

Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
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Yellowknife, NT X1A 2P7

ECCC File: 6200 000 018/005
NWB File: 3AM-ARV1016



July 30, 2020

via email at: licensing@nwb-oen.ca

Richard Dwyer
Manager Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Richard Dwyer:

RE: 3AM-ARV1016 – Municipality of Arviat – Type A Water 2019 Annual Report

Environment and Climate Change Canada (ECCC) has reviewed the information submitted by the Municipality of Arviat ('the Proponent') to the Nunavut Water Board (NWB) regarding the above-mentioned Water License Annual Report. You will find our comments included in this letter.

ECCC's specialist advice is based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

ECCC has the following comments:

1. Station ARV-4 Monitoring Results

Reference(s)

- 2019 Annual Report for the Hamlet of Arviat, NU
- Water licence no. 3AM-ARV1016

Comment

Part D (Conditions Applying to Waste Disposal and Management), Item 2 of the water licence sets out the effluent quality limits for all effluent discharged from the Sewage Disposal Facilities at monitoring program station ARV-4

ECCC notes that monitoring results for station ARV-4 exceeded the effluent quality limit for total suspended solids (TSS) on August 26, 2019. TSS exceedance can related to seasonal algal blooms in the lagoon, and observations of effluent colour and visible algal presence would be useful for interpreting TSS exceedances. The Proponent reported measurable



amounts of oil and grease for July 7, 2019, however the concentration units were not provided.

ECCC Recommendation(s)

ECCC recommends that visual observations on algal presence/effluent colour be documented during effluent sampling, and that future annual reports include concentration units for oil and grease measurements.

2. Station ARV 2a and ARV-2b – Monitoring results

Reference(s)

- 2019 Annual Report for the Hamlet of Arviat, NU
- Water licence no. 3AM-ARV1016

Comment

The water licence refers to Stations ARV-2a (Effluent from discharge point of Solid Waste Disposal Facility) and ARV-2b (Effluent from discharge point of New Solid Waste Disposal Facility). However, the sampling forms and laboratory reports include references to ARV-2, but do not reference either ARV-2a or ARV-2b. Appendix E provides a summary table for ARV-2a but not for ARV-2b. The annual report does not appear to include monitoring results for station ARV-2b.

It is unclear what station “ARV-2” refers to, and is unclear whether both stations ARV-2a and ARV-2b were monitored.

ECCC Recommendation(s)

ECCC recommends that the Proponent:

- Describes what “ARV-2” refers to;
- Clarifies whether both stations ARV-2a and ARV-2b were monitored in 2019 and, if not, describes why; and
- Provide any available 2019 monitoring results for station ARV-2b.

3. General Comment

Reference(s)

- 2019 Annual Report for the Hamlet of Arviat, NU
- Water licence no. 3AM-ARV1016

Comment

To support analysis and interpretation of monitoring data, the annual report should emphasize any exceedance values in the summary tables and provide a discussion of the monitoring results. This was not provided in the 2019 annual report.

ECCC Recommendation(s)

ECCC recommends that future annual reports include:

- Highlighted and/or bolded font on summary tables to indicate any water licence exceedances; and
- Discussion of monitoring results, particularly regarding any exceedances, any potential or known causes, and any response actions taken.

4. Unauthorized Discharges

Reference(s)

- 2019 Annual Report for the Hamlet of Arviat, NU
- Water licence no. 3AM-ARV1016

Comment

The annual report provides details regarding spills/ unauthorized discharges but does not indicate what follow-up actions the Proponent took.

ECCC Recommendation(s)

ECCC recommends that future annual reports describe any follow-up actions taken for any spills/ unauthorized discharges.

5. Map of Monitoring Stations

Reference(s)

- 2019 Annual Report for the Hamlet of Arviat, NU
- Water licence no. 3AM-ARV1016

Comment

The annual report provides data for a number of monitoring stations; however, there is no map provided that depicts the locations of these sampling points. A map or that figure that illustrates the locations of monitoring stations would aid the reviewer in interpretation of data provided.

ECCC Recommendation(s)

ECCC recommends that future annual reports provide a figure or map indicating the locations of all monitoring stations.

6. Copper and Ammonia at ARV-2 and ARV -4

Reference(s)

- 2019 Annual Report for the Hamlet of Arviat, NU
- Water licence no. 3AM-ARV1016

Comment

Based on the sampling results provided for ARV-2 (effluent from solid waste facility) and ARV-4 (effluent from sewage disposal facility) elevated concentrations of total copper (ARV-2 and ARV-4) and total ammonia (ARV-4) are noted. The annual report does not provide any discussion of these elevated concentrations or options to improve effluent quality.

ECCC Recommendation(s)

ECCC recommends that the Proponent provide a discussion of the elevated concentrations of ammonia and copper associated with the sewage lagoon and solid waste facility. This should include a discussion of the level of treatment that is achieved by the lagoon and wetland area, and how this can be optimized.

If you need more information, please contact Jody Small at (780) 951-8961 or Jody.Small@canda.ca.

Sincerely,

[Original signed by]

Eva Walker
Environmental Assessment Coordinator

Attachment(s):

cc: Jody Small, Acting Head, Environmental Assessment North (NT and NU)