APPENDIX K

Regulator Inspections and Baffinland's Responses

Appendix K1
2023 and 2024 CIRNAC Inspections and Baffinland's Responses

Appendix K2
2023 QIA Inspections and Baffinland's Responses

APPENDIX K1

2023 and 2024 CIRNAC Inspections and Baffinland's Responses

(Pages K1-1 to K1-115)

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corp – Mary River Project	Connor Devereaux
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environment Superintendent
Land Authorization No. / Expiry	**Land Authorization Expiry**
N/A	N/A
Date of Inspection	**Inspector**
January 25, 2023	Isaiah James Bolt

Activities Inspected

☒ Camp: ☐ Drilling: ☒ Mining: X ☐ Construction: ☐ Reclamation: ☒ Fuel Storage:
☐ Roads/Hauling: ☐ Other: Waste & Water Management Structures ☐ Other:

SECTION 1 ☒ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence** (s.__) ☐ **Action Required** (s.__)

On Wednesday January 25, 2023 I, Isaiah James Bolt, Inspector with the Crown Indigenous Relations and Northern Affairs Canada, (CIRNAC and for the purpose of this report hereafter referred as the "Inspector"), Along with Senior Inspector with the Crown Indigenous and Northern Affairs Canada, Omer Pasalic, completed a visit of the site named above for the purpose of verifying terms and conditions which the water license was issued upon. At the time of the inspection, there were 482 personnel on site at Mary River and an additional 217 personnel at Milne Port site. The number of staff on site reflects the use of water, waste produced and an overall Impact to the Environment.

During our inspection, we mainly focused on Mary River Mine site and did not visit Milne Port site. The inspectors Bolt and Pasalic were accompanied by Connor Devereaux, the Environmental Superintendent for both Mary River and Milne Port sites.

The Following list of items were inspected for compliance with the issued and valid water license:

- Open Burn facility (KM99)
- Camp Lake Jetty Water Intake facility
- Polishing Waste Stabilization Ponds #2 and #3. Inspectors Bolt and Pasalic along with Deveraux arrive at PWSP #2 and #3 No Concerns, just note that PWSP #1 was not accessible at this time due to snow covering the road
- Hazardous Waste Berm #7
- Land farm and Land Fill
- Effluent Discharge Site
- Main camp area (Outside maintenance shop, mine rescue building area)
- Waste Management Building laydown (incinerator) and hazardous waste berm #6
- Mine Pit/Dump and Waste rock water treatment plant
- KM105 Dam
- Ore Haul Truck Laydown
- Sailiviik Waste Water and Water Treatment Plants

The Inspector, Bolt, verified that a copy of the water license was present and available in the water treatment plant, waste treatment plant and water intake facility. Signage for waste sorting (waste sorting guidelines) are present in the incinerator building. Photos of the flowmeters at the Camp Lake Jetty and Wastewater Treatment facility (sailiviik) are included at the end of the photo log.

During the time of inspection, snow on the ground made it difficult to see leaks or stains and there was deep snow-covered portions of the road. The inspector was not able to access some facilities such as PWSP #1, the Waste rock stockpile, Waste rock water treatment plant and water runoff holding pond containing the Waste Rock contact water. Deveraux confirmed PWSP#1 is not in use and PWSP #3 is primary holding pond. Connor Devereaux also confirmed that the Waste rock water holding pond (MS-08) was snowed over as well.

SECTION 2 ☐ **Comments** (s.__) ☒ **Non-Compliance with Act or Licence** (s.2) ☐ **Action Required** (s.__)

1. At the Open Burn facility, Inspector BOLT, noted some carboard in the snow that was pushed to the side with a loader. The Licensee shall implement preventive and mitigation measures to prevent any wastes associated with the undertaking from entering any water bodies." Part D, #8 of the water licence. (See photo #1)
2. A frost fighter heater was observed on the edge of the road, close to the effluent discharge site, without a drip pan under the fuel tank. (No Photo) A leak would result in a deleterious substance entering the environment. (No photo)
3. Inspector BOLT had found a fuel leak outside the Mine Rescue Building (Emergency Response Team building). The leak came from the large heating fuel tank (10,000L) outside the building. The tank at the time of inspection held 6540.64Litres. The amount of spill is unknown. A drip pan was placed under to stop leak from spilling onto the ground. (See photo #3)
4. At the Waste Management building laydown, an articulating rock truck (ART-022) was found leaking hydraulic oil onto the snow, with no visible containment. (No drip pan) (See photo #4)
5. Outside of the Incinerator building, a storage shipping container was missing its front door, allowing wildlife to access the storage shipping container. Upon entry of the shipping container BOLT noted a garbage bin open to the environment and it appeared to be allowing access to wildlife. (See photo #5)
6. At the 105 dam, inspector BOLT noted concerns with tangled wire and wooden debris outside of the facility. (See photo #6)
7. At the OHT Laydown (ore haul truck laydown), inspector Bolt had noted 4 – 1000 litre totes each sitting in snow that was covering their respective secondary containment. The secondary containment "drip pans" were unacceptable for use as they were all filled with snow, reducing the available space for leaks. The snow also caused the walls of the secondary containment to fall outward, which would allow substances to flow out into the receiving environment. (See photo #7)
8. OHT laydown, there were 4 identified Quatrex bags overflowing with used 1lb propane bottles, batteries, garbage, aerosols bottles, oily rags and contaminated snow. The Quatrex bags were filled with snow as well. Inspector BOLT also noted that used 20lbs propane bottles were placed on the ground rather than in their storage container. The propane storage container was filled with snow, making it unable to close. (See photo #8)

SECTION 3 ☐ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence, (**s.__) ☒ **Action Required** (s.3)

1. Ensure burn pit area is clear of debris so nothing enters the environment.
2. Ensure the use of drip pans beneath all equipment during the refuelling outside of secondary containment. "The Licensee shall maintain and service any equipment in designated areas and shall implement special procedures (such as the use of drip pans) to manage Waste and contain potential spills as per "*Part H #5 in the 2AM-MRY1325Water License".*
3. Ensure cleanup of identified fuel spill, licensee must submit a follow up report to the inspector 30 days after the submission of a spill report. Ensure all spills are reported and cleaned up as per the approved Spill Contingency Plan.
4. Ensure contaminated snow and dirt is brought to the appropriate designated facility for treatment.
5. Ensure doors are operational on shipping container storing waste to be sorted. "The Licensee shall construct and operate all infrastructure and Facilities authorized by the Board that are designed to contain, withhold, divert or retain Water and/or Waste, in accordance with all applicable legislation and industry standards." *Part D #23 of the water license 2AM-MRY1325*". Waste should be stored to avoid attracting animals.
6. Ensure loose debris is collected and disposed of accordingly.
7. Ensure all 1000L Totes outside of storage berms have proper secondary containment. "The Licensee shall implement preventive and mitigation measures to prevent any Wastes associated with the undertaking from entering any Water bodies." – *"Part D, #8 of the water license 2AM-MRY1325*"
8. Properly sort, safely store and dispose of any waste at OHT Laydown. Ensure contaminated snow and dirt is stored in the land farm and dealt with accordingly. "Baffinland will ensure that all hazardous waste generated at the Project is effectively managed and disposed. Hazardous waste will be properly stored, transported, treated and disposed. All site personnel (including contractors) will be responsible for managing the waste they generate and will be required to comply with the procedures provided in this Plan, the Hazardous Materials and Hazardous Waste Management Plan (BAF-PH1-830-P16-0011) and will be subject to monitoring and enforcement." - section 3.8 of the Waste Management Plan
9. Within 30 days of receiving this report, Inspector Bolt will follow up with the mine's environmental department to ensure that the non-compliances listed in the report are remedied to the Inspector(s) satisfactory degree.

Licensee or Representative	Inspector's Name
Connor Devereaux	Isaiah Bolt
Signature	**Signature**
Date Feb 8, 2023	**Date**

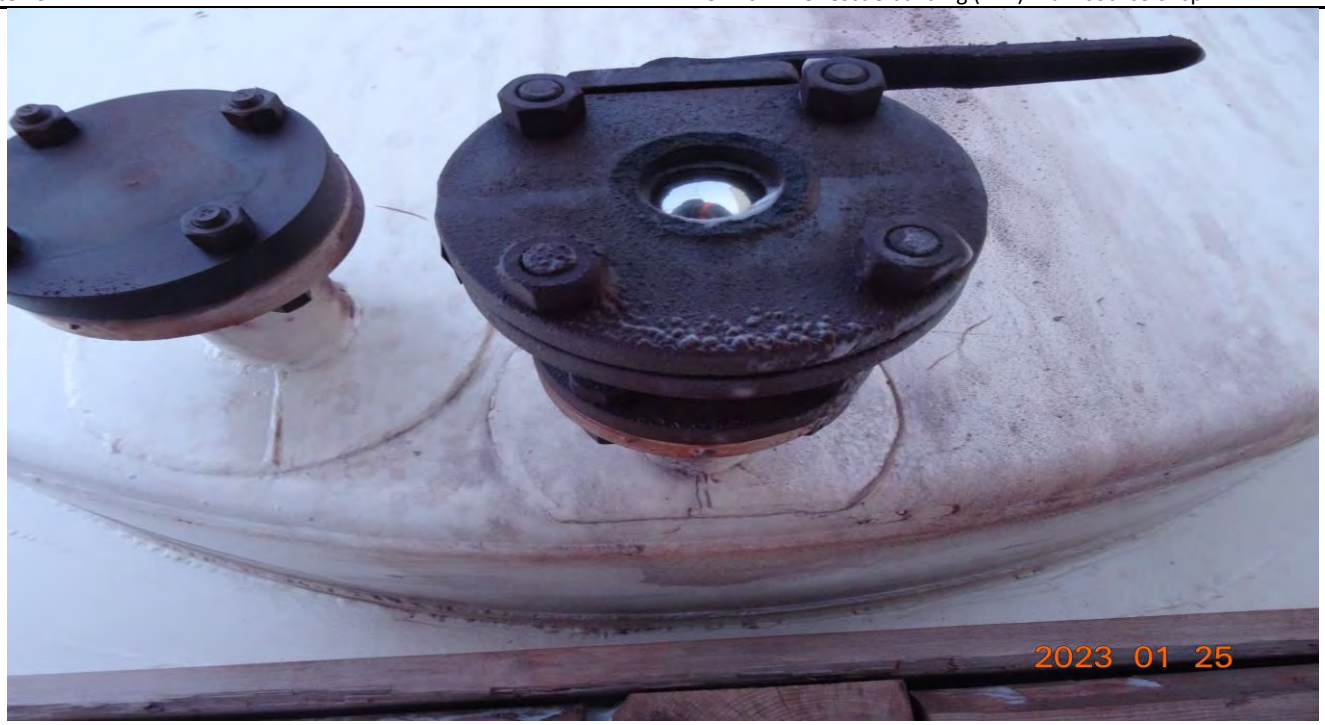
Photo Log # DSC08925	Location
Photo #1	Open Burn Facility, Mary River

Description: Loose Cardboard in the pushed snow pile inside the open burn area.

Photo Log # DSC08973	Location
Photo #3	Behind Mine rescue Building (ERT) fuel tank

Description: General site photo of Fuel tank and surrounding buildings.

Photo Log #DSC08977	Location
Photo #3	Behind mine rescue building (ERT) Main source of spill



Description: Diesel Drips were observed on this valve. Snow directly under was saturated in Diesel.

Photo Log # DSC08986	Location

Photo #4	Waste Management Laydown

Description: Hydraulic Leak coming from above the front right wheel well

Photo Log # DSC08987	**Location**
Photo #4	Waste management Laydown

Description: Photo of hydraulic leak onto snow, Drip pan is sitting too far back and won't catch any leaking fluid.

Canada

Photo Log # DSC08995	Location
Photo #5	Infront of Incinerator Building

Description: Door is unable to close, and a metal trash bin is present inside with animal attractants.

Photo Log #DSC08991	Location
Photo #5	Inside Sea can Infront of incinerator Building

Description: Image shows Fox tracks inside sea can, and Animal Attractants inside trash bin.

Photo Log #DSC09004	Location
Photo #6	105 Dam

Canada

Description: Loose wood and tangled wires. Loose pallet was located behind the sea can. (Unsighty Debris)

Photo Log #DSC09016	**Location**
Photo #7	OHT Laydown

Description: 4 1000Litre totes each with their secondary containment buried in snow. All 4 secondary containment ineffective.

Canada

Photo Log # DSC09018	Location
Photo #7	OHT Laydown

Description: Up-close photo of the buried secondary containment.

Photo Log #DSC09021	Location
Photo #8	OHT Laydown

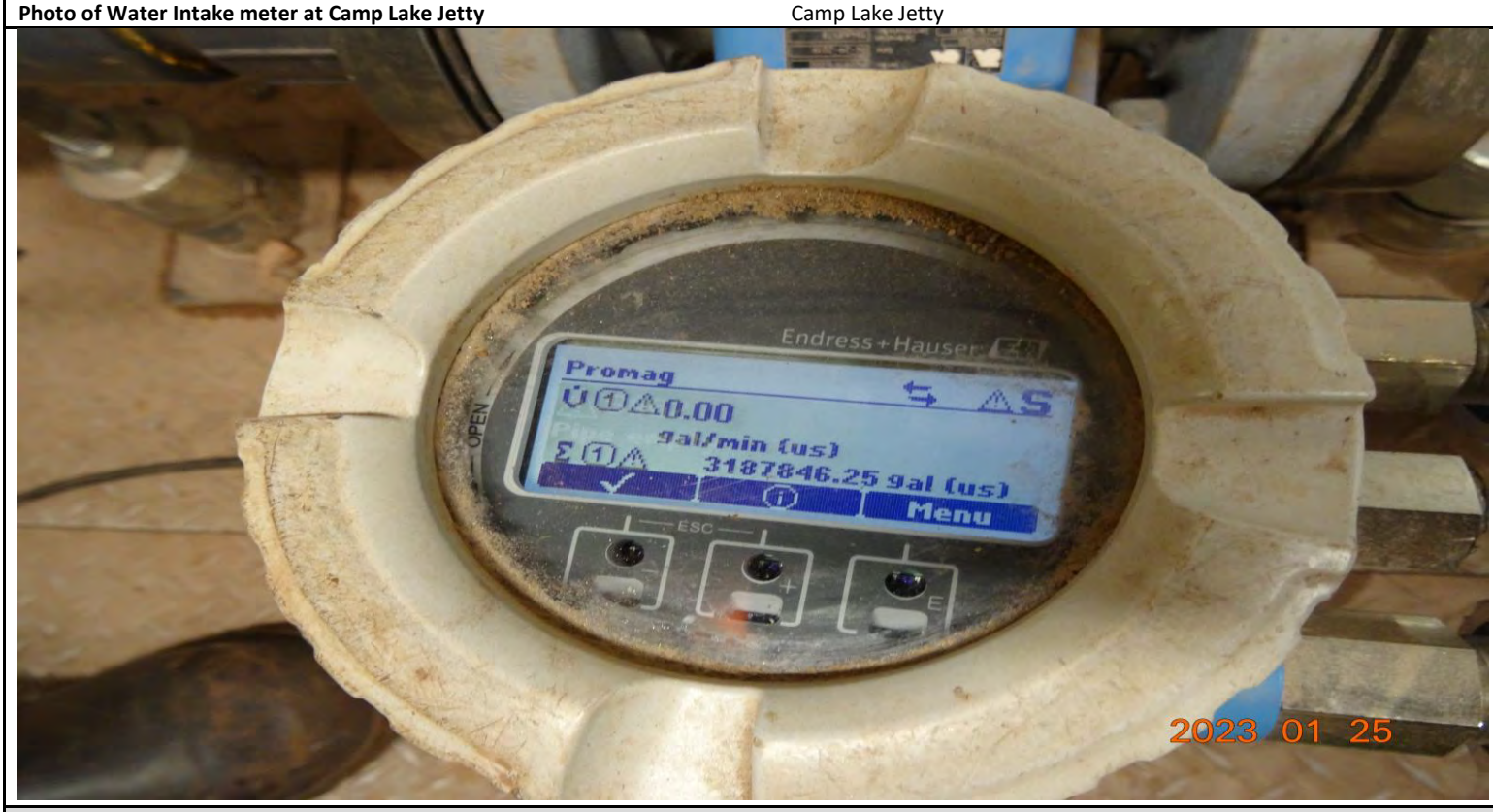
Description: Overflowing waste in Quatrex bags at OHT Laydown. Waste has become filled with snow and looks to be mixed with other types of Waste.

Canada

Photo Log #DSC09023	Location
Photo #8	OHT Laydown

Description: Photo of Batteries, Propane Bottles, secondary containment "drip pan" all stacked together.

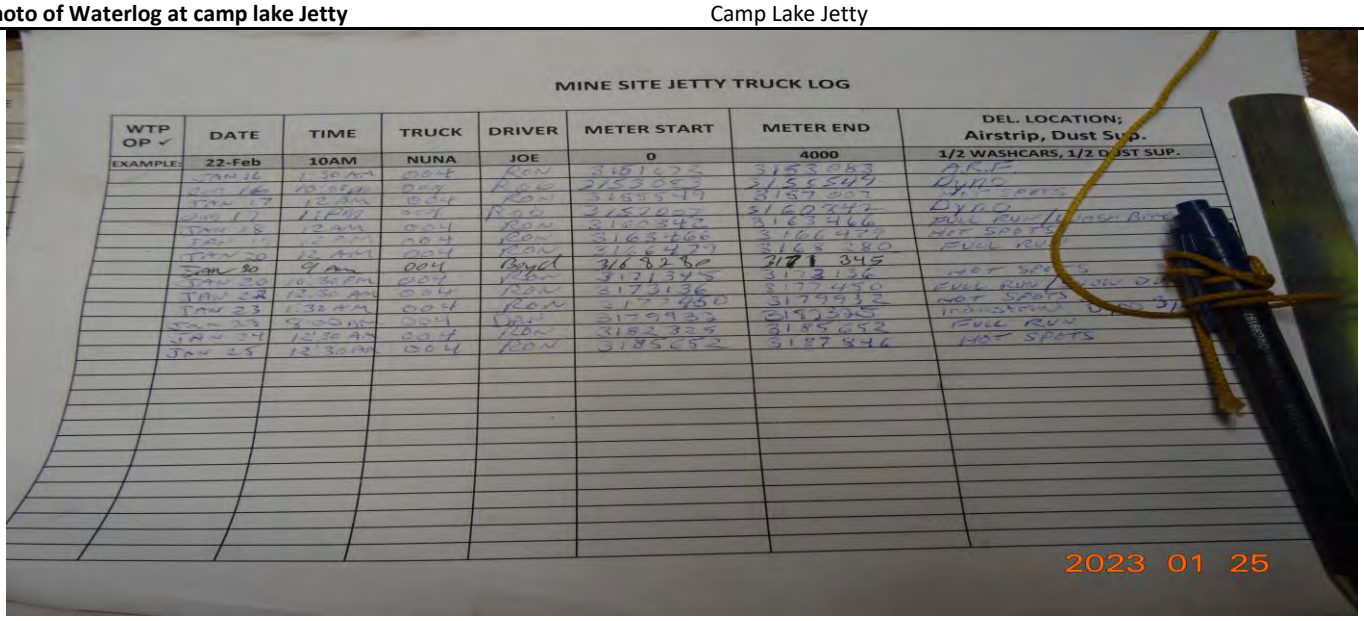
Photo Log # DSC08932	Location
Photo of Water Intake meter at Camp Lake Jetty	Camp Lake Jetty



Description: 3187846.25 US Gal = 12067.310 Cubic Metres on January 25th, 2023

Canada

Photo Log # DSC08935	Location
Photo of Waterlog at camp lake Jetty	Camp Lake Jetty

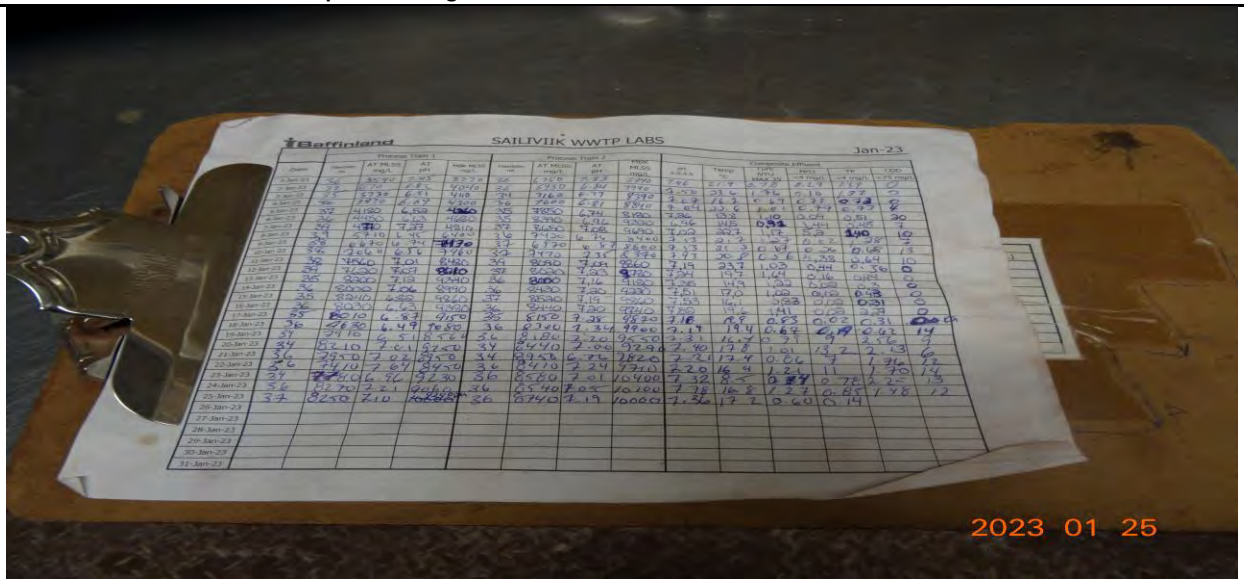


Description: Truck Log from Camp Lake Jetty

Photo Log # DSC09025	Location
Photo of Effluent Totalizer	Saillivik Wastewater treatment Plant

Description: 164951 M^3 Photo Inside Wastewater Treatment plant on January 25, 2023

Photo Log # DSC09028	Location
Photo of Sailiviik Wastewater treatment plant labs log	Sailiviik WWTP



Description: Sailiviik Wastewater treatment plant lab logs.

Canada

March 09, 2023

James Bolt
Inspector, CIRNAC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0

Re: Water Licence 2AM-MRY1325 Baffinland Response to January 2023 Inspection

The following submission from Baffinland Iron Mines Corporation (Baffinland) is a follow up in response to the Water Licence Inspection[1] conducted on January 25th, 2023, at Baffinland's Mary River Project (the Project) by the Crown-Indigenous Relations Norther Affairs Canada (CIRNAC) Inspectors. The attached Table 1 provides a summary of the Inspector's key observations and concerns. Baffinland has detailed responses to these items in Table 1.

Should you have any additional concerns or questions regarding the attached responses, please to not hesitate to contact the undersigned at your convenience.

Regards,

Katie Babin
Environmental Superintendent

Cc: Karén Kharatyan, Assol Kubeisinova (NWB)
Omer Pasalic (CIRNAC)
Megan Lord-Hoyle, Lou Kamermans, Tim Sewell, Katie Babin, Todd Swenson, Francois Gaudreau, Martin Beausejour (Baffinland)

Attachments

Attachment 1 – Table 1: Baffinland Responses to CIRNAC 2023 January Inspection Report
Attachment 2 – Photos

[1] CIRNAC (2022) Re: 230125 2AM-MRY1325-January Inspection-IAAE Report - CIRNAC Baffinland Iron Mines Water Licence Inspection Form. Inspection form dated January 25, 2023.

Baffinland

Attachment 1

Baffinland Response to CIRNAC 2023 January Inspection Report

Table 1: Baffinland Responses to CIRNAC 2023 January Inspection Report

Cmt. #	Project Location	Description of Concern or Finding	Baffinland's Response
1	Open Burn Facility, Mary River	Ensure burn pit area is clear of debris so nothing enters the environment.	To ensure waste is prevented from entering nearby water bodies, Project waste disposal areas, including the Mary River Open Burn Facility, are located at a distance greater than 30 meters from any water body. In addition, note that only clean wood waste and cardboard is permitted to be burned at the Project's Open Burn Facilities. Residual waste and bottom ash from open burning operations is collected regularly and disposed of in the approved non-hazardous solid waste Landfill Facility. Unburned cardboard debris may alternatively be placed back into the active open burn area for subsequent burning. Photo 1 in Attachment 2 shows the Open Burn Facility area with the cardboard debris removed.
2	General	Ensure the use of drip pans beneath all equipment during the refuelling outside of secondary containment. "The Licensee shall maintain and service any equipment in designated areas and shall implement special procedures (such as the use of drip pans) to manage Waste and contain potential spills as per "Part H #5 in the 2AM-MRY1325Water License".	As per Baffinland's policies, spill trays are to be used under stationary equipment that contains fuels, including frost fighters, to capture any overflow during refuelling activities. Baffinland will continue to ensure the use of spill trays under stationary equipment during refuelling outside of secondary containment to prevent hazardous materials such as fuels and oil from spilling onto the ground when transferring these products. Baffinland is committed to ensuring that spill trays are placed beneath all stationary equipment that is regularly refuelled.
3	Mine Rescue Building	Ensure clean-up of identified fuel spill, licensee must submit a follow up report to the inspector 30 days after the submission of a spill report. Ensure all spills are reported and cleaned up as per the approved Spill Contingency Plan.	On investigation of the potential fuel spill at the fuel tank outside the Mine Rescue Building, it was found that the area around the drain valve was wet. The drain valve was tightened and the handle removed, to ensure a re-occurrence would not happen and, as a precaution, a spill tray was temporarily placed beneath the drain valve. Photo 2 in Attachment 2 shows the fuel tank after the seal around the drain valve was fixed, with the temporary spill tray in place. Fuel storage tanks across the Project will continue to be inspected on a regular basis as per Baffinland's policies. The area will be monitored during warming

Cmt. #	Project Location	Description of Concern or Finding	Baffinland's Response
			conditions to ensure any affected ground material was effectively removed
4	Waste Management Laydown	Ensure contaminated snow and dirt is brought to the appropriate designated facility for treatment.	Baffinland is committed to ensuring that spill trays are placed underneath equipment and vehicles containing fluids that are in mid-term and long-term storage (i.e. equipment that is not being used for more than five (5) days) to provide secondary containment to prevent spills due to product leaks. Positioning of spill trays under vehicles is based on an analysis of the potential points of leakage for the subject equipment or vehicle. The minor surficial staining observed on the snow near the front right wheel of the articulating rock truck (ART) was removed and placed in appropriate secondary containment. An additional spill tray was subsequently placed underneath the ART at that location. Photo 3 in Attachment 2 shows the ART following removal of the minor surficial snow staining and with the additional spill tray in place at the location near the front right wheel. Operational areas continue to be inspected for proper use of secondary containment during routine compliance inspections and any issues are addressed as they are identified.
5	Seacan in front of Incinerator Building	Ensure doors are operational on shipping container storing waste to be sorted. "The Licensee shall construct and operate all infrastructure and Facilities authorized by the Board that are designed to contain, withhold, divert or retain Water and/or Waste, in accordance with all applicable legislation and industry standards." Part D #23 of the water license 2AM-MRY1325". Waste should be stored to avoid attracting animals.	The metal trash bin containing domestic waste was removed from the seacan near the incinerator building and the door of the seacan was properly closed. As per Baffinland's policies, all food waste and wildlife attractants are to be disposed of indoors or outdoors in a latching, appropriate container to prevent the attraction and food conditioning of wildlife. Work areas are to be kept free of food waste to prevent wildlife from becoming food conditioned. Photo 4 in Attachment 2 shows the seacan with the metal trash bin removed and the door of the seacan properly closed. Baffinland will ensure this area is inspected during routine compliance inspections to ensure ongoing compliance with waste disposal practices.

Cmt. #	Project Location	Description of Concern or Finding	Baffinland's Response
6	105 Dam	Ensure loose debris is collected and disposed of accordingly.	Wires identified near the seacan at the KM105 Dam do not pose a risk associated with entry of wastes to any Water bodies and therefore do not require preventative and mitigation measures in accordance with Part D, Item 8 of the water licence. Minor loose wood material observed was removed from the area. At that time, as good housekeeping practice, the wire was also untangled. Photo 5 in Attachment 2 shows the KM105 Dam area with the wooden debris removed and the wire untangled.
7	OHT Laydown	Ensure all 1000L Totes outside of storage berms have proper secondary containment. "The Licensee shall implement preventive and mitigation measures to prevent any Wastes associated with the undertaking from entering any Water bodies." – "Part D, #8 of the water license 2AM-MRY1325"	Accumulated snow around the totes at the OHT Laydown was excavated from the area to ensure effective secondary containment of the spill trays was restored. Photo 6 in Attachment 2 shows the area with the accumulated snow removed. Baffinland is committed to ensuring that containers are placed within appropriate secondary containment. Following the successful trial of secondary containment spill pallets for the hazardous waste totes at the Mine Site Crusher Maintenance Facility in late 2021, Baffinland is proceeding with the procurement of additional secondary containment spill pallets for use across site.
8	OHT Laydown	Properly sort, safely store and dispose of any waste at OHT Laydown. Ensure contaminated snow and dirt is stored in the land farm and dealt with accordingly. "Baffinland will ensure that all hazardous waste generated at the Project is effectively managed and disposed. Hazardous waste will be properly stored, transported, treated and disposed. All site personnel (including contractors) will be responsible for managing the waste they generate and will be required to comply with the	Baffinland continues to focus on housekeeping and debris management. Operational areas are inspected for the presence of debris during routine compliance inspections and any issues are generally addressed as they are identified. Materials and wastes stored at the OHT Laydown were assessed and subsequently cleaned up, properly sorted and disposed of as appropriate, and the area was organized. Photo 7 in Attachment 2 shows the current status of the area at the OHT Laydown following the clean-up and reorganization. Baffinland will ensure this area is inspected during routine compliance inspections to ensure ongoing compliance with waste sorting and disposal practices as per the Waste Management Plan, and the

Cmt. #	Project Location	Description of Concern or Finding	Baffinland's Response
		procedures provided in this Plan, the Hazardous Materials and Hazardous Waste Management Plan (BAF-PH1- 830-P16-0011) and will be subject to monitoring and enforcement." - section 3.8 of the Waste Management Plan	Hazardous Materials and Hazardous Wastes Management Plan.
9	N/A	Within 30 days of receiving this report, Inspector Bolt will follow up with the mine's environmental department to ensure that the non-compliances listed in the report are remedied to the Inspector(s) satisfactory degree.	N/A

Baffinland

Attachment 2

Photos

Photo 1. Open Burn Facility with Cardboard Debris Removed, Feb 13

Photo 2. Fuel Tank at Mine Rescue Building after Valve Repair (with Temporary Spill Tray), Feb 13

Photo 3. ART Following Removal of Minor Surficial Staining with Additional Spill Tray, Feb 13

Photo 4. Seacan at Incinerator Facility with Trash Bin Removed and Door Properly Closed, Feb 13

Photo 5. Photo KM105 Dam Area with Wood Debris Removed and Wire Untangled, Mar 9

Photo 6. OHT Laydown with Accumulated Snow Removed from Around Secondary Containment, Feb 14

Photo 7. OHT Laydown Waste Storage Area Following Clean-up and Reorganization, Feb 14

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corp – Mary River Project	Katie Babin
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environment Superintendent
Land Authorization No. / Expiry	**Land Authorization Expiry**
N/A	N/A
Date of Inspection	**Inspector**
July 12-13, 2023	Omer Pasalic

Activities Inspected

☒ Camp: ☐ Drilling: ☒ Mining: X ☐ Construction: ☐ Reclamation: ☒ Fuel Storage:
☐ Roads/Hauling: ☐ Other: Waste & Water Management Structures ☐ Other:

SECTION 1 ☒ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence** (s.__) ☐ **Action Required** (s.__)

On Wednesday July 12, 2023 I, Omer Pasalic, Inspector and Sean Noble-Nowdluk, inspector in training, with the Crown Indigenous Relations and Northern Affairs Canada, (CIRNAC) completed a visit of the site named above for the purpose of verifying terms and conditions which the water license was issued upon. At the time of the inspection, there were 554 personnel on site at Mary River and an additional 290 personnel at Milne Port site. The number of staff on site reflects the use of water, waste produced and an overall Impact to the Environment.

During the inspection, we mainly focused on Mary River Mine site and visited the Milne Port site. The inspectors were accompanied by Katie Babin, the Environmental Superintendent for both Mary River and Milne Port sites.

The Following list of items were inspected for compliance with the issued and valid water license:

- Camp Lake Jetty Water Intake facility
- Polishing Waste Stabilization Ponds #2 and #3.
- Hazardous Waste Berm #7
- Land farm and Land Fill
- Effluent Discharge Site
- Main camp area (Outside maintenance shop, mine rescue building area)
- Waste Management Building laydown (incinerator) and hazardous waste berm #6
- Mine Pit/Dump and Waste rock water treatment plant
- KM105 Dam
- Ore Haul Truck Laydown
- Sailiviik Waste Water and Water Treatment Plants

The Inspectors verified that a copy of the water license was present and available in the water treatment plant, waste treatment plant and water intake facility. Signage for waste sorting (waste sorting guidelines) are present in the incinerator building. Photos of the flowmeters at the Camp Lake Jetty and Wastewater Treatment facility (sailiviik) are included at the end of the photo log.

SECTION 2 ☐ **Comments** (s.__) ☒ **Non-Compliance with Act or Licence** (s.2) ☐ **Action Required** (s.__)

1. At the Waste Rock Facility, a spill (Spill#23-276) had occurred when heavy machinery punctured the berm liner allowing untreated water to escape under the berm. The spill was reported and employees started the remediation.
2. At KM105 Surface Water Management Pond, there is a dam constructed. At some point, a leak had been discovered in the dam allowing untreated water to escape the site and enter the waterway. Baffinland has since contracted engineers to come up with a solution to seal or fix the leak. We are awaiting to hear who the contractor is and what will happen in the future to fix the leak.
3. While inspecting the incinerator building, a waste oil spill was discovered just outside the building. Employees stated that the remediation work will commence as soon as possible.
4. During the inspection of the light vehicle refuelling station at the Mary River site, Inspector Pasalic noticed a small berm

had not been properly set up, and any potential spill would have not been contained within the berm.

5. Stained soil was also observed at the light vehicle refuelling station. The ground staining suggested that Gasoline or Diesel had migrated down into the Tank Farm berm, which had some water present.
6. Shortly after noticing the ground staining, a fuel sheen was discovered on the Northwest corner of the Tank Farm berm.
7. More small berms were not set up properly at the heavy equipment refuelling station. Any potential spills would have escaped from the berm and enter the environment. Ground staining was also present at the heavy equipment refuelling station.
8. During the drive along the tote road to Milne Inlet, an inspection was conducted at the water intake lake for the Milne camp. The berm that held the water pump was not set up properly. Any potential fuel spill from this berm would have ended up in the lake where fish were observed during the inspection.
9. During the Milne Inlet inspection, Inspector Pasalic arrived at the site where a spill had occurred before (Spill # 23-294). With this particular spill, freshet water had eroded the area near the shore causing sand and sediments to travel towards the ocean. A silt fence was put in place to prevent further spreading and the water was also diverted to a different area.
10. More berms were seen at the light vehicle refuelling station in Milne and were not set up properly. Ground staining and fuel odour were also present at this location. Inspector Pasalic requested that this spill be reported to the NT-NU spill line.
11. Cigarettes were seen throughout both sites. Pasalic reminded Baffinland staff that all cigarettes must be disposed of properly and not thrown into the environment.

SECTION 3 ☐ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence, (**s.__) ☒ **Action Required** (s.3)

1. Ensure that the broken liner at the Waste Rock Facility is fixed and in good operating order to ensure no future spills occur.
2. Ensure that all berms are fixed and set up properly. These berms must be set up so that no potential spill will be released into the environment.
3. Impacted soil at both of the light equipment refuelling stations must be remediated.
4. Any water being discharged from the Mary River tank farm must be tested prior to being pumped out.
5. Ensure that cigarettes are being discarded properly and not thrown into the environment.

Licensee or Representative	**Inspector's Name**
Katie Babin	Omer Pasalic
Signature Todd Swenson for KB	**Signature** Omer Pasalic
Date	**Date**

Photo Log	Location
Photo #1	Waste Rock Water Treatment Facility

Description: Photo of the liner that was ripped by an excavator. Liner will be repaired.

Photo Log	Location
Photo #2	KM105 Surface Water Management Pond Dam

Description: Photo of the dam looking upstream (East). Note that the water runoff is not building up due to a leak in the dam.

Photo Log	Location
Photo #3	KM105 Surface Water Management Pond Dam

Description: Photo of dam looking up from the bottom of the dam to show structure. It is still unclear exactly where the leak is coming from.

Photo Log	Location
Photo #4	Bottom of KM105 Dam

Description: Untreated water coming from a leak in the dam which follows the stream down to Camp Lake.

Photo Log	Location
Photo #5	KM105 at the bottom of the dam.

Description: Evidence of erosion above the culverts. Access road has started to crack and has a possibility of washing away.

Photo Log	Location
Photo #6	Flow meter at the Camp Lake water intake.

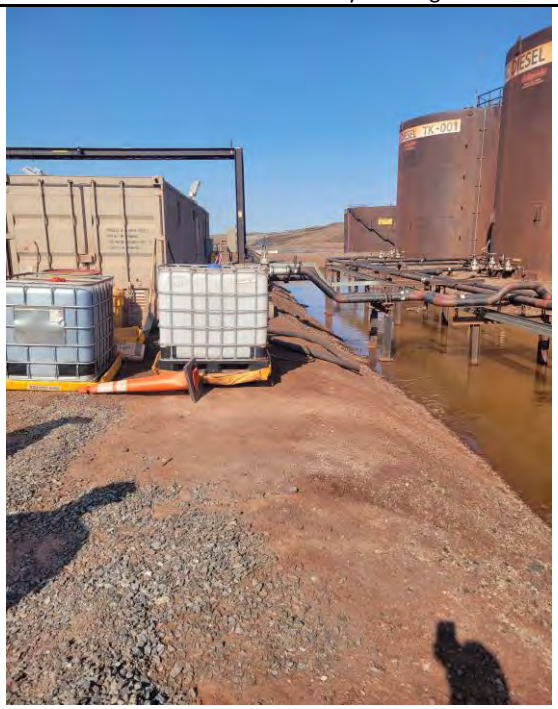
Description: Flow meter at the Camp Lake water intake pumphouse.

Canada

Photo Log	Location
Photo #7	Mary River incinerator building

Description: Evidence of a spill outside the incinerator building. Crews stated remediation would start immediately.

Photo Log	Location
Photo #8	Mary River light vehicle refueling station



Description: Previous spills seem to be migrating into the tank farm berm. Smells of fuel-stained soil was present near the totes.

Photo Log	Location
Photo #9	Mary River tank farm berm

Description: Some fuel sheen was seen on the edge of the water. Photo looking West.

Photo Log	Location
Photo #10	Mary River heavy vehicle refueling station

Description: More berms showing improper set-up. Any fuel spilled would not be contained and would cause a spill.

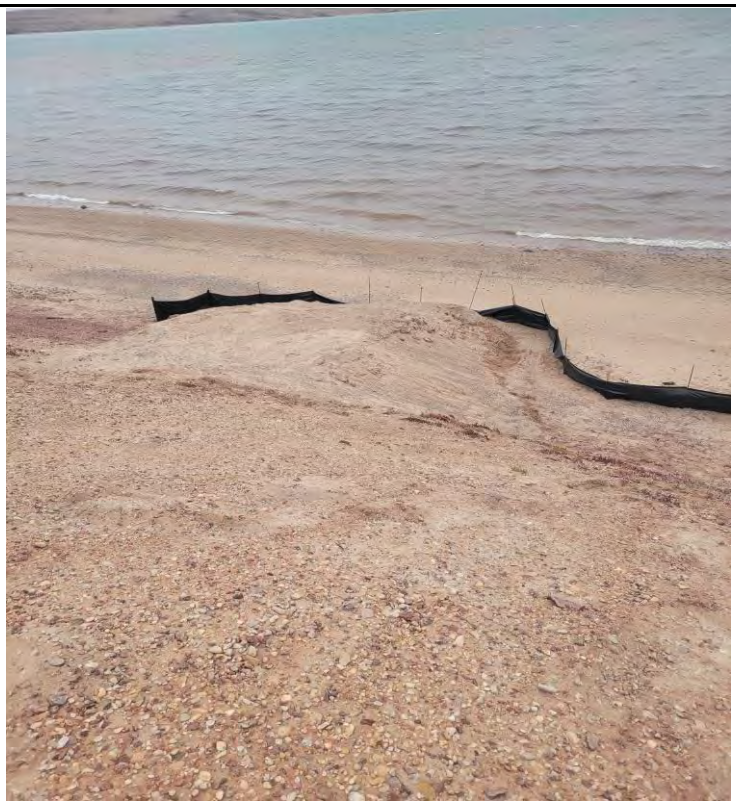
Photo Log	Location
Photo #11	Mary River heavy vehicle refueling station

Description: More photos of berms that are not set up properly.

Photo Log	Location
Photo #12	Water Intake Lake for Milne Inlet Camp

Description: Small berm for water pump was not set up properly. Fish was also observed at this lake. This lake supplies the water for the Milne Inlet Site.

Photo Log	Location
Photo #13	Milne Inlet Shoreline



Description: A spring freshet caused water to erode some areas and transfer sediments towards the ocean. A silt fence was installed to minimize impacts.

Photo Log	Location
Photo #14	Milne Inlet

Description: Evidence of erosion. Sediments had been carried towards the ocean.

Photo Log	Location
Photo #15	Milne Inlet light vehicle refueling station

Description: More berms improperly set up.

Photo Log	Location
Photo #16	Milne Inlet light vehicle refueling station

Description: Inspector Pasalic discovered a spill that was not reported to the NT-NU spill line. Pasalic stated that this spill should be reported and remediated.

January 5, 2024

Omer Pasalic
Senior Resources Management Officer
Crown Indigenous Relations and Northern Affairs (CIRNAC)
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0

Re: Baffinland Response to July 2023 CIRNAC Inspection

The following submission from Baffinland Iron Mines Corporation (Baffinland) is a follow up in response to the Inspection[1] conducted from July 12-14, 2023, at Baffinland's Mary River Project (the Project), by Crown-Indigenous Relations Norther Affairs Canada (CIRNAC). The attached Table 1 provides a summary of follow up information and updates requested by CIRNAC during the inspection and associated close out meeting. Photos are provided in attachment 3, and a list of Project Certificate (PC) conditions that were reviewed on site are included in attachment 4.

Should you have any additional concerns or questions regarding the attached responses, please to not hesitate to contact the undersigned at your convenience.

Regards,
Katie Babin

Environmental Superintendent

Cc: Karén Kharatyan, Assol Kubeisinova (NWB)
Sean Noble-Nowdluk, Jeremy Fraser (CIRNAC)
Megan Lord-Hoyle, Lou Kamermans, Tim Sewell, Connor Devereaux Todd Swenson, Francois Gaudreau, Martin Beausejour, Dale Kristoff, Allison Parker (Baffinland)

Attachments

Attachment 1 – 230914 2AM-MRY1325-Baffinland Water Licence Inspection July 2023
Attachment 2 – Table 1: Baffinland Responses to CIRNAC 2023 July Inspection Report
Attachment 3 – Photos
Attachment 4 – PC conditions reviewed on site

[1] CIRNAC (2023) CIRNAC Baffinland Water License Inspection Report - July 2023 - CIRNAC Baffinland Iron Mines Water Licence Inspection Form. Inspection form dated September 14, 2023.

Baffinland

Attachment 1

230914 2AM-MRY1325-Baffinland Water Licence Inspection July 2023

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines Corp – Mary River Project	Katie Babin
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environment Superintendent
Land Authorization No. / Expiry	**Land Authorization Expiry**
N/A	N/A
Date of Inspection	**Inspector**
July 12-13, 2023	Omer Pasalic

Activities Inspected

☒ Camp: ☐ Drilling: ☒ Mining: X ☐ Construction: ☐ Reclamation: ☒ Fuel Storage:
☐ Roads/Hauling: ☐ Other: Waste & Water Management Structures ☐ Other:

SECTION 1 ☒ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence** (s.__) ☐ **Action Required** (s.__)

On Wednesday July 12, 2023 I, Omer Pasalic, Inspector and Sean Noble-Nowdluk, inspector in training, with the Crown Indigenous Relations and Northern Affairs Canada, (CIRNAC) completed a visit of the site named above for the purpose of verifying terms and conditions which the water license was issued upon. At the time of the inspection, there were 554 personnel on site at Mary River and an additional 290 personnel at Milne Port site. The number of staff on site reflects the use of water, waste produced and an overall Impact to the Environment.

During the inspection, we mainly focused on Mary River Mine site and visited the Milne Port site. The inspectors were accompanied by Katie Babin, the Environmental Superintendent for both Mary River and Milne Port sites.

The Following list of items were inspected for compliance with the issued and valid water license:

- Camp Lake Jetty Water Intake facility
- Polishing Waste Stabilization Ponds #2 and #3.
- Hazardous Waste Berm #7
- Land farm and Land Fill
- Effluent Discharge Site
- Main camp area (Outside maintenance shop, mine rescue building area)
- Waste Management Building laydown (incinerator) and hazardous waste berm #6
- Mine Pit/Dump and Waste rock water treatment plant
- KM105 Dam
- Ore Haul Truck Laydown
- Sailiviik Waste Water and Water Treatment Plants

The Inspectors verified that a copy of the water license was present and available in the water treatment plant, waste treatment plant and water intake facility. Signage for waste sorting (waste sorting guidelines) are present in the incinerator building. Photos of the flowmeters at the Camp Lake Jetty and Wastewater Treatment facility (sailiviik) are included at the end of the photo log.

SECTION 2 ☐ **Comments** (s.__) ☒ **Non-Compliance with Act or Licence** (s.2) ☐ **Action Required** (s.__)

1. At the Waste Rock Facility, a spill (Spill#23-276) had occurred when heavy machinery punctured the berm liner allowing untreated water to escape under the berm. The spill was reported and employees started the remediation.
2. At KM105 Surface Water Management Pond, there is a dam constructed. At some point, a leak had been discovered in the dam allowing untreated water to escape the site and enter the waterway. Baffinland has since contracted engineers to come up with a solution to seal or fix the leak. We are awaiting to hear who the contractor is and what will happen in the future to fix the leak.
3. While inspecting the incinerator building, a waste oil spill was discovered just outside the building. Employees stated that the remediation work will commence as soon as possible.
4. During the inspection of the light vehicle refuelling station at the Mary River site, Inspector Pasalic noticed a small berm

had not been properly set up, and any potential spill would have not been contained within the berm.

5. Stained soil was also observed at the light vehicle refuelling station. The ground staining suggested that Gasoline or Diesel had migrated down into the Tank Farm berm, which had some water present.
6. Shortly after noticing the ground staining, a fuel sheen was discovered on the Northwest corner of the Tank Farm berm.
7. More small berms were not set up properly at the heavy equipment refuelling station. Any potential spills would have escaped from the berm and enter the environment. Ground staining was also present at the heavy equipment refuelling station.
8. During the drive along the tote road to Milne Inlet, an inspection was conducted at the water intake lake for the Milne camp. The berm that held the water pump was not set up properly. Any potential fuel spill from this berm would have ended up in the lake where fish were observed during the inspection.
9. During the Milne Inlet inspection, Inspector Pasalic arrived at the site where a spill had occurred before (Spill # 23-294). With this particular spill, freshet water had eroded the area near the shore causing sand and sediments to travel towards the ocean. A silt fence was put in place to prevent further spreading and the water was also diverted to a different area.
10. More berms were seen at the light vehicle refuelling station in Milne and were not set up properly. Ground staining and fuel odour were also present at this location. Inspector Pasalic requested that this spill be reported to the NT-NU spill line.
11. Cigarettes were seen throughout both sites. Pasalic reminded Baffinland staff that all cigarettes must be disposed of properly and not thrown into the environment.

SECTION 3 ☐ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence, (**s.__) ☒ **Action Required** (s.3)

1. Ensure that the broken liner at the Waste Rock Facility is fixed and in good operating order to ensure no future spills occur.
2. Ensure that all berms are fixed and set up properly. These berms must be set up so that no potential spill will be released into the environment.
3. Impacted soil at both of the light equipment refuelling stations must be remediated.
4. Any water being discharged from the Mary River tank farm must be tested prior to being pumped out.
5. Ensure that cigarettes are being discarded properly and not thrown into the environment.

Licensee or Representative	**Inspector's Name**
Katie Babin	Omer Pasalic
Signature Todd Swenson for KB	**Signature** Omer Pasalic
Date	**Date**

Photo Log	Location
Photo #1	Waste Rock Water Treatment Facility

Description: Photo of the liner that was ripped by an excavator. Liner will be repaired.

Photo Log	Location
Photo #2	KM105 Surface Water Management Pond Dam

Description: Photo of the dam looking upstream (East). Note that the water runoff is not building up due to a leak in the dam.

Photo Log	Location
Photo #3	KM105 Surface Water Management Pond Dam

Description: Photo of dam looking up from the bottom of the dam to show structure. It is still unclear exactly where the leak is coming from.

Photo Log	Location
Photo #4	Bottom of KM105 Dam

Description: Untreated water coming from a leak in the dam which follows the stream down to Camp Lake.

Photo Log	Location
Photo #5	KM105 at the bottom of the dam.

Description: Evidence of erosion above the culverts. Access road has started to crack and has a possibility of washing away.

Photo Log	Location
Photo #6	Flow meter at the Camp Lake water intake.

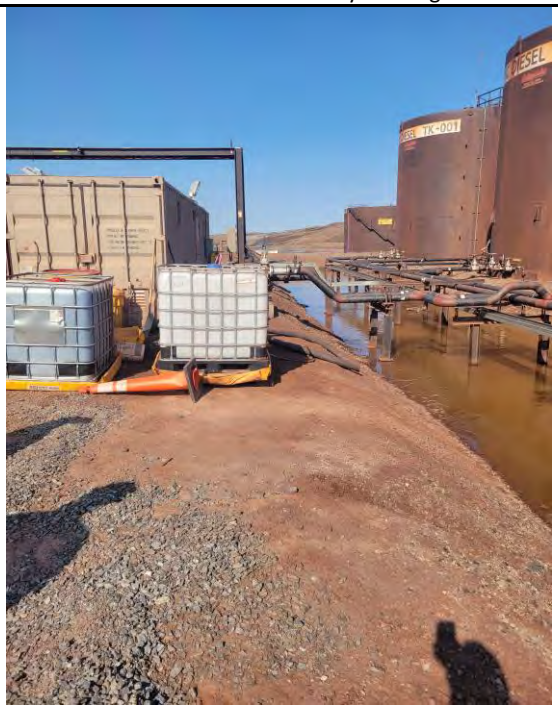
Description: Flow meter at the Camp Lake water intake pumphouse.

Canada

Photo Log	Location
Photo #7	Mary River incinerator building

Description: Evidence of a spill outside the incinerator building. Crews stated remediation would start immediately.

Photo Log	Location
Photo #8	Mary River light vehicle refueling station



Description: Previous spills seem to be migrating into the tank farm berm. Smells of fuel-stained soil was present near the totes.

Photo Log	Location
Photo #9	Mary River tank farm berm

Description: Some fuel sheen was seen on the edge of the water. Photo looking West.

Photo Log	Location
Photo #10	Mary River heavy vehicle refueling station

Description: More berms showing improper set-up. Any fuel spilled would not be contained and would cause a spill.

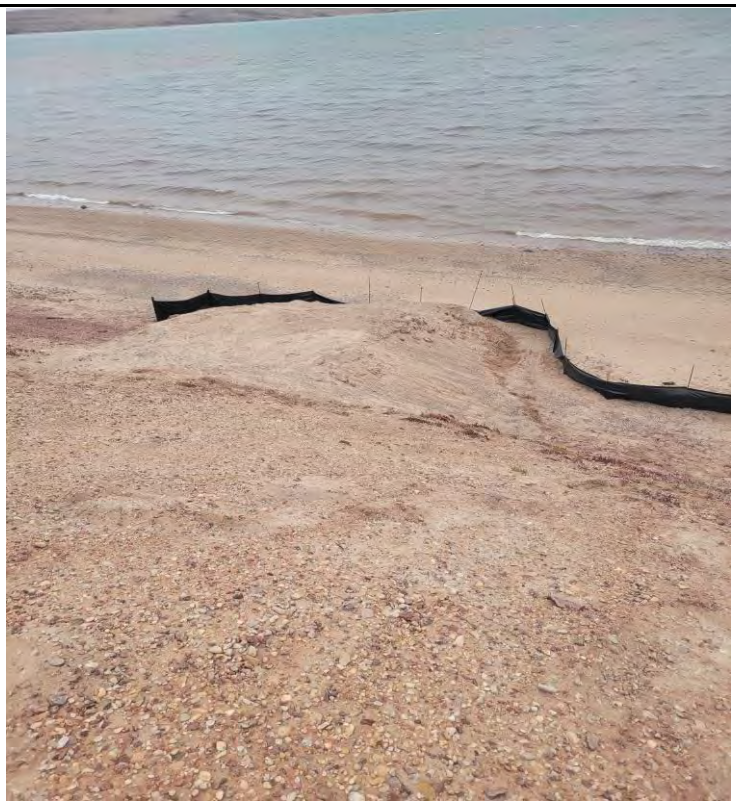
Photo Log	Location
Photo #11	Mary River heavy vehicle refueling station

Description: More photos of berms that are not set up properly.

Photo Log	Location
Photo #12	Water Intake Lake for Milne Inlet Camp

Description: Small berm for water pump was not set up properly. Fish was also observed at this lake. This lake supplies the water for the Milne Inlet Site.

Photo Log	Location
Photo #13	Milne Inlet Shoreline



Description: A spring freshet caused water to erode some areas and transfer sediments towards the ocean. A silt fence was installed to minimize impacts.

Photo Log	Location
Photo #14	Milne Inlet

Description: Evidence of erosion. Sediments had been carried towards the ocean.

Photo Log	Location
Photo #15	Milne Inlet light vehicle refueling station

Description: More berms improperly set up.

Photo Log	Location
Photo #16	Milne Inlet light vehicle refueling station

Description: Inspector Pasalic discovered a spill that was not reported to the NT-NU spill line. Pasalic stated that this spill should be reported and remediated.

Attachment 2

Baffinland Response to CIRNAC 2023 July Inspection Information Requests

Table 1: Baffinland Responses to CIRNAC 2023 July Inspection Information Requests

Finding	Action	Baffinland's Response
1	Ensure that the broken liner at the Waste Rock Facility is fixed and in good operating order to ensure no future spills occur.	This was completed on July 16, 2023. See photo 1
2	Ensure that all berms are fixed and set up properly. These berms must be set up so that no potential spill will be released into the environment.	This area was reviewed with site personnel and spill trays replaced at this facility. Note that this is considered tertiary containment as this in an engineered lined area. See photo 2 and 3.
3	Impacted soil at both of the light equipment refuelling stations must be remediated.	Soil was carefully removed from the Bulk Fuel Storage Facilities at the Mine Site and Milne Port and will be remediated in the Landfarm facility. See Photo 4 and 5. Note: this soil and staining was observed in an engineered lined containment area.
4	Any water being discharged from the Mary River tank farm must be tested prior to being pumped out.	Water that is discharged from any facility is tested to ensure compliance with applicable criteria outlined in the water licence. If it is compliant than a direct discharge occurs as per the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (FWSSWMP). The water observed at the referenced facility during this inspection was pumped out and treated through the on site OWS.
5	Ensure that cigarettes are being discarded properly and not thrown into the environment.	Site crews were reminded of this and clean-up is an ongoing initiative and focus for Baffinland in all areas. A site memo has been distributed to all personnel as a reminder and supervisors reviewed with their crews.
WRF	At KM105 Surface Water Management Pond, there is a dam constructed. At some point, a leak had been discovered in the dam allowing untreated water to escape the site and enter the waterway. Baffinland has since contracted engineers to come up with a solution to seal or fix the leak. We are awaiting to hear who the contractor is and what will happen in the future to fix the leak.	A follow up report #23-208 was submitted to CIRNAC on June 20th, 2023 that details initial mitigations and work completed for this event. Water quality monitoring occurred throughout 2023 to characterize conditions at the seep and receiving environment. As outlined previously Baffinland has retained a third party engineer to review current status and develop a remediation plan for the observed issue. A follow up report will be submitted to CIRNAC detailing remedial measures implemented to date, water quality monitoring and the final remedial plan and schedule of implementation.

Spill 23-294	During the Milne Inlet inspection, Inspector Pasalic arrived at the site where a spill had occurred before (Spill # 23-294). With this particular spill, freshet water had eroded the area near the shore causing sand and sediments to travel towards the ocean. A silt fence was put in place to prevent further spreading and the water was also diverted to a different area.	A follow up report to spill 23-294 submitted on August 6th, 2023 contained information about further remediation to this area. The material was removed and the area re-enforced with competent material to prevent further sedimentation issues in the future.
Photo #16	More berms were seen at the light vehicle refuelling station in Milne and were not set up properly. Ground staining and fuel odour were also present at this location. Inspector Pasalic requested that this spill be reported to the NT-NU spill line.	It was observed during inspection in July that there was some sheen and staining at the light vehicle fuelling areas which are in a lined engineered facility. As per Baffinland's Spill Contingency Plan (SCP) Rev. 6, Baffinland investigated the volume and location of the observation and determined it was not reportable externally as per section 9 of the SCP. An internal incident report was filed by the responsible department and contaminated soil from the area was removed. The pooling water observed within the lined facility is being treated through the Oily Water Treatment Facility and water quality results and discharge volumes are reported in the water licence monthly report. As this is an active refuelling area, Baffinland will continue to complete routine compliance inspections as per the Environmental Protection Plan and ensure this facility is operated as designed.

Attachment 3

Photos

Photo 1 – Liner repair at the WRF pond ditch inflow. July 16, 2023

Photo 2 – Spill trays at Milne Port light vehicle refueling area replaced, August 2023

Photo 3 – Spill trays at Mary River light vehicle refueling area replaced, August 2023

Photo 4 – Contaminated soil removed, and old fuel tank replaced with new double walled tank. September, 2023

Photo 5 – Contaminated soil removed, and ponding water being removed for treatment. September, 2023

Photo 6 – Follow up to spill 23-294 showing re-enforced bank to prevent further erosion

Attachment 4

PC Conditions Reviewed on Site

PC Condition	Project Certificate Term or Condition/Description of Request	Baffinland's Response
PC 51	The Proponent, either directly or as part of the TEWG, shall consider and, where appropriate, cooperate with relevant regional and/or community-based monitoring initiatives that raise issues or produce information pertinent to mitigating Project-induced impacts. The Proponent shall give special consideration for supporting regional studies of population health and harvest programs for North Baffin caribou which help address areas of uncertainty for Project impact predictions.	As per 2022 NIRB Annual report, Baffinland has provided financial and logistical support for the Government of Nunavut's (GN's) North Baffin Island caribou survey research on several occasions since 2009. Baffinland will continue to support relevant GN caribou surveys to enhance Baffinland's understanding of potential Project-related effects and regional knowledge about wildlife distribution and abundance. For example, Baffinland presented options for larger-scale caribou surveys to the TEWG during the June 2021 meeting, including aerial surveys and a collaring program as monitoring options, ideally collaborating with GN. In 2023 Baffinland retained EDI Environmental Dynamics Inc. (EDI) to conduct a late-winter aerial survey to assess the occurrence (presence/absence), distribution, and total counts of north Baffin caribou within the Wildlife RSA and nearby areas of interest. The objective of this aerial survey was to estimate the abundance and density of north Baffin caribou in the northern (i.e., active Project area) and southern (i.e., planned/future Project area) subregions of the RSA in relation to the predefined monitoring triggers. The full findings will be provided in the 2023 NIRB annual report
PC 49	A Terrestrial Environment Working Group (TEWG) shall be established as an advisory oversight body, providing advice, guidance and enforceable recommendations to fulfil the intended objectives. The operation of the TEWG shall not duplicate or impede the exercise of regulatory authority of authorizing agencies or government. The TEWG shall have the following permanent members: The Proponent, the Qikiqtani Inuit Association, the Government of Nunavut, the Government of Canada, the Mittimatalik HTO, and the Hunters and Trappers Organizations of the other Impacted Communities (Arctic Bay, Clyde River, Sanirajak, Igloolik), should they wish to participate. A Terms of Reference shall be established that guides additional participation in the TEWG by observers. The TEWG shall be chaired by an independent third party as chosen by the permanent members. A revised Terms of Reference shall be presented to NIRB no later than	Baffinland established a TEWG in 2013. Members of the TEWG include representatives from: Environment and Climate Change Canada (ECCC), Qikiqtani Inuit Association (QIA), Government of Nunavut (GN), and Baffinland with technical experts as required. The Mittimatalik Hunters and Trappers Organization (MHTO) joined the group in 2016. In 2022, representatives from the HTOs of Arctic Bay, Clyde River, Igloolik and Sanirajak have been added to the Term and Condition should they wish to participate. The TEWG and MEWG met in Iqaluit in December of 2023. The TOR are being reviewed with working group numbers and will be submitted to the NIRB once finalized. Baffinland and the responsible parties are in the process of establishing an independent chair. Full details of this PC can be found in the 2022 NIRB annual report, and will be reported on in the 2023 NIRB annual report.

PC Condition	Project Certificate Term or Condition/Description of Request	Baffinland's Response
	December 15th, 2022, or at another date on consent of the Proponent, Canada, and the Qikiqtani Inuit Association.	
PC 179	Baffinland shall not exceed 20 ore carrier transits to Steensby Port per month during the open water season and 242 transits per year in total.	Baffinland is currently not shipping out of Steensby Port.
PC 185	All project related shipping associated with the Northern Shipping route shall observe the following conditions, subject to the variances and/or exceptions below: a) The Proponent must avoid breaking landfast ice at all times during the shipping season. b) The Proponent shall confirm a continuous path of 3/10th ice concentrations along the Northern Shipping route is available prior to commencement of the shipping season. c) The Proponent is required to plan for and cease all shipping from Milne Port by October 31. The Proponent may proceed with a variance to condition (b) above, or under exceptional circumstances that may occur from time to time seek an exception to condition (c). (….) Full description in NIRB PROJECT CERTIFICATE [NO.: 005] Amendment 4	Baffinland will continue to implement its Shipping and Marine Wildlife Management Plan which is consistent with this Term and Condition and which stipulates that start of shipping be delayed until a continuous path of no greater than 3/10ths ice exists along the Northern Shipping Route, that it will cease its shipping activities no later than October 31 on every calendar year, and at all times shipping through land fast ice will be avoided. Full details of this PC can be found in the 2022 NIRB annual report, and will be reported on in the 2023 NIRB annual report.
PC 187	The Proponent is required to resource an annual audit of dust impacts and mitigations associated with project activities to be completed by a third party acceptable to the responsible parties. The dust audit shall evaluate effectiveness of current measures and if necessary, contain recommendations and options to reduce the spread and impacts of dust from project activities.	Baffinland contracted a third party consultant to conduct an audit to identify any modifications or controls that could effectively reduce the generation or spread of dust at the Mary River Project. The Dust Audit Committee is comprised of nominated representatives from the hamlets and their Hunter and Trappers' associations including Arctic Bay, Clyde River, Igloolik, Pond Inlet, and

PC Condition	Project Certificate Term or Condition/Description of Request	Baffinland's Response
		Sanirajak, as well as representatives from the Qikiqtani Inuit Association (QIA), and facilitators and engineering subject matter experts from Nunami Stantec and CWA Engineers Inc. (CWA). Full details of this PC can be found in the 2022 NIRB annual report, and will be reported on in the 2023 NIRB annual report.
PC 188	The Proponent working with the TEWG is required to develop a program for identification of conditions with high risk for dust dispersal and plan for additional mitigation measures that shall be applied at the times the conditions are present. The program shall also include the use of dust suppressants.	Baffinland has commenced work to create a program to identify high risk conditions for dust dispersal. The first step in this program is to establish a monitoring program to collect data to enable thresholds to be developed against 'high risk conditions'. Monitoring trials have commenced in spring of 2023 and continued throughout the year. This involves monitoring dust sources and confounding factors such as wind speed and precipitation to develop specific thresholds by area or activity. Once these thresholds are established, high risk conditions will be selected and a plan developed for additional measures to be taken at the times the conditions are present, including additional dust suppression or operational staged decreases in dust generating site activities. It is important to note that the priority is to implement controls for dust management under the various environmental conditions observed at the Project.
PC 110	The Proponent shall immediately develop a monitoring protocol that includes, but is not limited to, acoustical monitoring, to facilitate assessment of the potential short term, long term, and cumulative effects of vessel noise on marine mammals and marine mammal populations. The Proponent is expected to work with the Marine Environment Working Group to determine appropriate early warning indicator(s) that will ensure rapid identification of negative impacts along the southern and northern shipping routes.	Baffinland has implemented since 2014 a number of marine mammal monitoring programs aimed at evaluating the potential effects on vessel noise on marine mammals and marine mammal populations (e.g., Bruce Head Shore-based Monitoring Program, Marine Mammal Aerial Survey Program (MMASP), Narwhal Tagging Study, Ship-based Observer (SBO) Program, Ringed Seal Aerial Survey Program, Underwater Passive Acoustic Monitoring (PAM) Program. An overview of all the marine mammal monitoring programs completed by Baffinland to date for the Northern Shipping Route and A summary of the marine mammal monitoring activities undertaken in 2022 is presented in 2022 NIRB annual report, and will be reported on in the 2023 NIRB annual report.
PC 17	The Proponent shall develop and implement effective measures to ensure that effluent from project-related facilities and/or activities, including sewage treatment plants, ore stockpiles, and mine pit, satisfies all discharge criteria requirement established by the	Wastewater and effluent management practices are outlined in the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (FWSSWMP) and the Metal and Diamond Mining Effluent Regulations – Early Revenue Phase (MDMER ERP), which is appended to the FWSSWMP. Surface water monitoring, management practices and procedures are outlined in the Project's Surface Water and Aquatic Ecosystem Management Plan (SWAEMP). Water quality

PC Condition	Project Certificate Term or Condition/Description of Request	Baffinland's Response
	relevant regulatory agencies prior to being discharged into the receiving environment.	discharge criteria (discharge criteria) for effluent generated by the Project are stipulated in the Type 'A' Water Licence issued by the NWB, and Schedules 4 and 5 of the MDMER. Consistent with the FWSSWMP, prior to discharge, wastewater (e.g. treated sewage, treated contact water, oily water, etc.) is sampled to ensure water quality meets the applicable discharge criteria. Wastewater that meets the applicable discharge criteria is discharged to the receiving environment. Water samples are routinely taken prior to and during wastewater discharges to ensure the water quality remains in compliance with the applicable discharge criteria. In the event that water quality sampling during a discharge indicates that the water quality has changed and is no longer in compliance with the applicable discharge criteria, the discharge of the non-compliant wastewater is halted. Results from the 2023 discharge activities will be reported on in the 2023 NIRB annual report.
PC 20	The Proponent shall monitor the effects of explosives residue and related by-products from Project-related blasting activities as well as develop and implement effective preventative and/or mitigation measures, including treatment, if necessary, to ensure that the effects associated with the manufacturing, storage, transportation and use of explosives do not negatively impact the Project and surrounding areas.	Surface water runoff downstream of Project mining areas and quarries is monitored as prescribed by the Type 'A' Water Licence, with water quality results reported to CIRNAC, the NWB and the QIA on a monthly and annual basis. Water samples are collected using the practices and procedures described in Baffinland's Sampling Program - Quality Assurance and Quality Control Plan (QA/QC Plan) which is an approved plan under the Type 'A' Water Licence. In addition, the Aquatic Effects Monitoring Plan (AEMP) follow-up monitoring program identified in Baffinland`s FEIS and prescribed by the Baffinland's Type 'A' Water Licence, monitors the receiving aquatic environment downstream of Project activities at the Mine Site. Baffinland will continue to monitor surface water runoff and aquatic environments downstream of Project mining areas and quarries as outlined in the Type 'A' Water Licence and the Project's AEMP and findings will be presented in the 2023 Annual NIRB report
PC 53	The Proponent shall demonstrate consideration for the following: a. Steps taken to prevent caribou mortality and injury as a result of train and vehicular traffic, including operational measures meant to	Baffinland will continue to implement the referenced measures which is consistent with this Term and Condition. Detailed methods are identified in the Terrestrial Environment Mitigation and Monitoring Plan (TEMMP) (Baffinland 2016, Sections 3.3.3 and 4.5.2, and Figure 3-2) and the 2023 Final Terrestrial Environment Annual Monitoring Report. Full details of this PC can be found in the 2022 NIRB annual report, and will be reported on in the 2023 NIRB annual report.

PC Condition	Project Certificate Term or Condition/Description of Request	Baffinland's Response
	maximize the potential for safe traffic relative to operations on the railway, Milne Inlet Tote Road and associated access roads. i. Specific measures intended to address the reduced effectiveness of visual protocols for the Milne Inlet Tote Road and access roads/trails during times of darkness and low visibility must be included. b. Monitoring and mitigation measures at points where the railway, roads, trails and flight paths pass through caribou calving areas, particularly during caribou calving times. The details of these monitoring and mitigation measures shall be developed in conjunction with the Terrestrial Environment Working Group (TEWG). c. Evaluation of the effectiveness of proposed caribou crossings over the railway, Milne Inlet Tote Road and access roads as well as the appropriate number. d. Development of a surveillance system along the railway corridor to identify the presence of caribou in proximity to the train tracks and operational protocols for the train to avoid collisions and enable caribou to cross the train tracks unimpeded. e. Protocols for documentation and reporting of all caribou collisions and mortalities, as well as mechanisms for adaptive management responses designed to prevent further such interactions.	

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines – Mary River Poject	Katie Babin/Todd Swenson
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environment Superintendent
Land Authorization No. / Expiry	**Land Authorization Expiry**
N/A	N/A
Date of Inspection	**Inspector**
September 7, 2023	Sean Noble-Nowdluk/Omer Pasalic

Activities Inspected

☐ Camp: ☐ Drilling: ☐ Mining: ☐ Construction: ☐ Reclamation: ☐ Fuel Storage:
☐ Roads/Hauling: ☒ Other: Potable Water Source, Waste Water Treatment, Solid Waste Facility, Hazardous Waste Facility ☐ Other:

SECTION 1 ☒ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence** (s.__) ☐ **Action Required** (s.__)

On Thursday September 7, 2023 we, Sean Noble-Nowdluk, and Omer Pasalic, Inspectors with the Crown Indigenous Relations and Northern Affairs Canada, (CIRNAC) completed a visit of the site named above for the purpose of verifying terms and conditions which the water license was issued upon. During the inspection, we mainly focused on Mary River Mine site. The inspectors were accompanied by Katie Babin, the Environmental Superintendent for both Mary River and Milne Port sites.

- Culverts along the tote road
- Both diesel tank farms
- KM 105 Surface Water Management Pond (Dam)

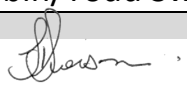
During our inspection along the tote road, Inspectors Noble-Nowdluk, Pasalic and Environment Superintendent Katie Babin observed a red/orange sediment laden water coming from a part of land about 200 meters from the road. Upon further inspection, the product seemed to be coming from in the ground through cracks in the bedrock. Baffinland employees will conduct sampling to determine exactly what the product is and whether it is a natural occurrence or from mining activities. Reports of findings and sample results will be forwarded to the Inspectors.

SECTION 2 ☐ **Comments** (s.__) ☒ **Non-Compliance with Act or Licence** (s.2) ☐ **Action Required** (s.__)

1. While conducting culvert inspections along the tote road, Inspectors Noble-Nowdluk and Pasalic observed erosion around culverts. Katie Babin had shown a number of culverts that will be replaced to fix the road and prevent erosion this year.
2. Fuel staining and fuel odour were present at both light and heavy refueling stations. One spot in particular had fuel present under the flex line, which may have been caused from fuel running under the station. No damage was seen on the flex line itself.

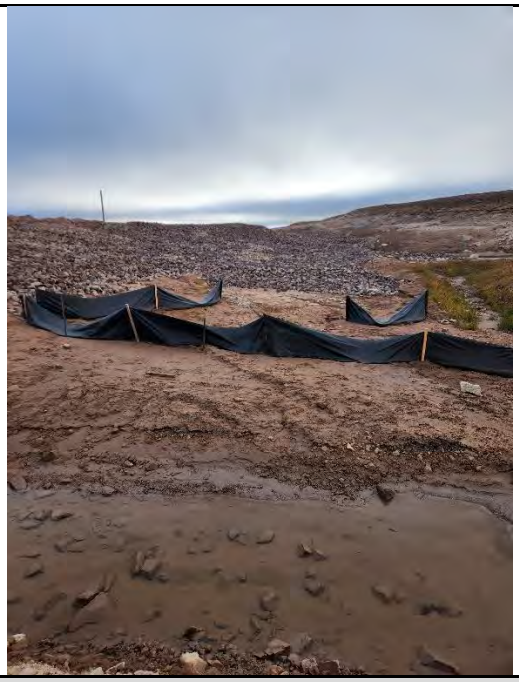
SECTION 3 ☐ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence, (**s.__) ☒ **Action Required** (s.3)

1. Under Part E, Section 13 of the Water License, The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
2. Remediation of the areas contaminated with fuel shall be remediated to mitigate impacts to the environment.

Licensee or Representative	Inspector's Name
Katie Babin/Todd Swenson	Sean Noble-Nowdluk
Signature 	**Signature**
Date 14-Sep-23	**Date**

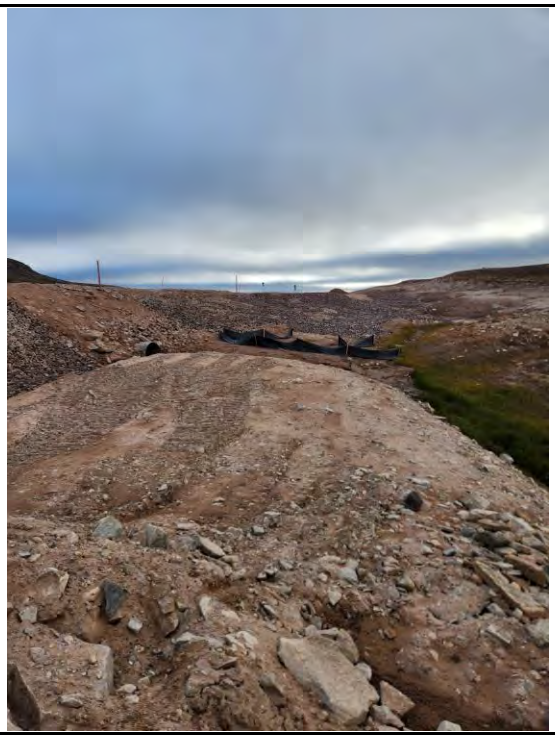
Canada

Photo Log	Location
Photo #1	Tote Road – Between KM 73-74



Description: Evidence of erosion which was contained with a silt fence.

Photo Log	Location
Photo #2	Tote Road – Between KM 73-74



Description: Full site picture of erosion between KM 73-74.

Photo Log	Location
Photo #3	Tote Road – KM79

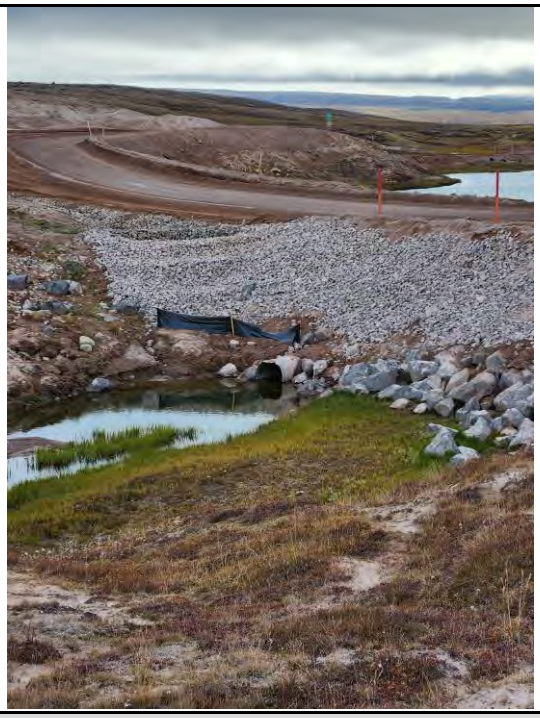
Description: Erosion on the side of the road at KM 79.

Photo Log	Location
Photo #4	Tote Road – Between KM 84-85

Description: Ditch between KM 84-85 with a steep gradient causing erosion.

Canada

Photo Log	Location
Photo #5	Tote Road – Between KM 84-85



Description: Erosion mitigation measures set in place with check dams and silt fences.

Photo Log	Location
Photo #6	Tote Road – Between KM 84 - 85

Description: Steep gradient causing erosion.

Canada

Photo Log	Location
Photo #7	Tote Road – KM 90

Description: A steep gradient with some erosion mitigation measures.

Photo Log	Location
Photo #8	Tote Road – KM 90

Description: Check dams installed in the ditch at KM 90. Evidence of sand/silt were observed in the dams.

Photo Log	Location
Photo #9	Tote Road – KM 92

Crown-Indigenous Relatio
and Northern Affairs Cana

Description: Sediment-laden water was observed coming out of the culvert at KM 92.

Photo Log	Location
Photo #10	Tote Road- KM 92

Description: Sediment-laden water flowing downstream into the culverts.

Canada

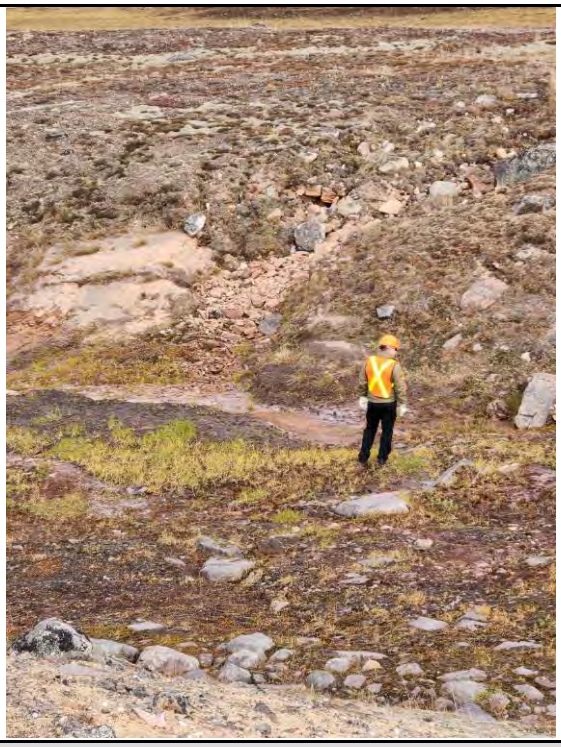
Photo Log	Location
Photo #11	Tote Road – KM 92

Description: Sediment-laden water coming from upstream towards the hill.

Photo Log	Location
Photo #12	Tote Road – KM 92

Description: Sediment-laden water appears to be flowing from under the hill. Source of water is unknown.

Photo Log	Location
Photo #13	Tote Road – KM 92



Description: Inspector Pasalic observing the site. Sediment-laden water is coming from under the tundra and may be occurring naturally.

Photo Log	Location
Photo #14	Tank Farm near light vehicle refueling station

Description: tank farm behind the light vehicle refueling station. No visible sheening was observed.

Photo Log	Location
Photo #15	Light Vehicle Refueling Station

Description: Fuel staining and odours were present under the flex pipe.

Photo Log	Location
Photo #16	KM 105 - Dam

Description: A liner was installed at the bottom of the dam to collect sediments before entering the waterway.

Photo Log	Location
Photo #17	KM 105 – Bottom of dam

Description: Geotechnical drilling to identify a leak in the dam.

January 5, 2024

Sean Noble-Nowdluk
Resources Management Officer
Crown Indigenous Relations and Northern Affairs (CIRNAC)
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0

Re: Baffinland Response to September 2023 CIRNAC Inspection

The following submission from Baffinland Iron Mines Corporation (Baffinland) is a follow up in response to the Water Licence Inspection[1] conducted from September 7 - 9, 2023, at Baffinland's Mary River Project (the Project), by Crown-Indigenous Relations Norther Affairs Canada (CIRNAC). The attached Table 1 provides a summary of follow up information and updates requested by CIRNAC in their Inspection Report issued September 14, 2023.

Should you have any additional concerns or questions regarding the attached responses, please to not hesitate to contact the undersigned at your convenience.

Regards,

Katie Babin,

Environmental Superintendent

Cc: Karén Kharatyan, Assol Kubeisinova (NWB)
Jeremy Fraser, Omer Pasalic (CIRNAC)
Megan Lord-Hoyle, Lou Kamermans, Tim Sewell, Connor Devereaux Todd Swenson, Francois Gaudreau, Martin Beausejour, Allison Parker, Dale Kristoff (Baffinland)

Attachments

Attachment 1 – 230914 2AM-MRY1325-Baffinland Water Licence Inspection September 2023
Attachment 2 – Table 1: Baffinland Responses to CIRNAC 2023 September Inspection Action Items
Attachment 3 – Photos
Attachment 4 – KM 92 Discoloured Water Investigation

[1] CIRNAC (2023) CIRNAC Baffinland Water License Inspection Report - September 2023 - CIRNAC Baffinland Iron Mines Water Licence Inspection Form. Inspection form dated September 14, 2023.

Baffinland

Attachment 1

230914 2AM-MRY1325-Baffinland Water Licence Inspection September 2023

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Baffinland Iron Mines – Mary River Poject	Katie Babin/Todd Swenson
Licence No. / Expiry	**Representative's Title**
2AM-MRY1325	Environment Superintendent
Land Authorization No. / Expiry	**Land Authorization Expiry**
N/A	N/A
Date of Inspection	**Inspector**
September 7, 2023	Sean Noble-Nowdluk/Omer Pasalic

Activities Inspected

☐ Camp: ☐ Drilling: ☐ Mining: ☐ Construction: ☐ Reclamation: ☐ Fuel Storage:
☐ Roads/Hauling: ☒ Other: Potable Water Source, Waste Water Treatment, Solid Waste Facility, Hazardous Waste Facility ☐ Other:

SECTION 1 ☒ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence** (s.__) ☐ **Action Required** (s.__)

On Thursday September 7, 2023 we, Sean Noble-Nowdluk, and Omer Pasalic, Inspectors with the Crown Indigenous Relations and Northern Affairs Canada, (CIRNAC) completed a visit of the site named above for the purpose of verifying terms and conditions which the water license was issued upon. During the inspection, we mainly focused on Mary River Mine site. The inspectors were accompanied by Katie Babin, the Environmental Superintendent for both Mary River and Milne Port sites.

- Culverts along the tote road
- Both diesel tank farms
- KM 105 Surface Water Management Pond (Dam)

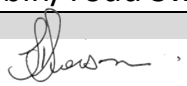
During our inspection along the tote road, Inspectors Noble-Nowdluk, Pasalic and Environment Superintendent Katie Babin observed a red/orange sediment laden water coming from a part of land about 200 meters from the road. Upon further inspection, the product seemed to be coming from in the ground through cracks in the bedrock. Baffinland employees will conduct sampling to determine exactly what the product is and whether it is a natural occurrence or from mining activities. Reports of findings and sample results will be forwarded to the Inspectors.

SECTION 2 ☐ **Comments** (s.__) ☒ **Non-Compliance with Act or Licence** (s.2) ☐ **Action Required** (s.__)

1. While conducting culvert inspections along the tote road, Inspectors Noble-Nowdluk and Pasalic observed erosion around culverts. Katie Babin had shown a number of culverts that will be replaced to fix the road and prevent erosion this year.
2. Fuel staining and fuel odour were present at both light and heavy refueling stations. One spot in particular had fuel present under the flex line, which may have been caused from fuel running under the station. No damage was seen on the flex line itself.

SECTION 3 ☐ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence, (**s.__) ☒ **Action Required** (s.3)

1. Under Part E, Section 13 of the Water License, The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
2. Remediation of the areas contaminated with fuel shall be remediated to mitigate impacts to the environment.

Licensee or Representative	Inspector's Name
Katie Babin/Todd Swenson	Sean Noble-Nowdluk
Signature 	**Signature**
Date 14-Sep-23	**Date**

Canada

Photo Log	Location
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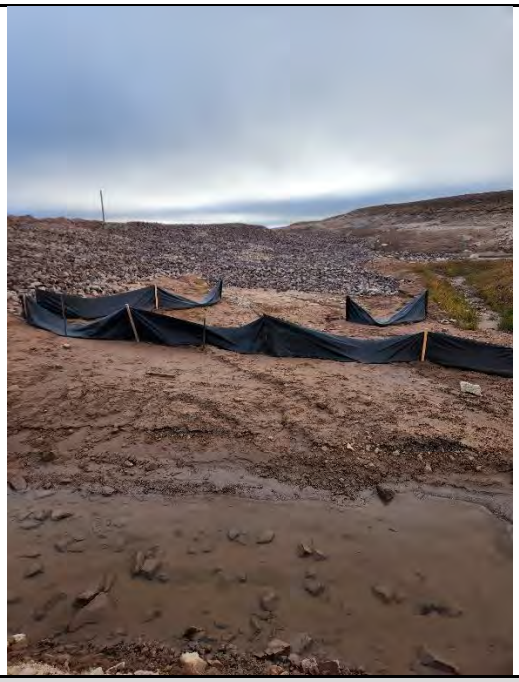

Description: Evidence of erosion which was contained with a silt fence.

Photo Log	Location
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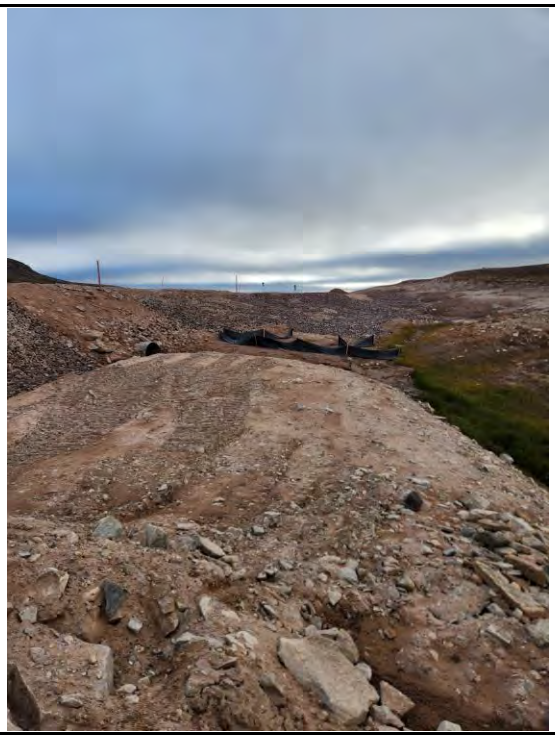

Description: Full site picture of erosion between KM 73-74.

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Description: Erosion on the side of the road at KM 79.

Photo Log	Location
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Description: Ditch between KM 84-85 with a steep gradient causing erosion.

Canada

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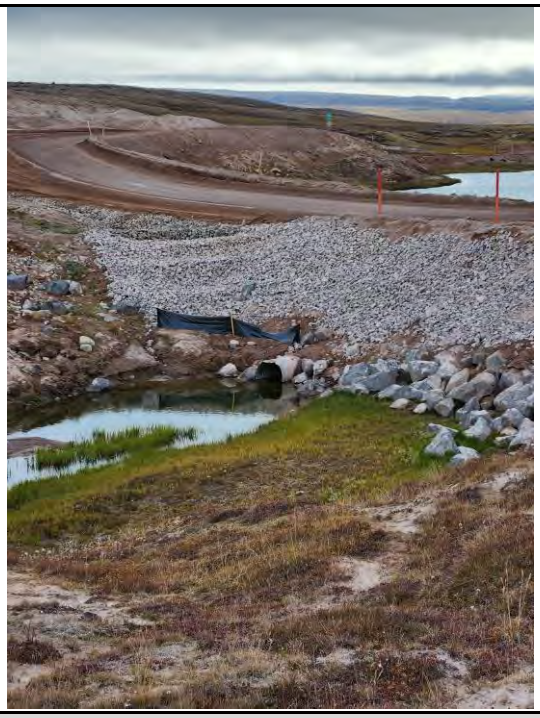

Description: Erosion mitigation measures set in place with check dams and silt fences.

Photo Log	Location
Photo #6	Tote Road – Between KM 84 - 85

Description: Steep gradient causing erosion.

Canada

Photo Log	Location
Photo #7	Tote Road – KM 90

Description: A steep gradient with some erosion mitigation measures.

Photo Log	Location
Photo #8	Tote Road – KM 90

Description: Check dams installed in the ditch at KM 90. Evidence of sand/silt were observed in the dams.

Photo Log	Location
Photo #9	Tote Road – KM 92

Crown-Indigenous Relatio
and Northern Affairs Cana

Description: Sediment-laden water was observed coming out of the culvert at KM 92.

Photo Log	Location
Photo #10	Tote Road- KM 92

Description: Sediment-laden water flowing downstream into the culverts.

Canada

Photo Log	Location
Photo #11	Tote Road – KM 92

Description: Sediment-laden water coming from upstream towards the hill.

Photo Log	Location
Photo #12	Tote Road – KM 92

Description: Sediment-laden water appears to be flowing from under the hill. Source of water is unknown.

Photo Log	Location
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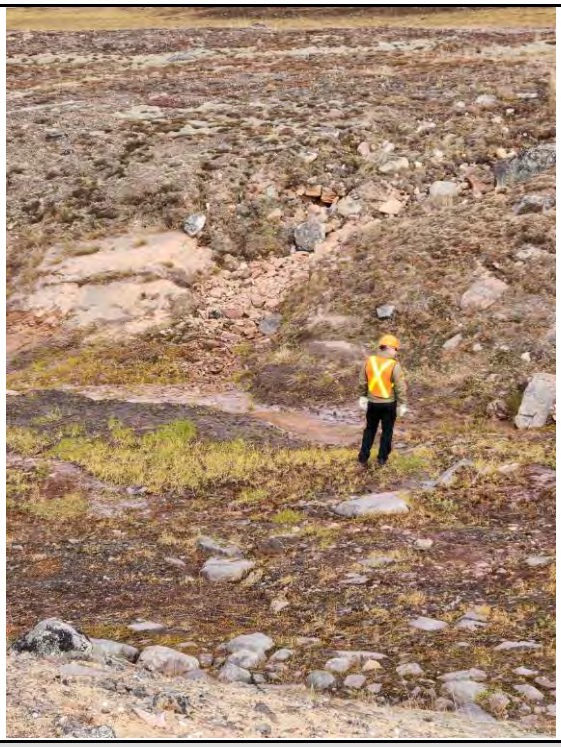

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Photo Log	Location
Photo #15	Light Vehicle Refueling Station

Description: Fuel staining and odours were present under the flex pipe.

Photo Log	Location
Photo #16	KM 105 - Dam

Description: A liner was installed at the bottom of the dam to collect sediments before entering the waterway.

Photo Log	Location
Photo #17	KM 105 – Bottom of dam

Description: Geotechnical drilling to identify a leak in the dam.

Attachment 2

Baffinland Response to CIRNAC 2023 September Inspection Report

Table 1: Baffinland Responses to CIRNAC 2023 September Inspection Report

Section	Description	Baffinland's Response
1	Section 1 "Comments": During inspection along the tote road, Inspectors Noble-Nowdluk, Pasalic and Environment Superintendent observed a red/orange sediment laden water coming from a part of land about 200 meters from the road. Upon further inspection, the product seemed to be coming from in the ground through cracks in the bedrock. Baffinland employees will conduct sampling to determine exactly what the product is and whether it is a natural occurrence or from mining activities. Reports of findings and sample results will be forwarded to the Inspectors.	An investigation into the source of this water was conducted and concluded that the water and the sediments are part of a natural weathering process. A summary of Baffinland's investigation into the source of this water is presented in Attachment #4 and was submitted to directly to CIRNAC on December 6th.
2, 3	While conducting culvert inspections along the tote road, Inspectors Noble-Nowdluk and Pasalic observed erosion around culverts. Environmental Superintendent had shown a number of culverts that will be replaced to fix the road and prevent erosion this year. Section 3 "Action Required": Under Part E, Section 13 of the Water License, The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion	A number of erosion events were reported (NT/NU spill number 2022-384) due to an intense rainfall event on August 14. Baffinland actively deploys erosion and sedimentation control measures in accordance with the Surface Water Aquatic Effects Management Plan to mitigate the significance and potential for erosion events due to heavy rainfall events, however the event on August 14 overwhelmed controls in a number of areas. As part of ongoing adaptive management in response to this event, Baffinland has retained engineering services from a third party group to design and manage the culvert replacement multiyear project to ensure sufficient sediment controls are put in place.
2, 3	Fuel staining and fuel odour were present at both light and heavy refueling stations. One spot in particular had fuel present under the flex line, which may have been caused from fuel running under the station. No damage was seen on the flex line itself. Section 3 "Action Required": Remediation of the areas contaminated with fuel shall be remediated to mitigate impacts to the environment.	Baffinland removed impacted soils from both the front and rear sides of the re-fuelling module, and replace with clean fill. All impacted material was disposed of in accordance with Baffinland's Hazardous Waste Management Plan. As this is an active refuelling area, Baffinland will continue to complete routine compliance inspections as per the Environmental Protection Plan and ensure this facility is operated as designed. See Photo 1 and 2.

Baffinland

Attachment 3

Photos

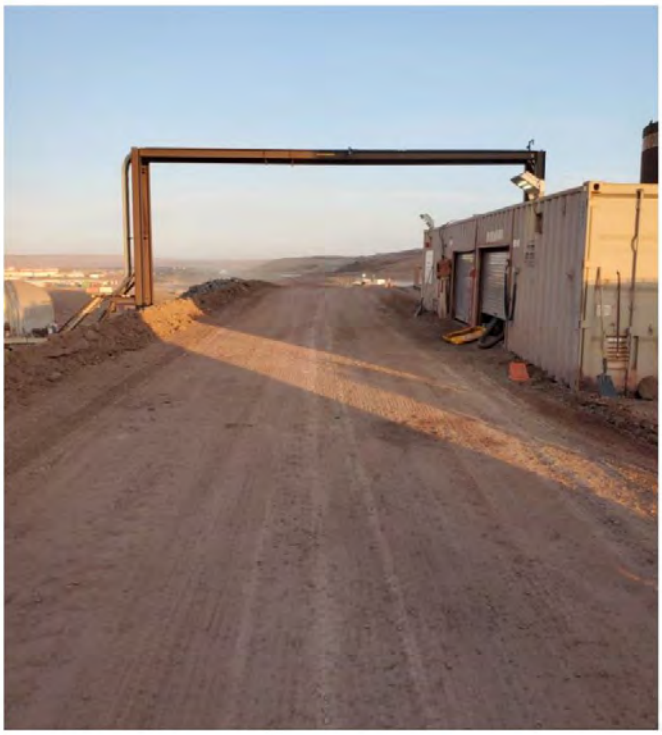


Photo 1. Mary River fuel station showing stained substrate removed and replaced with clean fill. Sept 16, 2023

Photo 2. Mary River fuel filling station showing stained substrate removed under flex line. Sept 16, 2023

Attachment 4 – KM 92 Discoloured Water Investigation

Summary of KM 92 Discoloured Water Investigation

Summary of KM 92 Discoloured Water Investigation

On September 9, 2023, Baffinland field staff performed an investigation into the source of red coloured water seen at KM 92 during the CIRNAC Inspection, September 7, 2023.

Observations were made from four different locations. A full walk of the area was completed from location 1 to location 4. Baffinland conducted similar investigations in the past, as this phenomenon has been noticed before the inspection with CIRNAC. In 2019, similar conditions were observed and investigated.

Visual Observations:

The investigation team walked upstream from the lake and noted that the vegetation in the tundra does not appear to be particularly dusty. Upstream of the pond (#1), the ground is very wet and swampy; water cannot be absorbed. Stepping on it, red-coloured water appears. Thick fine-grained and red coloured sediment is below the vegetation (therefore presumably naturally occurring) and when disturbed, the water becomes red and turbid immediately. This explains why the water in the upstream pond is clear – it and the sediments beneath it are not disturbed.

Photo 1 – vegetation in the area does not appear dusty, not suspected to be affected by road dust.

Photo 2 – Saturated ground, water not able to be absorbed.

Photo 3 – Clear water on top of rusty coloured ground material

Photo 6 - Valley below the hill where water is first observed becoming red and turbid (Location 2)

Photo 7 - Staining from red runoff water well away from any mine disturbance

Photo 8 - On top of the hill with clear water adjacent to it exposed, weathered, naturally occurring iron rich rocks.

Explanation of Observations:

Water in this area becomes red/turbid when the native, undisturbed tundra soil is disturbed, such as when the field investigation team was stepping on the vegetation.

In Late July and August, when the permafrost melts and the active layer begins to move, it effectively "disturbs" the subsurface soils, releasing red, discoloured water downstream.

Further uphill, quartz rocks exhibit staining by red water. Baffinland Geologists report that the hill further up gradient is an outcropping of hematite sedimentary rocks. Hematite is a common iron oxide compound with the formula, Fe_2O_3 and is widely found in rocks and soils. It has a rust-red streak.

Since there was no other visible source of the discoloured water discovered (eg. Dust impacts from the road), one of the explanations that the red colour in the water coming from the rocks/soil itself. The Geologist observed samples of the rocks and the water source and is confident it is a common natural phenomenon that is seen in other locations in the area.

Geological Explanation:

According to the Geologist, this natural outcropping of sedimentary hematite (iron oxide) has been under a process of natural disaggregation (weathering) of the outcrop for a long time. With the seasonal movement of shallow groundwater during August and September, the escaping groundwater liberates some of the historically deposited iron oxide sediments, causing discoloured water to flow down gradient towards the Tote Road and the larger lake beyond to the west.

This theory is supported by the fact that there are no disturbed areas up gradient of the pools with some of the highest suspended solids concentrations, and we see similar conditions in historical satellite photos pre-dating the construction of the mine or any haulage along the Tote Road.

Historical Satellite Photo Review:

The effect of the reddish coloured opaque water is seen throughout the area and well up gradient of the mine or road infrastructure, as well as in historical satellite imagery, although the effect is more difficult to discern due to the limited resolution and colouration of the available historical images.

Figure 1 - 2020 (September) Imagery adjusted for brightness and contrast.

Figure 2 - 2005 (August) Imagery adjusted for brightness and contrast

Although the overall colour tone of the 2005 photo is different, one can clearly see discoloured water in the circled ponds in both periods, indicating this has been happening prior to mine influence.

Conclusion:

In conclusion, it appears the discoloured water observed by CIRNAC and BIM staff during the September 7 Inspection of the Mary River Tote Road at KM 92, is due to natural weathering sedimentation and ground water active layer processes, and is not related to Baffinland's operation, or erosion events associated with project-related disturbances.

Baffinland will continue to monitor this location and ensure that water entering the downstream lake is not being influenced by local mine or Tote Road activities.

March 12, 2024

Sean Noble-Nowdluk
Resources Management Officer
Crown Indigenous Relations and Northern Affairs (CIRNAC)
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0

Re: Baffinland Response to February 2024 CIRNAC Inspection

The following submission from Baffinland Iron Mines Corporation (Baffinland) is a follow up in response to the Water Licence Inspection[1] conducted from February 14-15, 2024, at Baffinland's Mary River Project (the Project), by Crown-Indigenous Relations Norther Affairs Canada (CIRNAC). The attached Table 1 provides a summary of follow up information and updates requested by CIRNAC in their Inspection Report issued March 4, 2024.

Should you have any additional concerns or questions regarding the attached responses, please to not hesitate to contact the undersigned at your convenience.

Regards,

Todd Swenson,

Environmental Superintendent

Cc: Karén Kharatyan, Nidhi Singh (NWB)
Jeremy Fraser, Omer Pasalic (CIRNAC)
Megan Lord-Hoyle, Lou Kamermans, Tim Sewell, Connor Devereaux Todd Swenson, Francois Gaudreau, Martin Beausejour, Allison Parker, Dale Kristoff (Baffinland)

Attachments

Attachment 1 –240214 2AM-MRY1325-Baffinland Water Licence Inspection February 2024
Attachment 2 – Table 1: Baffinland Responses to CIRNAC 2024 February Inspection Action Items
Attachment 3 – Photos
Attachment 4 – Issued for Use Design and Drawings for KM105 Pond Remediation Plan

[1] CIRNAC (2024) CIRNAC Baffinland Water License Inspection Report – February 2024 - CIRNAC Baffinland Iron Mines Water Licence Inspection Form. Inspection form dated February 14, 2024.

Baffinland

Attachment 1

230914 2AM-MRY1325-Baffinland Water Licence Inspection September 2023

Water Licence Inspection Report

☒Original
☐Follow-Up Report

Authorization	Representative
Baffinland Iron Mines	Katie Babin/Todd Swenson
Authorization No. / Expiry	**Representative's Title**
2AM-MRY1325	Environmental Superintendent
Activities Inspected	
☒ **Camp, Commercial** ☒ **Drilling** ☒ **Mining** ☐ **Construction** ☐ **Reclamation** ☒ **Fuel Storage** ☐ **Roads/Hauling** ☐ **Winter Hauling** ☐ **Camp, Private** ☐ **Other**	

Section 1 Comments

On Wednesday February 14, 2024 I, Sean Noble-Nowdluk, Inspector with the Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) completed an inspection of the site named above for the purpose of verifying terms and conditions in which the water license was issued upon. During the inspection, I focused on the Mary River Mine and Camp site. The inspector was accompanied by Katie Babin, Environmental Superintendent for Baffinland Iron Mines.

The Following list of items were inspected for compliance with the issued and valid water license:

- Ore Stockpile
- KM 105 Dam
- Heavy/Light Duty Maintenance Shop
- Open Burn Pit
- Water Intake Station
- Polishing Waste Pond
- Incinerator
- Landfill
- Landfarm
- Light Duty Vehicle Refueling Station
- MSC
- Heavy Duty Vehicle Refueling Station
- Waste Water Treatment Plant
- Hazardous Waste Berm

No major issues of non-compliance were observed during the inspection. All operations were being performed as per the Water License terms and conditions except for the one noted below.

Section 2 Non-Compliance with Acts or License

1. During the inspection, CIRNAC Inspector identified a number of totes filled with waste oil outside the Ore Haul Truck (OHT) Wash Bay. These totes were not situated within secondary containment and are in non-compliance with Part H – Section 3 of the Water License. Part H – Section 3 states "The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.".
2. At KM105, the Dam has been leaking causing sediment laden water to escape into the surrounding area. The Licensee has since put up mitigation measures to prevent the migration of the water.

Section 3 Action Required
1. All totes or containers filled with hazardous material must be placed in a designated lined facility or secondary containment. 2. The KM105 Dam must be repaired to prevent future releases of sediment laden water.

Licensee or Representative	Inspector's Name
Todd Swenson	Sean Noble-Nowdluk
Signature	**Signature**
	Sean Noble-Nowdluk
Date	**Date**
March 6, 2024	March 4, 2024

Office Use Only:	Follow-up report to be issued by Inspector	☐ Yes ☒ No

PHOTO LOG			
Date:	**Authorization Number:**	**Camera/Model:**	**Inspector**
Wednesday, February 14, 2024	2AM-MRY1325	Samsung S23	Sean Noble-Nowdluk

Photo No. 1	**Lat/Long (DD.MM.SS.SS, NAD83)**
Photo	71.18.709'N, 79.15.490'W

Description:
Drilling operations and preparing to inject grout into the KM105 Dam to repair the leak.

Photo No. 2	**Lat/Long (DD.MM.SS.SS, NAD83)**
Photo	71.18.779'N, 79.16.488'W

Description:
Totes of hazardous waste not situated within secondary containment. Photo taken behind the OHT Wash Bay.

Photo No. 3	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.19.947'N, 79.24.578'W

Description:

Open burn pit. No garbage or debris was observed outside the site.

Photo No. 4	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.19.666'N, 79.22.962'W

Description:

Water Intake Station (Jetty). All systems observed were in proper working condition.

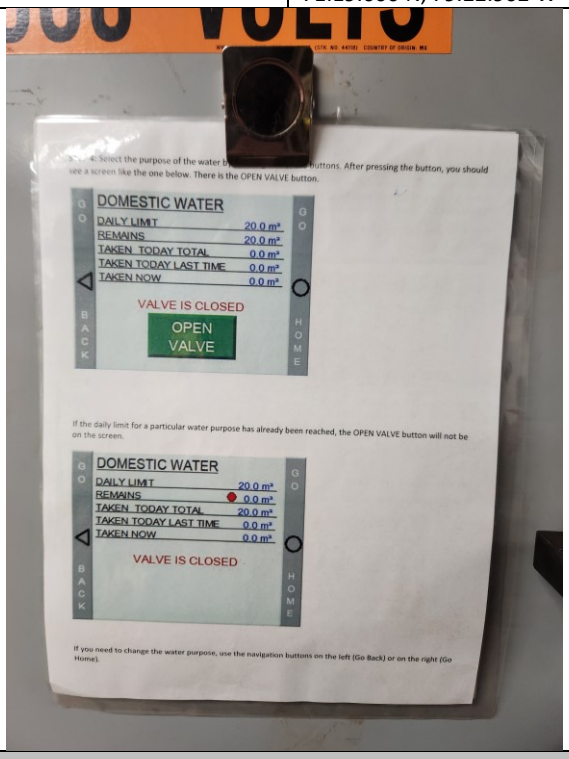
Photo No. 5	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.19.666'N, 79.22.962'W

Description:
Flow intake meter inside the Water Intake Station.

Photo No. 6	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.19.666'N, 79.22.962'W

Description:
Paper copy of the Water License which was located inside the Water Intake Station.

Photo No. 7	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.19.666'N, 79.22.962'W



Description:

Computer program instructions. This program tracks and limits the use of water pumped from the station.

Photo No. 8	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.19.536'N, 79.22.084'W

Description:

The Inspector observed hazardous waste being stored within a hazardous waste containment berm.

Photo No. 9	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.18.837'N, 79.17.210'W

Description:

Inspector Noble-Nowdluk observed stained soil at the Light Vehicle Refueling Station. A strong fuel odour was present at this location and has since been remediated. The Licensee is working towards spill prevention at these refueling sites.

Photo No. 10	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.18.873'N, 79.17.067'W

Description:

Wide view of previous sewage spill location (Spill#2024-041) at the MSC. The Licensee has remediated the site to the best of their abilities. No evidence of sewage was observed and a follow up inspection will be performed during the freshet.

Photo No. 11	Lat/Long (DD.MM.SS.SS, NAD83)
Photo	71.18.850'N, 79.17.982'W

Description:

Sewage flow meter inside the Waste Water Treatment Plant.

Attachment 2

Baffinland Response to CIRNAC 2023 September Inspection Report

Table 1: Baffinland Responses to CIRNAC 2023 September Inspection Report

Section	Description	Baffinland's Response
1	During the inspection, CIRNAC Inspector identified a number of totes filled with waste oil outside the Ore Haul Truck (OHT) Wash Bay. These totes were not situated within secondary containment and are in non-compliance with Part H – Section 3 of the Water License. Part H – Section 3 states "The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice."	All identified totes with waste oil and oily wastewater were removed from the OHT Washbay area and placed within secondary containment. See Photos 1 and 2.
2	At KM105, the Dam has been leaking causing sediment laden water to escape into the surrounding area. The Licensee has since put up mitigation measures to prevent the migration of the water.	Baffinland acknowledges the observation, and clarifies that conditions at the KM105 pond and dam are fully frozen, and there is currently no flow into or out of the pond. A geotechnical drilling program was completed in late 2023 to obtain detailed data relating to the subsurface conditions. This information has been used to develop a comprehensive remediation plan that involves installing a grout curtain to provide a seepage barrier to reduce seepage through the dam foundation. This remediation program has been initiated with an objective to be completed prior to Freshet 2024. The detailed remediation plan is included as Attachment 4 to this response, and will be emailed via KiteWorks due to file size.

Baffinland

Attachment 3

Photos

Photo 1. Totes with waste water and waste oil out of secondary containment behind the OHT Wash Bay. February 14. 2024

Photo 2. Totes with waste water and waste oil removed from OHT Wash Bay area. Totes pictured in photo are empty. February 18. 2024

Attachment 4 – Issued for Use Design and Drawings for KM105 Pond Remediation Plan (Issued via KiteWorks)

April 30, 2024

Omer Pasalic
Senior Inspector, CIRNAC
Crown Indigenous Relations and Northern Affairs (CIRNAC)
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0

Re: Baffinland Response to April 3 to April 5, 2024 CIRNAC Inspection

The following submission from Baffinland Iron Mines Corporation (Baffinland) is a follow up in response to the Water Licence Inspection[1] conducted from April 3 to April 5, 2024, at Baffinland's Mary River Project (the Project), by Crown-Indigenous Relations Norther Affairs Canada (CIRNAC). The attached Table 1 provides a summary of follow up information and updates requested by CIRNAC in their Inspection Report issued April 19, 2024.

Should you have any additional concerns or questions regarding the attached responses, please to not hesitate to contact the undersigned at your convenience.

Regards,

Todd Swenson

Environmental Superintendent

Cc: Karén Kharatyan, Nidhi Singh (NWB)
Jeremy Fraser, Kyle Amsel (CIRNAC)
Megan Lord-Hoyle, Lou Kamermans, Tim Sewell, Connor Devereaux, Katie Babin, Francois Gaudreau, Martin Beausejour, Allison Parker, Dale Kristoff (Baffinland)

Attachments

Attachment 1 – 240419 2AM-MRY1325-Baffinland Water Licence Inspection April 2024
Attachment 2 – Table 1: Baffinland Responses to CIRNAC 2024 April Inspection Action Items
Attachment 3 – Photos

[1] CIRNAC (2024) CIRNAC Baffinland Water License Inspection Report – April 3 to April 5, 2024 - CIRNAC Baffinland Iron Mines Water Licence Inspection Form. Inspection form dated April 19, 2024.

Attachment 1

2AM-MRY1325-Baffinland Water Licence Inspection April 2024

Attachment 2

Baffinland Response to CIRNAC 2024 April Inspection Report Action Items

Table 1: Baffinland Responses to CIRNAC 2024 April Inspection Report Action Items

Section	Action Item Description	Baffinland's Response
1	A generator was observed on the site near stacked sea cans with no secondary containment was deployed. **ACTION ITEM: Ensure secondary containments are deployed at the locations named in this report.**	The generator is an Allmand Night-Lite V-Series. The brand and model of the generator/light plant has a Fluid Containment System (FCS) that holds up 110% of the fuel and engine oil capacity. See Photos confirming the model of the generator/light plant. Also see attached Allmand Night-Lite V-Series Operator's Manual Fluid Containment System Diagram (Photos 2, 3, and 4). The link outlining the features can be viewed on the company's website at: https://www.allmand.com/na/en_us/product-catalog/light-towers/nightlite-vseries.html.
2	Once at the landfill area, the inspectors noted what appeared to be a significant fence damage. **ACTION ITEM: Ensure that the fence has been repaired.**	Baffinland is committed to repairing the fence around the landfill as soon as reasonably possible. Given the snow conditions and the accessibility of the damaged area, attempting a repair at this time would most likely result in further damage to the fence. Because the landfill is for inert waste only, Baffinland feels the damaged fence line currently exhibits very low risk. Therefore, the repair has been scheduled for completion once the area is snow-free and the ground beginning to thaw. A Work Order has been created for the repair to be completed by early June (WO# 4613938). See Photo #5 for a snip of the Work Order. Baffinland will provide photographic evidence of the repairs once completed.
3	At the Tote Road, inspectors noted ongoing work at KM 95's location where culverts were being replaced by sub-contractor of Nuna Group of Companies, contracted by the Baffinland Iron Mine Corporation. Upon closer inspection of the location, the inspectors noted that no secondary containment was deployed under the generator used for lighting or nighttime work. **ACTION ITEM: Ensure secondary containments are deployed at the locations named in this report.**	The generator is an Allmand Night-Lite V-Series. The brand and model of the generator/light plant has a Fluid Containment System (FCS) that holds up 110% of the fuel and engine oil capacity. See Photos confirming the model of the generator/light plant. Also see attached Allmand Night-Lite V-Series Operator's Manual Fluid Containment System Diagram (Photos 2, 3, and 4). The link outlining the features can be viewed on the company's website at: https://www.allmand.com/na/en_us/product-catalog/light-towers/nightlite-vseries.html.

Attachment 3

Photos

Photo 1: Photograph of generator/light plant near stacked seacans taken during the inspection (note make and model on the side)

Photo 2: Generator/Light Plant at KM 97 indicating the make and model, April 20, 2024

Allmand

8.4 - FCS Fuel Tank Group

SN 07-000001 and UP
SN 08-000001 and UP

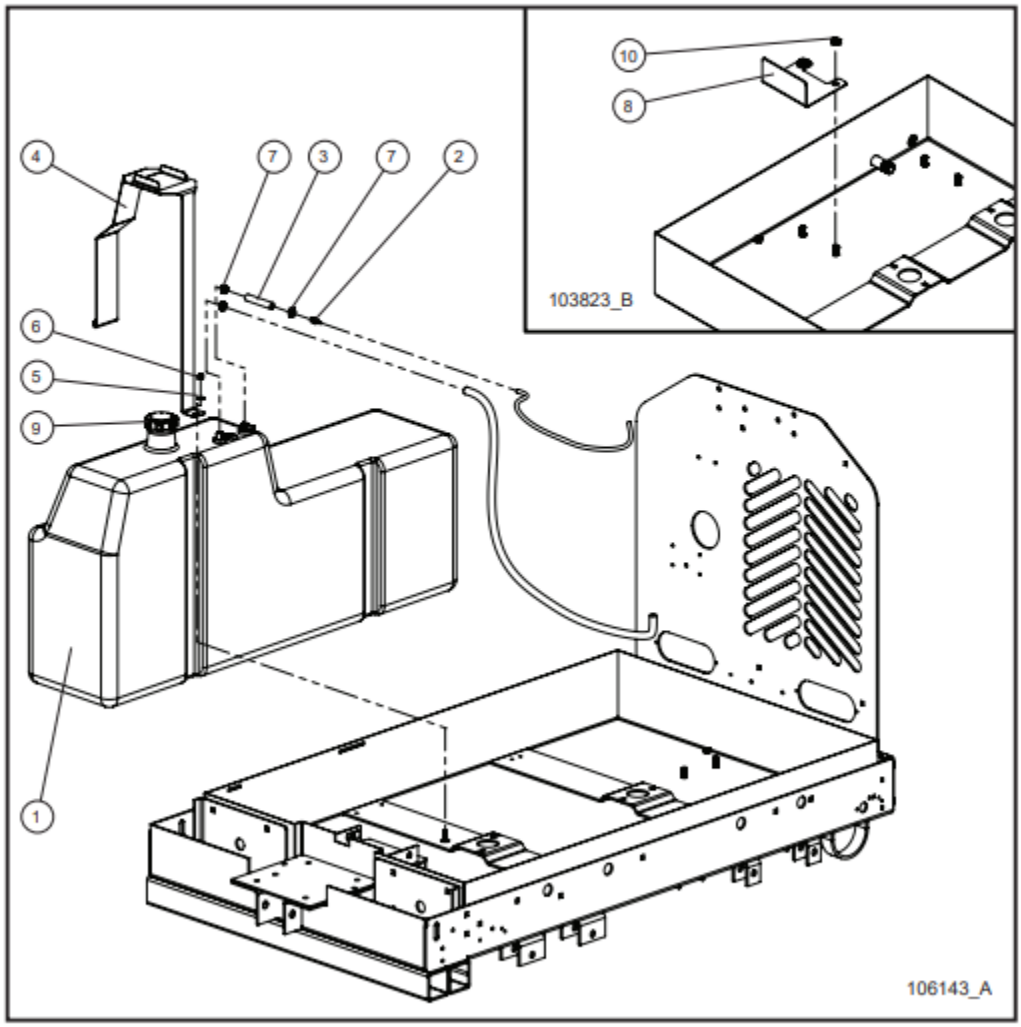


Photo 3: Schematic of the Fluid Containment System (holds 110% of all on-board fluids) on the Allmand Night-Lite V-Series Generator/Light Plants.

Photo 4: Location of fluid containment system drain plug on the Allmand Night-Lite V-Series located at KM 97, April 20, 2024.

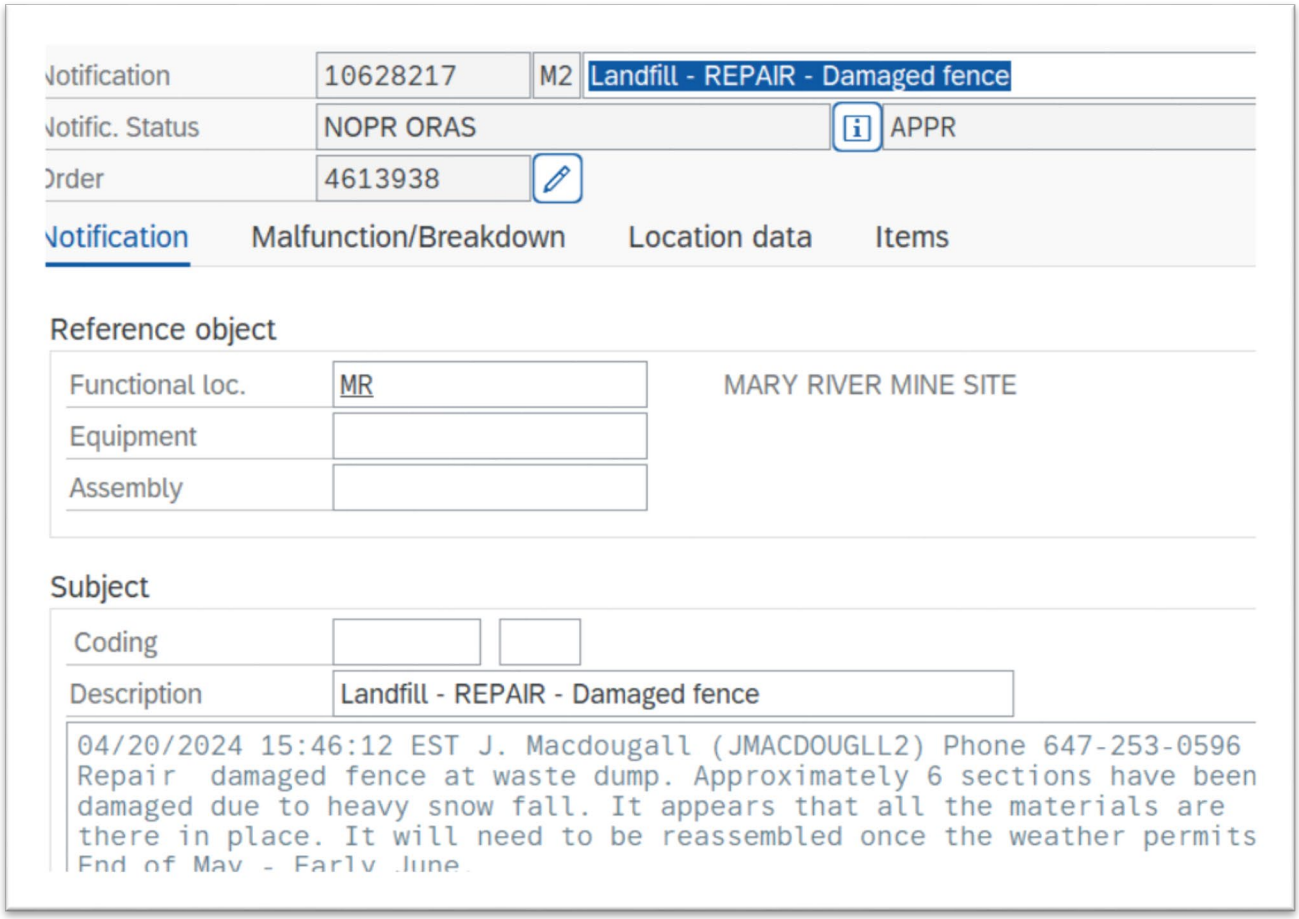


Photo 5: Screenshot of Notification for landfill fence repair.