

Report title: August 2022 Site Visit Report for the Nunavut Impact Review Board's Monitoring of Baffinland Iron Mines Corporation's Mary River Project (NIRB File No. 08MN053).

Project: Mary River Project
Project Location: Qikiqtani (North Baffin) Region, Nunavut

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Site visit dates: August 23-25, 2022

Last Site Visit: June 13-16, 2022

Report prepared by: Cory Barker & Guillaume Daoust

Photos by: Cory Barker & Guillaume Daoust

TABLE OF CONTENTS

1	INTRODUCTION	4
1.1	Objectives & Purpose of Site Visit.....	4
2	BACKGROUND OF THE MARY RIVER PROJECT AND AMENDMENTS.....	5
3	PREPARATIONS FOR THE SITE VISIT	6
4	SITE VISIT	6
4.1	Observations for Mary River Mine Site.....	9
4.1.1	Milne Port	9
4.1.2	Tote Road.....	18
4.1.3	Mary River Mine Site	24
4.2	Observations Based on NIRB Project Certificate No. 005.....	40
5	RECOMMENDATIONS AND DIRECTION	41

TABLE OF FIGURES

Figure 1:	Project Location Map.....	5
Figure 2:	Early Revenue Phase of the Mary River Project	6

LIST OF PHOTOGRAPHS

Photo 1:	Aerial View of Milne Port, August 2022.....	8
Photo 2:	Aerial View of Mary River Mine Site, August 2019	9
Photo 3:	Monitoring Team Capturing Arctic char.....	10
Photo 4:	Arctic char for Analysis.....	10
Photo 5:	Aerial View of Bruce-Head Camp.....	11
Photo 6:	Bruce-Head Camp.....	12
Photo 7:	Waste Barrels Waiting to be Transported	12
Photo 8:	Landfarm at Milne Port	13
Photo 9:	Ore Stockpile	14
Photo 10:	Shiploader	15
Photo 11:	View of the Ore Stockpile from the Shiploader	15
Photo 12:	West Sedimentation Pond	16
Photo 13:	OPEP Spill Response Equipment	17
Photo 14:	Milne Port Quarry	18
Photo 15:	Dust Collector.....	19
Photo 16:	Truck Watering the Tote Road	19
Photo 17:	Culvert CV-104 Located at KM34	20
Photo 18:	Culvert CV-059 Located at KM59.5	21
Photo 19:	Culvert BG-29 Located at KM84.5.....	22
Photo 20:	Sedimentation Control Located at KM94.5.....	23
Photo 21:	Rip Rap Along the Tote Road Near the Mine Site	23
Photo 22:	Waste Rock Storage Pile.....	24
Photo 23:	Waste Rock Pond.....	25
Photo 24:	Second Waste Rock Pond.....	25

Photo 25: Deposit No. 1, August 2021.....	26
Photo 26: Deposit No.1, August 2022.....	26
Photo 27: Deposit No. 1 Dam Sedimentation Pond	27
Photo 28: Deposit No. 1 Dam Sedimentation Pond	28
Photo 29: Example of Hoods Covering the Conveyor Belt	29
Photo 30: Example of Hood on the Conveyor System and Bellows at the End of a Conveyor Belt	29
Photo 31: Conveyor Under Maintenance	30
Photo 32: Buried Tire in the Landfill	31
Photo 33: Disposed Tires and Fencing Around the Landfill	32
Photo 34: Row of Contaminated Soil.....	33
Photo 35: Garbage from Snow Pile.....	34
Photo 36: Waste Prior to Incineration	35
Photo 37: Hazardous Waste Segregation	35
Photo 38: Real Time Air Quality Monitor	36
Photo 39: Real Time Data from the Air Quality Monitor	37
Photo 40: Groundwater Monitoring Well Next to the Landfill.....	38
Photo 41: Inuktitut Classes Poster	39
Photo 42: Poster with English and Inuktitut	39

1 INTRODUCTION

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and is responsible for post environmental assessment monitoring of a Project in accordance with Part 7 of Article 12 of the *Nunavut Agreement* and s. 135(4) of the *Nunavut Planning and Project Assessment Act, S.C. 2013, c. 14 (NuPPAA)*.

This report provides the findings that resulted from the NIRB's August site visit to the Mary River Project between August 23 - 25, 2022; however, the NIRB did not host a Community Update Session. At the time of the site visit, the Board was awaiting the Ministerial Decision on Baffinland's "Phase 2 Development Proposal" as well as considering Baffinland's "Production Increase Proposal Renewal". As such, the site visit was conducted in consideration of Project Certificate No. 005, Amendment No. 3 issued June 18, 2020, noting that the rates of production reverted to 4.2 MT/a.

1.1 Objectives & Purpose of Site Visit

The objective of the NIRB's site visit was to determine whether, and to what extent, the land or resource use in question is being carried out within the Terms and Conditions of amended NIRB Project Certificate No. 005, Amendment 3 for the Mary River Project, in accordance with Section 12.7.2(b) of the *Nunavut Agreement* and s. 135 of *NuPPAA*.

Observations resulting from this site visit shall, wherever possible, be incorporated into the measurement of the relevant effects of the Project, provide the information necessary for agencies to enforce terms and conditions of land or resource use approvals, and will be further used to assess the accuracy of the predictions contained in the project impact statements in accordance with Section 12.7.2 of the *Nunavut Agreement*, and s. 135(3) of the *NuPPAA*.

2 BACKGROUND OF THE MARY RIVER PROJECT AND AMENDMENTS

The Mary River Project

The original Mary River Project approximately 150 kilometres (km) from Pond Inlet was approved in December 2012 for development of an open pit iron ore mine on northern Baffin Island. It included the use of an existing Tote Road between Milne Inlet and the Mine Site and a railway connecting the Mine Site to the Steensby Port ([Figure 1](#)) to ship 12 MT/a of iron ore year-round. Several elements have not been constructed: the port at Steensby Inlet, the railway from the Mine Site to Steensby Inlet, and the fleet of purpose-built ore carriers.

For further information on the original Mary River Project, please refer to the Project Dashboard on the NIRB's Public Registry at www.nirb.ca/project/123910.

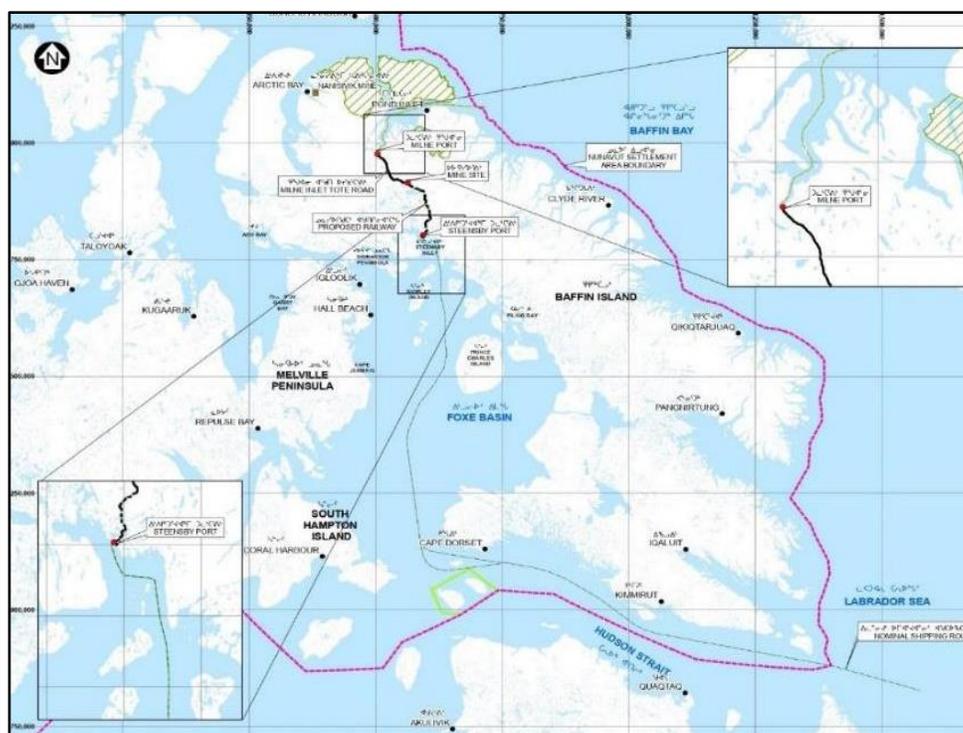


Figure 1: Project Location Map

Mary River Modifications

Title (Years Active)	Project Dashboard	Modification
Early Revenue Phase (2014-2018)	www.nirb.ca/project/124700	Transporting 4.2 Mt/a of ore for shipment (Figure 2) during open water through Eclipse Sound
Production Increase Proposal (2018-2020)	www.nirb.ca/project/124702	Increase in the volume of ore from 4.2 Mt/a to 6 Mt/a.
Extension Request to the Production Increase Proposal (2020-2021)	www.nirb.ca/project/124703	To extend the 6 MT/a until the end of 2021



Figure 2: Early Revenue Phase of the Mary River Project

Current Assessments

For information regarding the NIRB's current assessments, please use the following links to access the information on the NIRB's Public Registry:

- The Phase 2 Development Proposal – www.nirb.ca/project/124701; and
- Production Increase Proposal Renewal – www.nirb.ca/project/125710

3 PREPARATIONS FOR THE SITE VISIT

In preparation for the site visit, the Monitoring Officers reviewed the following items: Mary River Project Certificate No. 005 Amendment No. 3, previous NIRB 2021-2022- Site Visit/Update Reports, 2021 NIRB Monitoring Report, 2021 Baffinland Annual Report and additional follow-up correspondence relevant to the monitoring.

4 SITE VISIT

On August 23, 2022, NIRB's Monitoring Officers Cory Barker and Guillaume Daoust (Monitoring Officers) flew from St-Hubert Airport to the Mary River mine site via Baffinland chartered aircraft, NIRB staff were guided by Baffinland's Vice President, Sustainable Development, Ms. Megan Lord-Hoyle and Environmental Superintendent, Todd Swenson. At the St-Hubert airport all employees completed a medical questionnaire and were tested for COVID-19 should they have any visible symptoms, these are precautions taken by Baffinland to reduce the potential for a COVID-19 outbreak on site.

On August 24, 2022, NIRB staff traveled north via helicopter to Milne Port, with a stop at Quluktuk Lake to observe part of Baffinland’s Arctic Char Monitoring Programs. NIRB staff then continued via helicopter to Bruce-head Observation Camp in Milne Inlet. While at Milne Port ([Photo 1](#)), observations were made of the:

- Hazardous waste storage area,
- Ore dock and ship loader facility,
- Sedimentation ponds,
- Ore stockpile,
- Landfarm,
- Quarry,
- Spill response equipment storage, and
- Snow Contaminated Pond.

Along the return trip of the Tote Road, stops were made to observe:

- Dust suppression activities,
- Various culverts and water crossings,
- Dust collection equipment, and
- Erosion control measures.

On August 25, 2022, NIRB staff toured the Mary River Mine Site ([Photo 2](#)) observing the following:

- Crusher plant,
- Deposit No. 1,
- Water Management Dam at the base of the Deposit,
- Waste Rock Storage Area,
- Sedimentation Pond,
- Landfill,
- Landfarm,
- Incinerator and Waste Management Facilities, and
- Sewage Outfall Area.



Photo 1: Aerial View of Milne Port, August 2022



Photo 2: Aerial View of Mary River Mine Site, August 2019

4.1 Observations for Mary River Mine Site

4.1.1 Milne Port

4.1.1.1 Arctic Char Monitoring

Before visiting Milne Port, NIRB staff flew by helicopter to Quluktuk lake, located approximately 10 km Northwest where a monitoring team was capturing Arctic char (Photo 3 & Photo 4) as part of Baffinland monitoring program and related to the Term and Condition No 113. The team explained that the sample location was informed by community members and that fish were collected for the analysis for metal contamination.



Photo 3: Monitoring Team Capturing Arctic char



Photo 4: Arctic char for Analysis

4.1.1.2 Bruce-Head

As part of the narwhal monitoring program and related to Term and Condition No. 110, NIRB staff visited the Bruce Head camp (Photo 5 & Photo 6), located nine (9) km north of Milne Port. Baffinland informed NIRB staff that the 28-day program just finished a few days ago, so the Monitoring Officers were unable to take photos of the team at camp and/or observing. Although, NIRB staff were able to see closure of the camp where all waste was stored in barrel (Photo 7) waiting to be transported and disposed at main camp.

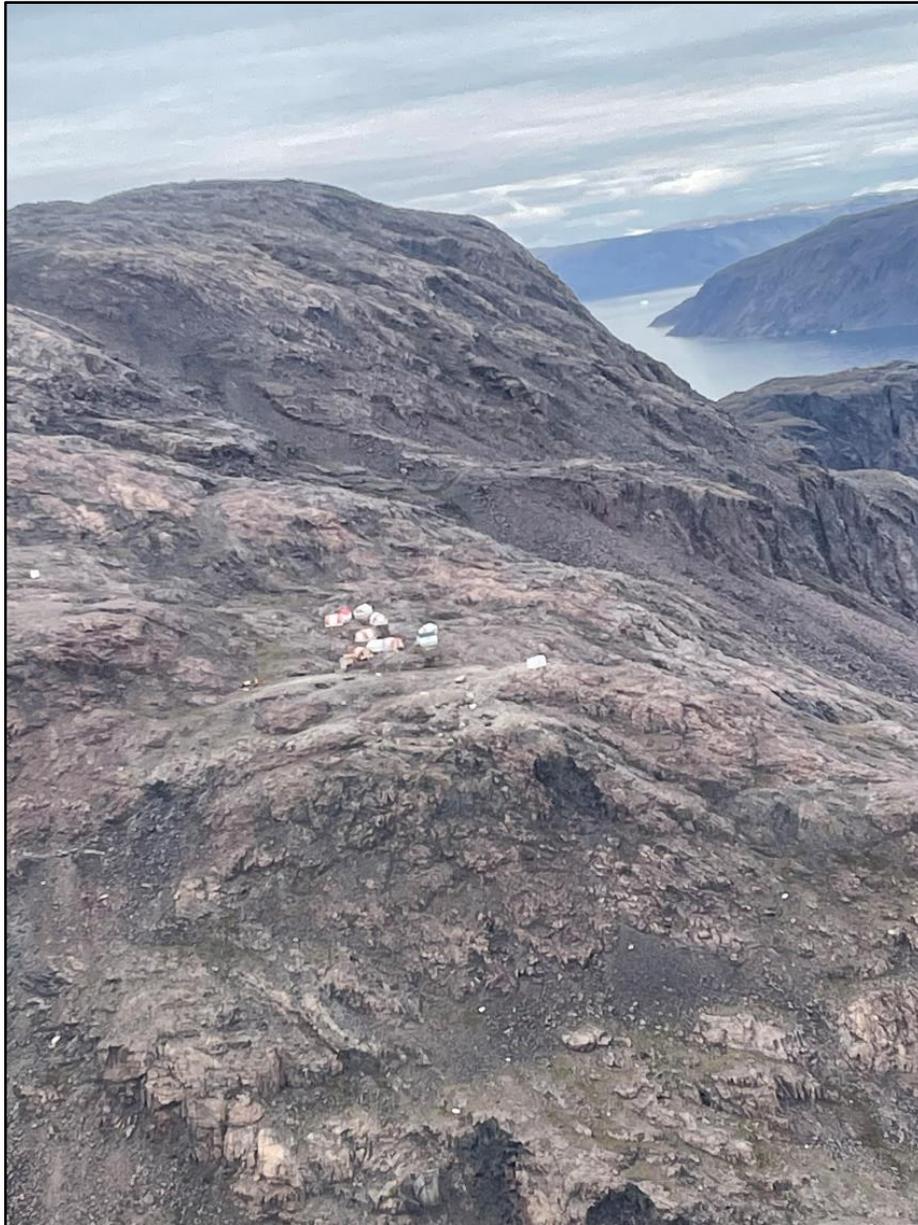


Photo 5: Aerial View of Bruce-Head Camp



Photo 6: Bruce-Head Camp



Photo 7: Waste Barrels Waiting to be Transported

4.1.1.3 Milne Port Landfarm

NIRB staff visited the landfarm facility where all contaminated soil and snow is stored and disposed of (Photo 8). As noted in the past, Baffinland stated NIRB staff that the current facility is not operating and has contracted a consultant to review the landfarm and improve the functionality of the area. Monitoring Officers will follow-up during 2023 site visits to observe progress.



Photo 8: Landfarm at Milne Port

4.1.1.4 Ore Dock and Stockpile Area

NIRB staff toured the Ore Stockpile (Photo 9) and the Ship Loader Facility (Photo 10 & Photo 11). The Ore Stockpile area was not in full operation and maintenance activities were ongoing at the facility. Baffinland staff had noted that due to a labour dispute affecting their contracted vessels and operators, no ore carriers had been called to Port for seven (7) days at the time of the visit. Therefore, Monitoring Officers were able to climb and make observations from the loaders.

During the visit, due to limited operation no visible dust was observed and Baffinland staff informed the Monitoring Officers that Baffinland still apply the dust suppressant on the stockpile. Baffinland further noted that they had begun investigating options to implement wind fencing along the water side of the Ore Stockpile to help reduce wind-blown dust emission from stockpiling activities.



Photo 9: Ore Stockpile



Photo 10: Shiploader



Photo 11: View of the Ore Stockpile from the Shiploader

4.1.1.5 Milne Port Sedimentation Ponds

As per Term and Condition No. 17 and Baffinland *Surface Water and Aquatic Ecosystem Management Plan*, NIRB staff observed the West Sedimentation Ponds that are adjacent to the Ore Stockpile ([Photo 12](#)) where runoff water is stored allowing any sediment in the ponds to settle before being tested and transferred to another pond to be discharged in Milne Port once water testing results indicate effluent is within discharge limits.



Photo 12: West Sedimentation Pond

4.1.1.6 Oil Spill Equipment

Baffinland keeps oil spill equipment ready at Milne Port ([Photo 13](#)) as its *Oil Pollution Emergency Plan* (OPEP) and related to Term and Condition No. 92. Baffinland staff informed the monitoring officers that Baffinland conducted its annual OPEP Training exercise from July 22nd to July 24th, 2022.

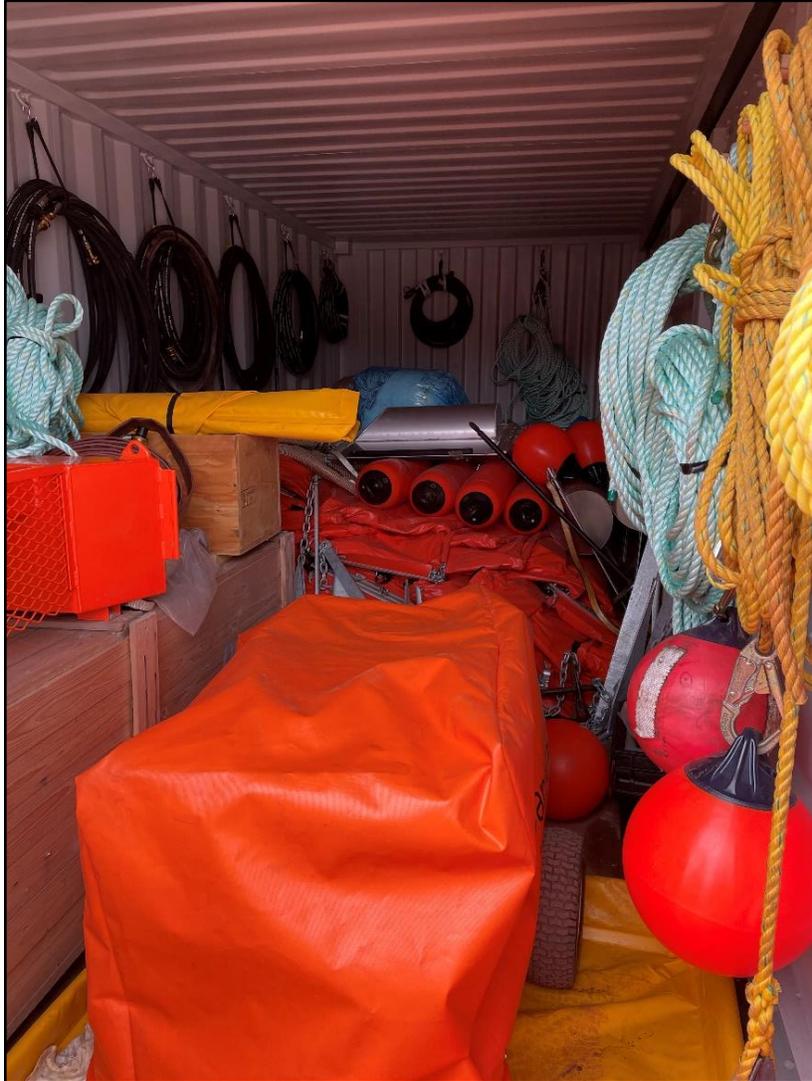


Photo 13: OPEP Spill Response Equipment

4.1.1.7 Quarry

In order to observe the Proponents compliance with Term and Condition 30, NIRB staff visited the quarry at Milne Port ([Photo 14](#)). There were no issues of note as there were minimal activities.



Photo 14: Milne Port Quarry

4.1.2 Tote Road

On August 24, 2022, after visiting Milne Port, NIRB staff drove along the Tote Road. To follow on the previous spring site visit, the Monitoring Officers stopped at various locations where some issues were noted and how Baffinland did resolve them.

4.1.2.1 Dust Monitoring

The NIRB monitoring officers observed dust collectors ([Photo 15](#)) and ongoing dust mitigation measures of water being dispersed on the Tote Road ([Photo 16](#)) as part of Baffinland's fulfillment of the Term and Condition No. 10.



Photo 15: Dust Collector



Photo 16: Truck Watering the Tote Road

4.1.2.2 Culverts

Along the Tote Road, the Project Certificate states through T&C No. 19 that Baffinland is required to maintain fish passage through water crossings. To follow up on the previous site visit in June, the Monitoring Officers returned to culverts previously visited. At culvert CV-104 at KM34 (Photo 17), no issue was noted. In June, the culvert at KM 59.5 (Photo 18) appeared to have blockage and flooding issues. When visited in August, Baffinland had repaired the culvert and there was flow of water again. Baffinland also informed the NIRB that it is working with DFO to further repair damaged culverts noted through DFO's site visits. The culvert BG-29 (Photo 19) is also under review to be repaired. Baffinland committed to following up on the issue in writing and the Monitoring Officers will follow-up in future site visits.



Photo 17: Culvert CV-104 Located at KM34



Photo 18: Culvert CV-059 Located at KM59.5



Photo 19: Culvert BG-29 Located at KM84.5

4.1.2.3 Sedimentation Control

As part of Baffinland's *Erosion Management Plan* within the *Surface Water and Aquatic Management Plan*, Baffinland has developed measures to prevent erosion and sediments impact to surface water. Related to Term and Condition No. 22, the Monitoring Officers were able to observe methods used by Baffinland such as silt fencing ([Photo 20](#)) and rip rap ([Photo 21](#)) to control erosion to enter in the nearby surface water.



Photo 20: Sedimentation Control Located at KM94.5



Photo 21: Rip Rap Along the Tote Road Near the Mine Site

4.1.3 Mary River Mine Site

4.1.3.1 Waste Rock Storage Facility, Sedimentation Pond and Wastewater Treatment Facility

The waste rock storage facility (WRF) is an open area where potentially acid generating rocks are stored (Photo 22). NIRB staff observed that the WRF was expanding as per the *Waste Rock Management Plan*.



Photo 22: Waste Rock Storage Pile

NIRB staff also observed the wastewater treatment facility adjacent to the waste rock pond (Photo 23) where wastewater is collected prior to treatment. The water is pumped into the treatment facility and transfer to the second waste rock pond (Photo 24) where the water is tested before discharge into the tundra.



Photo 23: Waste Rock Pond



Photo 24: Second Waste Rock Pond

4.1.3.2 Deposit No. 1

NIRB staff visited the Deposit No.1 pit ([Photo 25](#) & [Photo 26](#)) and noted that ore extraction and mining activities were ongoing. Since the last site visit in June 2022, NIRB staff were able to drive closer to active equipment down in the deposit and directly approach the pit benches. While observing the deposit, Baffinland staff were able to explain the extraction process and detail the mining plan for the Deposit.



Photo 25: Deposit No. 1, August 2021

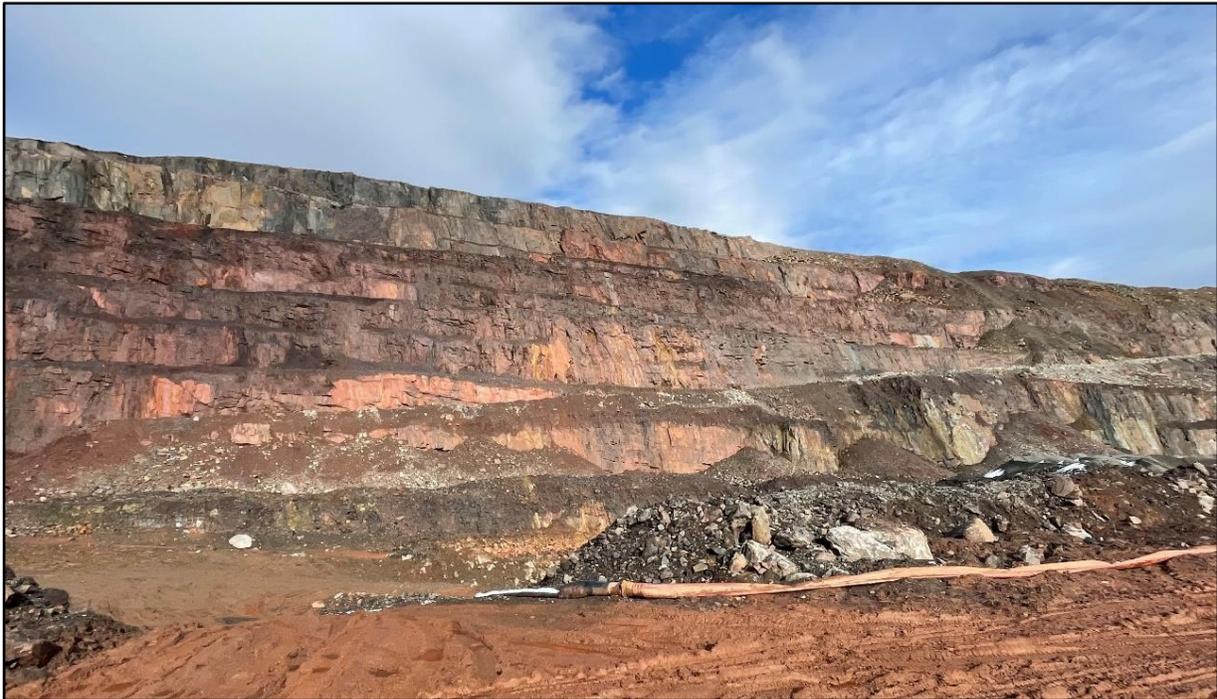


Photo 26: Deposit No.1, August 2022

4.1.3.3 Water Management Dam at Deposit No. 1

While at Deposit No.1 NIRB staff visited the KM 105 Dam located at the base of the Deposit (Photo 27 & Photo 28). This Dam allows for water running down the deposit to be captured in a sedimentation pond where suspended solids in the water can settle prior to the water being pumped with other effluent, after meeting release requirements, into creeks. The Dam was completed in 2022 to mitigate any potential accumulation of total suspended solids in run-off water which may lead to impacts on the freshwater environment if left untreated. Baffinland explained to NIRB staff, that a seepage was discovered in June and Baffinland is in the process of remediating the situation in working close with the Qikiqtani Inuit Association as the landowner.

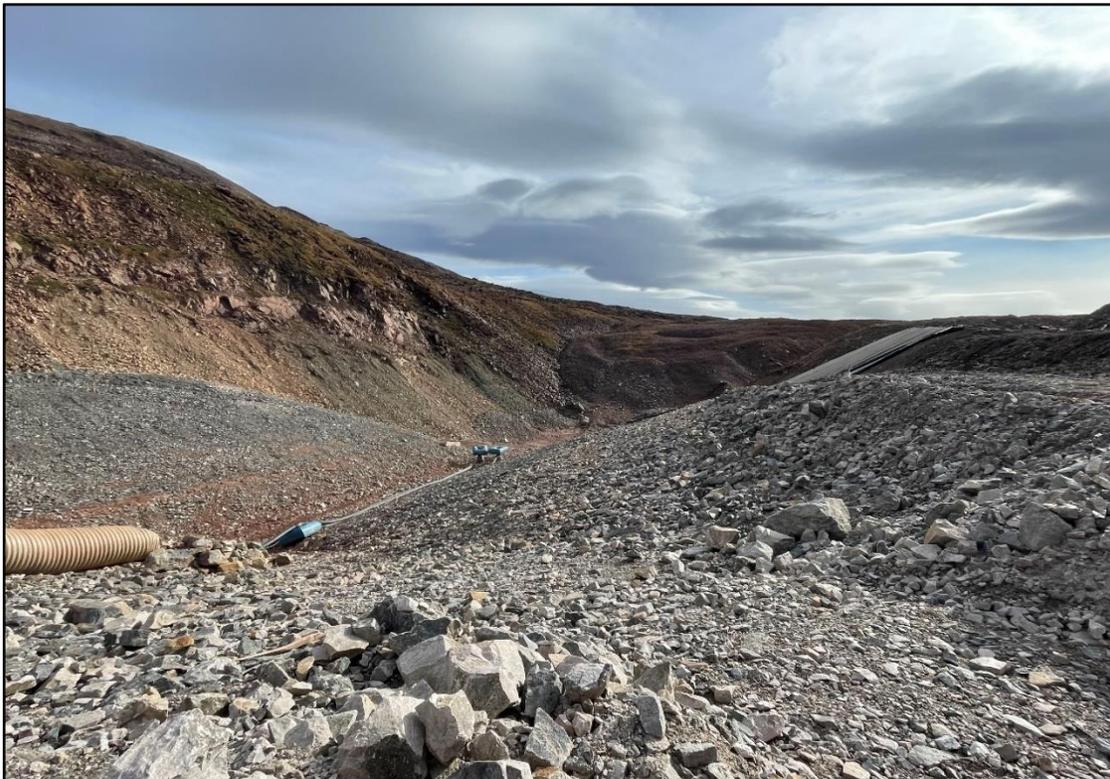


Photo 27: Deposit No. 1 Dam Sedimentation Pond



Photo 28: Deposit No. 1 Dam Sedimentation Pond

4.1.3.4 Crusher Plant and Sedimentation Pond

NIRB staff viewed the crusher facility (Photo 29, Photo 30 & Photo 31) by foot. The Monitoring Officers observed the continued dust mitigation applied by Baffinland. On all three (3) crushers facilities hoods, shrouds, and bellows are installed to reduce dust emissions. Baffinland staff also noted the continued maintenance on the crusher equipment generally as well as on the hoods and shrouds. Baffinland stated that due to the need for dust mitigations on the crusher equipment, many of the mitigation designs implemented are constructed on site by repurposing old conveyor belts and other pieces of metal on site.



Photo 29: Example of Hoods Covering the Conveyor Belt



Photo 30: Example of Hood on the Conveyor System and Bellows at the End of a Conveyor Belt



Photo 31: Conveyor Under Maintenance

4.1.3.5 Mine Site Landfill and Landfarm

NIRB visited the landfill site to view Baffinland’s ongoing waste management practices as described in the *Waste Management Plan*. NIRB staff observed some tires which are not supposed to be disposed in the landfill ([Photo 32](#) & [Photo 33](#)), this issue was discussed with Baffinland staff at the close out meeting and Baffinland indicated they would review the site and remove any debris not approved for disposal. Fencing around the landfill is well maintained ([Photo 33](#)) as a measure to prevent human-carnivore interactions as required by Term and Condition No. 64.



Photo 32: Buried Tire in the Landfill



Photo 33: Disposed Tires and Fencing Around the Landfill

Next to the landfill is the landfarm ([Photo 34](#)) where Baffinland disposed all its contaminated soil and snow from the Mine site. NIRB monitoring officers observed piles of soil which is turned during summer months until contaminants reached an acceptable level for the soil to be disposed in the landfill. Baffinland noted the expected improvements with this landfarm when compared to the one at Milne Port indicating that because this one was new, they would be able to implement the required changes to operation from the beginning rather than after large amounts of contaminated soil had been stored in the landfarm.



Photo 34: Row of Contaminated Soil

4.1.3.6 Snow Management

On the road towards the landfill, NIRB staff observed a lot of waste ([Photo 35](#)) in locations where snow was consistently piled through the winter months. As part of Baffinland's *Snow Management Plan*, Baffinland is supposed to clean the area on a regular basis as the snow melts. This concern was discussed with Baffinland, who noted that a clean-up will occur in the following days.



Photo 35: Garbage from Snow Pile

4.1.3.7 Incinerator Facility

The incinerator facility at the Mary River Mine Site remains in operation. Related to Term and Condition No. 11, Baffinland segregated waste as per their *Incinerator Management Plan*. Non-hazardous material are the only materials incinerated (Photo 36) and hazardous waste is disposed in labelled bins (Photo 37) for backhaul off site.



Photo 36: Waste Prior to Incineration



Photo 37: Hazardous Waste Segregation

4.1.3.8 Air and Groundwater Monitoring

Related the Term and Condition No. 6, Baffinland monitors air quality for SO₂ and NO₂. NIRB staff could observed a continuous air quality monitor (Photo 38) located at Mine Site Complex. Inside the building, real time data SO₂ and NO₂ are collected and recorded to ensure air quality thresholds are not surpassed. (Photo 39).

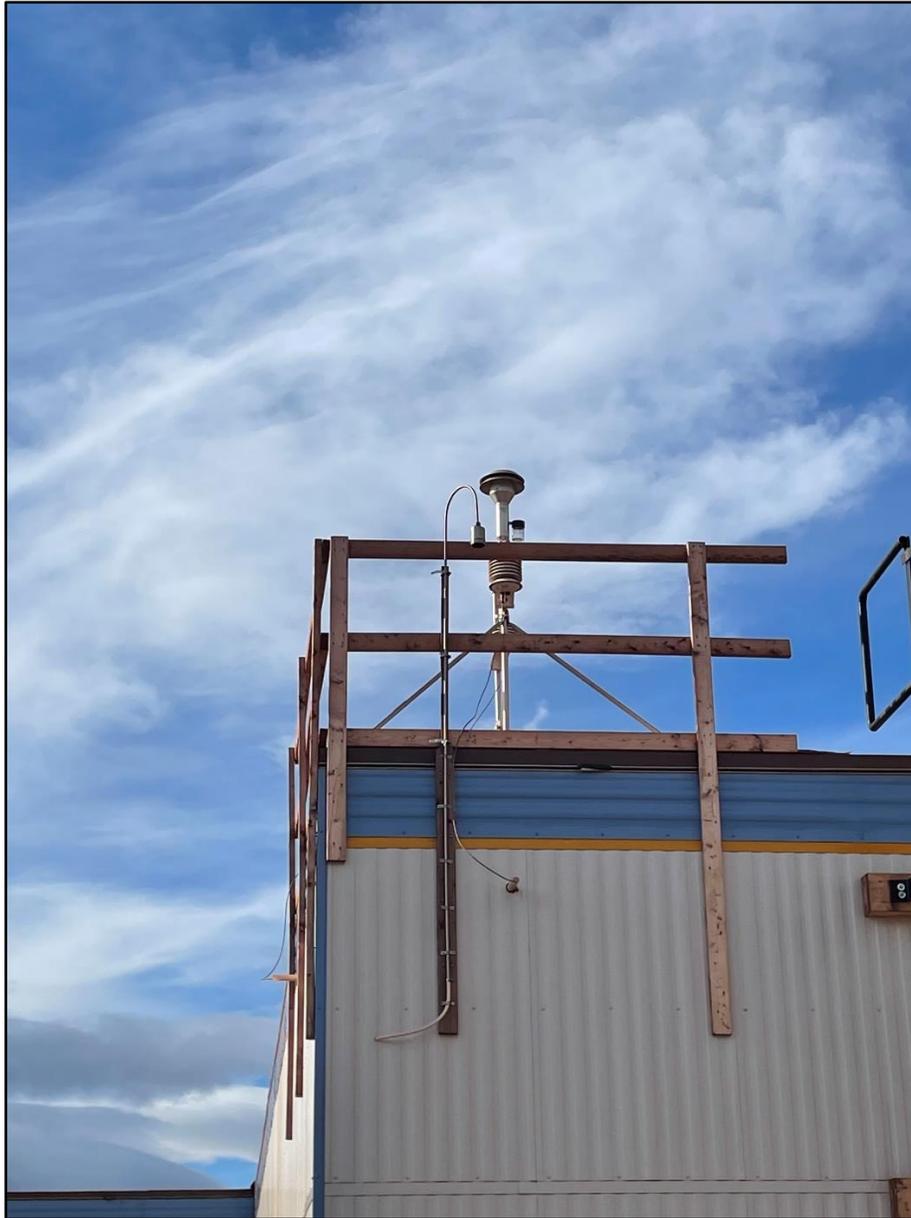


Photo 38: Real Time Air Quality Monitor



Photo 39: Real Time Data from the Air Quality Monitor

As per Baffinland's *Groundwater Monitoring Program* and related to the Term and Condition No. 23, Baffinland has multiple ongoing groundwater wells around the landfill. NIRB Monitoring Officers observed one (1) located (Photo 40) several meters outside the fence from the landfill.



Photo 40: Groundwater Monitoring Well Next to the Landfill

4.1.3.9 Socio-Economic

As per Term and Condition No. 142, Baffinland offers Inuktitut classes ([Photo 41](#)) and has translated signs over the project ([Photo 42](#)). These measures are in place to reduce possible language barriers for employees.

4.2 Observations Based on NIRB Project Certificate No. 005

The following table summarizes observations made during the site visit that pertain specifically to observable terms and conditions during a summer site visit of Project Certificate No. 005 relevant to the construction and operation phase of the Mary River Project.

T&C No.	Topic	Site Observation
Air Quality		
6	Air Quality Monitoring	Continuous air quality monitor was observed at Mine Site (section 4.1.3.8).
10	Dust Management and Monitoring	Dust fall monitoring stations were observed along the Tote Road with ongoing mitigation measures along the Tote Road, the Crusher facility and the Ore Stockpile at Milne port. (Section 4.1.2.1)
11	Incinerator	NIRB Staff visited the Incinerator facility at the Mine Site (section 4.1.3.7)
Hydrology and Hydrogeology		
17	Prevent impacts to water bodies from effluent	Related to T&C 24 and 46 Sedimentation ponds were observed at Deposit No. 1 (Section 4.1.5) and at the KM 105 dam (section 4.1.3.3).
19	Mitigate impacts to natural water flow	Baffinland has issues with some culverts and is in the process to remediate damaged culverts (section 4.1.2.2).
Groundwater/Surface Water		
21	Monitor dust/deposition rates in water bodies along the Tote Road	Related to T&C 10 Dust fall monitoring stations were observed along the Tote Road (section 4.1.2.1).
22	Develop appropriate sediment and erosion controls	Silt fences and rip raps were observed on-site to prevent sediment from entering the nearby surface water (section 4.1.2.3).
23	Groundwater Monitoring	NIRB staff observed groundwater monitoring near the landfill (section 4.1.3.8)
Landforms, Geology and Geomorphology, Soils and Permafrost		
26	Erosion Management	Related to T&C 43 NIRB staff noted several instances where rip raps and silt fences were installed along the Tote Road (section 4.1.1.9).
30	Quarry or borrow site management	NIRB staff toured the quarry at Milne Inlet (section 4.1.1.7) which there was low activity.

T&C No.	Topic	Site Observation
Terrestrial Wildlife Habitat and Waste Management		
64	Prevent human-carnivore interactions	Fencing at the landfill is maintained (section 4.1.3.5).
Marine Environment, Marine Water/Ice and Sediment Quality		
92	Spill response equipment on site	Baffinland has spill equipment ready in case of an emergency in a seacan on the shore of Milne Inlet (section 4.1.1.6)
Marine Wildlife and Marine Habitat		
110	To prevent impacts to marine mammal from shipping activities	The Bruce Head monitoring camp is a program to monitor narwhal activities in the area (section 4.1.1.2)
113	To prevent impact to marine fish.	A monitoring team was capturing Arctic char at Quluktuk Lake for further health analysis (section 4.1.1.1)
Socio-Economic		
142	To address potential barriers from the use of various Inuktitut dialects.	Signs were translated and Inuktitut was offered on-site (section 4.1.3.9)

5 RECOMMENDATIONS AND DIRECTION

Upon completion of the site visit, NIRB staff met with Baffinland staff to discuss the site visit observations and made follow-up plans. This allowed NIRB staff to discuss specific areas of the operation or other topics related to Baffinland's *Annual Report* but more difficult to observe on-site.

1. NIRB staff discuss the recurring concerns of helicopter flights height compliance, related to Terms and Conditions No. 59 and 71, and asked for an explanation over the rational used by Baffinland in its *Annual Report*.
2. As some culverts along the Tote Road were observed to be damaged ([section 4.1.2.2](#)), NIRB staff asked Baffinland to provide the next planned steps to remediate the issue.
3. As dust from traffic was observed along the Tote Road, NIRB staff asked for clarification on the criteria that initiate dust mitigation measures along the Tote Road.

4. As described in Baffinland's *Annual Report* Term and Condition No. 17, on some occasions the Total Suspended Solids was above the discharge criteria. NIRB requested further information on the possible causes of these exceedances.
5. NIRB noted that tires observed within the landfill should be disposed of appropriately ([section 4.1.3.5](#)).
6. NIRB noted to Baffinland that the waste from the snow pile should be cleaned before the next snow ([section 4.1.3.6](#)).

Baffinland noted the above observations and advised that a follow-up would be sent to NIRB. On September 12, 2022, Baffinland submitted its follow-up (Appendix A) on items discussed at the close out meeting.

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Reviewed by: Kelli Gillard
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Date: October 4, 2022
Signature:



Prepared by: Guillaume Daoust
Title: Technical Advisor II
Date: October 4, 2022
Signature:



Appendix A: BAFFINLAND FOLLOW UP ON AUGUST SITE VISIT

September 10, 2022

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Nunavut Impact Review Board

Re: Follow up to NIRB August 2022 Site Visit

Baffinland Iron Mines Corporation (Baffinland) is pleased to provide the Nunavut Impact Review Board with information to NIRB's comments and questions from their Site Visit on August 24-25, 2022.

The attached Table 1 provides Baffinland's follow-up information from the NIRB Site Visit.

Should you have any additional concerns or questions regarding the attached information, or Baffinland's environmental monitoring and operational management implemented throughout 2022 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,



Todd Swenson
Environmental Superintendent

Cc: Megan Lord-Hoyle, Lou Kamermans, Timothy Sewell, Kendra Button, Connor Devereaux, Francois Gaudreau, Martin Beausejour (Baffinland)

Attachments

Attachment 1 – Table 1: Baffinland Follow-Up Information to NIRB 2022 August Site Visit

Attachment 2 – Photos



Attachment 1

Baffinland Follow-Up Information to NIRB 2022 August Site Visit

Table 1: Baffinland Follow-Up Information to August 2022
Site Visit

Cmt. #	Project Location	Topic	Additional Information	BIM Response
1	Site Wide	Helicopter Flight non-compliance rationales	Action – to provide summary of the flight compliance issue.	<p>Compliant heights are heights that are above the 650 m limit for wildlife (i.e. snow geese or Caribou). Non-compliant are ones that are not. However, non-compliant with rationale, is where we are below these heights, but for necessary reasons, such as slinging, personnel pick-up/drop-off, take off/landings. This is stated in PC condition 59.</p> <p>There are no alternative measures to slinging. Slinging generally occurs in remote areas that are not accessible by the Tote Road. For example, to/from the Brucehead narwhal observation camp and for various monitoring programs (i.e. dustfall, AEMP lakes, vegetation surveys). Due to the limited accessibility of these sites, pick-ups and drop-offs cannot be adjusted to improve compliance. The majority of sampling areas that are accessed by helicopter are reference sites (> 1 km from the PDA) and therefore cannot be safely accessed by field staff on foot. Many of these areas also have terrain that further limits the ability of field staff to access on foot. Additionally, eliminating the use of helicopters would prevent programs from being completed in a timely manner due to the short duration of the field season and lack of resources (i.e. vehicles) on site.</p>
2	Tote Road	Culvert maintenance and repair plan update.	NIRB requested a timeline/plan regarding when repairs will be made to culverts along the Tote Road.	Baffinland is finalizing a crossing remediation plan for submission to DFO as a requirement of relevant authorizations and the Fisheries Act. The remediation plan will include the methods and timelines to complete work on specified culverts. The details of this plan and work to date will be included in our regular annual reporting cycle.

Cmt. #	Project Location	Topic	Additional Information	BIM Response
3	Tote Road	Dust Suppression and Dust-Blokr® Application	(discussed at length; no specific question asked).	<p>Baffinland takes the issue of dust very seriously and has made dustfall mitigation and monitoring a priority since operations began. Although monitoring results to date indicate no long-term effects of dustfall on vegetation, aquatic environments, wildlife or human health, Baffinland recognizes that dustfall continues to be an important source of concern for local communities.</p> <p>Since 2018, Baffinland has implemented the following additional mitigation and monitoring measures, which include:</p> <ul style="list-style-type: none"> • application of DustBlokr® to project roadways including the Tote Road (this is a glycol based product approved by the GN and has also been trialed in several Nunavut communities); • application of DusTreat® to Milne Port stockpiles, a product that forms a crust around the stockpiled ore, effectively covering and containing potential fugitive dust; • development of a new remote sensing monitoring program to characterize the extent and concentration of dustfall, utilizing satellite imagery Snow Darkening Index values; and • expansion of the existing passive dust monitoring program, including the installation of several collectors at below standard heights to address community and TEWG requests. <p>The above is in addition to the ongoing implementation of existing dust mitigation measures, which include, but are not limited to:</p> <ul style="list-style-type: none"> • installation of hoods and shrouds on crusher plant equipment (stackers and conveyors) to minimize fugitive dust generation during crushing operations as well as rubber bellows to control the fall of the ore and reduce the distance the ore freefalls to the pad; and

Cmt. #	Project Location	Topic	Additional Information	BIM Response
				<ul style="list-style-type: none"> • application of dust suppressants (calcium chloride, water) to the pads, laydown and parking areas at the Mine Site and Milne Port, as well as along the Tote Road.
4	Site Wide	Freshet-Related TSS Events	(discussed at length; no specific question asked).	<p>Upon discovery of the elevated instream TSS conditions at these drainages, personnel worked to install sedimentation mitigation measures including silt fences, silt curtains and coconut husk coir logs, in areas around the CLT, CLSP, SDLT and LDFG outfalls in accordance with Baffinland’s Surface Water and Aquatic Ecosystem Management Plan, to slow the flow and settle sediments prior to the water entering the streams. Water diversion and pumping strategies were also implemented to reduce potential erosion and sedimentation.</p> <p>Water quality is conducted throughout freshet, as per Baffinland’s Freshet Monitoring Procedure.</p> <p>Conditions at CLT, CLSP, SDLT and LDFG, as well as other freshet monitoring locations were sampled and assessed as per Baffinland’s Freshet Monitoring Program. Freshet monitoring continued until June 25 when water quality improved at the CLT, SDLT and LDFG monitoring locations. Sampling at CLSP ended on June 20 following the end of flow conditions. The development and implementation of the Long Term Surface Water Management Plan under Modification No. 13 is ongoing with support from a third party consultant.</p> <p>In 2022, construction of the MS-11 Surface Water Management Pond was completed, as part of the first phase of the implementation of the plan. Freshet preparation and response measures will be reviewed and any lessons learned will be incorporated into future freshet planning.</p>

Cmt. #	Project Location	Topic	Additional Information	BIM Response
				Additional water sampling conducted for acute toxicity on May 22 at CLT-OUT and SDLT-OUT and June 7th at LDFG-OUT and CLSP-OUT LDFG locations indicated the samples collected were not acutely toxic.
5	Mary River Landfill	Waste Management at the landfill	Presence of partially buried tires in the landfill Action – tires to be removed and an audit of other non-compliant items to be removed.	The area where the tires were found was scanned and the tires removed from the landfill. See Photo 1
6	Mary River Dyno Snow Stockpile	Waste Management at the Dyno Snow Stockpile	Waste and Debris from melting snow stockpile near Dyno.	A combination of excavator and hand-picking was employed once the ground surface was safe for foot access, and all debris from both Dyno snow stockpiles was removed. See Photos 2-4 for after photos.



Attachment 2

Photos



Figure 1. Photo of Landfill area following tire removal



Figure 2. Photo of Snow Dump Area by Dyno – Debris removal ongoing



Figure 3. Photo of Snow Dump Area by Dyno – Debris removal ongoing



Figure 4. Photo of Snow Dump Area by Dyno – all debris removed