NI6, and W1.	Approved	FCRP Version 1.1 Section 3.7.7
	SW11-3 – Confirmation by the designated authority that closure of Mine openings was completed in accordance with the Mine Health and Safety Act	Approved with Revisions. Revisions removed reference to GNWT department.	FCRP Version 1.1 Section 3.7.7
	SW11-4 - Acceptable performance results as assessed by a Professional Engineer through geotechnical investigations in snow free conditions. Acceptable results are defined as a concluding statement in the record report signed off by a Professional Engineer that landforms are	Approved with revisions. Revisions added to reflect response to WLWB 72.	FCRP Version 1.1 Section 3.7.7

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	performing as designed and are physically stable. See also area specific criteria M5, P2, and NI6.		
	SW11-5 - Final Inspection of site by professional engineer verifying that site components without engineered closure designs have a Low Instability Hazard rating under the Waste Dump and Stockpile Stability Rating and Hazard Classification (WSRHC) System.	Approve with revisions. Revisions reflect DDMI proposed as SW9-3.	FCRP Version 1.1 Section 3.7.5
SW12: Placeholder for Risk Communication Objective			FCRP Version 1.1, Section 3.1.2
OPEN PIT, UNDERGROUND, AND DIKE AREAS			
M1. Water quality in the flooded pit and dike area that is similar to Lac de Gras or, at a minimum, protective of aquatic life.	**M1-1** – AEMP Benchmark within the top 40m of water column.	Decision to update Closure Objective M1 to reflect the requirement of the PKMW EA Measure 1 that water quality be "safe for people, aquatic life, and wildlife Previously approved	FCRP Version 1.1 Section 3.11.5 FCRP Version 1.0 Reasons for Decision
	M1-2 – Cultural use criteria are met within the top 40 m of water column	Approve as placeholder for cultural use criteria.	FCRP Version 1.1, Section 3.11.4

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	of the A418 pit containing processed kimberlite.		
M2. Pit and dike closure that do not have adverse effects on water uses in Lac de Gras, the Coppermine River, or groundwater use.	**M2-1** – Water quality meets closure criteria M1-1. (see also M6-1 and M6-2)	Previously approved	FCRP Version 1.0 Reasons for Decision
M3. Fish habitat compensation projects to off-set fish habitat temporarily lost during operations. (REVISED)	**M3-1** – Habitat compensation completed to the satisfaction of Fisheries and Oceans Canada as per Article 5.3 Authorization SC98001.	Approved Closure Objective M3 Approved M3-1	FCRP Version 1.1, Section 3.11.1
M4. Safe small craft navigation through dike and pit area.	**M4-1** – Breaches in dikes to be a minimum of 30 m wide by 2 m deep as per Transport Canada approval.	Previously approved	See June 10, 2021 WLWB Decision;
M5. Physically stable pit walls and shorelines to limit risk of a failure impacting people, aquatic life or wildlife.	**M5-1** – Final inspection by a professional engineer confirming construction according to design.	Previously approved	FCRP Version 1.0 Reasons for Decision
	M5-2 – Geotechnical performance meets closure criteria SW11-2 and SW11-4.	Approved with revisions	FCRP Version 1.1, Section 3.7.7
	M5-3 – No sudden unexpected change to chemocline, if present, based on comparison of observed water quality data to predicted chemocline.	Approved	FCRP Version 1.1 Section 3.11.6
M6. Pit fill rate that will not cause adverse	**M6-1** – Water levels in Lac de Gras remain above historic daily	Approved	FCRP Version 1.1, Section 3.11.3

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
effects on water levels in Lac de Gras and Coppermine River	minimum Lac de Gras water level to ensure Lac de Gras and Coppermine River remain within natural fluctuations.		
	M6-2 – Flows in the Coppermine River are protected through adherence of pumping rates to Fisheries and Oceans Canada's *Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada.* (Approved; WLWB 2021)	Previously approved	See June 10, 2021 WLWB Decision; Section 3.13.1 Pits Issue #1: Pit Flooding
M7. Pit fill rate that will not cause adverse effects on fish or fish habitat in Lac de Gras and Coppermine River	**M7-1 –** Water levels in Lac de Gras meet closure criteria M6-1 during pit filling.	Approved	FCRP Version 1.1, Section 3.11.3
	M7-2 – Flows in the Coppermine River meet closure criteria M6-2 during pit filling.	Approved	FCRP Version 1.1, Section 3.11.3
M8. Wildlife safe during filling of pits.	**M8-1** – No mortalities to wildlife caused by filling of pits.	Previously approved	See June 10, 2021 WLWB Decision; Pits Issue #2
M9. Reconnection allows access to fish habitat inside pit lakes. (NEW)	**M9-1** – Breaches in dikes meet closure criteria M4-1.	Approved Closure Objective M9 Approved M9-1 with revisions	FCRP Version 1.1, Section 3.11.2
	M9-2 – Water quality meets closure criteria M1-1.	Approved with revisions	FCRP Version 1.1, Section 3.11.2
	M9-3 – Pit lake habitat is safe for fish and no pit lake habitat-associated	Approved with revisions	FCRP Version 1.1, Section 3.11.2

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	fish mortalities or fish stranding observed.		
WASTE ROCK AND TILL AREA			
W1 Physically stable slopes to limit risk of failure that would impact the safety of people or wildlife. (North and South WRSA)	**W1-1** – Final inspection by a professional engineer confirming construction according to design.	Previously approved for North WRSA.	FCRP Version 1.0 Reasons for Decision
	W1-2 - Geotechnical performance meets closure criteria SW11-2 and SW11-4.	Approve with revisions.	FCRP Version 1.1, Section 3.7.7
	W1-3 – Final inspection by professional engineer confirming WRSA-SCRP meets Waste Dump and Stockpile Stability Rating and Hazard Classification (WSRHC) System Low Instability Hazard rating.	Approved	FCRP Version 1.1, Section 3.8.2
W2 Rock and till pile features (shape and appearance) that match aesthetics of the surrounding natural area. (North and South WRSA)	**W2-1 –** Demonstration that W1-1 and W1-3 are met.	Approved with revisions Revisions reflect response to WLWB staff comment 73 to remove "continued"	FCRP Version 1.1, Section 3.8.3
	W2-2 – Inspections indicate NCRP continue to meet W1-1 and W1-2;	W2-2 approved for North WRSA	FCRP Version 1.1, Section 3.8.3

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	SCRP continues to meet W1-3 and W1-2. See also SW9.		
W3 Contaminated soils and waste disposal areas that cannot contaminate land and water. (North WRSA only)	**W3-1 -** Final inspection of waste disposal area by a professional engineer confirming construction according to design.	Approved	FCRP Version 1.1, Section 3.12.3
	W3-2 - Thermal monitoring (supplemented with thermal modelling as needed) demonstrates that potential sources of contamination are contained within the frozen zone, below the active layer. If PAG material is not predicted to remain contained within the frozen zone, water quality predictions demonstrate that freezing is not required. .	Approved with revisions	FCRP Version 1.1, Section 3.8.1
	W3-3 – No hydrocarbon impacts (TPH < 3.0 mg/L) in surface water downstream of contaminated materials facility (Pond 1). Refer to Closure Objective SW1 and SW2 for additional information on criteria applicable to water sampling	Previously approved	FCRP Version 1.0 Reasons for Decision

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	W3-4 - Surface runoff and seepage water quality that meets SW1-1 criteria	Approved with revisions. Revisions are new criteria to cross reference sitewide criteria.	FCRP Version 1.1, Section 3.8.1
	W3-5 - Surface runoff and seepage water quality that meets SW1-2 criteria.	Approved with revisions. Revisions are new criteria to cross reference sitewide criteria.	FCRP Version 1.1, Section 3.8.1
W4. PAG rock stored so that it does not contaminate the land and water.	**W4-1** – Thermal monitoring (supplemented with thermal modelling as needed) continues to demonstrate W3-2 is met.	Approved	FCRP Version 1.1, Section 3.8.1
PROCESSED KIMBERLITE CONTAINMENT			
P1. No adverse effects on people, wildlife, or vegetation.	**P1-1** Dustfall meets closure criteria SW3-1 for closure and post-closure.	Approved	FCRP Version 1.1, Section 3.9.2.1
	P1-2 - Surface runoff, Seepage, and pond water quality that meets SW1-1 criteria.	Approved with revisions.	FCRP Version 1.1, Section 3.9.2
	P1-3 - Surface runoff, seepage, and pond water quality that meets SW1-2 criteria.	Approved with revisions.	FCRP Version 1.1, Section 3.9.2
P2. Physically stable processed kimberlite containment area to	**P2-1** – Satisfactory final inspection of the PKC facility and cover	Previously approved	FCRP Version 1.0 Reasons for Decision

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
limit risk of failure that would affect safety of people or wildlife.	construction by a professional engineer, confirming that the works have been carried out in accordance with the final approved detailed design.		
	P2-2 – Inspections of the dams by a professional engineer where: a) Rockfill shell material loss (due to gullies or animal activity) is less than 1 m deep. b) Deformation rate in the downstream direction not increasing. c) No observed instability or indicated potential future instability in dams based on evaluation of monitoring data representing passive care conditions and observations by a professional engineer.	Approved	FCRP Version 1.1, Section 3.9.2
	P2-3 – Geotechnical performance of cover meets closure criteria SW11-2 and SW11-4.	Approved with revisions	FCRP Version 1.1, Section 3.7.7
	P2-4: PLACEHOLDER	Direction to Propose additional criterion to evaluate physical stability of the Zone 2 region (e.g., bearing capacity)	FCRP Version 1.1, Section 3.9.2

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
P3. Prevent processed kimberlite from entering the surrounding terrestrial and aquatic environments.	**P3-1** – Geotechnical inspections indicating no visible fine processed kimberlite outside the PKC facility. Refer to Closure Objective P2 for stability and cover integrity criteria. Refer to Closure Objective SW3 for dust fall monitoring. Refer to Closure Objective SW2 for water quality monitoring.	Approved	FCRP Version 1.1, Section 3.9.2
NORTH INLET			
NI1. Reestablish flow between North Inlet and Lac de Gras. (REVISED)	**NI1-1** – Final inspection by a professional engineer confirming construction according to design.	Approved closure objective NI1 Not approved NI-1	FCRP Version 1.1, Section 3.10.1
	NI1-2 – Final inspection by a professional engineer continues to demonstrate flow-through cell is performing as designed.	Not approved	
	NI1-3 – Water levels are the same on both sides of the flow through structure.	Not approved	
NI2. Water quality and sediment quality in the North Inlet that is safe for aquatic life, wildlife, and people.	**NI2-1** – AEMP benchmark for water quality achieved.	Previously approved	FCRP Version 1.0 Reasons for Decision

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	NI2-2 – Sediment F3 hydrocarbon levels below 1,500 mg/kg.	Not approved	FCRP Version 1.1, Section
REMOVAL OF : **NI3**. Suitable fish habitat in the North Inlet.		Approve removal	FCRP Version 1.1, Section 3.10.1
REMOVAL OF : **NI4**. Water quality in the North Inlet that is as similar to Lac de Gras as possible.		Not approve removal. To be considered with component-specific FCRP	FCRP Version 1.1, Section 3.10.1
NI5. Water and sediment quality in the North Inlet that will not cause adverse effects on aquatic life or water uses in Lac de Gras or the Coppermine River.	**NI5-1** – AEMP benchmark for water quality achieved.	Previously approved	FCRP Version 1.0 Reasons for Decision
	NI5-2 – Sediment F3 hydrocarbon levels below 1,500 mg/kg.	Not approved	
NI6. Physically stable banks of the North Inlet to limit risk of failure that would impact the safety of people or wildlife.	**NI6-1** – Final inspection by a professional engineer confirming construction according to design.	Not approved	
	NI6-2 – Geotechnical performance meets closure criteria SW11-2 and SW11-4.	Not approved	
MINE INFRASTRUCTURE			
I1. Opportunities for communities to re-use infrastructure, allowable under	**I1-1** – Conditions of Socio-Economic Monitoring Agreement (SEMA) met.	Approved	FCRP Version 1.1, Section 3.12

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
regulation and where liability is not a significant concern.			
I2. On-site disposal areas that are safe for people, wildlife, and vegetation.	**I2-1** – Surface runoff water quality that meets SW1-1 criteria.	Approved	FCRP Version 1.1, Section 3.12
	I2-2 – Surface runoff water quality that meets SW1-2 criteria.	Approved	FCRP Version 1.1, Section 3.12
	I2-3 – Inspections of the waste disposal area cover by a professional engineer where geotechnical performance meets closure criteria SW11-2 and SW11-4.	Approved with revisions.	FCRP Version 1.1, Section 3.12
I3. Prevent remaining infrastructure from contaminating land or water.	**I3-1** – Surface runoff water quality that meets SW1-1 criteria.	Approved	FCRP Version 1.1, Section 3.12
	I3-2 – Surface runoff water quality that meets SW1-2 criteria.	Approved	FCRP Version 1.1, Section 3.12
	I3-3 – Surficial material quality in infrastructure areas has hydrocarbon levels below Table 3(a) and glycol levels below 960 mg/kg following infrastructure demolition and waste removal.	Previously approved	FCRP Version 1.0 Reasons for Decision
	I3-4 – If contaminated surficial material associated with site infrastructure are left in-situ, piezometric wells downstream of contaminated surficial	Approved	FCRP Version 1.1, Section 3.12.1

Closure Objective	Closure Criteria[(a)]	WLWB Decision	Relevant Reasons for Decision Section
	material location(s) show no free petroleum hydrocarbon product and show no migration of TPH through groundwater (i.e., TPH < 3.0 mg/L and there is no visible hydrocarbon sheen).		

(a) Tracked changes indicate a change from what was proposed by DDMI in the FCRP Version 1.1.