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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

File No.: **1AR-NAN2030**

August 10, 2021

Zied Tebaibi  
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E-mail: [Zied.Tebaibi@nyrstar.com](mailto:Zied.Tebaibi@nyrstar.com)

**RE: NWB Technical Review of 2020 Annual Report for the Closure, Reclamation and Post-Closure Monitoring of the Nanisivik Mine; Water Licence No. 1AR-NAN2030**

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Dear Mr. Zied Tebaibi,

The Nunavut Water Board (NWB) has completed a technical review of the 2020 Annual Report.

On April 06, 2021, the NWB acknowledged receipt of the Annual Report, provided it to the Nanisivik distribution list for information, and invited parties to comment until July 06, 2021. The NWB received comments from Crown-Indigenous Relations and Northern Affairs (CIRNA) and Environment and Climate Change Canada (ECCC) on July 06, 2021.

Copies of all documents received during the review can be accessed through the NWB's Public Registry and FTP site using the following link:

<ftp://ftp.nwb-oen.ca/registry/1%20INDUSTRIAL/1A/1AR%20-%20Remediation/1AR-NAN2030/3%20TECH/B%20GENERAL/2%20ANNUAL%20RPT/2020/>

Following is a summary of the actions and recommendations required by Interveners:

## **1. CIRNA**

### **i. (R-01) Investigation of elevated sulphate concentration sources**

Concentrations of sulphate at Station NML-29 in 2019 and 2020 were consistently above Action Level values defined in the Contingency Plan for Surface Water Quality Exceedances.

CIRNA recommends that the proponent conduct a secondary investigation with chemical analysis testing recommended in the Appendix B 2020 Nyrstar Water

Quality Monitoring report done for the proponent, and that the investigation include stations along the drainage channel as far west as NML-30 to confirm the hypothesis that the landfill is not part of the source of high sulphate concentrations.

**ii. (R-02) pH Quality Assurance and Quality Control Results**

Only three of the eight pH measurements meet the data quality objectives and field measurements are consistently higher than laboratory results (7 of 8 samples). Both sections 4.1.1 and 4.1.5 on QA/QC conclude samples results are representative, even though there seems to be systematic error resulting in measurements above data quality objectives.

CIRNA recommends that the licensee carefully calibrate equipment used to measure pH in the future, and look for ways to reach data quality objectives if exceedances persist.

**iii. (R-03) Station Markers**

Section 3.1 of Appendix B the 2020 Nyrstar Water Quality Monitoring report states “Station markers are present at select but not all stations”. Station markers are a typical component of QA/QC to ensure that the same sites are being sampled during each campaign.

CIRNA recommends that the licensee install markers at all water quality monitoring stations.

**iv. (R-04) Removal of voluntary stations**

CIRNA agrees with the removal of stations ELO and 159-6 Temp as concluded in the 2020 Water Quality Monitoring Report.

**v. (R-05) Geotechnical Report**

The geotechnical report was reviewed by CIRNA and was found to be satisfactory.

## **2. ECCC**

ECCC stated that they have reviewed the 2020 Annual Report for Nanisivik and has no comments at this time.

The technical review of the Annual Report, found that the information submitted by the Licensee addresses the requirements of the Licence. The Licensee is advised to respond to the comments provided by the Interveners.

Should you have any questions, please feel free to contact the undersigned at (867) 360-6338 (extension 33) or [ali.shaikh@nwb-oen.ca](mailto:ali.shaikh@nwb-oen.ca), at your earliest convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read 'mali', with a horizontal line underneath and two dots below the line.

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Mohammad Ali Shaikh  
Nunavut Water Board,  
Technical Advisor

Cc: Distribution List – Nanisivik

Attachments: CIRNA, ECCC