



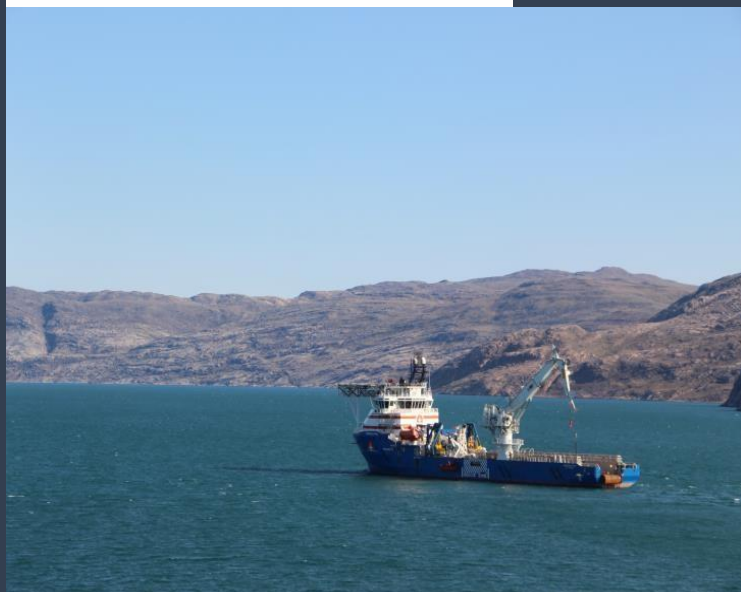
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መጋቢት ለገጠላዊ

Baffinland-ወር ካልናኑክሙ ስራዎች ስራ

NIRB File No. 08MN053



ገጽ ፩

2019



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## **የጠቅላይ ልማት ሚኒስቴር**

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◁▷<sup>3</sup>▷

[illegible]





The map displays the Baffin region in Nunavut, Canada, with a focus on the proposed railway route. The route is shown as a black line connecting the Milne Inlet Tote Road to the Milne Inlet Mine Site. Key locations and features include:

- Geographical Features:** Dundas Harbour, Arctic Bay, Pond Inlet, Clyde River, Baffin Bay, Foxe Basin, Labrador Sea, Hudson Strait, and various islands and peninsulas (e.g., Melville Peninsula, South Hampton Island, Coral Harbour).
- Infrastructure:** The proposed railway route, the Milne Inlet Tote Road, and the Milne Inlet Mine Site.
- Settlements and Landmarks:** Arctic Bay, Pond Inlet, Clyde River, Igloolik, Hall Beach, Cape Dorset, and various other locations.
- Map Elements:** A grid system, a north arrow, and an inset map showing the location of the Baffin region within the larger context of the Arctic region.

ፍፆራገፊ ለኃላፊዎች ልገገግና ጋራ ጋራ ማረጋገጥ

Map of the proposed rail line and road in the Milne Bay area, Nunavut, Canada. The map shows the coastline of Milne Bay, including Borden Peninsula, Magda Plateau, and Bruce Mountains. Key locations marked include Milne Port, Milne Inlet Tote Road, Mine Site, and Steensby Port. A dashed line indicates the proposed railway route, and a solid line indicates the Milne Inlet Tote Road. An inset map shows the project location within Canada. A scale bar indicates 0 to 100 km.

ዎይቅ 2: ንግግር ለግልጽ ግልጽ ምሳሌ ለግልጽ

[illegible][illegible]









Haul Road to Deposit No. 1  
 Landfill  
 Crusher Pad  
 Mine Site Complex  
 Fuel Tank Farm  
 Sallivik Mine Site Complex  
 Tote Road

[illegible]



An aerial photograph of the Milne Port facility. The image shows a large industrial area with several large, dark, conical stockpiles of ore. A ship is docked at a pier in the foreground, with a ship loader positioned on the pier. Various other structures, including a fuel tank farm and a landfarm, are visible. Labels with arrows point to specific features: Gravel Quarry, Landfarm, Milne Port Fuel Tank Farm, Fine Ore Stockpile, Lump Ore Stockpile, and Ship Loader.

**5.1 ንግድ ምርትና አገልግሎት የሚያስፈልጉትን ሰው ሀብት በማመልከት**

### 5.1.1 ሙሉ ስርዓት

[illegible]

A large pile of dark, reddish-brown crushed rock or gravel, likely a byproduct of mining or construction, under a blue sky with clouds. The material is piled high, showing a mix of dark and reddish tones, suggesting different rock types or oxidation. The foreground shows a reddish-brown surface, possibly a road or a pile of similar material.

ወይም ለፍጥነት





[illegible]

### 5.1.1.3 ሆኖኅልፍ ልዩ ርዕዮታዊ ልዩነት ይኖራል

- ልረካጋጋብ ድሮክፍርፍር ስርዓታዊነቱ ለረገዱ ድረገጽ ስርዓታዊነቱ ስርዓታዊነቱ ስርዓታዊነቱ ስርዓታዊነቱ (፩ኛውን ስርዓታዊነቱ 11) ይዞ (፪ኛውን ስርዓታዊነቱ 12), ስርዓታዊነቱ



[illegible]

ወደፊት ለደብዳቤዎች ማግኘት  
2019-ፍ ለፍጥነት ወደፊት ለደብዳቤዎች ማግኘት



ቅጽ 12: የክሮሽር ቅጽ ለሰራተኛ ሰራተኛ  
የክሮሽር ስርዓት



ቅጽ 13: የፖርቱጋል የክሮሽር ካሊብራ



ቅጽ 14: ንድፍ የሰራተኛ የክሮሽር ስርዓት



ቅጽ 15: የፖርቱጋል ካሊብራ የክሮሽር ስርዓት  
የክሮሽር ስርዓት









A large pile of white plastic waste bags is shown in a warehouse setting. The bags are piled high, some on a wooden pallet and others on the floor. The background shows the interior of a warehouse with corrugated metal walls and a wooden door.

பொது அருள்



[illegible][illegible]

ᐅᐃᐃᐃᐃᐃ 27: ᐃᐃᐃᐃᐃᐃᐃᐃ ᐃᐃᐃᐃᐃᐃᐃᐃ ᐃᐃᐃ ᐃᐃᐃᐃᐃᐃᐃᐃ,  
ᐃᐃᐃ. 2016





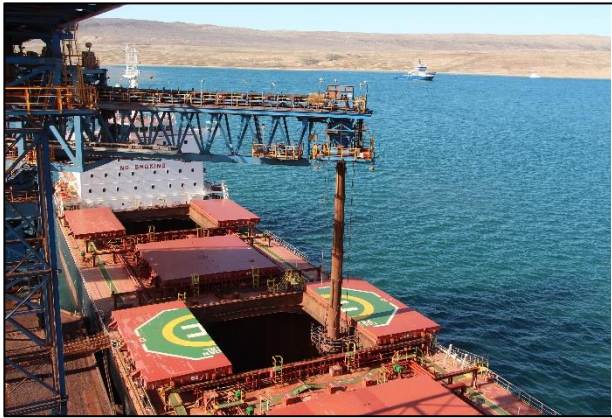




ወይም ለፍጥነት



ՎնչՅՎՖ 35: Եհեհ հԱհհհհհհհհհհ Մհհհհ Մհհհհհհհհհ Վհհհ Մհհհհհհհհհ Մհհհհհհհհհ



ՎնչՅՎՖ 36: Նհհ հԱհհհհհհհ Մհհ Մհհհհհհհհհ



ՎնչՅՎՖ 37: Դհհհհհհ Մհհհհհհհհհ հԱհհհհհհհ Մհհհհհհհ















ቀጥታ 44: ወደ ክልላዊ ልማት ድርጅት ሥራ ስራ ስራ ስራ



ቀጥታ 45: ከፍተኛ ልማት ድርጅት ስራ ስራ ስራ ስራ



$\Delta\rho^a\rho^a\sigma^b\wedge\epsilon^{\dagger}n^c$

- [illegible]

7  $\triangleleft \dot{\mathcal{D}} \mathcal{C} \triangleright^{\mathfrak{f}} d^{\mathfrak{c}} \wedge^{\mathfrak{f}} d \triangleright^{\mathfrak{a}} \dot{\mathfrak{N}} \mathcal{U}^{\mathfrak{c}} \triangleleft \mathcal{L} \mathcal{J} \mathcal{L} \mathcal{C}^{\mathfrak{b}} \mathcal{C} \triangleright^{\mathfrak{f}} d^{\mathfrak{c}}$

[illegible]

- [illegible]

[illegible]

- [illegible]

### 7.1 ወይም ልዩነት ለሚጠቀሙ ለውጦች

[illegible]





ወይም ለፍጥነት

၈ ပရိယတ္တနာ

[illegible][illegible]

ንጥናት፡ ጸሐፊ ገጽ  
 ርዕስ፡ ልማትና ልማት  
 ልማትና ልማት  
 ጥያቄ፡ ጥርጣሬ 3, 2019  
 ልማትና ልማት

C. Barker

Kelli Gillard



[illegible][illegible]

ልገኖቻቸው ልዩነቶችና ልዩነቶች ለመለየት ልዩነቶች ልዩነቶች		
41	ከሌሎች ልዩነቶች 100 m ለገንጠል ስራ ጋራነት ልዩነት ልዩነት ልዩነት	መግቢያ ልዩነት ከሌሎች ልዩነት ልዩነት ልዩነት
46	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
51	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
59	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
መገንጠል ልዩነት ልዩነት ልዩነት ልዩነት		
64	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት		
72	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት		
83	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
92	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት		
101	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት
ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት		
142	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት	ገንጠል ልዩነት ልዩነት ልዩነት ልዩነት





Δελτοειδής Β: Διότι ο μόνος δεικνύει την βλάβη που προκαλείται από το 2019-Γ  
στην περίπτωση που η βλάβη είναι η ίδια, η βλάβη είναι η ίδια, η βλάβη είναι η ίδια



August 26, 2019

Solomon Amuno  
Technical Advisor II  
Nunavut Impact Review Board

**RE: Follow up to NIRB August 2019 Site Visit, Findings and Recommendations**

Baffinland Iron Mines Corporation (Baffinland) is pleased to provide the Nunavut Impact Review Board with a description of follow-up actions undertaken by Baffinland following recommendations made by the NIRB during the Site Visit on August 7-8, 2019.

The attached Table 1 provides Baffinland's responses to the findings and recommendations of the NIRB Site Visit including details, where applicable, on progress made to date.

Should you have any additional concerns or questions regarding the attached responses, the 2018 Annual Report to the NIRB submitted by Baffinland March 31 2019 and subsequent reviewer comments, or Baffinland's environmental monitoring and operational management implemented throughout 2019 to ensure adherence to the terms and conditions of Project Certificate No. 005 for the Mary River Project, please do not hesitate to contact the undersigned at your convenience.

Regards,

Lou Kamermans  
Director, Sustainable Development  
Baffinland Iron Mines

Cc: Megan Lord-Hoyle, Shawn Stevens, William Bowden, Connor Devereaux, Emma Malcolm  
(Baffinland)

Attachments:

Attachment 1 – Baffinland Responses to NIRB Findings and Recommendations  
Attachment 2 – Baffinland Follow-Up Photos  
Attachment 3 – Figure 1 – Interim Landfill Enclosure Plan

## **Attachment 1**

### **Baffinland Responses to NIRB Findings and Recommendations**



**Table 1 – Baffinland Responses to NIRB Finding and Recommendations - August 2019 Site Visit**

#	Project Location	Description of Concern or Finding	Recommended Action	Response
2	Mine Site / Milne Port / Tote Road / Mine Haul Road	Dust deposition on Project Roads and dust generation at site.	Update on mitigations implemented to minimize dust deposition. Provide update on dust stop trial. Continued application of dust suppressant.	<p>Baffinland is committed to controlling dust sources at the Project. This has included continual development of new dust suppression alternatives at Milne Port, including ore pad redesign to position fines in the centre and lump ore around the margins, installation of downwind fencing and proper positioning of the conveyors to minimize distances when stock piling. Additional shrouds were also installed at the Mine Site crusher in 2019 and Baffinland is actively considering and/or implementing new methods through reengineering of equipment designs to minimize dust generation.</p> <p>Calcium chloride and water has also been applied on road surfaces throughout operations to mitigate dust emissions. Based on feedback received from communities, the QIA and other regulators, Baffinland actioned an implementation plan for testing new dust suppression products with increased durability and longevity for site infrastructure.</p> <p>Dust Stop, produced by Cypher Environmental is an approved product for dust suppression under Nunavut's Environmental Guideline for Dust Suppression on unpaved Roads. Dust Stop is environmentally friendly, and is expected to have a longer lasting durability for both traffic and rainfall impact, as it promotes a hard, competent water repellant surface when properly applied.</p> <p>Dust Stop product was shipped on the 2019 sealift and a full application along the Tote Road is expected to commence in September 2019. A micro trial of Dust Stop was performed in August 2019 from km 103.5 - km 97 on the Mine Site and Tote Road to determine efficacy of the product on site. Improved dust suppression was observed throughout the application zones and the product also showed signs of water shedding during rain events supporting improved road sealant and application lifespan. (Refer to photos provided in Attachment 2).</p> <p>Following arrival of the sealift, Baffinland will implement an expanded trial and use the results to determine the efficacy and feasibility of this alternative. If it is determined that Dust Stop is both economically feasible and a more effective alternative, Baffinland will procure a larger volume to be delivered on summer 2020 sealift for ongoing application.</p>

#	Project Location	Description of Concern or Finding	Recommended Action	Response
3	Mine Site / Landfill	Landfill fence does not completely surround active landfill areas. More cover material required on top of current layer and west side.	Develop detailed action plan for landfill fence construction that surrounds entire action landfill area.	<p>Baffinland is committed to managing the Mine Site Landfill as per the approved Waste Management Plan. After discussions with NIRB, a fence was installed on the west side of Cell 1 to address concerns of potential wind-blown debris sourcing from the landfill to the Tundra. Baffinland erected a fence in the fall of 2018. This included approximately 275 metres of fence on the downwind side of the landfill. The fence also repurposed over 800 used tires as part of Baffinland's used tire disposal and recycling initiative. The fence currently captures windblown debris from the landfill effectively. (Refer to photos in Attachment 2).</p> <p>An additional 405 metres of Landfill fence was ordered by Baffinland for delivery on the 2019 sealift (mid to late September arrival). The fence will be erected to further mitigate the potential for wind-blown debris impacting the tundra that the prevailing wind fence was not already capturing. Figure 1 (Attachment 3) outlines the plan to enclose the current working space of the landfill by the end of Q4 2019.</p>
4	Steensby	General maintenance and clean-up of site.	General site clean-up required.	<p>In 2016, Baffinland performed a major sealift operation at Steensby that removed hazardous substances, heavy equipment and camp modules.</p> <p>Following NIRB's site visit in August, Baffinland performed a general cleanup of windblown debris, assessed potential hazards to the Tundra and completed critical repairs to weatherhaven tents to minimize future dispersion of materials in the general area. (Refer to photos in Attachment 2).</p> <p>Baffinland will continue to run its annual end of year clean-up of the Site and may consider backhauling the weatherhaven tents, if feasible, in 2020.</p>
5	Mine Site / Waste Management Building	Waste Management building. Excess garbage present, fluids on the ground and oil dispensing system needs shelving or frame.	Overall clean up and organization of waste management building	<p>As part of Baffinland's approved Waste Management Plan, waste management buildings are used to store, segregate and sort all kinds of waste on the Project Site. The structures are concrete floor secondary containment buildings with built in sump systems which water is processed from. When waste is actively processed and sorted in these buildings it can appear visually unappealing however this is the intent and function of the buildings and is consistent with Baffinland's Waste Management Plan.</p> <p>Weekly waste retention structure inspections are performed to consistently identify improper waste sorting practices and resultant corrective actions. It was noted during the NIRB visit in August 2019 that fluids were present on the concrete floor sourcing from the lube and oil station. All fluids impacting the floor have been cleaned up and tertiary containment has been installed under all totes and sources of leaks. (Refer to photos in Attachment 2).</p>

#	Project Location	Description of Concern or Finding	Recommended Action	Response
6	Tote Road – KM 29-32	Tote Road km 29-32 - noticed some issues with slope stability issues	Remediate area and add erosion protection measures.	<p>Baffinland has developed several protocols to address concerns regarding erosion, permafrost degradation and sedimentation at the Project. Regular inspections of the Tote Road are conducted by the Road Maintenance and Environment Department to ensure areas of potential concern are identified, and corrective actions initiated. Visual monitoring is conducted, and if any concerns are identified in an area this will trigger additional monitoring and installation of erosion and sediment control measures. In general, the following measures are implemented to address reoccurring water ponding on site:</p> <ul style="list-style-type: none"> <li>• Baffinland will work to remove ponding water from beside the Tote Road in noted areas, by regrading or contouring the road banks.</li> <li>• Regular inspections of borrow locations will be completed during this work through the Tote Road Monitoring Program.</li> <li>• Any additional unstable slopes identified will be re-graded to eliminate depressions and re-establish natural drainage patterns.</li> <li>• Cut and fill areas will be stabilized by constructing gentle slopes less prone to erosion.</li> <li>• Areas of unexpected settlement will be filled to re-establish the natural contours and eliminate ponding of water.</li> <li>• Borrow activities will occur only at approved locations and will be concentrated to limit the area of disturbance.</li> </ul> <p>Areas of concern will be further inspected by the Road Maintenance and Environment Department, and ranked based on risk/likelihood of adverse environmental impacts. Re-contouring/grading of areas will be prioritized in 2019 based on the highest to lowest risk areas of potential concern.</p>
7	Mine Site	Effluent line erosion present.	Need to add armour/rip rap to slope that has stability issues	<p>It was noted during the 2018 NIRB visits that erosion of a tundra bank nearby to the Mine Site Waste Water Treatment Plant effluent outfall location was occurring. Since that time, this erosion has been evaluated by geotechnical inspectors on a bi-annual basis since its identification. Results of these inspections have determined that the erosion is not a concern for stability of the outfall laydown pad. It is also noted that this erosion is naturally occurring and has not been impacted or influenced by effluent as it segregated from the outfalls.</p> <p>Baffinland has committed to remediating the natural erosion identified by further armoring the slope with additional rip rap. Baffinland commits to completing this by the end of September.</p>



#	Project Location	Description of Concern or Finding	Recommended Action	Response
8	Milne Port / Landfarm	Remaining buried plastic in Landfarm.	Need to remove plastics in landfarm as more is tilled to surface.	<p>NIRB has noted that light plastics continue to present in the Milne Port Landfarm. The Landfarm is a lined engineered containment facility. The plastics in the Landfarm are actively cleaned up and removed on an annual ongoing basis. (Refer to photo in Attachment 2).</p> <p>Active tilling to remediate contaminated soils in the Landfarm regularly unearths plastic to the surface, which are then subsequently cleaned up and removed. Remediated soil from the containment facility will not be removed with any liner.</p> <p>Baffinland will continue to remove plastics from the Landfarm on an annual basis and maintains that the plastics do not impact functional efficacy of the containment facility.</p>

## **Attachment 2**

### **Baffinland Follow-Up Photos**



**PHOTO 1** – Dust Suppression Application along Project Roads



**PHOTO 2** – Dust Suppression Application along Project Roads



Long range visual-TREATED- Minimal dust off OHT (24 hours after treatment)



Long range Visual- UNTREATED- Visual dust off OHT at KM100 dip northbound



**PHOTO 3 and 4** – Long Range Visual of Treatment Area Post-Trial

Fresh gravel laid out



Pressurized application of DSMB



Product applied – full coverage



**PHOTO 5, 6 and 7** – Photos Taken During August 2019 Dust Stop Trial





**PHOTO 8 – Dust Stop Tote**



**PHOTO 9 – Existing Fencing at Landfill**



**PHOTO 10** – Steensby Camp Post- August Site Clean Up



**PHOTO 11** – Waste Management Building Post-August Clean Up and Installation of Tertiary Containment Under Totes





**PHOTO 12** – Ongoing Clean-Up of Plastics at Milne Port Land Farm

### **Attachment 3**

#### **Figure 1 – Interim Landfill Enclosure Plan**



