



Aboriginal Affairs and
Northern Development Canada

Affaires autochtones et
Développement du Nord Canada

NUNAVUT WATER BOARD	
Date:	Oct. 8/14
Exhibit No.:	15 (3 pgs)

Water Resources Division
Nunavut Regional Office
Iqaluit, NU
X0A 0H0

Your file – Votre référence
1AR-NAN0914

September 17, 2014

Our file – Notre référence
IQALUIT-# 851219

Robin Ikkutisluik
License Administrator Assistant, NWB
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

**Re: 1AR-NAN0914 – Technical Review for Water Licence Renewal/Amendment
Licence Process – Additional Information - Nanisivik Mine Property –
Canzinc Ltd. - Nyrstar Canada (Holdings) Ltd.**

Dear Ms. Beaulieu,

Thank you for your email on September 9, 2014, concerning the above mentioned water licence renewal/amendment application.

A technical review memorandum is provided for the Nunavut Water Board's (Board or NWB) consideration. Comments have been provided pursuant to the Department's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at 867-975-4282 or email at ian.parsons@aandc-aadnc.gc.ca for further comments or any questions.

Sincerely,

Original signed by

Ian Parsons
Regional Coordinator

Cc. Murray Ball, Manager, Water Resources – Aboriginal Affairs and Northern Development Canada (AANDC), Nunavut Regional Office (NRO)
Erik Allain, Manager, Field Operations, AANDC, NRO

Technical Review Memorandum

TO Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board

AANDC File
IQALUIT-# 851219

NWB File
1AR-NAN0914

FROM Ian Parsons
Regional Coordinator
Aboriginal Affairs and Northern
Development Canada

DATE
September 17, 2014

**Re: 1AR-NAN0914 – Technical Review for Water Licence Renewal/Amendment
Licence Process– Additional Information - Nanisivik Mine Property –
Canzinc Ltd. - Nyrstar Canada (Holdings) Ltd (Nyrstar).**

A. Results of Review

The following technical review comments were prepared by AANDC in response to the Nunavut Water Board's notification letter of additional information submitted by Nyrstar dated September 9, 2014.

The AANDC technical review comments and recommendations are summarized below:

Item	Issue	Comments and Recommendations
1	Abandonment & Remediation Plan For the On-site contaminated soil	It is still unclear what will be the end use of the remaining soil yet to be treated. Will the soil be placed back in Area 4 of the former tank farm or will it be placed or stockpiled elsewhere? AANDC recommends clarifying what the end use of the treated soil will be and where the treated soil will be placed both in short term and in the long-term.
2	Methodology and Approach for Developing Site Specific Soil Remediation Objectives (SSRO's)	The document makes reference to conducting toxicity tests on two soil types: a field-collected soil and an artificial soil spiked with fractionated samples of a sweet crude oil. AANDC recommends that the proponent describe how close these two soil types are both physically and chemically as well as providing rationale as to why sweet crude oil is an acceptable indicator for the gasoline/diesel contaminants.

Item	Issue	Comments and Recommendations
3	Methodology and Approach for Developing Site Specific Soil Remediation Objectives (SSRO's)	<p>The document makes reference to ex-situ bioremediation.</p> <p>AANDC recommends that the proponent describe and explain what type of ex-situ bioremediation is being applied. The effectiveness of the technology in regards to the environmental conditions should also be incorporated.</p>
4	Methodology and Approach for Developing Site Specific Soil Remediation Objectives (SSRO's)	<p>The document states that the most recent analytical results are not yet available.</p> <p>As these results are the basis for the proposed approach AANDC recommends that the proponent submit these results to the NWB for additional review.</p>
5	Methodology and Approach for Developing Site Specific Soil Remediation Objectives (SSRO's)	<p>AANDC is concerned about residual contamination in regards to the proposed methodology and approach. In particular, AANDC is concerned about the uptake of contaminants in the plant life after the implementation of the proposed technology.</p> <p>In addition, AANDC requests that the proponent consider the possibility of bioaccumulation in biota relying on such plants.</p> <p>As well AANDC recommends that the approach being implemented should be more robust, in that, the approach should not solely rely on plant growth but also include insect response.</p>

AANDC will be making a presentation at the Public Hearing to be held in Arctic Bay October 8-9.

Prepared By: Ian Parsons and Amjad Tariq