

Attachment 1 – EMAB Assessment of How Diavik has Addressed Requirements of draft Water Licence Schedule 8, Part 3 – Description of Decommissioning Plan

The Decommissioning Plan referred to in Part J, Condition 9, shall include but not be limited to::	
a) Plain language summary of the Plan and proposed closure criteria.	Done
b) A conformity table identifying how applicable direction from the Board’s Reasons for Decision for Version 4.1 of the Interim Closure and Reclamation Plan was addressed, including at minimum Decision 7; Revisions 5, 6, 9, 15, 16, 17,18; and Engagement Requirements 2.	Done – EMAB does not agree with some assessed conformities
c) A description of the pond being Decommissioned, including:	
i. Purpose and dimensions of pond;	Done
ii. Details of water and waste streams in the pond catchment and considered/adopted source controls;	Done
iii. A description of closure plans, closure activities, and associated timelines that may influence the water and waste streams in the pond catchment;	Done
iv. Description of the potential influence of outstanding closure activities on the water and waste streams in the pond catchment, with supporting evidence as necessary;	Done
v. A summary of previous decommissioned ponds, if any, and how information collected from decommissioning the pond will inform decommissioning of subsequent ponds;	Proposed approach does not explicitly provide for learnings from previously decommissioned ponds
vi. Other supporting rationale for decision to Decommission the pond.	
d) Details on the Decommissioning process, including:	
i. Demolition plan and design, including, location and dimensions of breach excavation;	Done
ii. Description of how the Licensee considered whether a controlled Discharge may be an appropriate research activity prior to reconnection;	Not Done – Diavik determined without evidence that this was not practical
iii. For any controlled releases for research purposes, describe the research purpose and methodology;	Not Done – Diavik determined research was not relevant/useful
iv. Long-term monitoring and maintenance of the Decommissioned component.	Some questions regarding robustness of designs for long-term maintenance. Period proposed for monitoring may not be adequate
e) Assessment of potential effects and associated predictions, including:	
i. Summary of relevant historical data for runoff, seepage, collection ponds, and/or the Receiving Environment;	Done
ii. Rationale and any supporting evidence, to support conclusion that sediments within the collection pond will not become a source of contamination;	Done – some concerns about adequacy of assessment
iii. Discussion of how predicted water quality in the catchment may be influenced during progressive reclamation and active closure;	Done – some concerns about potential for earthworks to result in elevated TSS
iv. Post-closure water quality predictions within the catchment (i.e., runoff, seepage, and relevant streams, lakes, or ponds);	Done – some questions about modelling
v. Post-closure water quality predictions at catchment Discharge and within the Receiving Environment, including:	No predictions for catchment discharge

1. Plain language description of the nature and spatial extent of the mixing zone;	Not Done - Model limitations do not allow predictions of the mixing zone. ARC 1 does not represent the mixing zone.
2. Map(s) to illustrate at minimum the spatial extent of the mixing zone predicted to exceed the AEMP benchmark for most restrictive parameter presented as the 50th and 95th percentile;	Not Done - See comment above on (e)(v)(1)
3. Post-closure 50th and 95th percentile dilution factor at multiple distances including: 100m and the edge of the mixing zone;	Not Done - See comment above on (e)(v)(1)
4. Post-closure 50th and 95th percentile chemistry at multiple distances including: point of Discharge, 100m, and the edge of the mixing zone	Not done at location of discharge into Lac de Gras, 100m or edge of mixing zone due to model limitations
5. A description of how the dilution required to meet benchmarks varies over time;	See comments above regarding prediction of mixing zone on (e)(v)(1)
6. Any additional information needed to fully understand the nature and size of the mixing zone beyond the most restrictive parameter; and	See comment above on (e)(v)(1)
7. Assessment of the mixing zone against the 13 decision criteria set out in section 3.0 of the MVLWB/GNWT Guidelines for Effluent Mixing Zones;	Appendix X-22 Table 1, Row 1 refers to 100 meters as the standard minimum distance for dimensions of mixing zone; this should be the <b>maximum</b> distance. EMAB's review of the locations of ARC1 shows none are less than 200 meters and at least 6 are at 500meters
vi. Design details and results of any investigations undertaken, if any, to determine the potential impacts to aquatic life within the mixing zone and the extent of sublethal effects:	Not done as described since ARC1 does not represent the mixing zone
vii. Explanation of how information from previously decommissioned ponds, if any, informs the current predictions;	Not done – see comment on (c)(v)
viii. Design details and results of investigations undertaken, if any, to understand the anticipated mixing and associated effects (e.g., plume delineation study);	Not Done - See comment above on (e)(v)(1)
ix. A description of the parameter screening, if any, completed for the proposed Discharge water chemistry; and	Done – some concerns as described in intervention
x. Rationale for whether the existing requirements of Part G (i.e., Part G, Conditions 33- 37, and 40) are appropriate or additional/revised Effluent Quality Criteria may be required.	Not Done – Diavik argues the discharge is not a waste so no need for EQC
f) Closure criteria details including:	
i. Identification of the Closure Objectives and Closure Criteria that implementation of the Plan is to satisfy in whole or in part	Done – EMAB has concerns about proposed changes to Criteria for SW1 and SW2
ii. Identification, with rationale, of new or updated Closure Objectives and/or Closure Criteria being proposed, including:	Done – EMAB has concerns about proposed changes to Criteria for SW1 and SW2
1. SW1 and SW2 criteria for the decommissioned catchment that include a list of contaminants of potential concern with rationale;	Not Done
2. Consideration of new closure criteria and/or objective(s) to assess effects in the Receiving Environment, including sediment quality, with rationale; and	Done – EMAB has concerns about proposed changes to Criteria for SW1 and SW2
3. Consideration, with rationale, of a SW2 criterion to address extent of sublethal effects	Done – EMAB has concerns about proposed changes to Criteria for SW1 and SW2
iii. Discussion of how effects on cultural uses were considered in the proposed mixing zones.	Not Done

g) Details of any applicable monitoring to be completed prior to, during, or following the Decommissioning of collection pond, including but not limited to:	
i. Sampling plan for seepage and runoff, including flow runoff monitoring;	Done – EMAB has concerns about the proposed sampling locations, timing etc.
ii. Sampling plan to evaluate effects of reconnection on the Receiving Environment, this must consider:	
1. Monitoring to demonstrate performance against SW1 and SW2 criteria, including chronic and acute toxicity;	Done – EMAB has concerns about proposed SW1 and SW2 Criteria and SWALF
2. Monitoring to evaluate the extent of mixing both within and surrounding the mixing zone;	Not Done – no plume delineation. Also see comment above on (e)(v)(1)
3. Monitoring to confirm the size of the mixing zone and extent of sublethal effects;	Not Done - See comment above on (e)(v)(1) and EMAB concerns about sampling locations and timing
4. Monitoring to assess potential effects of water quality on cultural uses;	Not Done
5. Monitoring to evaluate triggers identified in Schedule 8, Condition 3(h).	Not Done – EMAB has several concerns about proposed SWALF triggers and actions
6. Sediment sampling plan;	Not Done
7. Benthic invertebrate sampling;	Not proposed within mixing zone
8. Fish sampling;	Not proposed within mixing zone
9. Consideration of targeted water sampling during periods of maximum predicted effects;	Not Done
10. Consideration of intermittent nature of the Discharge;	Not Done
iii. Details on when and how results will be reported; and	Done
iv. Consideration of new technologies to maximize data collection during freshet.	Not Done
h) Discussion of triggers and response actions:	
i. Triggers, approach, and timelines to implement controls to restore water collection;	Done – EMAB has several concerns about proposed SWALF triggers and actions
ii. Implications of restoring Collection Pond System for the specific pond;	Done – EMAB has several concerns about proposed SWALF triggers and actions
iii. Identification of any additional contingency options, if any; and	Done – EMAB has several concerns about proposed SWALF triggers and actions
iv. Identification of additional triggers and response actions, if any.	Done – EMAB has several concerns about proposed SWALF triggers and actions
i) Engagement log for Plan; and	Done
j) Any additional information as requested by the Board.	N/a