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From: Baffinland Iron Mines Corporation

Title: **Rationale for Changing the Frequency of Narwhal Aerial Surveys, reducing the Acoustic Monitoring Program and Update to the MEEMP**

Date: May 27, 2024

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At the May 13 & 14, 2024 working group meeting, Baffinland presented a five-year Environmental Monitoring Plan for the Northern Shipping Route marine monitoring programs.

The plan outlined that the Marine Mammal Aerial Survey Program (MMASP) would be conducted at a frequency of every third year rather than every year, which has been the case since 2019. It also indicated a reduction in underwater acoustic monitoring to a frequency of every third year, which is a change from the annual monitoring that has occurred since 2018. The proposed monitoring frequencies were discussed in parallel with Baffinland's proposed plans and logistical constraints applicable to the 2024 marine monitoring season. Subsequently, the Marine Environmental Working Group (MEWG) members asked Baffinland to provide written rationale for reducing the frequency of these monitoring program. This is provided below.

#### **Clarification - Scope of 2024 MEEMP**

There is one correction to note related to the Marine Environmental Effects Monitoring Program (MEEMP). The five-year plan indicated a full MEEMP for 2024 when it should have shown a limited sampling program for Marine Sediment Quality and Benthic Infauna, which is following the execution of a full MEEMP in 2023. The limited sampling program planned for 2024 will still study key parameters committed to under the SOP reconsideration process in relation to the introduction of Capesize vessels. As no impacts exceeding the localized effects predicted in the Final Environmental Impacts Statement (FEIS) have been observed in Marine Sediment Quality and Benthic Infauna, these components of the MEEMP were placed on a three-year sampling cycle with full sampling of the 60-station radial design planned to occur once in every three years and a smaller number of stations sampled in the other two years. The sampling that will occur in 2024 is to support Baffinland's commitment that for three years following the initial use of large ore carriers (Capesize and Baby Cape), sampling will occur at eight stations that were identified in 2023 for monitoring of potential large ore carrier impacts. As the first use of the large ore carriers occurred following the completion of the 2023 MEEMP field studies, the eight stations for large ore carrier impacts monitoring will be sampled in 2024, 2025 and 2026. The stations to be sampled for this monitoring include five stations that are part of the radial survey design, plus an additional three stations added specifically to monitor for potential impacts of large ore carriers.

### **Rationale – Reducing the frequency of the Marine Mammal Aerial Survey Program**

In support of the Mary River Project, Baffinland continues to actively monitor for potential project-related effects on marine mammals, including potential disturbance of narwhal from shipping activities that may result in changes in their distribution, abundance, and migratory movements in the North Baffin region. Marine mammal monitoring programs include aerial census surveys, underwater acoustic monitoring programs, shore-based behavioural response studies, satellite tagging programs, and ship-based marine wildlife observer programs.

Baffinland has monitored narwhal abundance in relation to shipping activity and has not found a correlation between the population fluctuations recorded year over year and Baffinland's shipping operations. The 2023 MMASP results indicated that the most recent narwhal population estimate is similar to the 2013, 2016, and 2019 population estimates, supporting the idea that the population sees a natural fluctuation between Eclipse Sound and Admiralty Inlet.

For this reason, Baffinland is scaling back the MMASP frequency to a three-year cycle, as was previously done from 2013 to 2019 and commensurate with other proponents in the industry. The end of shipping clearance surveys will be completed annually but the population abundance surveys will pause for 2024 and 2025, and resume in 2026.

### **Rationale – Reducing the Underwater Acoustic Program**

Baffinland has collected yearly data for the last six years, for two years of convoy operations and covered the use of Capesize vessels in 2023. Overall, the results of the 2023 acoustic monitoring program are consistent with results from past acoustic monitoring programs. The acoustic monitoring of convoy operations supports Baffinland's hypothesis that convoys are effective in mitigating the total sound exposure that marine mammals are exposed to during the shipping season. The acoustic monitoring conducted to date has provided a solid understanding of the noise levels of the various project vessels and that vessels impact narwhal for a relatively small proportion of time.

In 2023 Capesize carriers transited through the Regional Study Area (RSA) and justified the continuation of the acoustic monitoring program for another consecutive year. Underwater sounds from these vessels were recorded and compared to noise levels from smaller ore carriers. A detailed review of the noise levels for these vessel classes is presented in Austin et al. (2024), in which Capesize ore carriers were reported to have radiated noise levels as much as 4 dB greater than those of smaller ore carriers. On days when Capesize carrier transits occurred, sound levels did not exceed 120 dB re 1  $\mu$ Pa for extended durations, relative to other days of the shipping season (Austin et al. 2024).

Baffinland attained all intended data for the 2023 acoustic monitoring program and does not expect any activities to occur in 2024 that have not been previously carried out and monitored and as such Baffinland will not be implementing an acoustic monitoring program in 2024. Further, Baffinland is proposing to reduce the frequency of the acoustic monitoring program to every three years, similar to the frequency of other industry acoustic monitoring programs unless Project activities change substantially in the marine

Regional Study Area. Otherwise, the acoustic monitoring program will pause for 2024 and 2025, and resume in 2026 and be repeated in 2029.

#### References

Austin, M.E., K.A. Kowarski, and C.C. Wilson. 2024. Baffinland Iron Mines Corporation — Mary River Project: 2023 Underwater Acoustic Monitoring Program (Open-Water Season). Document 03260, Version 1.0. Technical report by JASCO Applied Sciences for WSP Canada.