



August 1, 2023

Ryan Barry
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU X0B 0C0

Re: Baffinland Iron Mines Corporation (Baffinland) Response to 2022 Dust Audit Report Prepared by Nunami Stantec Limited and Independent Dust Audit Committee Members

Dear Mr. Barry

Baffinland is pleased to provide the enclosed responses to the 2022 Dust Audit Final Recommendation Report, prepared by Nunami Stantec Limited and Independent Dust Audit Committee Members. Baffinland provided its initial responses to the Report directly to the Dust Audit Committee in February 2023. The enclosed response includes the scope of work and schedule to implement each recommendation.

The annual dust audit is designed to be a global review of Baffinland's efforts to reduce dust dispersion, and includes the consideration of annual monitoring results, along with direct observations through Site Visits by the Independent Dust Audit Committee and technical specialists to recommend improvements, where possible.

Baffinland is grateful for the participation of the Independent Dust Audit Committee Members in the development of the 2022 Report, and for their ongoing participation through 2023 to review and shape our implementation efforts.

Sincerely,

A handwritten signature in black ink, appearing to read "Lou Kamermans".

Lou Kamermans
Senior Director, Sustainable Development
Baffinland Iron Mines Corporation

CC Megan Lord-Hoyle, Baffinland
Tayfun Eldem, Baffinland
Tim Sewell, Baffinland
Connor Devereaux, Baffinland

Jared Ottenhof, Qikiqtani Inuit Association
Conor Godard, Qikiqtani Inuit Association
Sarah Kemp de Gereda, Nunami Stantec
North Baffin Mayors and HTO Chairs

#	RECOMMENDATION TO BAFFINLAND	LOCATION	NOTES / LIMITATIONS	QIA IDS	BIM RESPONSE (July 2023)
BLASTING					
1	Work with explosives supplier and subject matter experts (SME) to identify dust control measures during the blasting process and to refine blasting protocols to reduce dust and nitrogen oxide (NOx) fumes (seen as yellow dust during the blast) for implementation. This includes studying the viability of using dust suppression cannons or fog prior to and during blasting, including looking at truck mounted as well as pit edge mounted machines.	Mine Site	This is also in consideration of the committee members concerns surrounding 'yellow dust' (NOx fumes). The Dust Audit Committee understands Baffinland is developing a program to identify conditions for high risks of dust as part of an ongoing evaluation of blasting optimization. The Dust Audit Committee requests the opportunity to review and provide input into the high risks of dust prior to finalization, including any consideration of IQ and the establishment of wind speed and/or direction controls to limit or prohibit when a blast can occur to reduce dust dispersion in the atmosphere/surrounding environment.	Blasting conditions overlaps with QIA ID 18A Similarly, QIA ID 21A and 21K relates to general conditions where activities should be paused.	Baffinland will review and evaluate its blasting practices to optimize our blasting procedures. Results will be reported back to the Dust Audit Committee. Target date December 2023.
2	Continue conversations with the Dust Audit Committee regarding winds on the grounds surface during the new moon to integrate IQ into the program under development regarding conditions of high-risk dust dispersion and to determine conditions where additional mitigations to reduce dust can be implemented or, where outlined by the wind thresholds report, blasting may be paused until wind speeds are within identified thresholds.	Mine Site	N/A	Blasting conditions overlaps with QIA ID 18A	This recommendation will be part of the development of the program under Project Certificate Amendment No. 4 Term and Condition 188. Term and Condition: <i>The Proponent working with the TEWG is required to develop a program for identification of conditions with high risk for dust dispersal and plan for additional mitigation measures that shall be applied at the times the conditions are present.</i> The above program is in development, with site specific data collection occurring across Project Sites up to October 31, 2023. Final program development is targeted for April 30, 2024.
3	Practice heightened monitoring and vigilance for the 4 days following a new moon and be prepared to delay or re-schedule blasting activities based on forecast or observed pressure/wind relative to established thresholds.	Mine Site	N/A	N/A	See response to Recommendation #2.
4	Conduct a blast fragmentation size study with explosive supplier and blasting specialists that can be incorporated into the program under develop regarding conditions of high-risk dust dispersion.	Mine Site	There are several explosives available to mining companies, so collaboration between Baffinland, a drill and blasting engineer, and the supplier to conduct a study that looks at the drill and blast operation from a dust reduction perspective.	Blasting conditions overlaps with QIA ID 18A	See response to Recommendation #1
5	Update draft explosives management plan once the explosive suppliers and SME's have determined the blasting protocols to develop a Standard Operating Procedure (SOP) for blasting, including thresholds for conditions when/where blasting can occur, blast pattern designs parameters to help reduce dust, explosive type and usage to help reduce dust, stemming material specifications to help reduce dust, and any other blasting related recommendations that the SME determines would help reduce dust generation.	Mine Site	N/A	N/A	Baffinland will update the Explosives Management Plan to include the relevant outcomes of study referenced in response to Recommendations #1 and #4 within 60 days of the final report's release.
MATERIAL HANDLING					
1	Conduct a run-of-mine (ROM) optimization study to assess the viability of implementing the following processes to be considered for current and future expansion, including Steensby: <ul style="list-style-type: none"> Using a ROM dump pocket Minimizing the use of front-end loaders (FEL) at the ore pad and the port Use of enclosures to collect and minimize dust. 	Mine Site, ROM Crushing pad and Milne Port	Capital cost. May not be economically feasible for current operations.	Overlaps with QIA 20A, 20B Aligns with QIA 22H	These are fundamental changes to Baffinlands ore processing and material handling circuit that cannot reasonably be implemented as part of the existing Project. Baffinland will carry out an optimization study that considers the items identified in this recommendations as the Steensby Component of the Project is advanced. Baffinland will provide regular status updates to the Dust Audit Committee through 2023 on this initiative.

	<ul style="list-style-type: none"> Increasing the use of conveyors and transfer chutes Using luffing stackers to reduce drop height when forming stockpiles Cover hoppers when loading conveyors, crushers, or screens Load or unload B-Trains within an enclosed area 				
DUST FALL MONITORING					
1	<p>Explore options to implement a continuous sitewide dust monitoring system for Arctic conditions to track the effectiveness of implemented dust mitigations. This system should include active dust monitors in order to:</p> <ul style="list-style-type: none"> measure changes to dust generation associated with changes to blast designs and execution. determine if there are any exceedances of the ambient air quality standards (at the Project Disturbance Area Boundary) due to dust emissions from blasting and/or mining activities. <p>Understand the contribution of blasting activities to dust emissions.</p>	Active and Passive monitoring stations to be positioned along the Project Disturbance Area Boundary downwind (and upwind) from the major sources (Mine Site/Open Pit, Primary Crushing, Stockpiles, Tote Road, and Milne Port)	<p>Upwind active dust monitors would be included to determine the “baseline” measurement prior to the contributions from the major dust sources (as a control measure/station). The downwind monitors would measure the dust contribution from the major dust sources. Both upwind and downwind monitoring locations should be on or near the Project Disturbance Area Boundary.</p> <p>The active dust monitoring equipment positioned on or near the Project Disturbance Area Boundary (upwind and downwind) will have to operate from battery power because there are not continuous sources of power in those areas. The active dust monitoring equipment will only be able to operate during the summer months (May – October) when there is enough solar energy to re-charge the batteries via solar panels.</p>	Aligns with QIA 21D, 21E, 22C, and 22D	Baffinland is exploring the feasibility of implementing continuous monitoring for dust around the Project Area, including at Deposit No. 1. Results will be reported back to the Dust Audit Committee. Target date December 31, 2023
2	Install additional passive monitors at a greater distance from the mine to capture the broader regional impacts of dust, including up and down wind of prevailing winds ¹ .	Along the Project Disturbance Area Boundary downwind (and upwind) from the major sources (Mine Site/Open Pit, Primary Crushing, Stockpiles, Tote Road, and Milne Port)	See above recommendation in Dust Fall Monitoring	Aligns with QIA 21D, 21E, 22C, and 22D	Baffinland is exploring the feasibility of implementing a joint trial with NRCAN after consultation with the communities that will compare current passive dust fall monitors with newly developed samplers used by NRCAN in multiple locations for comparison. Baffinland will be implementing this program once NRCAN provided materials and location for the new dust monitors. In addition to this, BIM is currently expanding the satellite imagery dustfall extent studies. Results will be reported back to the Dust Audit Committee. Target date December 2023.
DUST SUPPRESSION TECHNOLOGY					
1	Conduct a study to assess the amount of watering and road maintenance equipment required for present and future operations	Mine Site and Tote Road	N/A	Aligns with QIA 19A, 19C	Baffinland will initiate a review and evaluation of the amount of watering and road maintenance equipment required for current operations. Results will be reported back to the Dust Audit Committee once a full season of data is collected and analysis occurs. Target date December 2023.
2	Research the viability of applying sea water on the haul roads and Tote Road, due to the lower freezing point, if Baffinland considers applying water exclusively as dust suppression	Mine Site Haul Roads	The Committee acknowledges that there are weather conditions that will impact how application will vary throughout the year.	N/A	Baffinland will initiate a review and evaluation of the viability of applying sea water as a dust suppression, as well as continue trialing other products as dust suppression. This investigation will include consultation with regulators to confirm required approvals for such activity at the Project. Target date October 2023.
3	Develop a SOP on dust suppression products that includes procedures on application and the ongoing maintenance for active mine haul roads	Mine Site Haul Roads	The Committee acknowledges that there are weather conditions that will impact how application will vary throughout the year.	N/A	Baffinland will develop a standard of practice (SOP) for application of dust suppressants and the ongoing maintenance for active mine haul roads. Target Date December 2023.

¹ This recommendation would be in addition to the Commitment ID 234 (Baffinland. 2022a), wherein Baffinland committed to developing and funding a “Community Based Monitoring (CBM) program out of Pond Inlet that is Inuit led to monitor the extent of visual dust in the Project Area as well as a snow sampling program”.

4	Conduct a study on dust suppressants for utilization on ore that is loaded onto the B-train trucks, instead of covers due to challenges of Arctic winter conditions. The study should also examine which is the most effective dust suppressant for the Arctic weather conditions (liquid or dry).	Crushing pad, Milne Port	Capital cost. Increased operational cost.	N/A	Baffinland will initiate a review and evaluation of the potential benefit of adding dust suppressants along portions of the material handling circuit. Results will be reported back to the Dust Audit Committee once available. Target Date December 2023.
5	Analyze aircraft approved dust suppression products for use on the runway. Approved products for runway use should be incorporated into the SOP on dust suppression	Airstrip	The committee knows that Baffinland has been considering various dust suppression products and are currently utilizing water along the airstrip. Increased operational cost.	N/A	Baffinland will initiate a review and evaluation of the potential benefit of adding dust suppressants or other measures to reduce dust dispersion at the runway. Results will be reported back to the Dust Audit Committee once available. Target Date October 2023.
6	Examine the use of wind fences around dust generating infrastructure and complete a feasibility study to determine how to use wind fencing most effectively at both the mine site and the port site taking into consideration of Arctic weather conditions. This study should include use of computer modelling to determine the optimal height and location of fencing both at the mine site and at the port site.	Crushing Pad, Milne Port	Capital cost. May not be practical due to retention of blowing snow in Arctic conditions.	Aligns with QIA ID 20C and 20D	Baffinland will initiate a review and evaluation of the potential benefit of installing wind fencing to reduce dust dispersion at Milne Port and other locations across the Project. Results will be reported back to the Dust Audit Committee once available. Target Date: August 2023.
DUST AUDIT COMMITTEE					
1	Request: <ul style="list-style-type: none"> • Ongoing funding of the Dust Audit Committee. • Provision of documents in both English and Inuktitut through accessible means. • A transparent process of providing data obtained through ongoing studies conducted by Baffinland, the Terrestrial Environment Working Group and the Marine Environment Working Group. • Establish a virtual monitoring website that is accessible to the five Northern communities. 	N/A	N/A	Potential for overlap with QIA 22E	<p>Baffinland will maintain the Dust Audit committee to continue to meet and receive updates re dust and dust sources, performance of mitigation measures and solicit input regarding potential refinements or improvements</p> <p>Baffinland will report back to the dust audit committee on the implementation and results of the recommendations</p> <p>Baffinland will facilitate ongoing site visits to see the implementation of recommendations</p> <p>Baffinland will enhance communications via its existing website with respect to environmental monitoring and mitigations on a more frequent basis than is currently available. The website will be accessible to the five Northern communities.</p>