

APPENDIX E.8.2

QIA Inspection Reports and Baffinland Response



July 5, 2019

Chris Spencer, Regulatory Manager
Qikiqtani Inuit Association
P.O. Box 1340
Iqaluit, NU X0A 0H0

RE: Response to QIA May 2019 Site Inspection, Findings and Recommendations

Baffinland Iron Mines Corporation (Baffinland) provides the Qikiqtani Inuit Association (QIA) with the following response to the inspection completed¹ May 20-21, 2019, consistent with the Commercial Lease No. Q13C301.

The attached Table 1 provides Baffinland's responses to the concerns/findings of the QIA inspection, including details where applicable on progress made to date.

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

Regards,

A handwritten signature in black ink, appearing to read "Chris Murray", with a stylized flourish at the end.

Christopher Murray
Environmental & Regulatory Compliance Manager
Baffinland Iron Mines

Cc: Jared Ottenhof (QIA), Megan Lord-Hoyle, Tim Sewell, Lou Kamermans, William Bowden, Connor Devereaux, Shawn Stevens, Amanda McKenzie (Baffinland)

Attachments:

Attachment 1 – Baffinland Responses to QIA Concerns/Findings
Attachment 2 – Baffinland Inspection Forms

¹ QIA (2019) Re: Baffinland Iron Mines Corporation's, Mary River Mine – Qikiqtani Inuit Association May 2019 Site Inspection, Findings, and Recommendations. Letter dated June 20, 2019.

Attachment 1

Baffinland Responses to QIA Concerns/Findings

Table 1 – Baffinland Responses to QIA Concerns/Findings May 2019 Site Inspection

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
1	Historical borrows and ponding beside roads	Historical borrows and general water accumulation was noted beside the Tote Road, possibly impacting the long- term stability of the Tote Road. Of specific concern were identified at Tote Road KM 89.8, 49.9, 49, 29.4, 21.9, and 7.2.	Baffinland remove ponding water from beside the Tote Road in noted areas to promote permafrost aggradation. Grading and contouring may be required to divert water from ponding next to the Tote Road.	September 1, 2019	<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 (ex. general water accumulation) 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"> • Baffinland will work to remove ponding water from beside the Tote Road in noted areas, by re-grading or contouring the road banks. • Regular inspections of borrow locations will be completed during this work through the Tote Road Monitoring Program. Any additional unstable slopes identified will be re-graded to eliminate depressions and re-establish natural drainage patterns. • Cut and fill areas will be stabilized by constructing gentle slopes less prone to erosion. • Areas of unexpected settlement will be filled to re-establish the natural contours and eliminate ponding of water.

					<ul style="list-style-type: none"> Borrow activities will occur only at approved locations and will be concentrated to limit the area of disturbance. <p>Areas of concern identified by QIA along the Tote Road (KM 89.8, 49.9, 49, 29.4, 21.9, and 7.2) 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>
2	Tote Road KM 7.2	Borrow sources of historical concern have fill placed. Grade of road appears near original ground with ponding water encroaching on the road, possibly due to degradation of permafrost.	Baffinland remove water prior to grading fill and provide timelines for grading fill.	September 1, 2019	Following the inspection, Baffinland conducted a detailed examination of the borrow sources along the Tote Road near KM 7.2. Baffinland commits to re-grading the road in this location to reduce the likelihood of ponding water and re-establish natural contours. This work is scheduled to be conducted by the end of 2019.
3	Upgrades to the Tote Road	It appears the Tote Road was raised at KM 52.2. Due to time constraints, the Inspector was not able to inquire with Baffinland's Road Maintenance department as to the triggers for upgrading the road.	Baffinland provide details of the trigger(s) used when upgrading the road.	July 5, 2019	Following consultation with project personnel, the road raising at KM 52.2 has been classified as historic construction work. This road raising was completed several years prior to establishment of the Tote Road Adjustment Notification Process. As a result, Baffinland is unable to provide record of the road raising, and the details triggering the modifications. Baffinland is conducting a detailed records review of historic road modifications. If documents pertaining to this road lift are located, records will be provided to QIA. Irrespective of the historical nature of the road upgrades, Baffinland will continue to monitor this

					region for any adverse environmental impacts, and signs of permafrost degradation in accordance with the Roads Management Plan and Environmental Protection Plan.
4	SWAEMP and Adaptive Management	Baffinland indicated triggers for additional management and monitoring due to erosion and sedimentation are based on an inspection form. At the time of questioning, there was not enough time to receive the inspection form.	Baffinland provide the inspection form that includes visual indicators for erosion and sedimentation that would trigger follow-up sampling.	July 5, 2019	Attachment 2 includes the 'Tote Road – Sampling Event Monitoring Form' as well as the 'Freshet Water Quality Data Sheet' that outline the visual indicators for erosion and sedimentation that project personnel would use to trigger follow-up sampling. Examples include recording visual observations of water clarity, and turbidity and requirements to fill in whether mitigation measures were implemented and water samples were collected.
5	Roads Management Plan	The thresholds in the Roads Management Plan that were identified by the Inspector do not comply with those included in the DFO report ¹ or water license ² . Specifically, that the downstream location be 10% higher than the upstream location and that there is no differentiation from clear and high flow.	Baffinland to provide evidence or reasoning why a 20% increase in TSS from upstream concentrations is sufficiently conservative compared to DFO's 10% guidance. Baffinland to provide reasoning why there is no differentiation between clear and high flow as indicated in the DFO report. Baffinland to	July 5, 2019	Baffinland will continue to engage with QIA on the review of the Roads Management Plan, and looks forward to receipt of comments on the March 31st submission. Additionally, Baffinland would welcome a meeting with QIA to further discuss the Roads Management Plan.

			provide evidence as to why the aforementioned threshold varies from the project's water license.		
6	Adaptive Management	Visual indicators for adaptive management (e.g., would trigger mitigation measures) were identified to be on an inspection form.	Baffinland to provide the inspection form with details as to when something is identified (e.g., when cracking, sloughing, washout, etc.) and what action is to be taken. Baffinland to provide inspection forms from 2018 and those available in 2019. Baffinland to provide any other on-site adaptive management documents.	July 5, 2019	<p>Roads and water crossings are inspected regularly for signs of degradation and maintenance requirements. Periodic visual inspections are conducted on the Project road network by trained personnel and occur at regular intervals following heavy precipitation events and construction activities. The Project road network will be continually inspected over the life of the Project. Road safety, stability and erosion are several of the main factors that will be investigated during the routine inspections.</p> <p>Baffinland has provided forms in Attachment 2 with details as to when visual indicators are observed (e.g., when cracking, sloughing, washout, etc.) and what action is to be taken.</p>
7	Waste Rock Facility	Baffinland indicated that there currently is not a QAQC program for waste rock once it is placed in the Waste Rock Facility; that it is currently monitored where the material is removed. This is not in	Baffinland to include a sampling and verification program to be performed on an annual basis, at a minimum, to verify the success of PAG rock segregation	September 1, 2019	Baffinland has committed to and is currently conducting confirmatory sampling of PAG rock segregation and placement in the Waste Rock Facility. In the next update to the Waste Rock Management Plan, Baffinland commits to incorporating a QA/QC program for waste rock once placed in the Waste Rock Facility. The updated plan is to be submitted to QIA by December 31, 2019.

		accordance with the Interim Reclamation and Closure Plan that indicates Waste Rock will be assured to be placed in the appropriate locations of the Waste Rock Facility nor QIA's October 2018 inspection recommendation.	and placement, for approval by QIA. This recommendation was stated in QIA's June and October 2018 site inspection reports.		
8	Snow Stockpile Inspection Forms	The Inspector requested Baffinland's Snow Stockpile Inspection Forms completed during the 2018-2019 winter period. These inspection forms remain outstanding.	Baffinland provide Snow Stockpile Inspection Forms for the 2018-2019 Winter period.	August 1, 2019	Attachment 2 outlines the Snow Stockpile Inspection Forms completed in the 2018-2019 winter period. The inspections are completed by site environment personnel to document any items of concern identified and the corresponding corrective actions taken.
9	Snow Dumps	Snow dump melt disturbing ground past where Lease delineation markers once were. Markers were clearly pushed over and overall could not be used to clearly identify lease boundaries. The Inspector observed that snow was pushed over the markers and that was confirmed by Baffinland personnel.	Baffinland ensure snow removal operators are aware of markers and do not exceed boundaries.	August 1, 2019	As a proactive measure to prevent sediment release, Baffinland commits to installing silt fencing in the region surrounding the snow dump. Baffinland also commits to conducting additional visual monitoring of the snow dump in accordance with the Snow Management Plan. If any potential adverse environmental impacts are observed, additional sediment and erosion control measures will be installed in the region surrounding the dump. Environmental awareness training will also be conducted with the snow removal operators prior to the 2019/20 winter season. The training will be conducted in accordance with the Snow Management Plan.

10	Snow Dumps	No sedimentation mitigations observed in place. Specifically, at the snow dump around Tote Road KM marker 85.5, runoff was observed to be flowing directly into a flowing stream.	Baffinland provide what triggers additional mitigation measures to ensure runoff from snow dumps are mitigated. Baffinland ensure mitigation measures are in place (e.g. silt fencing) to limit sediment due to snow dump runoff from entering water bodies.	September 1, 2019	As a preemptive measure to prevent sediment release, Baffinland commits to installing silt fencing in the area around Tote Road KM marker 85.5 surrounding the snow dump. Baffinland also commits to conducting additional visual monitoring of the snow dump in accordance with the Snow Management Plan. If any potential adverse environmental impacts are observed, additional sediment and erosion control measures will be installed.
11	Milne Port Snow Dump	Waste, debris, and plastic wrap covering in and around the area of the snow dump.	Baffinland to remove waste, debris, and plastic wrap from all snow dumps.	August 1, 2019	Baffinland applies the principles of pollution prevention, waste reduction and continuous improvement to minimize ecosystem impacts, and facilitate biodiversity conservation. Baffinland commits to removing waste, debris, and plastic wrap from the snow dump, and disposing of the material in accordance with the Waste Management Plan.

Attachment 2

Baffinland Inspection Forms

Freshet Water Quality Data Sheet					
Sample ID:	Date:	Time:	Photos:		
			Upstream:		
Samplers:	Camera ID:	Weather:	Cross Section:		
YSI Model:	Calibration:		Downstream:		
Visual Observations					
Water Level (Dry, Stagnant, Low, Moderate, High):					
Water Clarity (Turbid, Clear, Sheen):					
Debris in Water (Y/N):					
Upstream Observations:					
Downstream Observations:					
Inconsistencies or Concerns:					
Substrate Composition (%)					
Boulders (>256 mm)	Cobble (64-256 mm)	Gravel (2-64 mm)	Sand/Silt/Clay (<2 mm)		
Field Parameters					
Time (24-hr)	Temp. (° C)	pH	Cond. (µs/cm)	Turbidity (NTU)	DO (%)

Freshet Water Quality Data Sheet					
Sample ID:	Date:	Time:	Photos:		
			Upstream:		
Samplers:	Camera ID:	Weather:	Cross Section:		
YSI Model:	Calibration:		Downstream:		
Visual Observations					
Water Level (Dry, Stagnant, Low, Moderate, High):					
Water Clarity (Turbid, Clear, Sheen):					
Debris in Water (Y/N):					
Upstream Observations:					
Downstream Observations:					
Inconsistencies or Concerns:					
Substrate Composition (%)					
Boulders (>256 mm)	Cobble (64-256 mm)	Gravel (2-64 mm)	Sand/Silt/Clay (<2 mm)		
Field Parameters					
Time (24-hr)	Temp. (° C)	pH	Cond. (µs/cm)	Turbidity (NTU)	DO (%)

QA/QC Samples (Y o N):				Erosion and Sediment Control Measures	
Field Dup. (01)	Field Blank (02)	Travel Blank (03)	Equip. Blank (04)	Required?:	Type?:
				Maintenance Required?:	
Flow Measurements					
Left Bank		Mid-Channel		Right Bank	
Depth (m):	Velocity (m/s):	Depth (m):	Velocity (m/s):	Depth (m):	Velocity (m/s):
Wetted Width (m):	Bankfull Width (m):	Bank Stability (H/M/L):			
		Left:		Right:	
Weir Depth (m):			V-Notch (m):		
Notes/Comments:					

QA/QC Samples (Y o N):				Erosion and Sediment Control Measures	
Field Dup. (01)	Field Blank (02)	Travel Blank (03)	Equip. Blank (04)	Required?:	Type?:
				Maintenance Required?:	
Flow Measurements					
Left Bank		Mid-Channel		Right Bank	
Depth (m):	Velocity (m/s):	Depth (m):	Velocity (m/s):	Depth (m):	Velocity (m/s):
Wetted Width (m):	Bankfull Width (m):	Bank Stability (H/M/L):			
		Left:		Right:	
Weir Depth (m):			V-Notch (m):		
Notes/Comments:					

Tote Road - Sampling Event Monitoring Form					
Water Crossing ID:		Date:	Time:	Photos:	
				Upstream:	
Samplers:		Camera ID:	Weather:	Cross Section:	
YSI Model:		Calibration:		Downstream:	
Coordinate of Monitoring Location (UTM; NAD83)		Zone:	Easting:		
			Northing:		
Sampling Information					
Reason for Sampling (e.g. scheduled sampling, follow-up, etc.):					
Water Sample Collected (Y/N):					
Mitigation Measures Implemented (Y/N):					
Field Parameters					
Time (24-hr)	Temp. (°C)	pH	Cond. (µs/cm)	Turbidity (NTU)	DO (%)
QA/QC Samples (Y o N):				Monitoring Location Description	
Field Dup. (01)	Field Blank (02)	Travel Blank (03)	Equip. Blank (04)	(e.g. 100m downstream)	
Notes: (General observations, Deviations from protocol, etc.)					



Mary River Snow Stockpile Inspections

2019

Date: Feb 5/19
 Inspecting Personnel: SJS

Mary River
Crusher Snow Stockpile



Condition	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		/		
Are there any vehicles/heavy equipment in the work area?.		/		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	/			
Does snow contain conaminants such as hydrocarbons or other fluids?	/			If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	/			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)	/			
Additional Notes:				

Date:

Inspecting Personnel:

Mary River
Crusher Snow Stockpile



Condition	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		X		NOT IN USE
Are there any vehicles/heavy equipment in the work area?.		/		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.				
Does snow/ice contain conaminants such as hydrocarbons or other fluids, are any spill present?				If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?				
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)				
Is the surrounding area free of loose debris?				
Additional Notes:				

Date: 12-may-19

Inspecting Personnel: CP/BH/TM

Mary River
Crusher Snow Stockpile



Condition	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓			
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		✓		
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		✓		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)				
Is the surrounding area free of loose debris?				
Additional Notes: photo: 036-037 (unsure of exact stockpile boundaries)				

Date: 15-Jan-19

Inspecting Personnel: KN/SJS

Stockpile Location: Dyno Rd/East

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	N	NOT IN USE	
	Are there any vehicles/heavy equipment in the work area?.	N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	Y		
3	Is the snow clear of contamination?. List type of contamination found (coolant, oil, fuel, sewage)	N		
4	Are the natural drainage patterns of the area still intact?	Y		
5	Is there any refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	N		
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	Y	Camera ID: 5 Photo #: 666-667	

Additional Notes:

Date: 15-Jan-19

Inspecting Personnel: KN/SJS

Stockpile Location: Dyno Road West

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	Y 25%		
	Are there any vehicles/heavy equipment in the work area?	N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?	Y	Recently Staked Effluent line	
3	Is the snow clear of contamination?. List type of contamination found (coolant, oil, fuel, sewage)	Y		
4	Are the natural drainage patterns of the area still intact?	Y		
5	Is there any refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	Y	Pieces of Wood + (672) Small Plastics	
6	Is the surrounding area free of loose debris?	N	Teal Pallet on Side of Rd.	# 676
7	Photos taken?	Y	Camera ID: 5 Photo #: 670 - 675	

Additional Notes:

Date: Feb 3/19

Inspecting Personnel: SSS

Mary River

Dyno Road Snow Stockpiles (East/West)



	Dyno Rd Snow Stockpile East				Dyno Rd Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		X	5/716		X		5/712-715	
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	X				X			
Does snow contain conaminants such as hydrocarbons or other fluids?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X				X			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		X				X		
Additional Notes:								

Date: Feb 3/19

Inspecting Personnel: SSS

Mary River

Dyno Road Snow Stockpiles (East/West)



	Dyno Rd Snow Stockpile East				Dyno Rd Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		X	5/716		X		5/712-715	
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	X				X			
Does snow contain conaminants such as hydrocarbons or other fluids?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X				X			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		X				X		
Additional Notes:								

Date: 03-Mar-19

Inspecting Personnel: SSS/KW

Mary River

Dyno Road Snow Stockpiles (East/West)



	Dyno Rd Snow Stockpile East				Dyno Rd Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		X		Not in Use	X			50%
Are there any vehicles/heavy equipment in the work area?		X				X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?	X				X			
Does snow/ice contain conaminants such as hydrocarbons or other fluids, are any spill present?				If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?					X			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)					X		10/26-31	-Wood, insulation scraps -Liner
Is the surrounding area free of loose debris?					X			
Additional Notes: Cam 10 /32								

Date: 03-Mar-19

Inspecting Personnel: SJS/KW

Mary River

Dyno Road Snow Stockpiles (East/West)

Baffinland

	Dyno Rd Snow Stockpile East				Dyno Rd Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		X		Not in Use	X			50%
Are there any vehicles/heavy equipment in the work area?		X				X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?	X				X			
Does snow/ice contain conaminants such as hydrocarbons or other fluids, are any spill present?				If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?					X			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)					X		10/26-31	-Wood, insulation scraps -Liner
Is the surrounding area free of loose debris?					X			
Additional Notes: Cam 10 /32								

Date: 12-May-19

Inspecting Personnel: CP/RH/TM

Mary River

Dyno Road Snow Stockpiles (East/West)



	Dyno Road Snow Stockpile East				Dyno Road Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)		X				X		Was not used
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	X				X			- Some delineators fell down
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X			- melt water not causing any issues	X			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	X			- Wooden debris around pile		X		
Is the surrounding area free of loose debris?	X				X			
Additional Notes: Photos: 054-061					Photos: 069-070			

Date: 26-May-2019

Inspecting Personnel: BM/BR/VPH

Mary River

Dyno Road Snow Stockpiles (East/West)



	Dyno Road Snow Stockpile East				Dyno Road Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)		X		residual snow		X		residual snow
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		X		no markers seen		X		
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X				X			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	X		13/ 346			X		
Is the surrounding area free of loose debris?	X				X			
Additional Notes: 13 345 significant snow cover					13 347			

Date: June 3/2019
 Inspecting Personnel: JH / JES

Mary River *MS-SN-02

Dyno Road Snow Stockpiles (East/West)



	Dyno Road Snow Stockpile East				Dyno Road Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	X							
Are there any vehicles/heavy equipment in the work area?.		X						
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		X						
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		X		If Yes: type of contamination found?				If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X							
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		X						
Is the surrounding area free of loose debris?	X							
Additional Notes: <u>Canons 14 # 17-18</u>								

Date: June 3/2019
 Inspecting Personnel: JH / JES

Mary River *MS-SN-02

Dyno Road Snow Stockpiles (East/West)



Condition	Dyno Road Snow Stockpile East				Dyno Road Snow Stockpile West			
	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	X							
Are there any vehicles/heavy equipment in the work area?.		X						
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		X						
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		X		If Yes: type of contamination found?				If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X							
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		X						
Is the surrounding area free of loose debris?	X							
Additional Notes: <u>Camera 14 #17-18</u>								

Date: 11-JUN-19
 Inspecting Personnel: BM/JBB

Mary River
Dyno Road Snow Stockpiles (East/West)



	Dyno Road Snow Stockpile East				Dyno Road Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓				✓			
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		✓				✓		
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		✓		If Yes: type of contamination found?		✓		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		✓			✓			some loose material
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes: 14 / 369-370 14 / 371-373								

Date: 18 JUN 19

Inspecting Personnel: BM/JB/BC

Mary River

Dyno Road Snow Stockpiles (East/West)



	Dyno Road Snow Stockpile East				Dyno Road Snow Stockpile West			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓			60	✓			50
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		✓		not clearly marked		✓		not clearly marked
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		✓		If Yes: type of contamination found?		✓		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		✓			✓		11-353	
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes: East - 11-351 West - 11-352								

Date: 15-Jan-19

Inspecting Personnel: SJS/KN

Stockpile Location: Landfill Overflow

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	N		
	Are there any vehicles/heavy equipment in the work area?.	N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	Y		
3	Is the snow clear of contamination?. List type of contamination found (coolant, oil, fuel, sewage)	Y		
4	Are the natural drainage patterns of the area still intact?	Y		
5	Is there any refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	N		
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	Y	Camera ID: 5 Photo #: 681/682	

Additional Notes:

Date: Feb 1st / 19

Inspecting Personnel: SJS

Mary River

Landfill Overflow Snow Stockpile



Condition	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		X	Cam 1 / 0743 / 0742	
Are there any vehicles/heavy equipment in the work area?.		/		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	/			
Does snow contain conaminants such as hydrocarbons or other fluids?		/		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	/			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		/		
Additional Notes:				

Date:

Inspecting Personnel:

Mary RiverLandfill Overflow Snow Stockpile

Condition	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		X		NOT IN USE
Are there any vehicles/heavy equipment in the work area?.		X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	X			
Does snow/ice contain conaminants such as hydrocarbons or other fluids, are any spill present?				If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?				
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)				
Is the surrounding area free of loose debris?				
Additional Notes: CAM 10/24-25				

Date: 12-May-19
 Inspecting Personnel: CP, TM, RH

Mary River
Landfill Overflow Snow Stockpile



Condition	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)		X	15/062	Stockpile was not used this season
Are there any vehicles/heavy equipment in the work area?.		X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	X		Removed delineators	Removed fallen down delineators
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		X		
Is the surrounding area free of loose debris?	X			
Additional Notes:				

Date: 11-JUN-19
Inspecting Personnel: BM/SBB

Mary River
Landfill Overflow Snow Stockpile



Condition	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)		✓		
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	✓			
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		✓		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		✓		
Is the surrounding area free of loose debris?	✓			
Additional Notes: 14/367-368				

Date: 13-Jan-19

Inspecting Personnel: KN/SJS

Stockpile Location: Weather Haven

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	Y 30%		
	Are there any vehicles/heavy equipment in the work area?.	N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	Y		
3	Is the snow clear of contamination?. List type of contamination found (coolant, oil, fuel, sewage)	Y		
4	Are the natural drainage patterns of the area still intact?	Y		
5	Is there any refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	Y	Small Debris (Wood/Plastic) Minimal	
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	Y	Camera ID: 5 Photo #: 539/540	

Additional Notes:

Date: Feb 2/19

Inspecting Personnel: SJS

Mary River

Weatherhaven/Warehouse Snow Stockpiles



	Weatherhaven Snow Stockpile				Warehouse Snow Stockpile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	X		5/757-760 40%			X		NOT IN USE
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?					X			
Does snow contain conaminants such as hydrocarbons or other fluids?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X				X			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		X				X		
Additional Notes:								

Date: 05-Mar-19

Inspecting Personnel: SSS/KN

Mary River

Weatherhaven/Warehouse Snow Stockpiles



	Weatherhaven Snow Stockpile				Warehouse Snow Stockpile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	X			1/2 Full		X	10/93	NOT IN USE
Are there any vehicles/heavy equipment in the work area?		X				X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?	X				X			
Does snow/ice contain conaminants such as hydrocarbons or other fluids, are any spill present?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X				X			
Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	X		Cam 10 54-60	Wood & Carboard Scraps.		X		
Is the surrounding area free of loose debris?	X				X			
Additional Notes:								

Date: 12-May-19

Inspecting Personnel:

CP/RH/TM

Mary River

Weatherhaven/Warehouse Snow Stockpiles



	Weatherhaven Snow Stockpile				Warehouse Snow Stockpile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)		X		Snow is melting, no additions		X		
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	X				X			
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X		049		X			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	X		16/050-052			X		
Is the surrounding area free of loose debris?	X				X	/		
Additional Notes: <p>pics: 049-053 Stockpile was never used</p> <p>pics: 69-70</p>								

Date: 26-May-19

Inspecting Personnel: VPH/AZ

Mary River

Weatherhaven/Warehouse Snow Stockpiles



Condition	Weatherhaven Snow Stockpile				Warehouse Snow Stockpile			
	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)		X				X		
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	X				X			
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		X		If Yes: type of contamination found?		X		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	X				X			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	X			skids/wheel refuse	X			
Is the surrounding area free of loose debris?		X				X		

Additional Notes:

Camera # 16 / Photo # 540-542

Date: 11-JUN-19

Inspecting Personnel: BM / JBB

Mary River

Weatherhaven/Warehouse Snow Stockpiles



	Weatherhaven Snow Stockpile				Warehouse Snow Stockpile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓			Signif. amount remaining ~20%		✓		
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		✓			✓			
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		✓		If Yes: type of contamination found?		✓		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		✓				✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes: 14/374					HAS NOT BEEN IN USE, GOOD CONDITION			

Date: 18 JUN 19

Inspecting Personnel: BH/BC

Mary River

Weatherhaven/Warehouse Snow Stockpiles



	Weatherhaven Snow Stockpile				Warehouse Snow Stockpile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓			~60%.				
Are there any vehicles/heavy equipment in the work area?.		✓						
Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.		✓						
Does snow/ice contain contaminants such as hydrocarbons or other fluids present?		✓		If Yes: type of contamination found?				If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓							
Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)		✓						
Is the surrounding area free of loose debris?	✓							
Additional Notes: 11-411								



Tote Road Snow Stockpile Inspections
2019



Snow Management Inspection Form

Date: 25-May-19

Inspecting Personnel: SJS, LC, TM, JBB

Stockpile Location: KM 37.5

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	Y	10% Full	
2	Are there any vehicles/heavy equipment in the work area?.	N		
3	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
4	Is the snow clear of contamination?. List type of contamination found (coolant, oil, fuel, sewage)	Y		
5	Are the natural drainage patterns of the area still intact?	Y		
6	Is there any refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	Y	Wood, delineators, plastic	
7	Is the surrounding area free of loose debris?	Y		
8	Photos taken?	Y	Camera ID: 17 Photo #: 404-412	

Additional Notes:

Date: 1 June 19

Inspecting Personnel: SBB/JK/VRH

Stockpile Location: TR-SN-01

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	N/A		
4	Are the natural drainage patterns of the area still intact?	N/A		
	Is there sediment-laden water flowing from the stockpile area?	N/A		
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	N/A		
6	Is the surrounding area free of loose debris?	N/A		
7	Photos taken?.	NO	Photo #:	

Additional Notes:

-We could not identify with any confidence the location of TR-SN-01 due to complete lack of snow.

Date: 9-JUN-19

Inspecting Personnel: JBB / BC

Stockpile Location: TR-SN-01

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	yes	No equipment in use	
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	NO	No boundry.	
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	yes	NO visible spills.	
4	Are the natural drainage patterns of the area still intact?	N/A		
	Is there sediment-laden water flowing from the stockpile area?	N/A	NO visible runoff.	
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	NO		
6	Is the surrounding area free of loose debris?	yes		
7	Photos taken?.	yes	Photo #: 13/909-914.	

Additional Notes:

Less than 5% of pile remaining.

Date: 1-JUNE-19
 Inspecting Personnel: JBB, JK, VPH
 Stockpile Location: TR-SN-02

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y, N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	Y, N		
4	Are the natural drainage patterns of the area still intact?	Y		
	Is there sediment-laden water flowing from the stockpile area?	N		
5	Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	N		
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?	✓	Photo #: 17 / 1026 - 1029	

Additional Notes:

Date: 9-JUN-19

Inspecting Personnel: JBB/BC

Stockpile Location: TR-SN-02

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y	Less than 1%. Remains	
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	Y	NONE	
4	Are the natural drainage patterns of the area still intact?	N/A	NO DRAINAGE ANYMORE	
	Is there sediment-laden water flowing from the stockpile area?	N	NO FLOWING WATER AT ALL	
5	Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	N	NONE	
6	Is the surrounding area free of loose debris?	Y	NONE	
7	Photos taken?.	Y	Photo #: 915-919	Camera 13

Additional Notes:

- A very small amount of snow remains.
- Sample taken from river just upstream from BG-50 culvert.

Date: 1-JUNE-19
 Inspecting Personnel: JBB, JK, VPH
 Stockpile Location: TR-SN-03

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y, N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	N		
4	Are the natural drainage patterns of the area still intact?	Y		
	Is there sediment-laden water flowing from the stockpile area?	N		
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	Y	small amounts of plastic	
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	✓	Photo #: 17/1013 - 1025	

Additional Notes:

Initial silt fence filled completely with sediment; small stream of water running overtop
 Previous sample location now stagnant, did not sample

Date: June 9/2019

Inspecting Personnel: JB/CB

Stockpile Location: TR-SN-03

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y	None	
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N	None	
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	Y	None	
4	Are the natural drainage patterns of the area still intact?	Y	None	
	Is there sediment-laden water flowing from the stockpile area?	N		
5	Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	N		
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	Y	Photo #: <u>920 - 934</u>	

Additional Notes:

-CU-033 IN GPS1 is NORTH of road (Above Road; CU-033 Accessible from TOP of ^{from} 76/77 HILL) AND IS NO LONGER IN USE OR VISIBLE AS SEEN IN PHOTOS 920-923.

Date: 1-JUNE-'19

Inspecting Personnel: JBB, VPH, JK

Stockpile Location: TR-SN-04

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y, N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	Y		
4	Are the natural drainage patterns of the area still intact?	Y		
	Is there sediment-laden water flowing from the stockpile area?	N		
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	Y	some plastic road markers	
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	✓	Photo #: 1003 - 1012	

Additional Notes:

Water running off snow stockpile
about 1 cm deep. Ice covered channels
about 250 m downstream of snow pile

Date: 9-JUN-19

Inspecting Personnel: BC/JB13

Stockpile Location: TR-SN-04

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	yes	NO equipment present	
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	NO		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	NO		
4	Are the natural drainage patterns of the area still intact?	N/A		
	Is there sediment-laden water flowing from the stockpile area?	NO	small runoff pool at stockpile	
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	NO		
6	Is the surrounding area free of loose debris?	yes		
7	Photos taken?.	yes	Photo #: 13 / 936-944.	

Additional Notes: Aprox 15% of pile left.

Water to stream located behind is slightly turbid in places.

Date: 1-JUNE-19

Inspecting Personnel: JBB, JK, VPH

Stockpile Location: TR-SN-05

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y, N		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	Y	Some sheen in surrounding puddles (natural?)	
4	Are the natural drainage patterns of the area still intact?	Y		
	Is there sediment-laden water flowing from the stockpile area?	N		
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	N		
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	✓	Photo #: 17 / 996 - 1002	

Additional Notes:

Date: 9-JUN-19

Inspecting Personnel: BC/JBB

Stockpile Location: TR-SN-05

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y	None ↳ 5% Left	
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	N		
4	Are the natural drainage patterns of the area still intact?	Y		
	Is there sediment-laden water flowing from the stockpile area?	N		
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	N		
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	Y	Photo #: 945-956 / Camera 13	

Additional Notes:

Date: 1-JUNE-'19

Inspecting Personnel: JBB, JK, VPH

Stockpile Location: KM 97 - TR-SN-06

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	Y		
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	N		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	Y		
4	Are the natural drainage patterns of the area still intact?	Y		
	Is there sediment-laden water flowing from the stockpile area?	N		
5	Is there any other refuse within the snow being stockpiled? (I.e. garbage, loose material, etc.)	N		
6	Is the surrounding area free of loose debris?	Y		
7	Photos taken?.	✓	Photo #: 171 988 - 995	

Additional Notes:

Water flowing, about 0.5 cm deep
(too shallow to sample)

Date: 9-JUN-19

Inspecting Personnel: BC/1313

Stockpile Location: TR-SN-06

	Condition	Y/N or NA	Item of Concern	Corrective Action
1	Is the stockpile currently in use?. If so, are there any vehicles/heavy equipment in the work area.	yes	no equipment	
2	Is the stockpile boundary clearly marked?. If so, is the snow being stockpiled within the boundary area?.	NO		
3	Is the snow clear of contamination?. If so, are there any fuel stains or visible spills?	yes	no stains	
4	Are the natural drainage patterns of the area still intact?	N/A		
	Is there sediment-laden water flowing from the stockpile area?	NO		
5	Is there any other refuse within the snow being stockpiled? (i.e. garbage, loose material, etc.)	NO		
6	Is the surrounding area free of loose debris?	yes		
7	Photos taken?.	yes	Photo #: 13/957-963	

Additional Notes:



Milne Port Snow Stockpile Inspections

2019

Date: 19/01/05
 Inspecting Personnel: SS

Milne Port
Helipad Snow Stock Piles



	North West Snow Stockpile				South Snow Stockpile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	/		#4 8362	> 1%	/		#4 8359-261	> 1%
Are there any vehicles/heavy equipment in the work area?.		/				/		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?		/		snow spilling over onto staked marker		/		snow spilling over onto staked marker.
Does snow contain conaminants such as hydrocarbons or other fluids?		/		If Yes: type of contamination found?	/			If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	/					/		
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		/			/			
Is the surrounding area free of loose debris?	/					/		
Additional Notes:								

Date: 19/02/08 14:55
 Inspecting Personnel: RB

Milne Port
Helipad Snow Stock Piles

Baffinland
 Km 4 ice SS

	North West Snow Stockpile				<u>South Snow Stockpile</u>			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	✓		30%	4:8955/56	✓		30%	4: 8970/69
Are there any vehicles/heavy equipment in the work area?.		✓			✓		robby 740's	
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	✓				✓			
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓		If Yes: type of contamination found?		✓		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓				✓		interior	
Is there sediment-laden water flowing from the stockpile area?		✓				✓		
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)	✓		Steel cable near entrance	48957		✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes: *Steel cable to be removed*					No back berm. 8971			

Date: 2019/02/23
Inspecting Personnel: SS

Milne Port
Helipad Snow Stockpile Km4 Ice Stockplie



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	X		~30% full		X			
Are there any vehicles/heavy equipment in the work area?.		X				X		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	X				X			
Does snow/ice contain conaminants such as hydrocarbons or other fluids, are any spill present?		X	If Yes: type of contamination found?			X	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	X				X			
Is there any refuse within the snow/ice being stockpiled? (I.e. plastic, wood, etc.)		X				X		
Is the surrounding area free of loose debris?	X				X			
Additional Notes: #2 A12/16								

Date: ~~18~~ 19/03/10
 Inspecting Personnel: ~~RB~~ RB

Milne Port
Helipad Snow Stockpile Km4 Ice Stockpile



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓		70% Full		✓		60% Full	
Are there any vehicles/heavy equipment in the work area?		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	✓				✓			
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?	✓		If Yes: type of contamination found? ICE, SOIL			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow/ice being stockpiled? (i.e. plastic, wood, etc.)		✓				✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes:								

Date: 20/04/0
Inspecting Personnel:

Milne Port



	Helipad Snow Stockpile 04/03				Km4 Ice Stockpile 04/01			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	/		~40% empty	9-761	/			
Are there any vehicles/heavy equipment in the work area?.		/				/		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	/				/	/		
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?		/	If Yes: type of contamination found?			/	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	/				/		Berm / Sealing and not yet complete.	
Is there any refuse within the snow/ice being stockpiled? (I.e. plastic, wood, etc.)		/	minimal sackments			/		
Is the surrounding area free of loose debris?	/				/			
Additional Notes:								

Date: 05-may-19
 Inspecting Personnel: DE/SS

Milne Port
Helipad Snow Stockpile Km4 Ice Stockpile



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓		40% rem	4-9334-3a	✓		15% rem	4-9334-3a
Are there any vehicles/heavy equipment in the work area?		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	✓				✓			
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow/ice being stockpiled? (i.e. plastic, wood, etc.)	✓	HH		4-9334		✓		
Is the surrounding area free of loose debris?	✓/HH	HH			✓			
Additional Notes:								

Date: 13 May 19
 Inspecting Personnel: BEIPR

Milne Port
Helipad Snow Stockpile Km4 Ice Stockpile



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓				✓			
Are there any vehicles/heavy equipment in the work area?		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	✓				✓		Bermed.	
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓		low laying area.		✓		To check dam. no flow yet.	
Is there any refuse within the snow/ice being stockpiled? (I.e. plastic, wood, etc.)	✓		within snow			✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes:								

Date: 20 May 19
Inspecting Personnel: AK/BC

Milne Port
Helipad Snow Stockpile Km4 Ice Stockplie



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓		50% rem.		✓		40% rem.	
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	✓				✓			
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow/ice being stockpiled? (I.e. plastic, wood, etc.)		✓			✓		Some misc. refuse in melting snow, see pic	
Is the surrounding area free of loose debris?		✓				✓		
Additional Notes: photos: 0425 - 0431 photos: 0264, 0268								

Date: 25.05.19
 Inspecting personnel:

BC/AK

Milne

Helipad Snow Stockpile Km4 Ice Stockpile



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓		50% rem		✓		20% rem	
Are there any vehicles/heavy equipment in the work area?		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	✓				✓			
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow/ice being stockpiled? (I.e. plastic, wood, etc.)	✓	✗				✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes:								

Date: 18 June 19
 Inspecting personnel: AM/AX/LC

Milne
Helipad Snow Stockpile Km4 Ice Stockpile



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓		old snow pile from previous winter		✓		previous years snow pile	Env. 9 #2134
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?		✓	Boundary markers horizontal / in snow pile	Env. 9 #2092		✓		
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow/ice being stockpiled? (i.e. plastic, wood, etc.)	✓		Various loose debris in snow pile	Env. 9 #2089-91		✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes: site photo of helipad snow pile # 2088								

Date: 19/01/05
 Inspecting Personnel: SS

Milne Port
Milne Hill Snow Stock Piles



	Milne Hill (upper) Snow Stock Pile				Milne Hill (lower) Snow Stock Pile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		/				/		
Are there any vehicles/heavy equipment in the work area?.								
Is the stockpile boundary clearly marked/snow stockpiled within boudary?								
Does snow contain conaminants such as hydrocarbons or other fluids?				If Yes: type of contamination found?				If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?								
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)								
Is the surrounding area free of loose debris?								
Additional Notes:								

Date: 19/02/08 15:30
 Inspecting Personnel: PB

Milne Port
 Milne Hill Snow Stock Piles



	Milne Hill (upper) Snow Stock Pile				Milne Hill (lower) Snow Stock Pile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)	✓		10% full					
Are there any vehicles/heavy equipment in the work area?		✓						
Is the stockpile boundary clearly marked/snow stockpiled within boundary?		✓						
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓		If Yes: type of contamination found?				If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓							
Is there sediment-laden water flowing from the stockpile area?		✓						
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		✓						
Is the surrounding area free of loose debris?	✓							
Additional Notes: MH Lower Not in use.								

Date: 2019/02/23
 Inspecting Personnel: SS

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining		X				X		
Are there any vehicles/heavy equipment in the work area?.	X		excavator present			X		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?		X				X		
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		/	If Yes: type of contamination found?			/	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	X				X			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		/				/		
Is the surrounding area free of loose debris?	X				X			
Additional Notes:								

Date: 19/03/10
 Inspecting Personnel: DB

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining			No				Not	
Are there any vehicles/heavy equipment in the work area?			Snow				in	
Is the stockpile boundary clearly marked/snow stockpiled within boudary?			present				use	
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?			If Yes: type of contamination found?				If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		✓				✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes:								

Date: 2011/04/03
 Inspecting Personnel: SS

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining								
Are there any vehicles/heavy equipment in the work area?.								
Is the stockpile boundary clearly marked/snow stockpiled within boudary?								
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?			If Yes: type of contamination found?				If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?								
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)								
Is the surrounding area free of loose debris?								
Additional Notes:								

Date: 05-may-19
 Inspecting Personnel: BLISS

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining			USE		✓			
Are there any vehicles/heavy equipment in the work area?						✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?						✓		
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?			If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?							snow covered/frozen	
Is there any refuse within the snow being stockpiled? (i.e. plastic, wood, etc.)						✓		
Is the surrounding area free of loose debris?					✓			
Additional Notes:								

Date: 13-MAY-19
 Inspecting Personnel: BDR

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining						✓	at capacity	
Are there any vehicles/heavy equipment in the work area?						✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?						✓		
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?			If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?						✓	to check dam	
Is there any refuse within the snow being stockpiled? (i.e. plastic, wood, etc.)						✓		
Is the surrounding area free of loose debris?						✓		
Additional Notes:								

Date: 21 MAY 19
 Inspecting Personnel: BC/AK

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓	✓			✓		20% rem	
Are there any vehicles/heavy equipment in the work area?.						✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?						✓	no markers	
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?						✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?						✓		
Is there any refuse within the snow being stockpiled? (i.e. plastic, wood, etc.)						✓		
Is the surrounding area free of loose debris?					✓			
Additional Notes:					photos: 0381 - 0383			

Date: 25.05.19
 Inspecting personnel: BC/AK

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining		✓	N/A not in use		✓			
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?		✓	no boundary present		✓	✓		
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)	✓					✓	Some materials frozen in snow	
Is the surrounding area free of loose debris?	✓					✓		
Additional Notes:								

Inspecting Personnel: AM/AK.

†Baffinland

	Milne Hill (upper) Snow Stockpile				Milne Hill (lower) Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓		~20%. → lack of available space.		✓		Current capacity unknown as markers are not visible.	
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?	✓		Some markers have fallen down.	Env. 4 #1849		✓	No boundary markers / markers on ground	Env. 4 #1855-56
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?			If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow being stockpiled? (i.e. plastic, wood, etc.)		✓			✓		many loose materials	
Is the surrounding area free of loose debris?	✓				✓	✓	Loose debris only within designated stockpile area.	
Additional Notes:								

Date: 18 June 19
 Inspecting personnel: AM/AX/LC

Milne
Helipad Snow Stockpile Km4 Ice Stockpile



	Helipad Snow Stockpile				Km4 Ice Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (%)	✓		old snow pile from previous winter		✓		previous years snow pile	Env. 9 #2134
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?		✓	Boundary markers horizontal / in snow pile	Env. 9 #2092		✓		
Does snow/ice contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?			✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there any refuse within the snow/ice being stockpiled? (i.e. plastic, wood, etc.)	✓		Various loose debris in snow pile	Env. 9 #2089-91		✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes: site photo of helipad snow pile # 2088								

Date: 03-JUL-2019
Inspecting Personnel: LC/AK

Milne Port
Milne Hill Snow Stockpiles



	Milne Hill (upper) Snow Stockpile				Milne Hill (lower)		
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corre
Is the stockpile currently in use?. If so, what is the current capacity remaining		N				N	
Are there any vehicles/heavy equipment in the work area?.		N				N	
Is the stockpile boundary clearly marked/snow stockpiled within boudary?		N		# 2019		N	
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?		N	If Yes: type of contamination found?			N	If Yes: type of conta found?
Are the natural drainage patterns of the area still intact?	Y				Y		
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		N	Minor debris.			N	
Is the surrounding area free of loose debris?	Y				Y		
Additional Notes:							

Inspection Checklist

Date: 19/01/11 17:40

Inspecting Personnel: RB

Camp: MP

	Condition	Y/N or NA	Item of Concern	Responsible Party	Corrective Action
1	Is the snow contained within the defined area?	N	* Not in use yet		
2	Is there visible fuel or oil or other staining present in the snow?	N			
3	Is there any visible refuse present? (i.e. garbage, wood, deliniators, etc.)	N			
4	Does the snow contain any iron ore?	N			
5	Are their any animals present in or on the snow?	N			
6	Is the stockpile area full?	N			

Additional Notes:

Inspection Checklist

Date: Jan 24, 2019
 Inspecting Personnel: CP
 Camp: Milne Port

	Condition	Y/N or NA	Item of Concern	Responsible Party	Corrective Action
1	Is the snow contained within the defined area?	Y			
2	Is there visible fuel or oil or other staining present in the snow?	N			
3	Is there any visible refuse present? (i.e. garbage, wood, deliniators, etc.)	N			
4	Does the snow contain any iron ore?	N			
5	Are their any animals present in or on the snow?	N			
6	Is the stockpile area full?	N			

Additional Notes:

Date: 11/02/08 15:30
 Inspecting Personnel: RB

Milne Port - Contaminated Snow Stockpiles
MP-04A and Ore Pad Snow Stockpile



	MP-04A Contaminated Snow Stockpile				Ore Contaminated Snow Stockpile			
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		✓			✓		5%	11-8967/68
Are there any vehicles/heavy equipment in the work area?.		✓				✓		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	✓				✓			
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓		If Yes: type of contamination found?		✓		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	✓				✓			
Is there sediment-laden water flowing from the stockpile area?		✓				✓		
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		✓				✓		
Is the surrounding area free of loose debris?	✓				✓			
Additional Notes:								

Date: 19/01/05
 Inspecting Personnel: SS

Milne Port
Ore Pad Snow Stockpile



	Ore Pad Snow Stockpile				Ore Contaminated Snow Stockpile			
Condition	Yes	No	Cam/Photo #	Comment	Yes	No	Cam/Photo #	Comment
Is the stockpile currently in use?. If so, what is the current capacity remaining (% full)		/				/		
Are there any vehicles/heavy equipment in the work area?.		/				/		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	N/A				/			
Does snow contain conaminants such as hydrocarbons or other fluids?		/		If Yes: type of contamination found?		/		If Yes: type of contamination found?
Are the natural drainage patterns of the area still intact?	/				/			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		/				/		
Additional Notes:								

Date: 11/03/10
 Inspecting Personnel: PB

Milne Port - Contaminated Snow Stockpiles



Ore Contaminated Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓			
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	✓			
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓			
Is there any refuse within the snow being stockpiled? (i.e. plastic, wood, etc.)		✓		
Is the surrounding area free of loose debris?	✓			
Additional Notes: Snow looks to contain high ore content. Broke open a chunk- mainly ore dust covered.				

Date: 2019/04/03
 Inspecting Personnel: SS

Milne Port - Contaminated Snow Stockpiles



Ore Contaminated Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	/		240% remaining	7-763-765
Are there any vehicles/heavy equipment in the work area?.		/		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	/			
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		/	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	/			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		/		
Is the surrounding area free of loose debris?	/			
Additional Notes:				

Date: 05 May 19
 Inspecting Personnel: B/SS

Milne Port
Ore Laden Snow Stockpile



Ore Laden Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓		25% rem.	4-9330
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?			current stockpile boundary being relocated for MOP road exp.	
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		✓		
Is the surrounding area free of loose debris?	✓			
Additional Notes:				

Date: 12-may-19
 Inspecting Personnel: JG/SS

Milne Port
Ore Laden Snow Stockpile



Ore Laden Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓			
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	✓			
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓			
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)	✓		previously documented	
Is the surrounding area free of loose debris?	✓			
Additional Notes: photos 9670-72				

Date: 21.05.19
 Inspecting Personnel: BCI/AK

Milne Port
Ore Laden Snow Stockpile



Ore Laden Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓			
Are there any vehicles/heavy equipment in the work area?.		✓	30% 50% rem	
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	✓			
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?		✓		
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		✓		
Is the surrounding area free of loose debris?		✓		
Additional Notes: photos: 0441 - 0452				

Date: 25-05-19
 Inspecting Personnel: BC/AK

Milne Port
Ore Laden Snow Stockpile



Ore Laden Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓		20% remaining	
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	✓			
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓		Bern enclosed ponded	
Is there any refuse within the snow being stockpiled? (I.e. plastic, wood, etc.)		✓		
Is the surrounding area free of loose debris?	✓			
Additional Notes:				

Date: 11-Jun-2019
 Inspecting Personnel: LC/AM

Milne Port
Ore Laden Snow Stockpile



Ore Laden Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓		~ 15% capacity remaining	Env. 4 # 1857
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked/snow stockpiled within boudary?	✓			
Does snow contain conaminants such as hydrocarbons or other fluids, are any spill present?		✓	If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓			
Is there any refuse within the snow being stockpiled? (i.e. plastic, wood, etc.)		✓		
Is the surrounding area free of loose debris?	✓			
Additional Notes:				

Date: 18 June 19
 Inspecting Personnel: AM/AK/LC

Milne
Ore Laden Snow Stockpile



Ore Laden Snow Stockpile				
Condition	Yes	No	Comment/Corrective Action	Cam/Photo #
Is the stockpile currently in use?. If so, what is the current capacity remaining	✓		old Previous years' snow pile.	
Are there any vehicles/heavy equipment in the work area?.		✓		
Is the stockpile boundary clearly marked/snow stockpiled within boundary?		✓	Boundaries are not clearly marked → they are horizontal	Env. 9 # 2095
Does snow contain contaminants such as hydrocarbons or other fluids, are any spill present?			If Yes: type of contamination found?	
Are the natural drainage patterns of the area still intact?	✓			
Is there any refuse within the snow being stockpiled? (i.e. plastic, wood, etc.)		✓		
Is the surrounding area free of loose debris?		✓		Env. 9 #2094
Additional Notes:				



August 9, 2019

Chris Spencer, Regulatory Manager
Qikiqtani Inuit Association
P.O. Box 1340
Iqaluit, NU X0A 0H0

RE: Response to QIA July 2019 Site Inspection, Findings and Recommendations

Baffinland Iron Mines Corporation (Baffinland) provides the Qikiqtani Inuit Association (QIA) with the following response to the inspection completed¹ July 16-17, 2019, consistent with the Commercial Lease No. Q13C301.

The attached Table 1 provides Baffinland's responses to the concerns/findings of the QIA inspection, including details where applicable on progress made to date.

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

Regards,

A handwritten signature in black ink, appearing to read "Chris Murray", written over a horizontal line.

Christopher Murray
Environmental & Regulatory Compliance Manager

Cc: Megan Lord-Hoyle, Lou Kamermans, Tim Sewell, Shawn Stevens, William Bowden, Connor Devereaux, Amanda McKenzie (Baffinland)

Attachments:

- Attachment 1 – Baffinland Responses to QIA Concerns/Findings
- Attachment 2 – Photos
- Attachment 3 – Incident Investigation Reports
- Attachment 4 – KM 80 Bridge As-Built

¹ QIA (2019) Re: Baffinland Iron Mines Corporation's, Mary River Mine – Qikiqtani Inuit Association July 2019 Site Inspection, Findings, and Recommendations. Letter dated July 26, 2019.

Attachment 1

Baffinland Responses to QIA Concerns/Findings

Table 1 – Baffinland Responses to QIA Concerns/Findings July 2019 Site Inspection

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
1	Mine Site pit water leaking from hose (Figure 1)	<p>Observed leaks from four separate locations along an effluent hose transporting mine contact water from the Pit to the Waste Rock Facility.</p> <p>Baffinland indicated the effluent water to have been recently tested and to be of low pH.</p> <p>The largest flow appeared to come from a connection of two hoses which was identified by the Inspectors in passing on the way to the Waste Rock Facility. When the Inspectors returned approximately 30 minutes later, the flow at the connection had halted but water had pooled around the connection. Further leaks were identified, including one that continued to spray liquid indicating pressure remained in the hose.</p>	Provide the Baffinland Incident Investigation Report.	August 9, 2019	<p>BIM has provided the Incident Investigation Report (Attachment 3) following observations on July 17, 2019 of the release of in-pit contact water from a hose line transferring into the MS-08 Waste Rock Facility.</p> <p>All actions taken by Baffinland following observations of the release are in accordance with approved management plans and environmental response procedures. Industry practice and procedures followed are detailed in the Spill Contingency Plan.</p>
2	Outside MP-HWB-01 (Figure 2)	Black discoloration of soil signifying a potential hydrocarbons spill. Baffinland staff confirmed the spill and were actively planning the cleanup while Inspectors were on Site.	Remove contaminated soil to an appropriate storage/treatment facility. Please confirm in writing with photographic evidence.	August 9, 2019	The contaminated soil observed at MP-HWB-01 has been removed. A photo following the site cleanup has been included as Photo 1 in Attachment 2.

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
3	Road near Landfill (Figure 3)	Site of historic Kalmar crash and spill. Soil remains oily with sheen in surrounding water. Used oil containment boom found in soil.	Remove contaminated soil and waste to an appropriate storage/treatment facility. Please confirm in writing with photographic evidence. Provide the Baffinland Incident Investigation Report. Provide rationale for the delayed response to spill remediation.	August 9, 2019	<p>The contaminated soil and waste has been removed and relocated to the soil treatment facility in accordance with Baffinland's <i>Waste Management Plan</i>.</p> <p>Photos of the area following the onsite cleanup in addition to the completed Incident Investigation Report are included in Attachment 2 (Photo 2 and 3).</p> <p>Baffinland does not consider the response to spill remediation to be delayed. Spill cleanup including deployment of spill pads and booms was initiated by site staff at the time of the incident. Cleanup of remaining materials was initiated immediately following the identification of these materials during the inspection.</p>
4	Water Management	As the five days prior to the Inspection included precipitation events, there were noted opportunities for improvement of water management on Site.	Ensure laydowns and Site surfaces are free draining and any sitting water in secondary containment facilities, such as hazardous waste berms and fuel storage areas, are treated, if necessary, and discharged to ensure facilities function as designed. Develop a schedule to address the aforementioned water management concerns.	August 9, 2019	<p>Surface and melt water generated in hazardous waste berms and fuel storage areas are treated during the open water season in accordance with the <i>Fresh Water Supply, Sewage and Wastewater Management Plan</i>. Several factors including timing of the open water season, maintenance of the treatment system and equipment availability are considered when determining the schedule for water treatment onsite.</p> <p>Following treatment by the oil water separator, the treated effluent may be pH adjusted if required, and resampled to ensure effluent water quality meets the applicable discharge criteria before the effluent is finally discharged to the receiving environment.</p> <p>Baffinland will continue to optimize the use of the oil water separator system in 2019 to ensure water continues to be properly managed following precipitation events.</p>

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
5	General	Debris observed throughout site, mainly due to wind and snowmelt. Of note are: 1. KM 85.5 Snow Dump 2. KM 63 bridge on either side of the southern abutments (Figure 12) 3. KM 17 bridge on either side of embankment (Figure 13) 4. Apparent snow dump southeast of Milne Port helipad (Figure 4) 5. Mary River snow dump. 6. Wind strewn debris near landfill where snow was not melted (Figure 24). 7. Wind blown debris south of Sheardown lake observed by helicopter.	Baffinland to complete site wide housekeeping and tidying.	September 30, 2019	Concerns regarding housekeeping are noted. Baffinland continues to improve upon housekeeping and debris management, as demonstrated by the cleanup of historical tire storage, installation of improved landfill fencing, use of seacans as wind breaks to prevent wind-blown debris, and implementation of site-wide cleanup days, among other initiatives. Baffinland has committed to completing extensive site wide housekeeping and tidying during Q3. Areas identified during the inspection (where debris was observed) will be focused on during these efforts.
6	Milne Inlet Helipad Apparent Snow Dump (Figure 4)	Debris indicative of a snow dump was observed south of the Milne Port Helipad that is not included as a snow dump location in the Snow Management Plan. ²	Confirm if and when the area indicated was used as a snow dump. If used as a snow dump, indicate when the Snow Management Plan will be updated to reflect the use of this location.	August 9, 2019	Baffinland will be amending the <i>Snow Management Plan</i> by the end of 2019 to include the Milne Inlet Helipad to include a designated snow stockpile area.
7	Waste Rock Facility Waste Water Treatment Plant (Figure 5)	Lime on pad and not in secondary containment. Operator indicated they had just mixed the reagent and had yet to clean up.	Clean spilled reagent and ensure reagent is stored in secondary containment. Please confirm with photographic evidence. Educate operators in clean workplace operations.	August 31, 2019	Photos (Photo 4 and 5) have been provided in Attachment 2 outlining post clean up conditions at the Waste Rock Facility Waste Water Treatment Plant. Baffinland has also committed to further education/meetings with the facility operators to review workplace housekeeping.
8	Deposit 3 Exploratory Drilling (Figure 6)	Multiple observed drill holes not capped with a lack of sedimentation controls for cuttings.	Provide the management plan that allows drill holes to remain uncapped and drill cuttings to be released to the environment. If none exists, ensure drill holes are capped and residual drill cuttings are remediated.	August 9, 2019	Baffinland commits to ensuring drill holes are properly remediated in accordance with the <i>Exploration Closure and Reclamation Plan</i> and residual drill cuttings are remediated following exploration drilling activities. Anchor rods observed above ground will be removed prior to winter.

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
9	KM 97 historical borrows	Historical borrow held water. Baffinland staff indicated water from the borrow had been used for dust suppression.	Provide the management plan that allows for the use of borrow source water to be used for dust suppression. If none exists, cease the activity until approved by the relevant regulatory body.	August 9, 2019	Baffinland will continue to remove water collecting in the historical borrow at KM 97 to prevent pooling and potential degradation of the land. Baffinland will continue to use water for the purpose of dust suppression from only authorized locations outlined in the water license. In the future, Baffinland may propose to the Nunavut Water Board potential discharge criteria for water to be sourced from historical borrows for dust suppression use.
10	KM 97, KM 80, and KM 17 Bridges (Figure 7)	Observed a stop sign and delineators in the water next to KM 97, KM 80, and KM 17 bridges.	Remove the stop sign and delineators from the watercourse.	September 30, 2019	Baffinland has committed to removing the stop sign and delineators from the watercourse prior to September 30, 2019.
11	KM 92	Stranded turbid waters observed upstream of road.	Ensure sides of roads do not strand water.	August 31, 2019	The Baffinland Road Maintenance Department will further investigate the stranded turbid waters observed upstream of the road at KM 92 to determine if further water management improvements are needed.
12	KM 80 Bridge	As-builts are not readily available.	Provide as-builts for the KM 80 Bridge.	August 9, 2019	As-built drawings for the KM 80 Bridge are contained within the signed and stamped <i>Construction Summary Report: Tote Road Upgrade Package – Bridge Crossings</i> available on the document registry. The relevant as-built is extracted and provided for reference in Attachment 4.
13	KM 73 (Figure 8)	Historical borrow sources on both sides of the road. Observed cracking on the roadside, possibly due to permafrost degradation.	Ensure this location is reviewed during the August 2019 Tote Road Geotechnical Inspection.	August 31, 2019	Baffinland will ensure KM 73 is included in the August 2019 Tetra Tech site visit. The entire length of the roadway will be inspected during this time.
14	KM 72.3 (Figure 9)	Borrow sources on both sides of the road. On uphill side, the borrow source appears to be the source of sediment transport through the culvert to the downhill side of the road.	Ensure this location is reviewed during the August 2019 Tote Road Geotechnical Inspection.	August 31, 2019	Baffinland will ensure KM 72.3 is included in the August 2019 Tetra Tech site visit. The entire length of the roadway will be inspected during this time.
15	KM 33 (Figure 10)	Sink hole developed, likely due to culvert failure.	Investigate possible culvert failure. Inform QIA of findings and proposed next steps.	August 9, 2019	Baffinland's Road Maintenance Department inspected and restored the integrity of the culvert. No further issues were identified following the restoration.

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
16	Water Withdrawal Locations (Figure 11)	Observed multiple open jerry cans at areas along the Tote Road. One jerry can on its side outside of secondary containment.	Inform operators that hazardous substances need to be stored in secondary containment and sealed when not in use to reduce the likelihood of a spill.	August 9, 2019	In an effort to further inform operators of the proper hazardous waste storage procedures, Baffinland will be re-releasing a "Waste Management Guidelines" memo in the upcoming safety memo. This will be distributed to all staff and contractors on site, and further discussed in the morning safety meetings.
17	East side of Ore Stockpile	Lack of berm for water management at the Southeast portion of the Ore Stockpile. Observed ponding of water that may concentrate contaminants without grading to direct to water management structure.	Confirm ditches are consistent with as-built drawings of the Ore Stockpile. Include this area in the bi-annual geotechnical report to ensure the pad and surrounding water management structures are functioning as designed.	August 31, 2019	An inspection of the ditches along the east side of Ore Stockpile will be included in the scope of work for geotechnical inspections taking place on site in Q3.
18	MP-HWB-02 (Figure 14)	Observed the same sea containers observed in 2017 and 2018. Smell of hydrocarbons was confirmed by Baffinland staff to be coming from sea containers within the hazardous waste berm.	Confirm intention and timeline to when the sea containers will be backhauled from Site.	August 31, 2019	Odours may be present from hazardous materials stored within the hazardous waste berms. Baffinland continues to optimize the removal of hazardous materials from the HWBs. At this time, the Baffinland Environment staff are working alongside the Port and Logistics Department to determine when the sea containers will be removed from site.
19	East side of Ore Stockpile (Figure 15)	Sedimentation event observed that may compromise the Ore Stockpile berm.	Confirm the berm is consistent with the design and as-built documentation for the Ore Stockpile water management structures.	August 31, 2019	The berm has been reinstated in the time following QIA's most recent inspection in July. An assessment of the ditches along the east side of Ore Stockpile is scheduled for the geotechnical inspection taking place on site in Q3.
20	MP-05 Sedimentation Pond	Northwest corner appears to be lower than spillway. This location is a site of a historical spill.	Confirm the height of the Northwest corner is higher than the spillway and is consistent with the design and as-built documentation.	August 31, 2019	Following the construction of pond MP-05a approved by the NWB in Modification No. 9, updated as-built documentation and surveys will be provided for MP-05.
21	MP-HWB-01	Observed rip in liner on the North berm.	Repair liner integrity to ensure secondary containment of hazardous materials.	September 30, 2019	Layfield will be returning to site in Q3 to complete repairs of the MP-HWB-01 liner.
22	Camp Lake Jetty (Figure 20)	Observed cracking in Camp Lake water management structures.	Provide construction and as-built drawings.	August 31, 2019	Baffinland will provide as-built drawings in the 2019 Annual Report for Operations for the Camp Lake water management structures.

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
23	PWSP 1 (Figure 21)	Multiple rips in liner.	Repair rips and holes to ensure secondary containment of hazardous materials.	September 30, 2019	Layfield will be returning to site in Q3 to complete repairs of the PWSP 1 liner.
24	MS-HWB-7	Water observed to have significant free product requiring treatment. Baffinland staff informed the inspector that the water in HWB-7 requires treating prior to other contaminated water being moved to HWB-7 to be treated.	Provide the plan that allows the operation of MS-HWB-7 as a treatment pond. If none exists, cease the activity until approved by the relevant regulatory body.	August 9, 2019	<p>Baffinland submitted an Options Exercise Notice in November 2016, for the former Mine Site Fuel Bladder Farm (Mine Site Hazardous Waste Berm 7). This was submitted to QIA as Appendix F of the 2017 Work Plan. MS-HWB-7 is not considered or used as a treatment pond. MS-HWB-7 is used exclusively as a hazardous waste berm in accordance with the conditions outlined in the Type A Water License.</p> <p>MS-HWB-7 is acting as designed, containing water that has come into contact with hazardous materials. Oily water and waste water contained within the hazardous waste berm is managed according to the approved <i>Fresh Water Supply, Sewage, and Wastewater Management Plan</i>, Section 6.2.</p>
25	MS-HWB-07 (Figure 22)	Observed staining on the corner of the liner for MS-HWB-07	Confirm the staining is not of environmental concern.	August 9, 2019	Since the QIA inspection in July 2019, the observed staining on the corner of the liner for MS-HWB-07 has been properly cleaned up. The stained material has been removed and relocated in accordance with Baffinland's Waste Management Plan. Photo 6 demonstrates the post cleanup condition, included in Attachment 2.
26	Washout of effluent line road (Figure 23)	Water flowing through road leading to effluent line. Appeared that work had been completed since CIRNAC's concern which has since been washed out. Baffinland staff indicated this is an access road and rarely used so the use of water management such as a culvert would require the road being built up to above the grade of the tundra.	Baffinland to consider and report on water management options.	August 31, 2019	Ephemeral ponding of water in this area results in temporary flows of water during high flow periods (freshet, heavy or prolonged precipitation events). The Baffinland Road Maintenance Department has committed to further investigating the access road. During this assessment, the feasibility of installing additional culverts to support the surface water management will be considered.

#	Project Location	Description of Concern or Finding	Recommended Action	Deadline	Response
27	Mine Site Bulk Fuel Facility	Water pooling with observed sheen and smell of hydrocarbons. Baffinland confirmed water has been tested and requires separation and treatment.	Separate and treat water contained within Mine Site Bulk Fuel Facility.	August 31, 2019	Baffinland will be treating and separating the water contained within the Bulk Fuel Facility, consistent with the approved <i>Fresh Water Supply, Sewage and Wastewater Management Plan</i> . Ongoing monitoring and treatment is occurring on site.
28	Mine Site Bulk Fuel Facility	Observed Hazardous Substances in compromised secondary containment.	Ensure Hazardous Substances are stored in secondary containment.	August 31, 2019	As noted by Baffinland staff during the inspection, materials identified were within the lined containment area for the Mine Site Bulk Fuel Storage Facility, and were therefore in secondary containment. As per the <i>Construction Summary Report: Mine Site Tank Farm & Dispensing Package</i> , the refueling module and surrounding area is lined.
29	Crusher Pad Scale	Pooling of water to the North of the crusher pad scale. This had been noted by QIA Auditors in the past. Baffinland confirmed this is a low-lying area prone to ponding.	Grade and recontour the area to be free flowing.	September 30, 2019	Re-contouring and grading of the identified area north of the crusher pad scale is ongoing.
30	Crusher Pad Berm (Figure 26)	Cracking in Crusher Pad Berm. When inquired to the cause of such cracking, Baffinland indicated cracking likely due to personnel walking on the berm.	Baffinland to include the stability of the crusher pad berm in their next geotechnical engineer inspection.	August 31, 2019	Consistent with previous years, the crusher pad water management structures will be examined in the 2019 Geotechnical Inspection taking place in Q3.

Attachment 2

Photos



PHOTO 1 – Spill cleaned up, area outside MP-HWB-01



PHOTO 2 – Area of Kalamar spill cleanup, following additional remediation



PHOTO 3 – Area of Kalamar spill cleanup, following additional remediation



PHOTO 4 – Lime secondary containment at WRF Water Treatment Plant



PHOTO 5 – Lime placed on secondary containment at WRF Water Treatment Plant



PHOTO 6 – Stained soil at MS-HWB-7 removed



PHOTO 7 – Cleanup of debris outside the Mine Site area

Attachment 3

Incident Investigation Reports

Incident Report

STEP 1. INITIAL REPORT OF THE INCIDENT (Supervisor)

Date of Event	Time of Event	Date Reported	Time Reported	Main Person Involved	Reported By
17-Jul-19	8:00am	17-Jul-19	3:00pm		Connor Devereaux

Employer	Contractor (If Applicable)	BIM Department	Location
Baffinland		Mine Operations	Mine Site

Supervisor	Supervisor Certificate #	Detailed Location
Alex Guindon	2015-0624	Waste Dump Haul Road

Health & Safety

- ☐ Injury
- ☐ Illness

Environment

- ☒ Spill/Release
- ☐ Wildlife Interaction
- ☐ Land disturbance

Operations

- ☐ Property Damage
- ☐ Vehicle Accident
- ☐ Fire

Reputation

- ☐ Security
- ☐ Non-compliance
- ☐ Non-conformance

Brief Title

Water leak from dewatering pipeline.

Detailed Description

At approximately 3:00 pm on Wednesday July 17th, four small leaks were discovered on the pit dewatering pipeline going to the waste rock facility. It is estimated that ~90 Liters of water has leaked from the pipeline onto the adjacent tundra. Baffinland has been pumping in-pit water intermittently to the Waste Rock Stockpile Facility beginning July 5, 2019. The hose line operated was verified to be in good working order on July 17, 2019 during morning inspections. However, it was observed in the afternoon of the inspection that four pinhole leaks had been observed. The pumps were turned off upon discovery of the leak and the impacted hoses were replaced. The water that was released was confined to the local tundra surface and was not discharged to any water bodies. In situ monitoring was performed on impacted water on the tundra sourcing from the pinholes on July 17, 2019 and measured at pH 7.14 on the YSI water quality multimeter.

Immediate Actions Taken to Secure Scene, Protect People or Environmental and Equipment

Pumping was immediately stopped and leaking hoses were replaced.

Preliminary Cause of the Incident

Defective hoses.

Would you consider this a "near miss" incident?

☐

Is this a "[Dangerous Occurrence](#)" under Section 16.01 of the NWT/Nunavut Mine Health and Safety Regulations?

☐

Is this a "[Serious Injury](#)" under Section 16.01 of the NWT/Nunavut Mine Health and Safety Regulations?

☐

Using the [Incident Classification Matrix](#) the **Actual** Consequence of this incident was

Minor

Incident Report

Using the [Incident Classification Matrix](#) the **Reasonable Potential** Consequence of this incident was Medium

Consequences	Minor	Medium	Serious	Major	Catastrophic
Health and Safety	No Injury, Bump & Scrape	First Aid	Medical Treatment or Restricted Work Injury	Lost Time Injury	Fatality
Environment	Non-reportable spill, No impact	Reportable Spill No impact	Reportable Spill Reversible Impact	Reportable Spill Long-Term Impact	Reportable Spill Irreversible Impact
Operations	< \$5K Loss	\$5K to \$50K Loss	\$50K to \$250K	\$250K to \$1000K	> \$1000K
Reputation	Community complaint - isolated and resolved Potential noncompliance with no impact	Low Level community impact Non-compliance with potential for fine or order	Community dissatisfaction Non-compliance with fine or order issued	Significant social harm Breach of license	Permanent social harm License Revocation

STEP 2. INFORMATION GATHERING (Investigator)

Investigator(s)

Lead Investigator Ben Emery

Others

☐ Witnesses Present?

☒ Incident occur outdoors?

☐ Did the incident warrant a drug & alcohol test?

☐ Photos available of the Incident?

Weather Conditions

Temperature

14 °C

Wind Speed & Direction

0 km/h

Light Conditions

Good

General Weather Conditions

Overcast skies

Spill / Release

Spill / Release Details

Water slow leak onto the adjacent tundra

Substance Spilled

Quantity

90

Unit

L

Habitat

Tundra

Initiating Event

Hose Wear

Method of Cleanup

Incident Report

STEP 3: CAUSAL ANALYSIS (Investigator)			
At least one must be selected (two or three are typical)			
Equipment Failure Issues	Procedural Issues	Communication Issues	Engineering Issue
<input checked="" type="checkbox"/> 1.1 Defective Parts / Tools / Equipment	<input type="checkbox"/> 3.1 No Procedure	<input type="checkbox"/> 5.1 Shift Change Impact	<input type="checkbox"/> 7.1 Workplace/Roadway Layout/ Design / Conditions
<input type="checkbox"/> 1.2 Design Issue	<input type="checkbox"/> 3.2 Error in Procedure	<input type="checkbox"/> 5.2 Failure to Agree on How Task to be Performed	<input type="checkbox"/> 7.2 Congested Work Area / Restricted Action
<input type="checkbox"/> 1.3 Preventative Maintenance Issue	<input type="checkbox"/> 3.3 Procedure too Complex	<input type="checkbox"/> 5.3 Failure to Understand Communication	<input type="checkbox"/> 7.3 Inadequate display, signs, labels, alarms, warnings
<input type="checkbox"/> 1.4 Repeat Failure	<input type="checkbox"/> 3.4 Procedure not Followed	<input type="checkbox"/> 5.4 Inadequate Communication	<input type="checkbox"/> 7.4 Inadequate Guards or Barriers
<input type="checkbox"/> 1.5 Tolerable Failure		<input type="checkbox"/> 5.5 Cross-Department Communication Issue	<input type="checkbox"/> 7.5 Noise / Vibration / Light
			<input type="checkbox"/> 7.6 Poor Body Mechanics, Body Placement, Positioning, Repetitive
Natural Elements Issue	Training Issue	Work Direction Issue	Quality Control Issue
<input type="checkbox"/> 2.1 Temperature Extremes	<input type="checkbox"/> 4.1 No Training	<input type="checkbox"/> 6.1 No Direction Provided	<input type="checkbox"/> 8.1 No Quality Controls
<input type="checkbox"/> 2.2 Weather Conditions	<input type="checkbox"/> 4.2 Training not Followed, Unintentional	<input type="checkbox"/> 6.2 Inadequate Direction Provided	<input type="checkbox"/> 8.2 Inadequate Quality Controls
<input type="checkbox"/> 2.3 Ground Movement / Earthquake	<input type="checkbox"/> 4.3 Trained but Inexperienced	<input type="checkbox"/> 6.3 Failure to Follow Work Direction	<input type="checkbox"/> 8.3 Poor Compliance or Application of Controls
	<input type="checkbox"/> 4.4 Training not followed - Intentional	<input type="checkbox"/> 6.4 Distraction	Other
		<input type="checkbox"/> 6.5 Fatigue	<input checked="" type="checkbox"/> 9.1 Other (explain below)
		<input type="checkbox"/> 6.6 Impairment	
Cause Explanation (For Each Cause Identified in Casual Analysis - Provide a Brief Explanation of Why)			
Code	Explanation		
1.1	Old hoses, friction over time caused a few small pin holes		
9.1	Collapseable hose utilized for the task, any sharp objects(ruts, dried mud or stones) accelerate the wear of the hose.		
Corrective Actions:			
No.	Description	Issued To	Due Date
1.1	Replaced hoses immediately after discovery of the leaks	Remi Pelletier	immediately
1.1	Increase the pump and hose inspection frequency. In addition have a millwright perform a pump and hose inspection once every shift (every 12 hours)	Remi Pelletier	immediately
9.1	Have personnel eliminate as many kinks as possible in the hose and remove as much sharp edges as possible where the hose is installed.	Remi Pelletier	immediately



Incident Report

Investigation Team and Factors Limiting the Investigation (if Any)		
Name	Position	Signature
Ben Emery	Mine Ops Superintendent	Investigation Accepted ✕
Statement of Limiting Factors (if any): <div></div>		
STEP 4: FINAL COMMENTS BY INVESTIGATORS OR MANAGEMENT		
Name	Comment	Date

Incident Report

STEP 1. INITIAL REPORT OF THE INCIDENT (Supervisor)

Date of Event	Time of Event	Date Reported	Time Reported	Main Person Involved	Reported By
23-Nov-18	09:30	23-Nov-18	10:00	Jonah Curley	Jonah Curley

Employer	Contractor (If Applicable)	BIM Department	Location
Baffinland		Surface Works	Mine Site

Supervisor	Supervisor Certificate #	Detailed Location
Bruce Arnold	2013-0614	Dyno Road

Health & Safety

- ☐ Injury
- ☐ Illness

Environment

- ☒ Spill/Release
- ☐ Wildlife Interaction
- ☐ Land disturbance

Operations

- ☐ Property Damage
- ☒ Vehicle Accident
- ☐ Fire

Reputation

- ☐ Security
- ☐ Non-compliance
- ☐ Non-conformance

Brief Title

Kalmar hit soft shoulder and rolled on its side.

Detailed Description

While Kalmar was driving north on Dyno road, Operator reached down right side to adjust/re set heater causing unit to drift to west side of road, left front tires hit soft shoulder and Unit was sucked into ditch and rolled on its side.

Immediate Actions Taken to Secure Scene, Protect People or Environmental and Equipment

Froze the scene and called supervisor

Preliminary Cause of the Incident

Soft shoulder

Would you consider this a "near miss" incident?

☐

Is this a "[Dangerous Occurrence](#)" under Section 16.01 of the NWT/Nunavut Mine Health and Safety Regulations?

☐

Is this a "[Serious Injury](#)" under Section 16.01 of the NWT/Nunavut Mine Health and Safety Regulations?

☐

Using the [Incident Classification Matrix](#) the **Actual** Consequence of this incident was

Minor

Using the [Incident Classification Matrix](#) the **Reasonable Potential** Consequence of this incident was

Serious

Consequences	Minor	Medium	Serious	Major	Catastrophic
Health and Safety	No Injury, Bump & Scrape	First Aid	Medical Treatment or Restricted Work Injury	Lost Time Injury	Fatality
Environment	Non-reportable spill, No impact	Reportable Spill No impact	Reportable Spill Reversible Impact	Reportable Spill Long-Term Impact	Reportable Spill Irreversible Impact
Operations	< \$5K Loss	\$5K to \$50K Loss	\$50K to \$250K	\$250K to \$1000K	> \$1000K
Reputation	Community complaint - isolated and resolved Potential noncompliance with no impact	Low Level community impact Non-compliance with potential for fine or order	Community dissatisfaction Non-compliance with fine or order issued	Significant social harm Breach of license	Permanent social harm License Revocation

STEP 2. INFORMATION GATHERING (Investigator)

Investigator(s)

Lead Investigator

Others

☐ Witnesses Present?

☒ Incident occur outdoors?

☒ Did the incident warrant a drug & alcohol test?

☒ Photos available of the Incident?

Weather Conditions

Temperature

-28 °C

Wind Speed & Direction

km/h

Light Conditions

Becoming somewhat light

General Weather Conditions

Clear and cold

Vehicle Accident

Driver

Driver

Baffinland

Contractor

of Passengers

Hours Worked by Driver Prior to Accident

3

Provincial/Territorial License

Yes

Issue Date

Expiry Date

Site Driver Permission

Light Vehicle & Tote Road

Appearance of Driver

Other

Road

Road Type

Interior Site Roads

Road Surface Conditions

Slippery

Direction of Travel

Moving Forward

Speed (km/hr)

10

Vehicle Details

Type

Other

Make

kalmar

Model

Year

Vehicle Condition (as inspected by a Mechanic)

Brakes

Good

Tires

Bad

Steering

Good

Lights

Good

Incident Report

Spill / Release

Spill / Release Details

Motor Oil spilled when unit rolled over.

Substance Spilled

Lubricating Oils

Quantity

40

Unit

L

Habitat

Tundra beside road

Initiating Event

Unit on it's side

Method of Cleanup

Soil disposed of in quatrex bags, spill socks and pads disposed of in quatrex bag.

Drug Testing Results

Results of Drug Test

Negative (No Drugs/Alcohol Indicated)

Incident Report

STEP 3: CAUSAL ANALYSIS (Investigator)			
At least one must be selected (two or three are typical)			
Equipment Failure Issues	Procedural Issues	Communication Issues	Engineering Issue
<input type="checkbox"/> 1.1 Defective Parts / Tools / Equipment	<input type="checkbox"/> 3.1 No Procedure	<input type="checkbox"/> 5.1 Shift Change Impact	<input checked="" type="checkbox"/> 7.1 Workplace/Roadway Layout/ Design / Conditions
<input type="checkbox"/> 1.2 Design Issue	<input type="checkbox"/> 3.2 Error in Procedure	<input type="checkbox"/> 5.2 Failure to Agree on How Task to be Performed	<input type="checkbox"/> 7.2 Congested Work Area / Restricted Action
<input type="checkbox"/> 1.3 Preventative Maintenance Issue	<input type="checkbox"/> 3.3 Procedure too Complex	<input type="checkbox"/> 5.3 Failure to Understand Communication	<input type="checkbox"/> 7.3 Inadequate display, signs, labels, alarms, warnings
<input type="checkbox"/> 1.4 Repeat Failure	<input type="checkbox"/> 3.4 Procedure not Followed	<input type="checkbox"/> 5.4 Inadequate Communication	<input type="checkbox"/> 7.4 Inadequate Guards or Barriers
<input type="checkbox"/> 1.5 Tolerable Failure		<input type="checkbox"/> 5.5 Cross-Department Communication Issue	<input type="checkbox"/> 7.5 Noise / Vibration / Light
			<input type="checkbox"/> 7.6 Poor Body Mechanics, Body Placement, Positioning, Repetitive
Natural Elements Issue	Training Issue	Work Direction Issue	Quality Control Issue
<input type="checkbox"/> 2.1 Temperature Extremes	<input type="checkbox"/> 4.1 No Training	<input type="checkbox"/> 6.1 No Direction Provided	<input type="checkbox"/> 8.1 No Quality Controls
<input type="checkbox"/> 2.2 Weather Conditions	<input type="checkbox"/> 4.2 Training not Followed, Unintentional	<input type="checkbox"/> 6.2 Inadequate Direction Provided	<input type="checkbox"/> 8.2 Inadequate Quality Controls
<input type="checkbox"/> 2.3 Ground Movement / Earthquake	<input type="checkbox"/> 4.3 Trained but Inexperienced	<input type="checkbox"/> 6.3 Failure to Follow Work Direction	<input type="checkbox"/> 8.3 Poor Compliance or Application of Controls
	<input type="checkbox"/> 4.4 Training not followed - Intentional	<input checked="" type="checkbox"/> 6.4 Distraction	Other
		<input type="checkbox"/> 6.5 Fatigue	<input type="checkbox"/> 9.1 Other (explain below)
		<input type="checkbox"/> 6.6 Impairment	
Cause Explanation (For Each Cause Identified in Casual Analysis - Provide a Brief Explanation of Why)			
Code	Explanation		
6.4	Reaching down to the right back of seat to reset the wobasto heater		
7.1	Road shoulder was soft and gave way no berms along this road.		
Corrective Actions:			
No.	Description	Issued To	Due Date
6.4	emphasize to all crews about not reaching for anything or taking focus off of the road or area of working while operating. To come to a completed safe area stop to adjust, reach or any alterations other than operating/driving	Superintendent / Supervisors	31-Dec-18
7.1	Ensure road is plowed and sanded at all times	Surface Works	31-Dec-18
7.1	Investigate the possibility of placing berms on west side of road, entire length of Road, 3 ft high as this is the only side with drop offs.	Surface Works	31-Dec-18
6.4	Move Heater so not with in reach of operators.	Maintenance	31-Dec-18



Incident Report

Investigation Team and Factors Limiting the Investigation (if Any)		
Name	Position	Signature
Bruce Arnold	Site Services Supervisor	Investigation Accepted ✕
James Martin	Site Services Superintendent	Investigation Accepted ✕

Statement of Limiting Factors (if any):

STEP 4: FINAL COMMENTS BY INVESTIGATORS OR MANAGEMENT

Name	Comment	Date

Attachment 4

KM80 Bridge As-Built

