



Arctic Region, Ontario & Prairie Region
Fish and Fish Habitat Protection Program
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Your file *Votre référence*
08MN053

September 13, 2021

Our file *Notre référence*
07-HCAA-CA7-00050

Nunavut Impact Review Board (NIRB)
PO Box 1360
Cambridge Bay, NU
X0B 0C0

Dear NIRB,

Subject: DFO Response to QIA, MHTO, and Hamlet of Pond Inlet Comments on Pond Inlet Harbour Construction

On August 30, 2021, Fisheries and Oceans Canada (DFO) received additional comments from the Qikiqtani Inuit Association (QIA), Mittimatalik Hunters and Trappers Organization (MHTO), and the Hamlet of Pond Inlet regarding DFO's June 15, 2021 submission to the NIRB (document ID 336238). This submission included DFO responses to the QIA's and the Hamlet of Pond Inlet's concerns regarding construction of the Pond Inlet Harbour. DFO provides the following information in response to the additional submissions, including the attached *Fisheries Act* Authorization (FAA) for the Pond Inlet Harbour project. DFO is willing to schedule additional meetings with the QIA, MHTO, and Hamlet of Pond Inlet to ensure that any outstanding comments and concerns are addressed.

DFO General Statement

DFO takes all reports of *Fisheries Act* violations very seriously. The FAA conditions for the Pond Inlet Harbour construction, including thresholds for maximum underwater noise from pile-driving and other construction activities, are based on the best available science and are designed to be protective of the marine environment, including marine mammals. Throughout the construction of the Pond Inlet Harbour, DFO received monitoring reports and would have been notified and fully aware of all potential non-compliance events, if they occurred. DFO conducted a review of the construction monitoring reports and all related correspondence with the Contractor and the Government of Nunavut (GN) for the 2020 construction season, as well as a review of Golder's Technical Memorandum: Preliminary Summary of 2020 Narwhal Monitoring Results (Technical Memo) submitted by Baffinland. Based on this review, DFO can confirm that there were no violations of the FAA during the 2020 season, including from pile-driving activities. The construction was completed in full compliance with the FAA conditions. We provide more detail below.

Noise Compliance Issues

In the FAA for the Pond Inlet Harbour construction activities, there are three enforceable conditions that specify mitigation measures for underwater noise, all of which relate to pile-driving activities. They are:

1. the establishment of a marine mammal exclusion zone (500m) around construction activities,
2. underwater pressure (30 kPa at 10 m) and discontinuous noise thresholds (160 dB re 1µPa), and
3. iced-season in-air sound threshold of 100 dB re 20 µPa.

Baffinland has alleged that the construction monitoring reports submitted by Advisian (the Contractor) showed non-compliance events with the recorded underwater pressure and the discontinuous noise threshold (bullet point #2).

DFO reviewed the monitoring reports for any events that would show non-compliance. On one occasion (July 22, 2020), there was an overpressure detection event reported at a monitoring station set up at the threshold distance. The report submitted by the Contractor also notes, however, that the company investigated the events and determined that they were due to an incorrectly calibrated microphone. Correcting for the faulty calibration showed that no overpressure or noise threshold non-compliance events occurred.

Contingency Mitigation Measures

In the Technical Memo, Golder states that several other non-compliance events occurred. Specifically Golder states:

Several non-compliance events occurred during the 2020 SCH pile-driving program and were reported to DFO (Advisian 2021). This included exceedances of underwater noise/overpressure thresholds during active pile-driving, absence of real-time acoustic monitoring during pile-driving², failure to deploy bubble curtains during impact pile-driving, failed application of soft-start procedure during pile-driving, failure to implement adaptive management for pile-driving, and failure to meet general monitoring requirements as prescribed in the CEMP (Tower Arctic 2020) and the FAA (DFO 2020).

² Acoustic monitoring of pile-driving in 2020 was limited to a total of four days out of 23 days of pile-driving based on information presented in Advisian (2021)

The measures described include bubble curtains, soft-start procedures, and adaptive management for pile-driving. These are contingency measures, required if monitoring determines that the standard mitigation measures above are not sufficient to meet the FAA conditions for underwater noise. Since no non-compliance was detected through monitoring, these additional measures

were not required. Despite this, the Contractor did initially attempt to use a bubble curtain during impact pile-driving activities; however due to prevailing currents it was deemed unlikely to be effective and its use was discontinued. The contractor also applied a soft-start procedure which was discontinued once monitoring showed that standard mitigation measures were sufficient to meet the FAA conditions for underwater noise.

With respect to the footnote (2) in the quote from Golder above, the monitoring report (Pond Inlet Project - 2020 Construction Season Annual Report (Advisian, 2021)), provided a subset of the available acoustic monitoring data with respect to pile-driving. The GN later provided the complete set of acoustic monitoring information to DFO, showing that monitoring of underwater noise/pressure was conducted throughout pile-driving activities and show that no exceedance of the threshold for underwater noise/pressure was observed.

Another apparent non-compliance event that Golder points to involves the real time monitoring requirements for underwater noise during pile driving. In their Technical Memo, Golder states:

“... because the EM was also having to undertake active marine mammal monitoring duties (acoustic monitoring was discharged to an on-site engineer that did not have the appropriate noise monitoring experience). This was identified as a non-compliance event for not performing real time monitoring of the applicable thresholds during active pile-driving, and a non-compliance event for not meeting the Environmental Procedure construction specification (Advisian 2018), which states that an EM must have no other roles on the Project and must be appropriately qualified to undertake the prescribed monitoring. “

This is an accurate description of what occurred. The Contractor reliably provided clear and detailed descriptions of all potential non-compliance events in its reporting to DFO, including the lack of real-time monitoring. However, since no exceedance of underwater overpressure or noise threshold was observed and given the realities of the kind of day-to-day challenges that monitoring construction activities present, especially in remote northern locations, this is a minor non-compliance event. Further, DFO is of the opinion that the Contractor remained in compliance with the intent of the FAA given that the monitor made reasonable efforts to ensure that the acoustic monitoring was carried out by an onsite engineer.

2021 Construction

In 2021, Baffinland indicated that they would modify their shipping schedule in order to avoid further potential impacts to narwhal in Eclipse Sound, and avoid any overlap with the construction of the Pond Inlet Harbour project. In 2021, construction of the Pond Inlet Harbour continued, including pile-driving activities. Impact pile-driving was used for seven days between June 24 and July 1, 2021. The use of impact pile-driving ceased prior to breakup of landfast ice, and prior to the possible arrival of Narwhal into Eclipse Sound. DFO has confirmed that no additional pile-driving activities are required to complete the construction of the Pond Inlet Harbour project. Therefore, underwater noise created from pile-driving for the construction of

the Pond Inlet Harbour project would not be a factor in narwhal abundance in Eclipse Sound or nearby waters for 2021, nor will it in future years.

Next Steps

Harbours are vital infrastructure for northern communities, providing safe access to fisheries and other services. DFO is continuing to work on the collection of relevant data from Baffinland and other organizations that have or are undertaking acoustic monitoring in the area. With this data, DFO would seek to compare the results of our internal review with the information provided in the Technical Memo. Since pile-driving activities are completed for the Pond Inlet Harbour, there is no opportunity to conduct additional studies on noise impacts from construction activities at that site. DFO has identified, however, that there are opportunities to collect data on marine noise from other construction activities in the North.

DFO is studying the possibility of undertaking additional monitoring studies for future harbour construction projects in the Arctic, including those that may not be in narwhal habitat, in order to determine the effectiveness of current mitigation measures and if additional measures may be warranted in the future. We hope that these monitoring studies will have both the support and direct involvement of northern communities. This research will confirm if current thresholds provide sufficient protection for the marine environment in the Arctic and will further inform the conditions for any future authorizations issued by DFO within the Arctic Ocean. More details on these studies will be provided as they become available, and we hope to be consulting with Inuit on these proposals soon.

If you have any questions with the content of this letter, please contact either Alexandra Sorckoff by email at Alexandra.Sorckoff@dfo-mpo.gc.ca, or Steve Cho by email at Steve.Cho@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Sincerely,



Thomas Hoggarth
Regional Director
Ontario & Prairie Region
Fisheries and Oceans Canada

Attachment (1): FA Amendment – 17-HCAA-00511 – Authorization – Pond Inlet SCH

cc: Alexandra Sorckoff – DFO-FFHPP
Steve Cho – DFO-FFHPP
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