August 22, 2022

Assol Kubeisinova
Technical Advisor, NWB
P.O. Box 119
Gjoa Haven, NU X0B 1J0

RE: Submission of 2022 Geotechnical Inspection Report No. 1 (June 2022)

Under Part D, Item 18 of Baffinland Iron Mines Corporation's (Baffinland) Type "A" Water Licence 2AM-MRY1325 Amendment No. 1 (Water Licence), Baffinland is required to conduct biannual geotechnical inspections of specified Mary River Project (the 'Project") infrastructure. Part D, Item 18, of the Water Licence states that:

> "The Licensee shall conduct inspections of the earthworks and geological and hydrological regimes of the Project biannually during the summer or as otherwise approved by the Board [Nunavut Water Board] in writing. The inspection shall be conducted by a Geotechnical Engineer and the inspection report shall be submitted to the Board within sixty (60) days of the inspection, including a cover letter from the Licensee outlining an implementation plan to respond to the Engineer's recommendations."

The first geotechnical inspection for 2022 was conducted by Laszlo Bodi, M.Sc., P.Eng., Principal Civil/Geotechnical Engineer with Wood Environment and Infrastructure Solutions. The focus of the inspection was on the Water Licence related infrastructure located at the Mary River Mine Site and Milne Port. The first geotechnical inspection for 2022 was conducted between June 21 and 24, 2022.

During the inspection, the following structures and facilities were inspected:

Mary River Mine Site

a) Berms of Polishing/Wastewater Stabilization Ponds (3)
b) Berms of hazardous waste disposal cells - (HWB-1 to HWB-7)
c) MS-06, MS-07, MS-08 and MS-11 surface water collection/settling ponds and adjacent ditches
d) Berms of the generator fuel bladder cell (located adjacent to the generators)
e) Fuel storage farms (3) – Aerodrome jet-fuel storage, MS-03 and MS-03B diesel fuel farms
f) Solid-waste disposal site (non-hazardous landfill facility)
g) Camp Lake silt sedimentation check dams and berms
h) Rock fill slope (riprap) at the water (effluent) discharge area
i) Deposit 1 pit walls
j) QMR2 rock quarry, and KM106 ore storage area

Milne Inlet Port Site

a) Berms of hazardous waste disposal cells - (HWB-1 through to HWB-4)

b) Berms of the MP-01A Polishing Waste Stabilization Pond (PWSP)
c) Berms of the MP-03 fuel tank farm
d) Berms of the MP-04 landfarm and MP-04A contaminated snow disposal pond
e) Berms of Pond #3, MP-05, and MP-06/MP-06A settling ponds and drainage ditches
f) Q01 rock quarry
g) Surface water collection ditches (P-SWD-3, -5, -6, -7, W3/W14, 380M pad and PSC ditches)
h) Tote Road culverts (conveying surface water from the Q01 rock quarry area)

No culvert crossings or other infrastructure associated with construction activities was completed over the past year along the Tote Road connecting the Mary River and Milne Inlet Port sites. Therefore, watercourse crossings (bridges and culverts) along the Tote Road were not inspected during the first geotechnical inspection in 2022. Some of the culvert recommendations included in the 2021 geotechnical reports involve work at fish-bearing culvert locations. Baffinland is working with Fisheries and Oceans Canada (DFO) to develop plans to address fish passage issues along the Tote Road at specific locations. A Request for Review was submitted to DFO in May 2022, and DFO staff visited the Mary River site in June 2022 to inspect fish-bearing crossing locations along the Tote Road. Engagement with DFO is required prior to in-water remedial works. A plan is being developed to prioritize and complete corrective actions at the remaining identified culvert crossings and embankments in 2022; pending further engagement with DFO and any additional authorizations that may be required.

The attached report (Attachment 1) presents the findings and recommendations of the June 2022 inspection for the aforementioned structures. The following subsections of this letter summarize Baffinland's plan for implementing the recommendations identified in the report.

Recommendations for the Mary River Mine Site Infrastructure

Polishing/Waste Stabilization Ponds – PWSP-2, PWSP-3

The surface appearance was not found to be orderly at the front of the water discharge pipes at the middle of the south-western perimeter berm (between PWSP-2 and PWSP-3). Pieces of timbers and miscellaneous other items are utilized as weight to secure the liner. It is recommended to clean-up this area and remove all hard materials, other than used tires, from above the liner.

Baffinland Action: Clean up of this area is ongoing and Baffinland will remove all hard materials, other than used tires, from above the liner (Completion Q3 2022).

Hazardous Waste Berm – HWB-2

Wooden pallets observed in the cell should be removed to prevent potential damage to the liner.

Baffinland Action: Baffinland will remove the wooden pallets and wooden pallet debris from HWB-2, to prevent potential damage to the liner, during routine maintenance activities.

Hazardous Waste Berm – HWB-4

There is some wooden pallet debris left in HWB-4, which should be removed during regular maintenance.

Baffinland Action: Baffinland will the wooden debris from HWB-4, to prevent potential damage to the liner, during routine maintenance activities.

Hazardous Waste Berm – HWB-6

Some disturbance from foot-traffic was noted on sections of the berm. The cell was recently emptied and the internal subgrade was disturbed by truck-traffic. After the area dries, the disturbed granular subgrade must be leveled/regraded. The regrading operation should not damage the liner.

Baffinland Action: Baffinland will relevel/regrade the disturbed subgrade within the cell after the area dries in a manner that does not damage the liner (Completion Q3 2022). Berm sections disturbed by foot traffic will be maintained during routine maintenance activities. Baffinland continues to educate personnel on access to berms.

Hazardous Waste Berm – HWB-7

The crest of the east berm appears to be lower than the other sections of the perimeter berm providing only minimal freeboard along this section of the berm. Consideration shall be given to raise this section of the berm, or alternatively remove and treat the water from the cell.

Baffinland Action: Stormwater retained within containment areas associated with the Project's HWBs is discharged to the receiving environment following water quality analysis and treatment, if required. Baffinland will continue to discharge stormwater from HWB-7 as needed to ensure adequate freeboard is maintained within the pond.

MS-08 – Surface Water Management Pond Adjacent to the Waste Rock Facility (WRF)

A section of the rock fill berm and liner at the south west berm of the pond have been damaged recently. The damaged berm section and liner should be repaired as soon as practically possible.

Baffinland Action: Baffinland will repair the damaged berm section and liner (Completion Q3 2022).

MS-11 – Surface Water Management Pond and Dam at KM105

Some frost related damages were observed along the road next to the southern zone of the MS-11 pond's slope. It appears that large ice pockets were likely present in the ground during construction of the pond during the fall and winter which likely thawed during the start of summer resulting in cracks within the ground near the surface. The area of frost/thaw impacted zones must be regraded/filled as soon as practically possible to prevent water collection in those cracks in the future.

Baffinland Action: Baffinland evaluated the presence of cracks along the road next to the southern zone of the MS-11 pond's slope. The cracks resulted from material moving down the slope on the pond's liner. Observations noted by Baffinland engineers; the liner is intact and there is no risk to the integrity of construction as it appears the slope has stabilized.

Following the June inspection, an unrelated containment seepage event occurred at the KM105 pond. The third-party design consultant was retained to evaluate remediation measures to address the issue. Their analysis of data provided from site investigations and observations indicates the seepage likely originated

immediately upstream of the northwest embankment geo-membrane tie-in trench; at the area where the trench transitions from the upstream embankment to the abutment slope. Baffinland is reviewing the potential remedial options for repair provided by the third-party consultant to determine appropriate corrective actions. Once appropriate corrective actions are determined, the remedial repair plan for the MS-11 pond will need to be actioned. The MS-11 area will be revisited by the third-party Geotechnical Engineering during the second geotechnical inspection to inspect the seepage area.

Historic Generator Fuel Bladder Berm

A large low-lying area of the adjacent road was flooded by run-off water (melted snow) during the June inspection. The low area should be filled (raised) with sand and gravel, and the water diverted away from the cell's berm by excavating properly designed and constructed drainage ditches to prevent potential erosion of the berm's toe and slope. In addition to raising the road elevation, re-establishment of the original berm configuration (downstream slope) using compacted granular fill should also be completed. Water runoff issues were previously identified at this area in 2021.

Baffinland Action: Remedial earthworks improvement measures were implemented for the adjacent roadway prior to freshet 2022. Further water management improvement work is required to ensure the long-term stability of the berm. An assessment completed prior to freshet 2022 identified potential remedial options for long-term water management in this area. Baffinland is currently reviewing the potential options to determine the appropriate long-term corrective action. Baffinland will re-establish the berm to the original configuration using compacted granular fill to prevent potential for local berm instability (Completion Q3, 2022) and implement suitable remedial water management improvements (Completion prior to freshet 2023).

Solid Waste Disposal Area

Surface water was ponding along a section of fence during the June inspection, and some of that water may flow out of the facility uninterrupted. To prevent the migration of suspended solids into the surrounding environment, it is recommended that an erosion and sediment control berm be constructed inside the fence. Similar observations were made during the first geotechnical inspection in 2021.

Baffinland Action: Water quality results at surface water drainage monitoring stations located down-gradient of the non-hazardous waste landfill do not indicate any impact to the downstream receiving environment from surface water runoff at the solid waste facility. Baffinland will continue to monitor the ponding water and receiving environment water quality and will implement mitigation measures if monitoring indicates a potential water quality issue.

QMR2 Rock Quarry

Ponding water continues to cover a section of the main level of the quarry, with potential to cause slope stability and traffic safety issues in the area.

Baffinland Action: Baffinland commits to continuing to manage surface water drainage in the quarry including implementation of water management strategies as needed and installation of erosion control protection measures at strategic locations. Surface water is diverted as needed during the open water season and will continue to be a focus after rain events.

Recommendations for Milne Port Infrastructure

HWB-3 and HWB-4

A thick layer of granular fill was placed inside the cells during the 2021 refurbishing operation. It is suggested that the top of the fill be removed/regraded to contain potential spills of stored fuel and contact water within the cells. During the regarding operation, approximately 300 mm thick granular protective fill layer should be left in place over the liners and the integrity of the liners must be maintained.

Baffinland Action: Baffinland recently completed regrading work at the entrance of HWB-3/HWB-4. An assessment of that work will be completed and, if necessary, additional regarding will be completed within the cells as recommended to ensure potential spills and contact water remain contained within the facility (Completion August 31, 2022).

MP-05 Settling Pond

Minor liner damage was noted on the west slope of the southern inlet channel to the pond. Consideration should be given to place protective berms adjacent to the slope's crest near the channel to prevent such damages.

Baffinland Action: Baffinland is continuing to review snow clearing practices for protection of this area and to determine if there are suitable controls to prevent recurring minor liner damage). Baffinland will repair the liner damage on the west slope of the southern inlet channel (Completion Q3 2022).

Surface Water Drainage Ditch - P-SWD-3

Sloughing of the sides of the P-SWD-3 ditch, adjacent to the LP2 laydown area, has occurred at several locations along the ditch. It is suggested that the existing condition of the P-SWD-3 drainage ditch and adjacent topography be re-evaluated, and that the ditch be redesigned and reconstructed to drain the large amount of surface water to the correct direction. It is also suggested that the snow stockpile adjacent to the drainage ditch be relocated to reduce flow to the ditch and allow for more efficient surface flow conditions during freshet.

Baffinland Action: Baffinland started remedial actions in 2021 and will complete the remaining improvement work (Completion Q3, 2022). Following completion of the remedial actions, Baffinland will continue to monitor the existing drainage of the P-SWD-3 drainage ditch and adjacent topography to ensure remedial actions address this issue (Completion Q3 2022). In the interim, all water will continue to be actively pumped downstream of this area to the proper receiving location until permanent remedial work to the drainage ditch is complete.

Surface Water Drainage Ditch - P-SWD-5

A short section of the P-SWD-5 ditch was noted with missing riprap and continuous water seepage from the side-slope was observed during the recent inspection. The side-slope should be covered with geotextile and rock fill riprap should be placed at this section to prevent unwanted seepage, and erosion of the soil present at the base and slopes of the ditch. Due to the increased localized seepage from the quarry at this location, placement of a more robust riprap slope protection is recommended. There is also

a clogged culvert along this ditch, located beneath the road at the entrance to the quarry. The clogged culvert should be cleaned or replaced if necessary; preferably with a larger diameter culvert.

Baffinland Action: Baffinland has initiated remedial actions to repair the slopes at the identified section of the P-SWD-5 ditch (Completion Q3 2022). Baffinland will assess the clogged culvert to determine appropriate corrective actions to reestablish proper drainage flow (Completion Q3 2022).

Surface Water Drainage Ditch P-SWD-6

The invert of the ditch is located at higher elevation than seasonal ponding water adjacent to the northern end of the ditch and it is suggested that a pump be installed and the ponding water be pumped into the ditch as needed.

Baffinland Commitment: Baffinland actively pumps seasonal ponding water from the identified area into the drainage ditch as needed.

W3/W14 Surface Water Collection Ditch and Culvert

During the inspection, short-term high flow was observed in the W3/S14 drainage ditch. To drain the increased flow more efficiently, it was suggested that the ditch be extended toward the west.

Baffinland Action: Baffinland will monitor ditch flow and will review options to extend the W3/W14 drainage ditch if more efficient drainage becomes necessary.

Surface Water Drainage Ditch – PSC

The PSC drainage ditch is still under construction, however, minor localized slope movements/failure at the west end of the ditch should be repaired, regraded and the riprap rock fill cover reinstated. Consideration should be given to reshape the west section of the ditch and reinstall the culvert to a lower invert level to prevent ponding in this section of the ditch.

Baffinland Action: Baffinland completed the repair and regrade of the identified area in the ditch where localized slope movements/failure have occurred and reinstated the riprap rock cover. Baffinland will inspect and if required, repair the invert level of the west ditch section culvert, prior to completion of the construction of the PSC drainage ditch.

We trust that this submission meets the requirements for geotechnical inspections as outlined in the Water Licence. Should you have any questions, please do not hesitate to contact the undersigned.

Regards,

Connor Devereaux
Environmental Manager

Attachments:
Attachment 1: 2022 Geotechnical Inspection Report No. 1

Cc: Karén Kharatyan (NWB)
Chris Spencer, Hugh Karpik (QIA)
Lauren Perrin, Omer Pasalic, Jeremy Fraser (CIRNAC)
Tim Sewell, Megan Lorde-Hoyle, Lou Kamermans, Sylvain Proulx, Francois Gaudreau, Martin Beausejour, Todd Swenson, Allison Parker (Baffinland)

Baffinland

Attachment 1

2022 Geotechnical Inspection Report No. 1

2275 Upper Middle Road East, Suite 300 | Oakville, ON, Canada L6H 0C3
Main: 416.364.8820 | Fax: 416.364.0193 | www.baffinland.com

Baffinland Iron Mines Corporation

August 21, 2022,
Project #: OMGM2212

Annual Geotechnical Inspections – 2022 Report 1.

Mary River Project – Nunavut

Mary River – View of the Camp – Source: Baffinland

August 21, 2022,
OMGM2212

Mr. Connor Devereaux - Environmental Manager, Mary River Iron Mine, Baffinland Iron Mines Corporation
2275 Upper Middle Road East, Suite 300
Oakville, Ontario
L6H 0C3

Re: Annual Site Inspections and Reporting - Mary River Iron Mine Complex, Nunavut

Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited (Wood), has been retained by Baffinland Iron Mines Corporation to carry out Annual Geotechnical Engineering Services at the Mary River Project in Nunavut. Based on information and guidance provided in connection with the site's infrastructure, the undersigned has completed the first of the two (2) required inspections for 2022 and summarized the findings in the following report. In addition to field observations, the following reports and design drawings had also been reviewed:

- Annual Geotechnical Site Inspections (2018 August and October) – B.H. Martin Consultancy
- Annual Geotechnical Site Inspections (2019) – Wood Environment & Infrastructure Solutions
- Annual Geotechnical Site Inspections (2020) – Wood Environment & Infrastructure Solutions
- Annual Geotechnical Site Inspections (2021) – Wood Environment & Infrastructure Solutions
- KM105 Sedimentation Pond Design Brief and Issued for Construction Drawings – Knight Piésold Consulting (June 28, 2021)

We trust that the content of this report meets your expectations. Should you have any questions regarding the details presented in the following document, please do not hesitate to contact our office.

Sincerely,

Wood Environment & Infrastructure Solutions a Division of Wood Canada Limited

REGISTERED PROFESSIONAL ENGINEER
L. BODI
LICENSEE
NT/NU

Laszlo Bodi, M.Sc.; P.Eng. – Principal Civil/Geotechnical Engineer
Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited

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1.0 Introduction

Wood Environment & Infrastructure Solutions (Wood), has completed the first geotechnical field inspection of 2022 at the Mary River Project, which is a condition of the Type "A" Water Licence No: 2AM-MRY1325 – Amendment No.1 ("Water Licence").

Based on the requirements outlined in the Water Licence, the field inspections shall include the review of various facilities and structures that contain waste materials (hazardous and non-hazardous), and store or retain/convey water (settling ponds and ditches) at the Mary River Mine and Milne Inlet Port sites. The field review included visual assessment of the current condition of the berms, ditches and slopes, and reporting on potential seepage or stability problems at the ponds and waste disposal areas, if any.

Baffinland indicated that no culvert crossings or other infrastructure associated with construction activities was completed over the past year along the Tote Road connecting the Mary River and Milne Inlet Port sites. Therefore, watercourse crossings (bridges and culverts) along the Tote Road were not inspected during the first geotechnical inspection in 2022.

As specified by the Nunavut Water Board, the condition of selected infrastructure components at the mine and port sites need to be visually inspected twice a year and documented by photographs. The inspected structures and facilities in the summer (June) of 2022 included the following infrastructure components:

A. Mary River Mine Site

a) Berms of Polishing/Wastewater Stabilization Ponds (3)
b) Berms of hazardous waste disposal cells - (HWB-1 to HWB-7)
c) Perimeter berms at the MS-06, MS-07, MS-08 and MS-11 surface water collection/settling ponds and slopes of adjacent ditches
d) Berms of the generator fuel bladder cell (located adjacent to the generators)
e) Fuel storage farms (3) – Aerodrome jet-fuel storage, MS-03 and MS-03B diesel fuel farms
f) Solid-waste disposal site (non-hazardous landfill facility)
g) Camp Lake silt sedimentation check dams and berms
h) Rock fill slope (riprap) at the water (effluent) discharge area
i) Deposit 1 pit walls
j) Exposed rock face in the QMR2 rock quarry, and diversion berm at the KM106 ore storage area

B. Milne Inlet Port Site

a) Berms of hazardous waste disposal cells - (HWB-1 through to HWB-4)
b) Berms of the MP-01A Polishing Waste Stabilization Pond (PWSP)
c) Berms of the MP-03 fuel tank farm

d) Berms of the MP-04 landfarm and MP-04A contaminated snow disposal pond
e) Berms of Pond #3, MP-05, and MP-06/MP-06A settling ponds and drainage ditches
f) Exposed rock face in the Q01 rock quarry
g) Surface water collection ditches (P-SWD-3, -5, -6, -7, W3/W14, 380M pad and PSC ditches)
h) Tote Road culverts (conveying surface water from the Q01 rock quarry area)

The above listed infrastructure components were visually inspected between June 21 and 24, 2022, by the author of this report, Laszlo Bodi M.Sc.; P.Eng. of Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited. During the inspection, the current condition of the structures was visually inspected, and the findings are summarized in the following report. The locations of the inspected structures, berms, settling ponds and ditches are shown in the following figures:

a) **Mary River Mine site** – (Central Zone - Figure 1), (Eastern Zone - MS-08 settling pond and a pond next to the treatment plant adjacent to the Waste Rock Facility (WRF), Pit 1, MS-07 (KM106) and MS-11 (KM105) settling ponds - Figure 2), (Northern Zone - Figure 3), (Rock quarry - Figure 4), (Southern Zone – MS-06 settling pond, non-hazardous landfill, and effluent discharge area - Figure 5).
b) **Milne Inlet Port site** – (Northern Zone - Figure 6 and Southern Zone - Figure 7).

Photographs of the inspected structures are shown in the following documents (attached to the report):

a) Appendix A: Mary River Mine site – Figures 8 to 41
b) Appendix B : Milne Inlet Port site - Figures 42 to 71

Figure 1: **Site layout – Mary River Mine Site - Central Zone** - with the two fuel farms (MS-03 and MS-03B), and the MS-06 settling pond (located adjacent to the Crusher Facility).

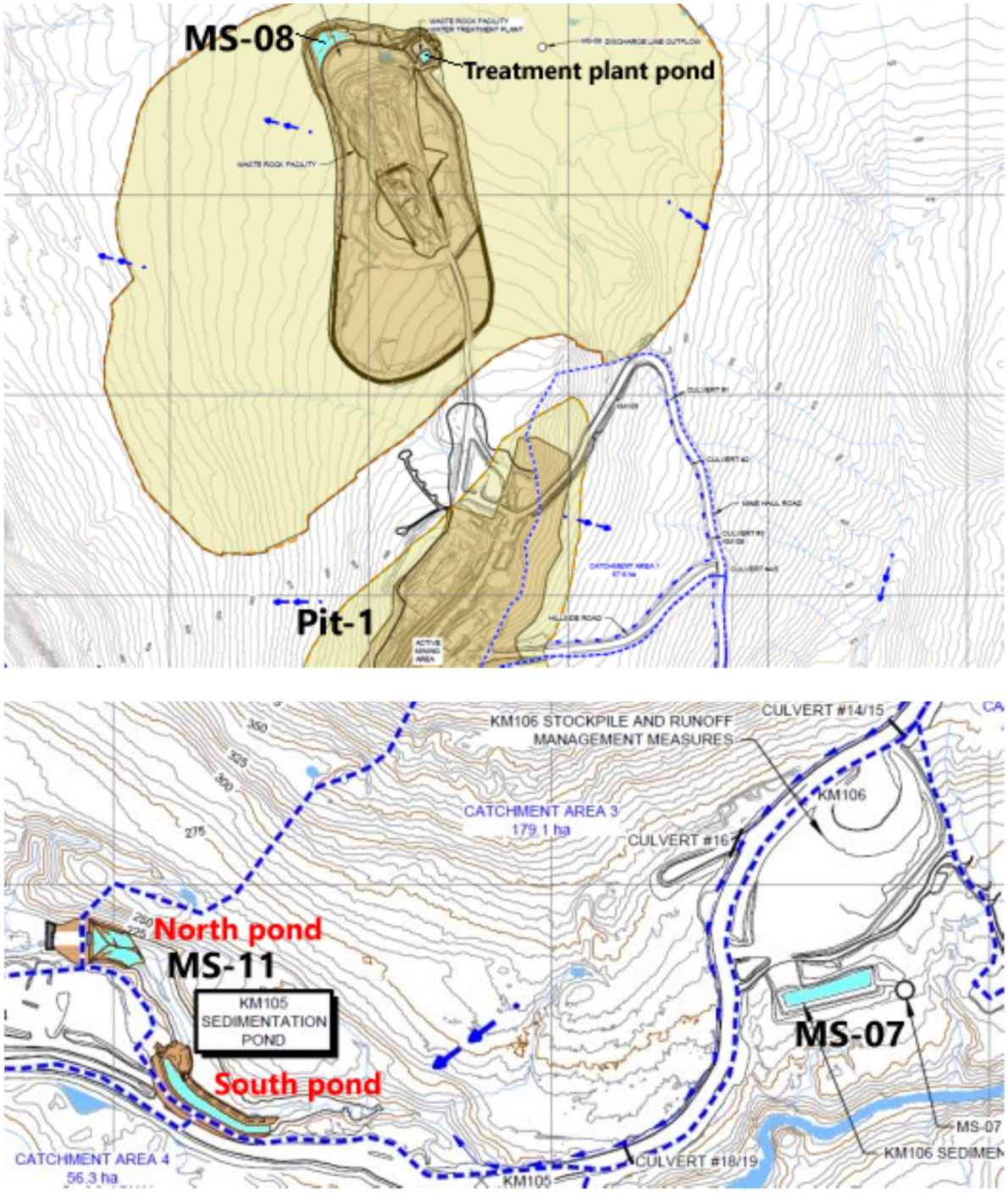

Figure 2: **Site layout** - **Mary River Mine Site – Eastern Zone** – MS-08 settling pond and a pond next to the treatment plant adjacent to the Waste Rock Facility (WRF), Pit 1 (upper map), MS-07 (KM106) and MS-11 (KM105) settling ponds (lower map).

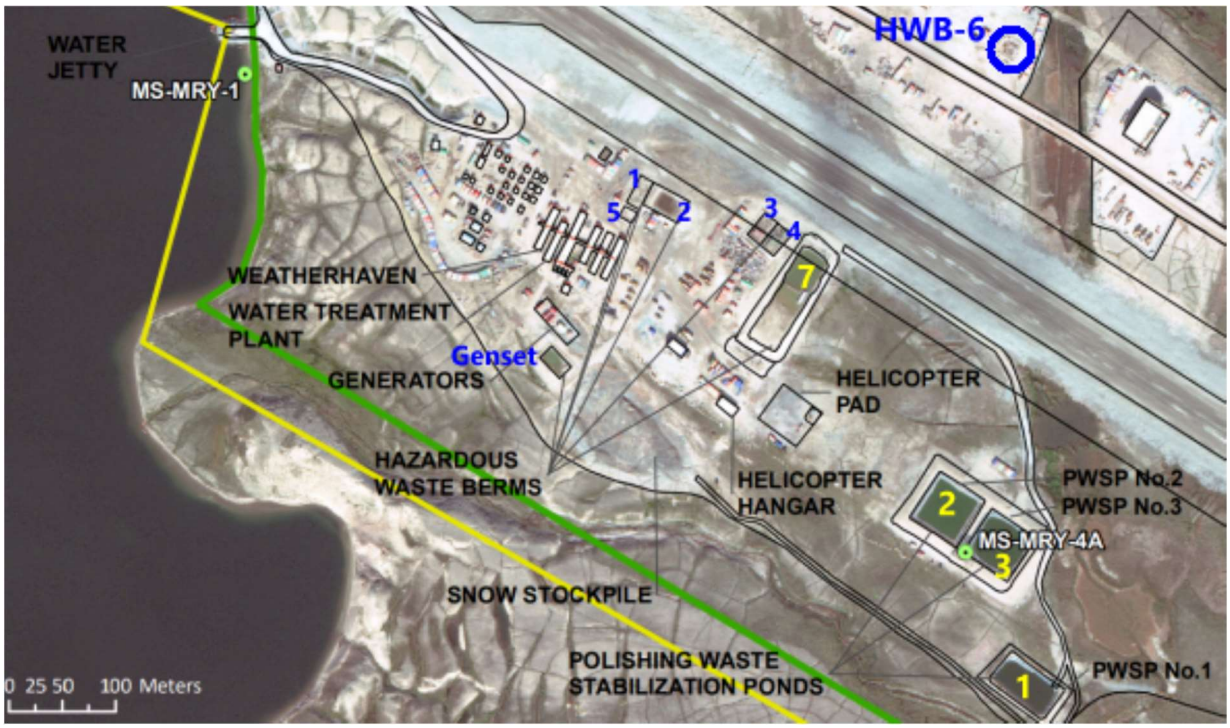

Figure 3: **Site layout – Mary River Mine Site** - **Northern Zone** - with ponds and hazardous waste cells

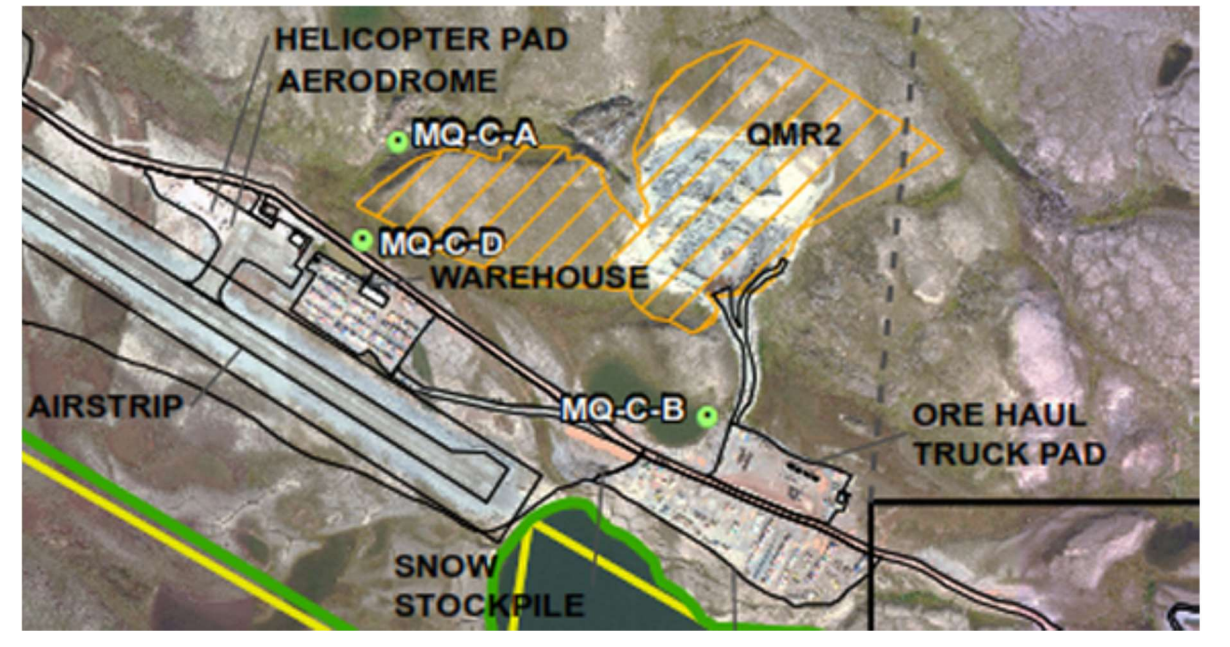

Figure 4: **Site layout – Mary River Mine Site** – QMR2 rock quarry area

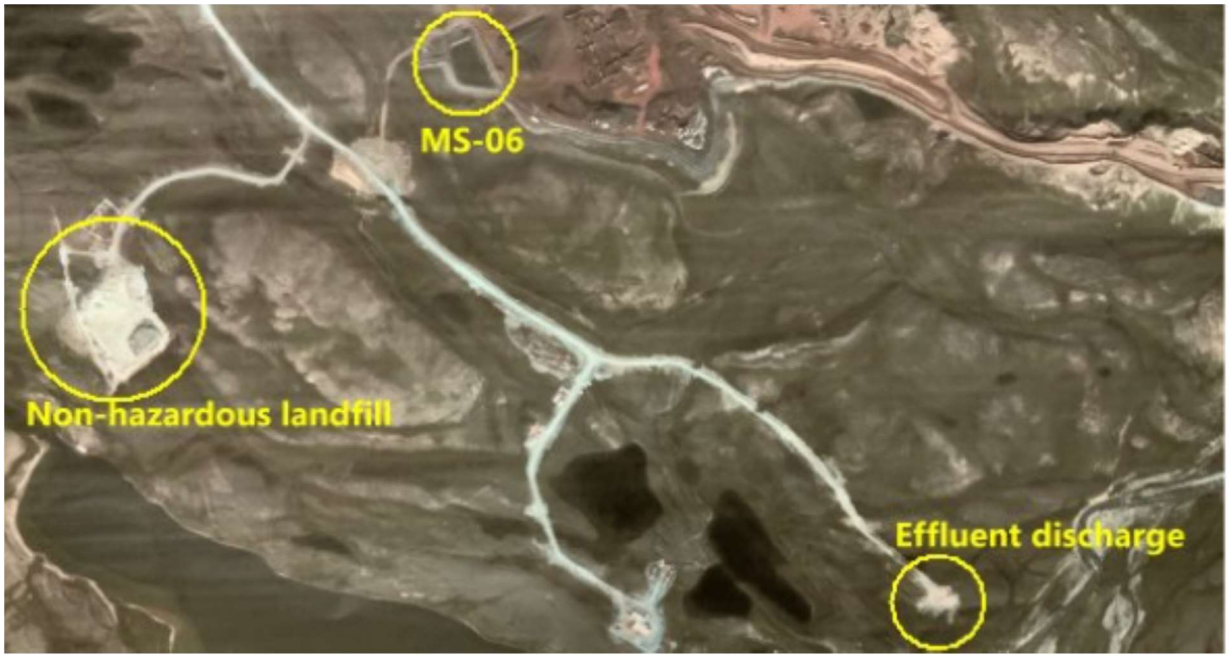

Figure 5: **Site layout – Mary River Mine Site** – Southern Zone - MS-06 settling pond, non-hazardous landfill, and effluent discharge areas

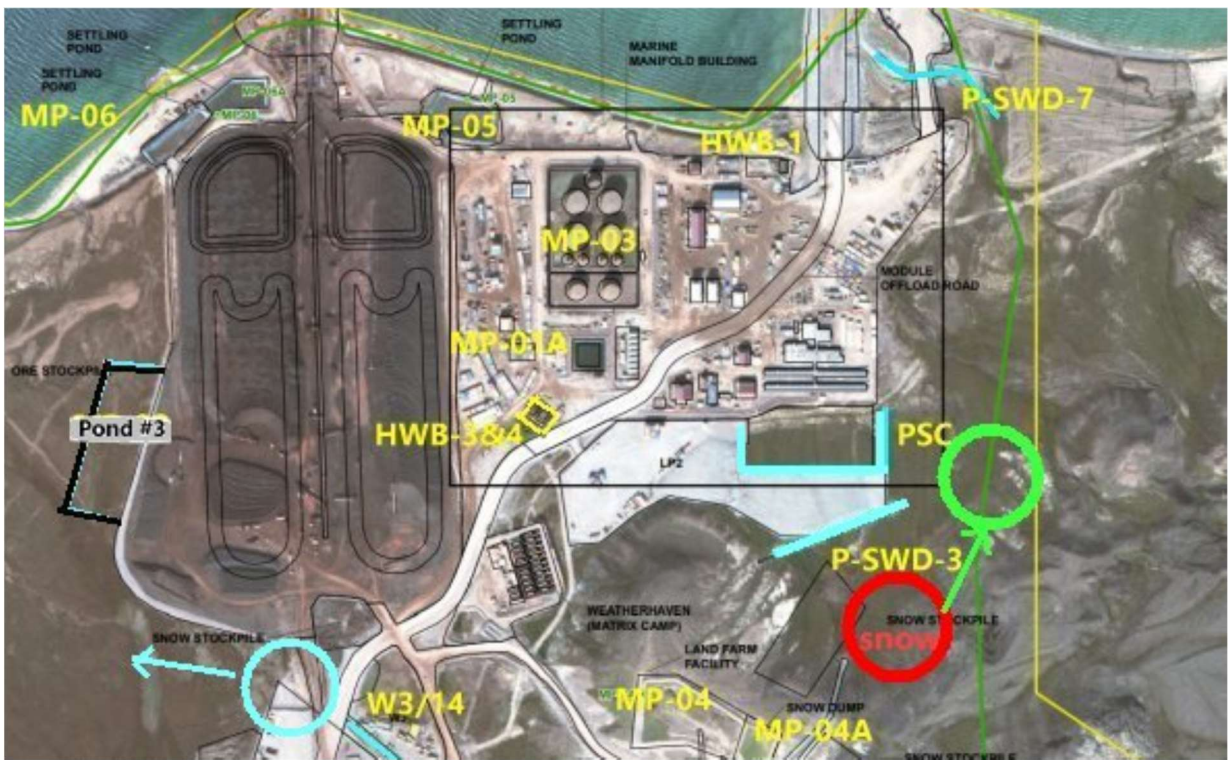

Figure 6: **Site layout – Milne Inlet Port Site** – Northern Zone

Figure 7: **Site layout – Milne Inlet Port Site** – Southern Zone

Details of the recent condition survey program of the individual structures, reviewed in June 2022, are summarized in the following sections of the report. Relevant photographs are shown in Appendix A, and B.

2.0 Mary River Mine Site

2.1 Polishing/Waste Stabilization Ponds (3 PWS ponds)

There are three (3) polishing/waste stabilization ponds, located adjacent to the airstrip, as shown in Figure 3. Pond #1 is a single structure, while Ponds #2 and #3 were constructed as twin-cells, as shown in Figure 8. This photograph is a historic aerial image showing the robust, stable berms around the three (3) ponds. These ponds were associated with the exploration phase of the mine, and currently serve as emergency holding ponds in case problems should arise, which would prevent the discharge of treated effluent directly to the receiving environment. The robust, stable berms around these ponds generally comprise granular materials (rock fill, sand, and gravel), supporting High Density Polyethylene (HDPE) geomembrane liners. The liners are secured in anchor trenches on the crest of the berms, and no damage is visible on the membranes on the upstream face of the slopes (see figures 9 to 11).

As shown in the relevant images, the berms around the three (3) ponds are stable, having shallow downstream slopes. Based on visual inspection of the berms' materials, these structures were built using non-frost-susceptible compacted granular materials. It appears that the subgrade around the berms comprise thaw-stable, predominantly granular soils with trace to some fines (silts and clays). Hence, the berms are assumed to have stable foundations, which is further supported by the fact that there are no indications of ground displacement (settlement) or sloughing at and around the berms. In summary, the robust berms are structurally stable with no sign of seepage from any of the three (3) ponds.

A relatively common issue, although not a problem, in water storage ponds is the appearance of so-called "whales" within the ponds. Whales are localized sections of the liners which have risen (float) above the surface of shallow water, particularly in shallow ponds, where the weight of water above the liner is minimal. Such small "whales" were visible during recent inspections, including the June 2022 inspection, at PWS ponds #2 and #3. Figure 11 shows one "whale" in pond #3, noticed during the inspection in June 2022. Similar "whales" were noticed and recorded during previous inspections in the past; however, no damage to the liner or seepage from the ponds was visible, including during the current survey/inspection in June 2022.

The surface appearance was not found to be orderly at the front of the water discharge pipes at the middle of the south-western perimeter berm at its juncture with the central berm between Ponds #2 and #3. Pieces of timbers and miscellaneous other elements (e.g., used tires etc.) are utilized as "weight" to secure the liner in-place at the berm's crest and slopes at this location. It is recommended to clean-up this area and remove all hard materials, other than used tires, from above the liner. Tires have no detrimental effect on the liner but protect the liner from potential wind uplift.

2.2 Hazardous Waste-Cell Berms (HWB-1 to HWB-7)

There are seven (7) hazardous waste storage cells with perimeter berm structures located at the Mary River mine site (HWB-1 to HWB-7). HWB-6 is located at the north side of the airstrip near the incinerator, while the other six (6) cells are located along the south side of the airstrip, as shown in Figure 3. All HWB cells are lined with HDPE liner, and comprise shallow, stable and lined perimeter berms, constructed from locally available, generally granular (sand and gravel) soils. Each HWB cell has a controlled/ramped access point provided for trucks and skid-steers to dispose of and remove materials within the cells; constructed as previously recommended to limit foot and truck traffic on the slopes and crest of the berms. There is no visible instability at the berms (sloughing, excessive settlement, or tension cracks), other than some soil displacement/disturbance caused by foot traffic on the surface of sections of the slopes and crests at a few locations, as shown in the relevant images in Appendix A. It is recommended that foot traffic on the slopes and crest of the berms continue to be limited.

a) HWB-1

This cell is currently empty, as shown in Figure 12. As reported previously, concerns had been raised in the past to suspected potential liner damage within this cell, and consequently no material has been stored in this cell since this concern was identified. Baffinland has previously committed to removing the old liner from this cell and replacing it with a new one should use of the HWB be required in the future, prior to storing material in the cell.

b) HWB-2

As shown in Figure 13, some heterogeneous soil is currently stored in this cell. Materials stored previously on wooden pallets have been recently removed. The perimeter berms around the cell appear to be stable and no visible seepage from the cell was noted around the berm. Ponding water in the cell indicates that the HDPE liner is intact, and that the cell is operating as intended. It is recommended that the wooden pallets be removed from the cell to prevent potential damage to the liner.

c) HWB-3 and HWB-4

These cells were constructed as "twin-cells" and were called "Fuel Containment" cells in historic inspection reports. As shown in Figures 14 and 15, there are fuel barrels stored on wooden pallets in both cells (jet-fuel and diesel). The berms and liner around and within the cells appear to be in good condition and no seepage from either of the cells was noted. Wooden pallet fragments, shown in Figure 15, should be removed from the cells during regular maintenance work to prevent potential damage to the liner.

d) HWB-5

As shown in Figure 16, the cell is currently empty. The shallow berms around this cell appear to be stable and there is no visible liner damage in the cell. Should material be stored in this cell again it may become necessary to regrade the granular fill within the cell to prevent potential liner damage in the future. Baffinland has previously committed to removing the old liner from this cell and replacing it with a new one should use of this HWB be required in the future, prior to storing material in the cell.

e) HWB-6

The berms around this cell have been regraded and stabilized recently using clean granular fill. Some disturbance from foot-traffic was noted on sections of the berm during the recent site visit (June 2022). As shown in Figure 17, the cell was recently emptied, and the internal subgrade was disturbed by truck-traffic. After the area dries, the disturbed granular subgrade, which protects the liner, must be leveled/regraded. The regrading operation should not damage the liner.

f) HWB-7

One (1) large fuel tank and a few plastic containers are stored in this large cell, as shown in Figure 18. The robust perimeter berms around the cell appear to be stable and the visible water (rain and melted snow) within the cell is indicative of adequate liner performance. As shown in Figure 19; however, the crest of the east berm appears to be lower than the other sections of the perimeter berm providing only minimal freeboard along this section of the berm. Consideration shall be given to raise this (north-east) section of the berm, or alternatively remove and treat the water from the cell.

2.3 MS-06, MS-07, MS-08 and MS-11 Surface Water Collection Ponds and Ditches

a) MS-06 – Surface Water Collection Pond Adjacent to the Crusher Pad

The MS-06 settling pond generally collects surface water from the area of the crusher pad. The rainwater and melted snow are collected in side-ditches around the crusher pad and conveyed to the MS-06 settling pond. There are two (2) intake locations to the pond at the northeast and southeast corners, and there is an emergency spillway located opposite the intakes. The spillway was extended in 2018/2019 and the berm's crest raised. Details of that work were summarized in a Construction Summary Report, dated December 2019. The liner within the pond and on the upstream slopes of the berm appeared to be intact (see Figure 20), and no wet downstream slopes or toe seepage from the pond were visible at the time of the inspection. The side slopes of the well-maintained surface-water collection ditches leading to the pond were observed to be stable (see Figure 21) and the ditches are unobstructed.

b) MS-07 – Surface Water Collection Pond Adjacent to the Run-of-Mine (ROM) Ore Storage

The MS-07 settling pond is located adjacent to the KM-106 Run of Mine (ROM) Ore Stockpile area. It collects storm water and snowmelt runoff originating from the KM106 stockpile. Runoff water is intercepted by perimeter collection ditches around the KM106 stockpile and directed to the MS-07 pond. The pond has stable, robust perimeter berms and intact geomembrane liner, as shown in Figure 22. No stability or seepage related problems were observed at this pond during the recent site visit in June.

c) MS-08 – Surface Water Collection Pond Adjacent to the Waste Rock Facility (WRF)

Waste rock from the open pit mining operation is disposed in the WRF, which consists of waste rock stockpiles, the MS-08 sedimentation pond, and perimeter drainage ditches constructed around the facility. Surface runoff and seepage from the WRF is collected in the ditches and directed to the MS-08

pond. The MS-08 settling pond is surrounded by stable berms, as shown in Figure 23 in Appendix A. The pond is lined with exposed new HDPE liner that is secured in place in anchor trenches, extending down into the permafrost zone along the WRF.

At the time of the June 2022 inspection, ice and snow still covered the pond, as shown in Figure 23. As pointed out earlier, contact water from the WRF is drained to perimeter ditches and the collected water flows to the settling pond from the east and west. As shown in Figure 24, the drainage ditches are well maintained, having stable slopes.

Water from the MS-08 pond is pumped to the nearby designated facility for treatment, if required. There is a lined treatment cell, located immediately next to the water treatment plant, with generally stable perimeter berm. However, a section of the rock fill berm and liner at the south-west berm of the cell have been damaged recently, as shown in Figure 25. The damaged berm section and liner should be repaired as soon as practically possible.

d) MS-11 – New Surface Water Collection Pond at KM105

The KM105 settling pond (MS-11), shown in Figure 2, was designed, and constructed recently to provide sediment control for runoff, originating from the following catchment areas:

- The undisturbed areas upslope of the Mine Haul Road (MHR) and the KM105 ponds from which runoff cannot be easily diverted to other areas,
- The section of the MHR near the ponds, and
- The area of the ponds themselves.

As per the design, the runoff from the above areas flows overland into the pond or is conveyed to the pond by the runoff collection ditch, located along the MHR. The pond includes an emergency spillway with an invert elevation of 220.5 m, the design maximum water level in the pond. At normal water level the pond has two separate areas: the "north and south ponds", as shown in Figure 2. As specified in the design, the upstream slopes of the pond embankments are lined with a geomembrane liner, underlain by non-woven geotextile as a cushion layer. The geomembrane liner and non-woven geotextile extend up the interior (upstream) slope of the embankments and are anchored at the crest. The geomembrane liner is covered with an additional layer of geotextile and a layer of compacted liner bedding, which in turn is covered with a layer of compacted transition zone 1 material followed by more rockfill (riprap), as shown in Figure 26.

Figure 27 shows the stable spillway of the pond that consists of a trapezoidal shaped inlet, constructed through the crest of the northwest embankment, and a stepped gabion basket outlet channel. A boulder apron is also shown in the image; constructed at the base of the spillway outlet channel, to dissipate energy as the runoff leaves the spillway.

Figure 28 shows some frost related damages along the road next to the southern zone of the MS-11 pond's slope. It appears that large ice pockets were likely present in the ground during construction of the pond during the fall and winter, and those ice pockets remained within the ground near the road. During the start of summer those ice pockets likely thawed, resulting in the wide cracks within the ground near the surface. The area of frost/thaw impacted zones must be regraded/filled as soon as practically possible, to prevent water collection in those cracks in the future. Without repair/regrading, additional ground disturbance and potential damage to the pond's slopes can be anticipated.

Baffinland indicated following the June inspection that an unrelated containment seepage event occurred at the KM105 pond. The MS-11 area will be revisited during the second geotechnical inspection of 2022 to inspect the seepage area.

2.4 Berms of the Generator Fuel Bladders

This pond has previously contained fuel bladders for the generators; however, the cell currently stores a few mobile fuel tanks, as shown in Figure 29. The facility is located immediately adjacent to the power generators, south-west of the hazardous waste cells (Figure 2). As shown in Figure 29, the stable perimeter berm around the pond generally comprises granular materials and the pond is lined. Ponding water within the cell indicates good liner performance.

A large low-lying area of the adjacent road was flooded by run-off water (melted snow) at the time of the June inspection, as shown in Figure 30. The low area should be filled (raised) with sand and gravel, and the water diverted away from the cell's berm to prevent potential erosion of the berm's toe and slope. In addition to raising the road elevation, re-establishment of the original berm configuration (downstream slope) using compacted granular fill should also be completed.

2.5 Fuel Storage Berms (3)

There are three (3) fuel storage facilities at the Mary River mine site. One (1) is located at the airfield and two (2) are located adjacent to the main office complex of the mine. The berms and liners at these facilities are in excellent condition, as shown in the relevant images in Appendix A.

a) Jet-fuel Tank Farm

The jet-fuel tank farm is located at the aerodrome, and it is surrounded by a stable perimeter berm, as shown in Figure 31. In addition, a second berm, constructed from crushed rock fill, provides additional protection at two (2) sides (Tote Road and airport parking lot) of the facility. The fuel farm cell is lined to the crest of the perimeter berm, and the liner within the cell appears to be in good condition.

b) MS-03 Diesel Fuel Tank Farm

The stable berms around the "old" diesel fuel tank farm are in excellent condition (see Figure 32) and they are well maintained. The collected rainwater (and melted snow) within the cell appears to be clean

and its presence indicates that the liner system is fully functional (i.e., no seepage from the cell is visible and the liner is well protected by granular fill throughout the facility).

c) MS-03B New Fuel Tank Farm

A large capacity fuel tank farm is located adjacent to the Tote Road, surrounded by stable and well-maintained berms, as shown in Figure 33. As shown in the image, there is some ponding water within the facility, confirming that the liner is intact.

2.6 Solid Waste Disposal Area

The solid waste disposal area is located in the southern zone of the Mary River Mine Site, as shown in Figure 4. Only non-hazardous solid waste is placed into this unlined facility and the site is surrounded by a chain-link fence and a lockable gate. As shown in Figure 34, the disposed waste is covered with soil, as per standard procedure at such a facility. The figure also shows surface water ponding along a section of fence that was observed during the June inspection. Some of that water may flow out of the facility uninterrupted. To prevent the migration of suspended solids into the surrounding environment, it is recommended that an erosion and sediment control berm be constructed inside the fence along the purple line shown in Figure 34.

Figure 35 shows a new stable berm constructed around a new non-hazardous waste disposal cell at the facility.

2.7 Camp Lake Silt-sedimentation Check Dams and Berms

The Camp Lake silt sedimentation control berms and check dams, which were observed to be stable and well-maintained, are located along the access road to the mine's water intake jetty. The primary purpose of these structures is to collect fine soil particles (silts and clays) that are eroded down from the adjacent slopes, and to prevent the siltation of the lake around the water intake structure, as shown in Figure 36. The image shows that the cells are working well and as intended for their purpose. The image also shows the recently completed riprap slope protection and new check dam at the adjacent side-slope (yellow ellipse).

2.8 Water (Effluent) Discharge Area

The effluent discharge point is located south of the Mary River mine complex, as shown in Figure 4. There are two (2) discharge pipes at that location, conveying the discharged water down the slope's surface. Trucks also bring water for discharge to this location and let the water flow down on the embankment, comprising crushed rock fill, as shown in Figure 37. Based on site observations, the slope along the discharge area appears to be stable.

2.9 Deposit-1 Pit Walls

The pit wall at the Deposit-1 open pit is in stable condition with only sporadic local friable weathered zones visible at a few locations, as shown in Figure 38. The access/haul road into the pit is appropriately wide and the eroded rock fragments are removed from the toe of the pit walls as needed during regular maintenance activities. The rock slopes and benches along the pit wall appear to be stable.

2.10 QMR2 Rock Quarry and KM106 Ore Stockpile Area

a) QMR2 Rock Quarry

There is no blasting and excavation activity currently carried out in the QMR2 rock quarry (Figure 39). The exposed slopes (rock face) in the quarry appeared to be in stable condition overall, with a few localized fall hazards (loose boulders) noted at the top level of the pit walls in some areas, as shown in Figure 39.

As reported during the 2020 and 2021 inspections, the lowest plateau (main level) of the quarry exhibits poor surface water control and therefore ponding rainwater and melted snow still cover a section of the quarry's main level. The excess water is still flowing uninterrupted along the access road (Figure 40), further eroding the edge of the road, and initiating erosion and failure of the road embankment's slope. As pointed out in the earlier reports, the uncontrolled surface water presents not only potential slope stability issues in the area, but also traffic safety issues, particularly after freezing. To maintain traffic safety and stable side slopes, all ponding water from the quarry's main level must be properly drained from the area down on the side-slope located immediately next to the plateau. It is recommended that consideration be given to the installation of a slope-drain pipe, chute, or flume drain, as an erosion protection measure to address the uncontrolled flow.

b) KM 106 Run of Mine (ROM) Ore Storage Facility

The area previously considered as the future D1Q2 rock quarry is now serving as an ore stockpile area. As shown in Figure 2, the selected area is located south of the Deposit-1 open pit, along the east side of the mine haul road.

As shown in Figure 41, the diversion berm around the stockpiled ore was constructed from granular fill that may not function well in diverting all surface runoff to the adjacent MS-07 pond. Some of the surface run-off can seep through the berm in localized areas, and the water spreads around the toe of the downstream slope of the berm instead of flowing into the MS-07 pond. The seepage water is now collected in a sump system and conveyed to the nearby MS-07 pond via pumping. The interim contingency measures appeared to be functioning as intended to convey all water to MS-07.

3.0 Milne Inlet Port Site

3.1 Hazardous Waste-cell Berms (HWB-1 to HWB-4)

There are four (4) lined, hazardous waste storage cells with stable perimeter berms at the Milne Inlet Port site. HWB-1 and HWB-2 cells are single detached structures, located north-east and south-east of the large fuel storage area, respectively. HWB-3 and HWB-4 were constructed as twin-cells, located south/south-west of the MP-03 fuel storage farm, as shown in Figure 6.

a) HWB-1

HWB-1 is the largest storage cell, surrounded by stable perimeter berms constructed of granular soils, as shown in Figure 42 and Figure 43 in Appendix B. The stored materials in the cell were placed close to the berms with the center of the cell generally empty. Ponding water was visible in the deeper area of the cell, indicating that the liner within the cell is intact and working as intended. No seepage from the cell was visible around the downstream toe of the perimeter berm and the recently placed granular fill across the cell's interior is well maintained.

b) HWB-2

HWB-2 is a relatively small cell that is no longer used to store hazardous waste. As shown in Figure 44, the cell has been filled with clean granular aggregate and only empty plastic containers and one shipping container are stored across the raised interior of the cell.

c) HWB-3 and HWB-4

HWB-3 and HWB-4 cells are located immediately next to each other (twin-cells), as shown in Figure 45 and Figure 46. These cells contained only shipping containers in the past; however, in 2021 the cells were emptied and "refurbished". At the time of the June 2022 inspection, the cells contained fuel barrels on wooden pallets, with only two (2) shipping containers stored in HWB-4. Sections of the berms around the cells have been regraded and appear to be in stable condition with no indication of slope movements or settlement. Ponding water at the back of the cells indicate that the geosynthetic liner within the ponds is intact and working as intended.

It is shown in Figures 45 and 46, that a thick layer of granular fill was placed inside the cells during the 2021 refurbishing operation. It is suggested that the top of the fill be removed/regraded to contain potential spills of stored fuel and contact water within the cells. During the regrading operation, approximately 300 mm thick granular protective fill layer should be left in place over the liners and the integrity of the liners must be maintained.

3.2 MP-01A Pond

The MP-01A polishing stabilization pond is located immediately south of the MP-03 fuel tank farm. As shown in Figure 47, the robust berms around the well-maintained pond are in excellent condition and the liner within the cell appears to be intact. No sign of slope instability, settlement or seepage from the pond was noted during the field inspection.

3.3 MP-03 Fuel Tank Farm

The MP-03 fuel tank farm occupies a large area in the center of the Milne Inlet port. As shown in Figure 48, the facility is well maintained and all of the robust berms around the site are in excellent condition. The visible ponding rainwater and melted snow within the facility is an indication of proper liner functionality. The facility is fenced in, and no indication of instability or seepage was noted on and around the berms, which are comprised of compacted granular materials.

3.4 MP-04 and MP-04A Landfarm and Contaminated Snow Disposal Cells

The MP-04 cell is located south of the Port complex at a higher elevation, adjacent to the rock quarry. It is a large landfarm cell that stores contaminated soils and a few empty shipping containers. The robust berms around the cell are in stable condition and ponding water in the corner of the cell indicates proper liner functionality, as shown in Figure 49. No wet downstream slopes or toe seepage were noted during the June 2022 inspection.

MP-04A is a smaller cell immediately adjacent to cell MP-04 and is used generally for the disposal of contaminated snow. This pond is also bounded by robust, stable perimeter berms, as shown in Figure 50. No seepage from the cell was noted anywhere around the downstream toe of the berms, and ponding water within the cell indicates that the liner is in good condition and working as intended.

3.5 Surface Water Collection Ponds and Ditches (Settling Pond #3, MP-05, and MP-06 Settling Ponds)

The high-grade iron ore that is mined, crushed, and screened at the Mary River mine site is transported to Milne Port, and stockpiled across a large area near the ship loader. Contact (surface) water from the ore-storage area is collected along the west and north sides of the ore stockpile in side-ditches and conveyed into three (3) water collection settling ponds, strategically located around the ore storage area, as shown in Figure 6.

a) Pond #3

Settling Pond #3 was constructed west of the ore storage area, as shown in Figure 6. There are robust, stable, lined berms along three (3) sides of the pond (Figure 51) that contains two (2) sumps. The geomembrane liner and protective geotextile on the internal slope of the berms were designed to extend 2.5 m below the surface and are anchored into the permafrost zone to prevent any seepage from the pond into the ground below and around the pond. Excess water from the pond is pumped into the nearby, large capacity MP-06 settling pond, whenever necessary.

b) MP-05 Settling Pond

The MP-05 settling pond is located adjacent to the north-east corner of the ore stockpile, while MP-06 was constructed at the north-west corner. Both settling ponds are in excellent condition with stable, well-maintained berms and intact geomembrane liners, as shown in Figures 52 to 56.

No instability, erosion or settlement was noted at the berms of the MP-05 pond and no toe seepage from the pond is visible anywhere around the pond's perimeter berm. Minor liner damage was noted on the west slope of the southern intake channel to the pond during the June 2022 inspection, as shown in Figure 53. It appears that these damages are returning problems on the slopes of the inlet channel, most likely caused by snow clearing equipment during winters. Used tires, weighing down the liner along the crest of the berms, do not cause such damages. As suggested in earlier reports, consideration should be given to place protective berms adjacent to the slope's crest near the inlet channel to prevent potential damages caused by snow clearing equipment.

Surface water from around the ore stockpile is collected in well-maintained drainage ditches. The slopes of the drainage ditch leading to the MP-05 pond appeared to be in good condition, as shown in Figure 54.

c) MP-06 and MP-06A Settling Ponds

MP-06 is a large settling pond adjacent to the north-west corner of the ore stockpile area, which is divided into two (2) cells by a liner-covered internal berm. The main (south) part of the pond is identified as MP-06 and is shown in Figure 55 and the northern cell is called the "overflow pond" MP-06A, as shown in Figure 56. The liners in the ponds appear to be intact. Both settling ponds have emergency spillways and the water level in both ponds was below the spillway inverts at the time of the June 2022 inspection. The robust berms around the ponds are in good condition, and no seepage was noted from the cells indicating good liner performance.

3.6 Q01 Rock Quarry

No activity was noted in the Q01 rock quarry at the time of the inspection. The rock slopes in the quarry appeared to be in stable condition and were covered with snow in some areas, as shown in Figure 57.

3.7 Surface Water Collection Ditches (P-SWD-3, -5, -6, -7, W3/W14, 380M and PSC ditches)

There are several surface water collection drainage ditches (listed above) across the Milne Port site, some of which are still under construction or improvement, as shown in Figures 58 to 69. These open ditches are excavated somewhat into the native soils and then their sides and inverts are protected from erosion by a layer of crushed rock fill (riprap). Geotextile has been placed beneath the riprap wherever the native subgrade was composed of fine-grained material (silt) to prevent migration of fines into the riprap and eventually into the ditches. Issues that were identified at these ditches during the June 2022 inspection are summarized below:

a) P-SWD-3 Surface Water Collection Ditch

As noted during previous inspections and still visible this year, sloughing of the sides of the P-SWD-3 ditch, adjacent to the LP2 laydown area, has occurred at several locations along the ditch, as shown in Figure 58 and Figure 59. It is evident that the sloughing of the ditch's slopes is a direct result of uncontrolled sheet-flow of surface water (melting snow from the adjacent snow stockpile), continuously flowing into the ditch during freshet that is not able to convey the collected water to the designed discharge location to the north. The main cause of this problem is that the invert level of the ditch at its designed discharge-end is higher than the invert along the rest of the ditch. As previously recommended, the existing condition of the P-SWD-3 drainage ditch and adjacent topography should be re-evaluated, and the ditch should be redesigned and reconstructed to drain the large amount of surface water to the correct direction to the north. It is also suggested that the snow stockpile be relocated to the north (from the area of the red circle in Figure 6, to the area marked by the green circle) or to another suitable location away from the immediate vicinity of the P-SWD-3 ditch.

b) P-SWD-5 Surface Water Collection Ditch

A short section of the P-SWD-5 ditch was noted with missing riprap and continuous water seepage from the side-slope, as shown in Figure 60. This section of the ditch should be repaired, and the side-slope covered with geotextile and riprap. Due to the increased localized seepage from the quarry at that location, placement of a more robust riprap slope protection is recommended. Figure 61 also shows that there is a clogged culvert along this ditch, located beneath the road at the entrance to the quarry. As a result, the south section of the ditch is flooded and the water from the ditch flows onto the road's surface around the entrance to the quarry. The clogged culvert should be cleaned, or if damaged, should be replaced, preferably with a larger diameter culvert.

c) P-SWD-6 Surface Water Collection Ditch

The P-SWD-6 drainage ditch (Q01 South) was designed and constructed to collect surface water from the southern part of the rock quarry and convey the collected water toward the Tote Road. As shown in Figure 62, a section of the quarry was over-excavated somewhat and as a result seasonal ponding water is visible adjacent to the northern end of the ditch. Since the invert of the P-SWD-6 ditch is located at higher elevation, it is recommended that a pump be installed, and the ponding water pumped into the ditch whenever needed (most likely after snowmelt and heavy rains). Alternatively, the ponding water from that low area could be drained into the P-SWD-5 ditch, once the previously mentioned culvert near the entrance to the quarry has been cleaned or replaced.

d) P-SWD-7 Surface Water Collection Ditch and Twin Culverts

The P-SWD-7 drainage ditch and twin culverts are in good condition, as shown in Figure 63 and Figure 64.

e) W3/W14 Surface Water Collection Ditch and Culvert

The W3/W14 drainage ditch was flooded at the time of the June inspection, experiencing short-term high flow, as shown in Figure 65. This ditch is draining toward the north-west, through a culvert located beneath the adjacent haul road. To drain the increased flow more efficiently, it is suggested that the ditch be extended toward the west, within the area marked by the blue circle in Figure 6 (bottom left corner).

f) 380M Surface Water Collection Ditch

Both the east and south sections of the 380M drainage ditch are in good condition, as shown in Figure 66 and Figure 67.

g) PSC Surface Water Collection Ditch

The PSC drainage ditch, which has a "U" shaped alignment, and is located north of the P-SWD-3 drainage ditch, is still under construction. A localized slope failure at the west end of the ditch was noted during the June inspection, as shown by the yellow circle in Figure 69. The failed slope should be repaired, regraded and the riprap rock fill cover reinstated. Based on field observations, consideration could be given to reshape the west section of the ditch and reinstall the culvert, shown in Figure 68, to a lower invert level to prevent ponding in this section of the ditch.

3.8 Tote Road Ditches and Culverts

As noted above, surface water from the drainage ditch P-SWD-6 is conveyed down the slope through corrugated galvanized steel culverts, installed under an internal haul road adjacent to the rock quarry and then under the Tote Road (Figure 70 and Figure 71). The water in the ditches is conveyed through

the culverts to small natural ponds, located along the west side of the Tote Road. Minor siltation is visible at the inlet of the culverts; however, all culverts appear to be clean, and the seasonal flow is uninterrupted.

4.0 Conclusion

Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited (Wood), has completed the first of the two (2) required geotechnical field inspections of 2022 at the Mary River Project in Nunavut. Based on field observations, the condition of the inspected infrastructure components can be summarized as follow:

- All surface water collection/settling ponds and waste areas are enclosed by relatively shallow, generally robust, and stable berms. The berms show no signs of instability, there are no tension cracks or noticeable settlements, and no detrimental slope erosion is visible on the berms. These structures were constructed by using thaw-stable, generally granular materials, placed over thaw-stable native subgrades. Minor disturbance on the surface of the slopes and crests were noted during the field inspection at some of the berms, however, these discrepancies can be rectified during the frequent maintenance (regrading) program. Foot traffic on the berms (crest and slopes) must be limited, while truck traffic must continue to be avoided.
- The water and waste storage settling ponds and cells comprised of HDPE/LLDPE liners are in good condition. No seepage from the currently operating ponds and cells was noted during the June inspection. Minor damages to the liner were noted at two (2) locations above the water lines, as detailed in this report. As specified, these minor damages to the liners should be repaired as soon as practically possible.
- Open drainage ditches across the Mary River and Milne Port sites are generally in good condition with some erosion and slope sloughing visible at a few locations, particularly where riprap slope protection is missing or has been damaged. As part of a more frequent maintenance program, the eroded sides of the ditches should be repaired/regraded, and the missing rock fill riprap replaced. One (1) of the drainage ditches at Milne Port (P-SWD-3) requires particular attention. Currently the floor of this drainage ditch slopes away from the designed discharge point, which resulted in a situation where the ditch is almost always full of seepage water (particularly during snowmelt) and the side-slopes of the ditch have failed along almost the entire length of the ditch. It is recommended that this ditch be redesigned and reconstructed to facilitate efficient drainage of all surface water from the area. It is suggested that the location of the adjacent snow stockpile be moved to the north, or to another suitable location, to reduce flow to the ditch and allow for more efficient surface flow conditions during freshet.

5.0 Closing Remarks

We trust that the above technical report provides you with satisfactory information in connection with the reviewed infrastructure components at the selected sites of the Mary River Project. Should you have any questions regarding this report, please do not hesitate to contact our office.

Sincerely,

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Baffinland Iron Mines Corporation

August 21, 2022
Project #: OMGM2212

Annual Geotechnical Inspections – 2022 Report 1.

APPENDIX "A" - Mary River Mine Complex - Photographs

Figure 8 to Figure 41

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1.0 Mary River Mine Complex

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Figure 9: PWS pond #1. Well maintained stable perimeter berm and liner.

Figure 10: PWS pond #2 – Robust, stable, well-maintained berm and liner in and around the pond.

Figure 11: Stable perimeter berms and liner in PWS pond #3 – A small "floating" section of the liner is visible in the pond (yellow circle), which is quite common in shallow ponds.

1.2 Hazardous Waste Disposal Cell Berms (HWB-1 to HWB-7)

a) HWB-1

Figure 12: View of HWB-1 – This cell is out of operation for years, and no materials are stored in the cell.

b) HWB-2

Figure 13: View of stable berms around HWB-2. The wooden pallets should be removed.

c) HWB-3 and HWB-4

Figure 14: View of stable berms and stored fuel barrels in HWB-3.

Figure 15: View of stable berms at HWB-4, with jet-fuel barrels stored on wooden pallets.

d) HWB-5

Figure 16: View of the berms around the currently empty HWB-5 cell. The cell is not in use for years.

e) HWB-6

Figure 17: View of the somewhat disturbed but stable berm around the HWB-6 cell. The cell was recently emptied, and the internal subgrade disturbed, which needs to be leveled.

f) HWB-7

Figure 18: View of the large, flooded HWB-7 cell, with one large fuel tank and some containers stored.

Figure 19: View of the somewhat lower crest of the east berm at the flooded HWB-7 cell.

1.3 MS-06, MS-07, MS-08, and MS-11 Water Collection Ponds and Ditches

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Figure 20: View of the MS-06 settling pond with robust, stable berms and intact liner.

Figure 21: Well-maintained drainage ditch next to the crusher plant, leading to the MS-06 pond.

b) MS-07 – Surface Water Collection Pond Adjacent to the new KM106 ore storage

Figure 22: View of the MS-07 surface-water collection pond with robust, stable berms and intact liner.

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Figure 24: Snow-filled stable drainage ditch around the east side of the waste rock facility.

Figure 25: Damaged rock fill berm and liner at the south-west section of the berm at the water treatment pond, located adjacent to the waste rock disposal facility.

d) New MS-11 sedimentation control pond at KM105, with emergency spillway

Figure 26: View of the recently completed robust, stable rock-fill dam at the MS-11 pond at KM105.

Figure 27: View of the recently completed stable emergency spillway (crushed rock filled gabion baskets and blankets) at KM105.

Figure 28: View of some frost related damages along the road next to the MS-11 pond (south pond) that must be repaired.

1.4 Generator Fuel Berm

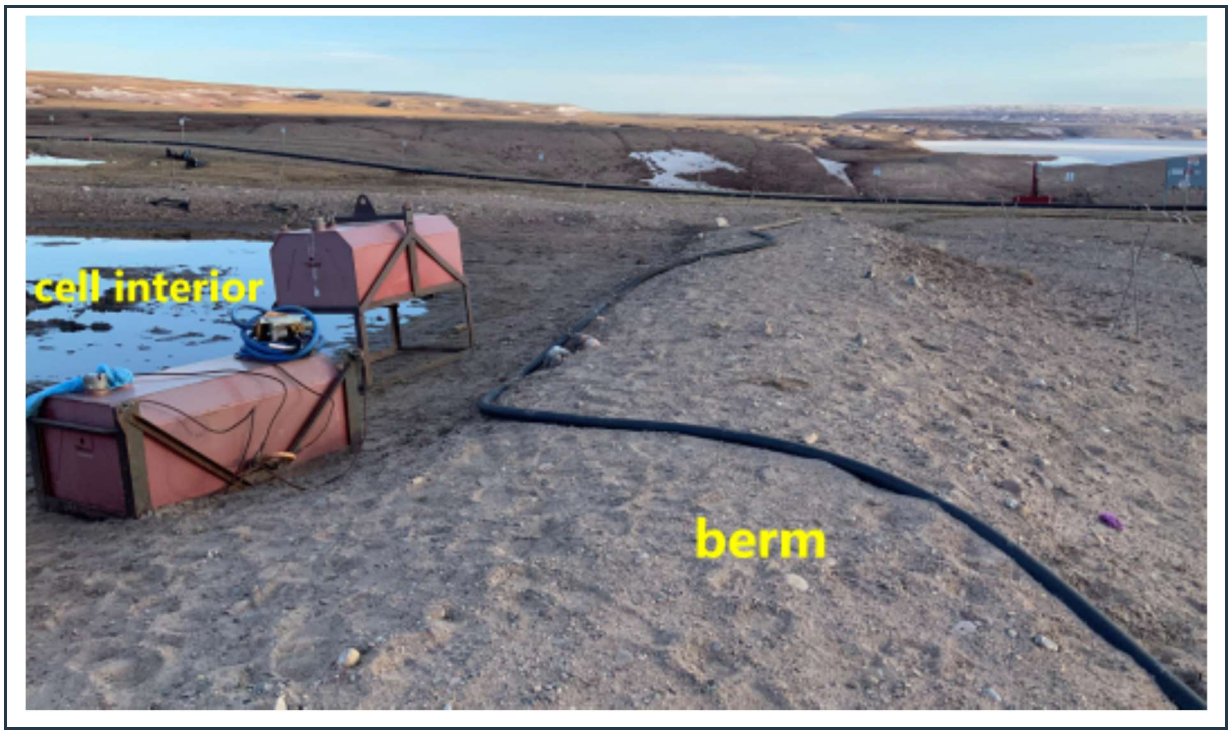


Figure 29: View of the stable berm around the "generator fuel bladder" cell.

Figure 30: View of ponding water adjacent to the north-east berm of the "fuel bladder" cell. The low area of the road should be filled with sand and gravel, and the water diverted away from the cell.

1.5 Fuel Farm Berms

a) Jet-fuel Tank Farm

Figure 31: View of the well-maintained sand and gravel berm at the lined jet-fuel storage facility.

b) MS-03 Diesel Fuel Tank Farm

Figure 32: Well-maintained, stable berm around the MS-03 diesel fuel farm, with some ponding water.

c) MS-03B Fuel Tank Farm

Figure 33: View of the well-maintained stable berms around the new lined fuel tank farm.

1.6 Solid Waste Landfill Facility

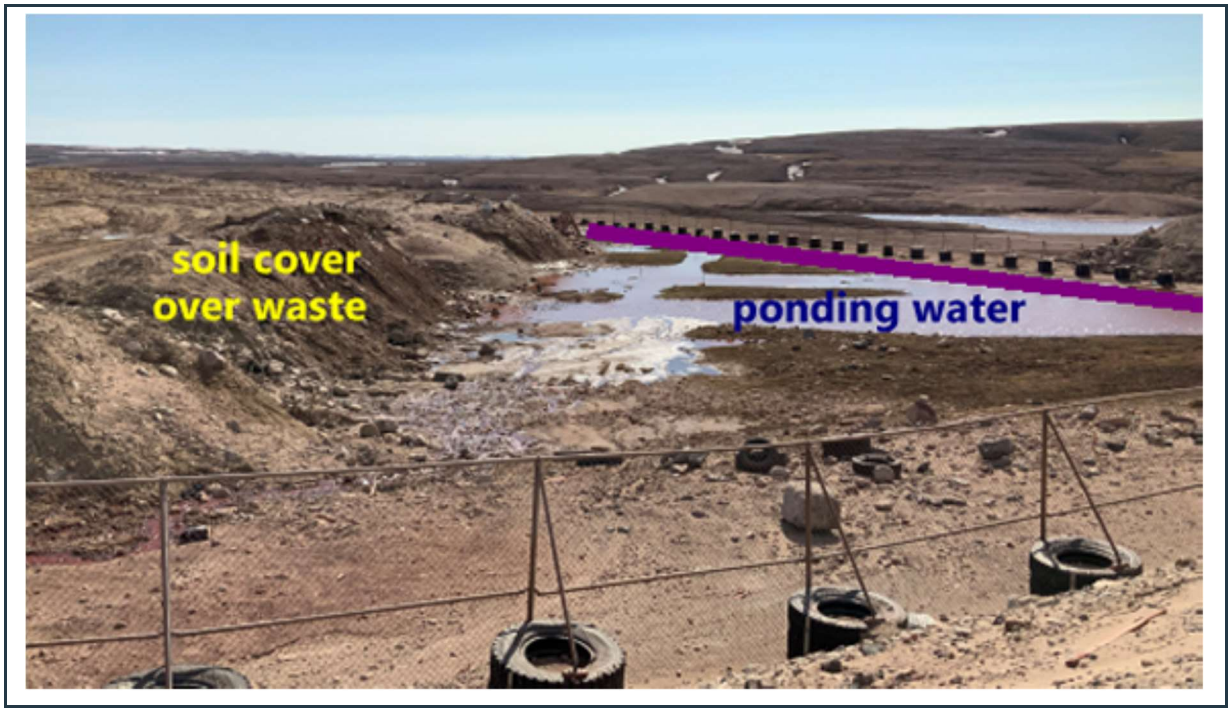


Figure 34: Solid waste landfill facility with ponding water along a section of the perimeter fence.

Figure 35: View of stable berms around a new non-hazardous solid waste disposal cell at the landfill facility.

1.7 Camp Lake Silt-Sedimentation Check Dams and Berms

Figure 36: Camp Lake check dams, berms, and sedimentation cells. Note the recently completed riprap slope protection and new check dam at the adjacent side-slope (yellow ellipse).

1.8 Rock Fill Slope at the Water Discharge Area

Figure 37: Stable rock fill riprap slope protection at the water discharge area.

1.9 Deposit-1 Pit Walls

Figure 38: Stable pit-walls with minor rock weathering and pit-wall erosion.

1.10 QMR2 Rock Quarry

Figure 39: Generally stable rock face at the upper level at the currently unused quarry.

Figure 40: View of the access road to the quarry that requires additional maintenance work.

1.11 KM106 Ore Stockpile Area

Figure 41: View of a temporary sump pit adjacent to the surface water diversion berm at the KM-106 ore stockpile area. The water from the sump is pumped to the nearby MS-07 pond.

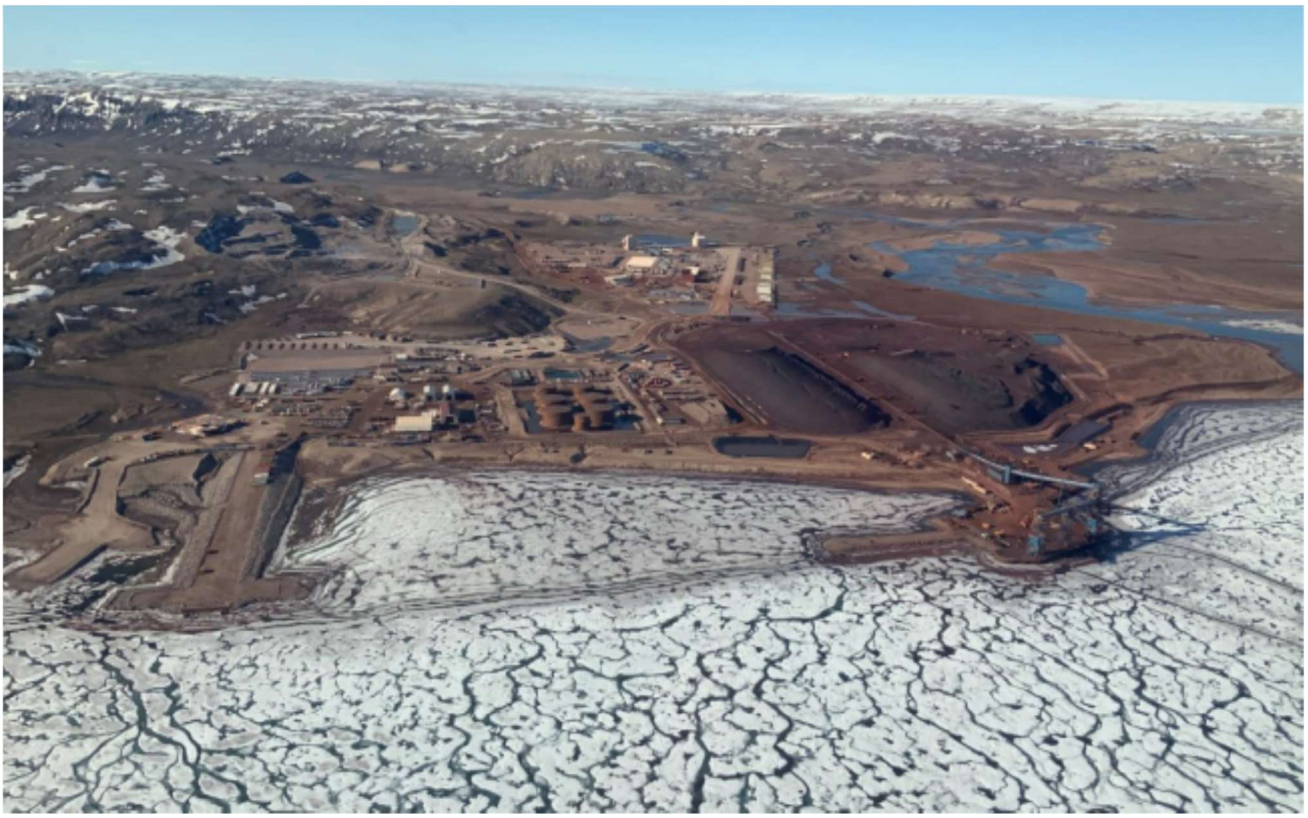
Baffinland Iron Mines Corporation

August 21, 2022
Project #: OMGM2212

Annual Geotechnical Inspections – 2022 Report 1.

APPENDIX "B" – Milne Inlet Port Site - Photographs

Figure 42 to Figure 71



View of Milne Inlet Port in June 2022

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2.0 Milne Inlet Port Site

2.1 Hazardeous Waste-Cell Berms - (HWB-1 to HWB-4)

a) HWB-1

Figure 42: View of the well-maintained HWB-1 cell with stable berms and well protected liner.

Figure 43: View of the back of the HWB-1 cell, with ponding water and stable spillway.

b) HWB-2

Figure 44: View of the former HWB-2 cell, with only empty containers stored on the top of clean sand and gravel fill pad. No hazardeous waste is stored in this cell.

c) HWB-3 and HWB-4 Twin Cells

Figure 45: View of the HWB-3 and HWB-4 cells, containing fuel barrels and two shipping containers.

Figure 46: Stable berms around and ponding water within the HWB-3 and HWB-4 cells.

2.2 MP-01A Pond

Figure 47: Berms and liner in good condition with stable slopes around the MP-01A pond.

2.3 MP-03 Fuel Tank Farm

Figure 48: View of the well maintained MP-03 fuel tank farm (ponding clean melted snow in the cell).

2.4 MP-04 and MP-04A Landfarm and Contaminated Snow Disposal Cell

Figure 49: View of stable, robust berms around the MP-04 landfarm, with empty shipping containers stored within the cell.

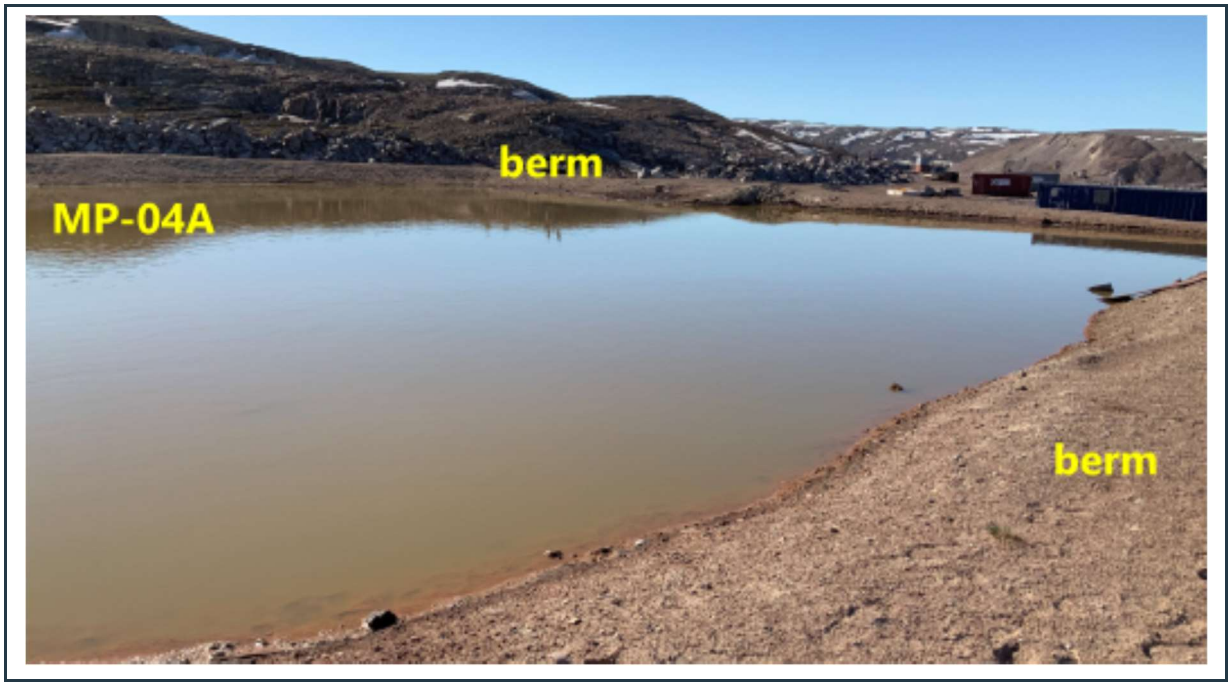

Figure 50: View of the MP-04A cell with stable berms and ponding melted snow.

2.5 Surface Water Collection Ponds and Ditches (Pond #3, MP-05, and MP-06 Settling Ponds)

a) Settling Pond #3

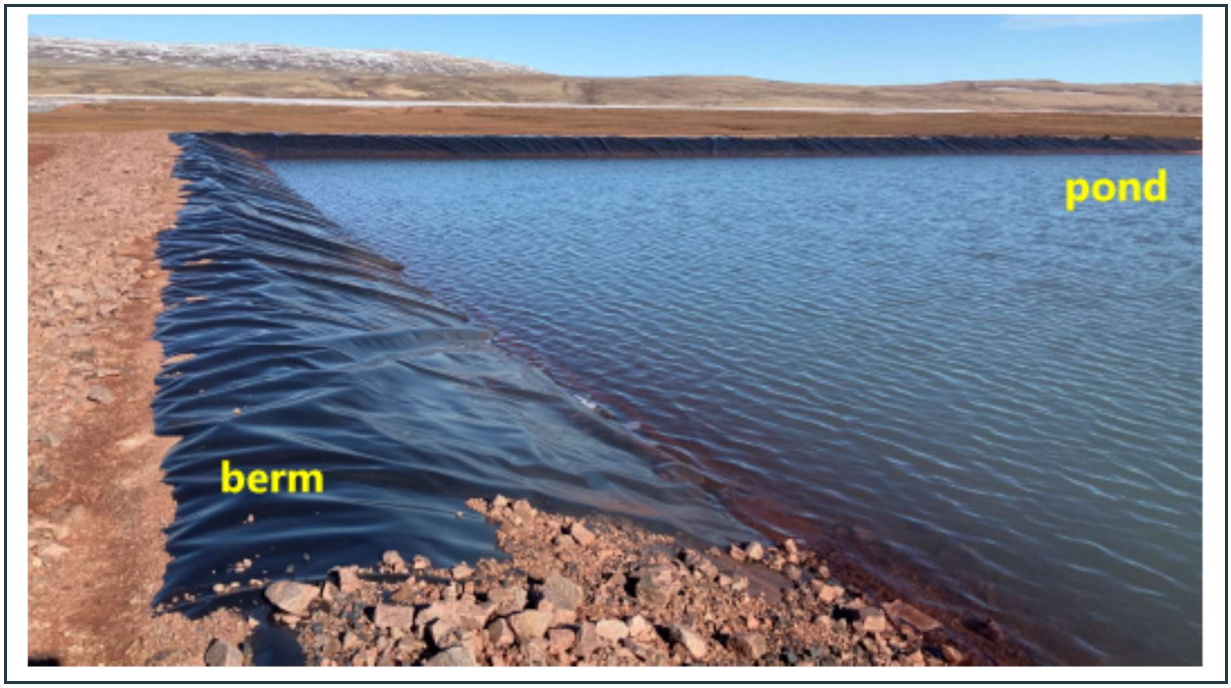

Figure 51: View of the lined, stable berm along the south and west sides of settling pond #3.

b) MP-05 Settling Pond

Figure 52: View of the stable berms and intact liner at the MP-05 settling pond (east of shiploader).

Figure 53: Minor liner damage on the west slope of the southern intake channel that should be repaired. Note the still frozen bay in the background.

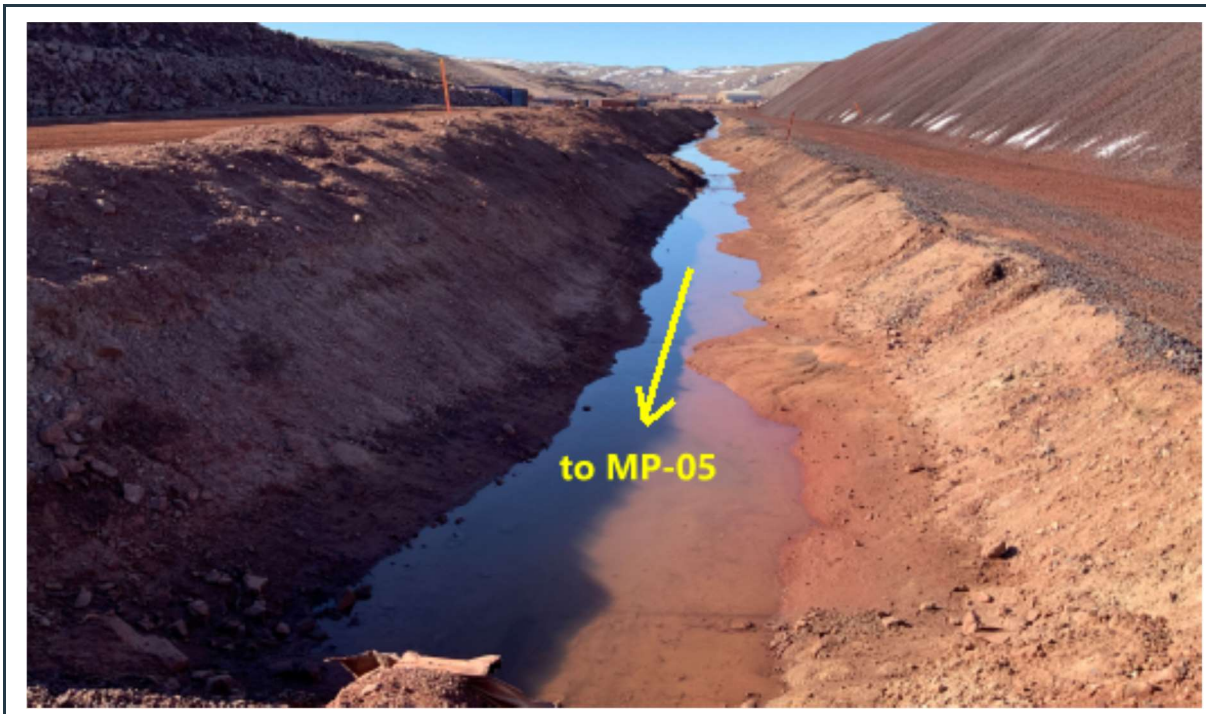

Figure 54: Surface water collection ditch adjacent (east) to the ore storage, draining to the MP-05 pond.

c) MP-06 Settling Pond

Figure 55: View of the lined MP-06 pond with robust, stable berms and spillway.

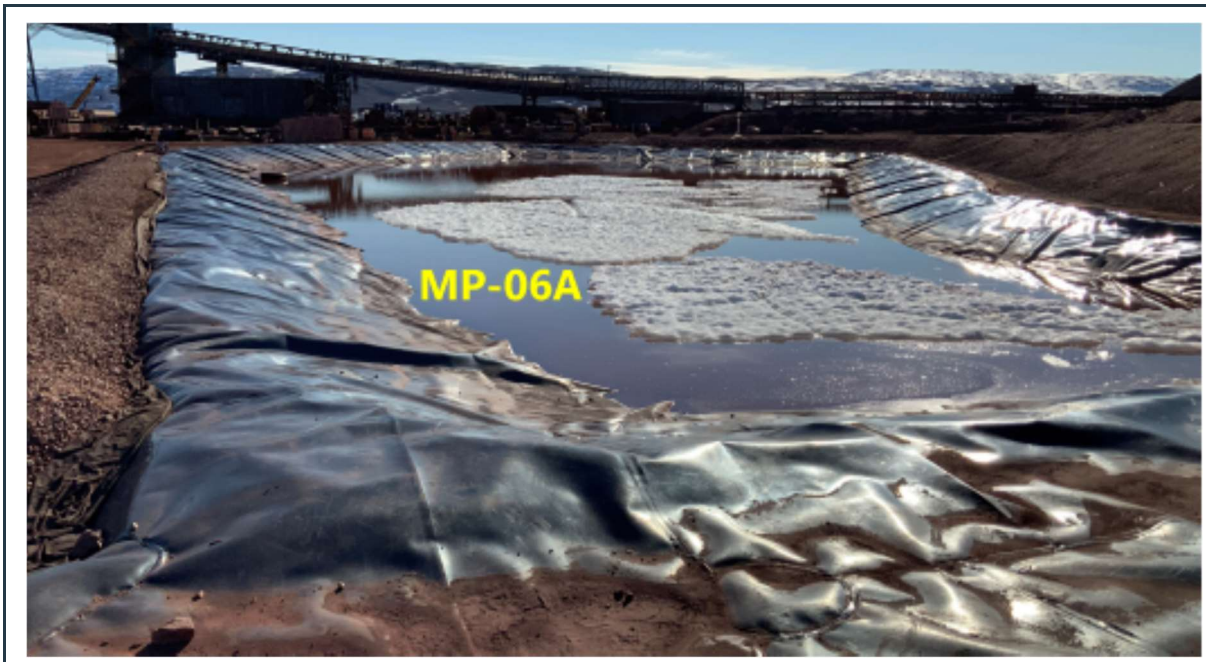

Figure 56: View of the lined MP-06A overflow pond, with robust, stable berms.

2.6 Q01 rock quarry

Figure 57: View of stable rock face with minor weathering and erosion in the Q01 rock quarry. The quarry is currently not in operation.

2.7 Surface Water Collection Ditches (P-SWD-3, P-SWD-5, P-SWD-6, P-SWD-7, W3/W14, 380M, and PSC Ditches)

a) P-SWD-3 (south-east side of the LP2 laydown area)

Figure 58: View of the "P-SWD-3 surface water collection ditch with ponding water and unstable slopes.

Figure 59: View of the northern part of the "P-SWD-3 surface water collection ditch with failed slopes and ponding water. The ditch should be redesigned and reconstructed.

b) P-SWD-5 (next to the Q01 rock quarry)

Figure 60: P-SWD-5 – "Q01-North" surface water collection ditch with missing riprap at a short section.

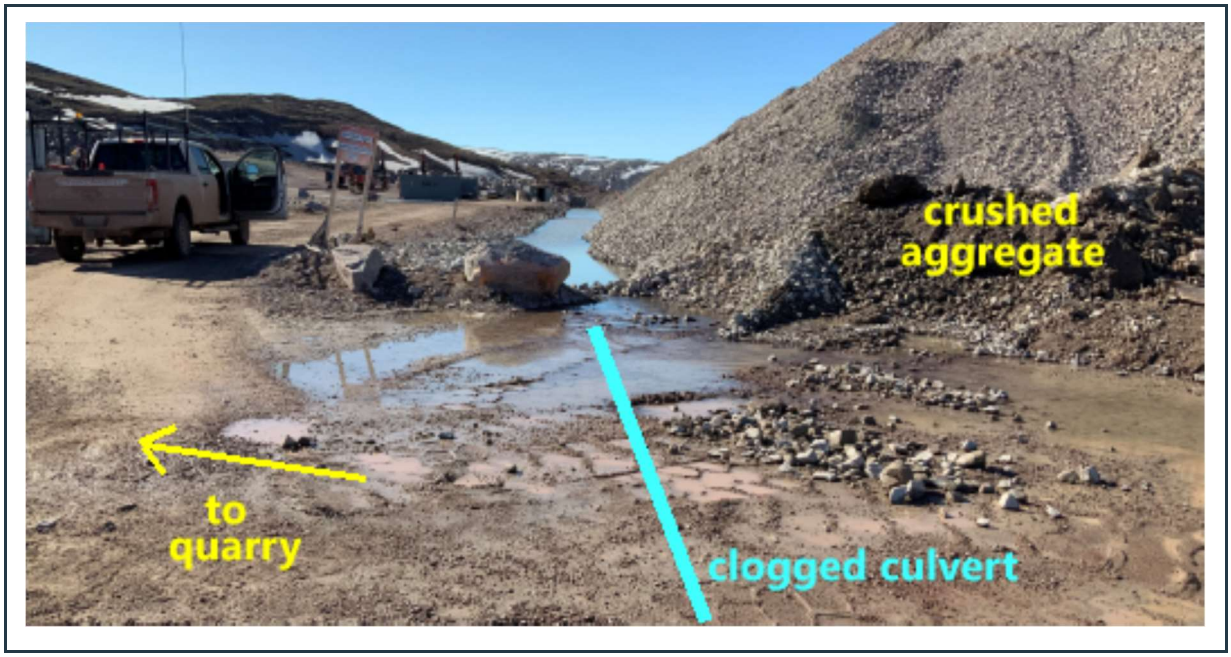

Figure 61: Clogged culvert at the entrance to the quarry in P-SWD-5 – "Q01-North" surface water collection ditch. The south section of the ditch is flooded and the collected water flows onto the road to the quarry.

c) P-SWD-6 (south of the Q01 rock quarry)

Figure 62: Ponding water next to the P-SWD-6 - "Q01 South" surface water collection ditch.

d) P-SWD-7 (ditch and culverts adjacent to the new freight dock)

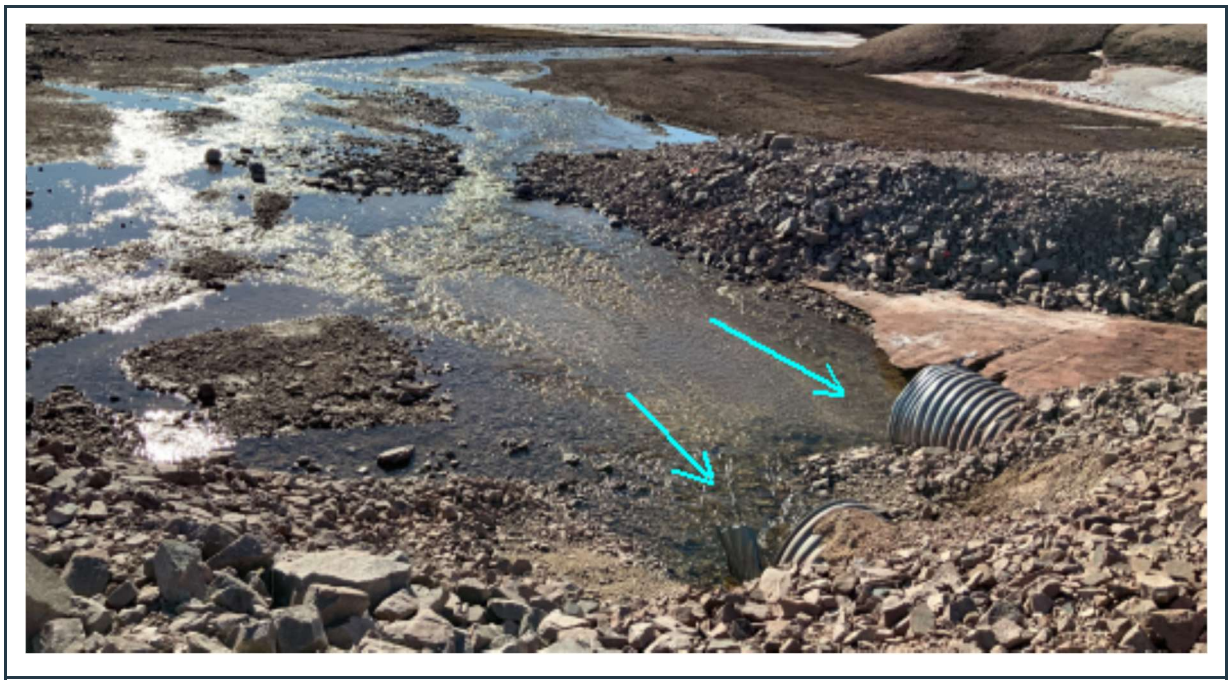

Figure 63: View of the P-SWD-7 surface water collection ditch and culverts (inlet).

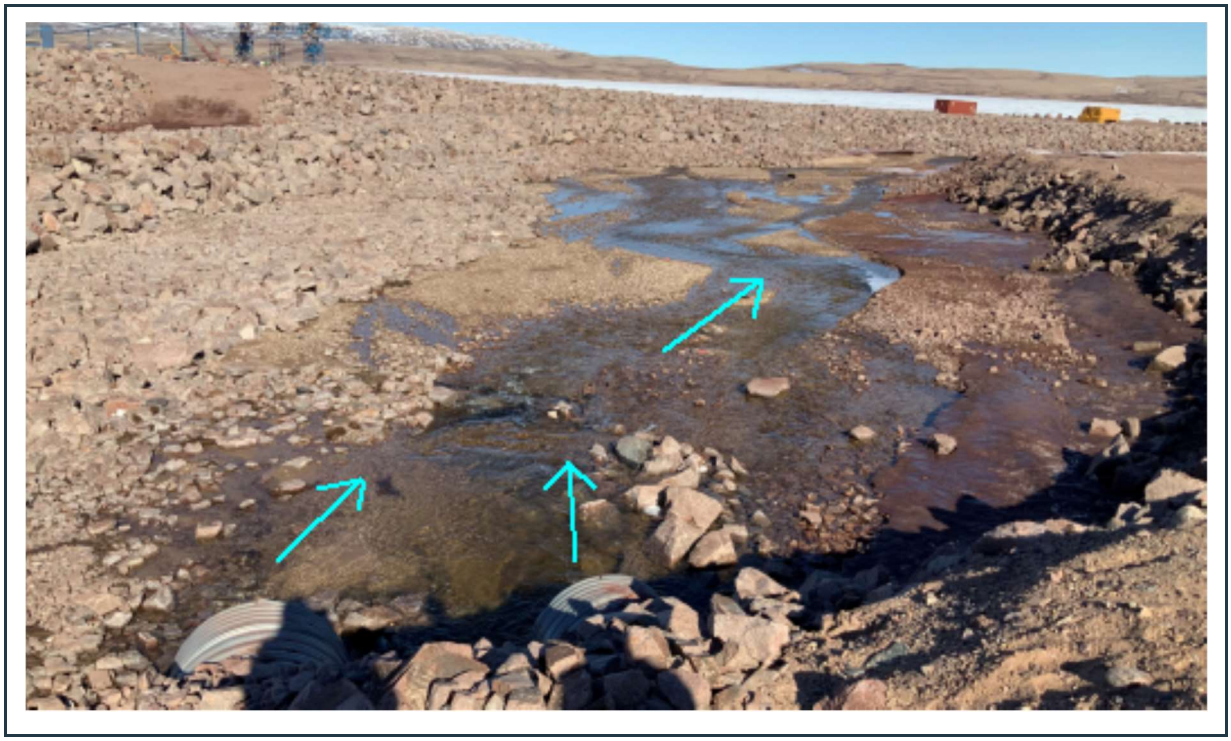

Figure 64: View of the P-SWD-7 surface water collection ditch and culverts (outlet).

e) W3/W14 (surface water collection ditch)

Figure 65: View of the W3/W14 surface water collection ditch, experiencing temporary high flow.

f) 380M (surface water collection ditch)

Figure 66: View of the south section of the 380 M surface water collection ditch in good condition.

Figure 67: View of the east section of the 380 M surface water collection ditch in good condition.

g) PSC (new surface water collection ditch)

Figure 68: View of the west section of the PSC surface water collection ditch. Note the culvert with too high invert elevation, resulting in ponding water in this section of the ditch.

Figure 69: View of the south end of the same (Figure 67) culvert with too high invert elevation. Note the localized slope failure adjacent to the culvert, which should be repaired as soon as practically possible.

2.8 Tote Road Ditch and Culverts

Figure 70: View of twin culverts' inlet, draining surface water from the P-SWD-6 - "Q01 South" surface water collection ditch.

Figure 71: View of twin culverts installed under the tote road, draining surface water from the quarry area (outlet).