

Environmental Protection Operations Directorate  
Prairie & Northern Region  
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ECCC File: 6200 000 010 / 004  
NWB File: 3BM-ARC1924



March 18, 2025

via email at: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

Robert Hunter,  
Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0

Dear Robert:

**RE: 3BM-ARC1924 – Hamlet of Arctic Bay – Type B Water Licence Renewal and Amendment – Response to Comments**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) by the Hamlet of Arctic Bay regarding the above-mentioned response to reviewer comments.

ECCC provides expert information and knowledge to project assessments on subjects within the department's mandate, including climate change, air quality, water quality, biodiversity, environmental emergencies preparedness and responses. This work includes reviewing proponent characterization of environmental effects and proposed mitigation measures. We provide advice to decision-makers regarding a proponent's characterization of environmental effects, the efficacy of their proposed mitigation activities, and may suggest additional mitigation measures. Any comments received from ECCC in this context does not relieve the proponent of its obligations to respect all applicable federal legislation.

One follow-up comment remains from ECCC regarding the Proponent's response:



## 1. Topic: Amendment of Compliance Point

### ECCC Recommendation

ECCC recommended to retain the compliance point at ARC-4 where control of flow of effluent from the lagoon can be maintained.

### Proponent Response

Please see Sections 1-7 and 1-8 in the uploaded report Recommendations for the Development of Nunavut Municipal Wastewater Management Standards dated October 2017 prepared by exp Services Inc., which provided the following findings and recommendations:

- Natural wetlands are capable of achieving wastewater treatment
- Site specific effluent discharge limitations should be considered
- Technology-based limitations establish a minimum level of effluent quality that is attainable using demonstrated technologies that are economically available
- Achievable limits for lagoon wetland systems:
  - Limits: 100 mg/L cBOD5; 120 mg/L TSS;
    - Systems application: Flows <2,500 m3/day to well flushed marine receiving environments
- The effluent discharge point considers only the location where the effluent enters the receiving waters (marine or fresh)
- Wetland system final discharge points should be monitored and amended as required if flow patterns throughout the wetland are dynamic
- Negligible environmental impacts from wastewater effluent have been observed

The requested effluent criteria 120 mg/L TSS and 100 mg/L cBOD5 is based on treatment from both the lagoon and the wetland.

Furthermore, in 2022, during the technical review for 3AM-ARV2232, it was determined that moving the compliance point to the end of the wetland would be appropriate application of this research.

These records are available on the NWB site and were uploaded to the folder for easy access as *Prior Discussion on Effluent Compliance Point.*

### ECCC Comment

Generally, a defined point of control is the preferred approach for a compliance point. However, at a minimum, monitoring should be maintained at ARC-4 to characterize effluent prior to entering the wetland.




The remaining four comments from ECCC's original submission have been addressed by the Proponent.

If you need more information, please contact Jessica Kassar at (867) 222-2036 or [Jessica.Kassar@ec.gc.ca](mailto:Jessica.Kassar@ec.gc.ca).

Sincerely,

**Kassar,  
Jessica**

Jessica Kassar  
Environmental Assessment Officer

 Digitally signed by  
Kassar, Jessica  
Date: 2025.03.18  
17:07:24 -04'00'

Attachment(s):

cc: Eva Walker, Head, Environmental Assessment North (NT and NU)

