



MEMORANDUM

850-5-X751

CLASSIFICATION

YOUR FILE No.
Votre dossier

OUR FILE No. 368-1-Y2
Notre dossier

TO
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Dr. W. H. Frost,
Senior Medical Advisor,
Indian Health & Northern Health.

FROM
De
Chief, Public Health
Engineering Division.

DATE Dec. 21, 1967

FOLD

SUBJECT
Sujet

Report "Arsenic Survey of Yellowknife Bay"

Attached is a copy of the report "Arsenic Survey of Yellowknife Bay", carried out by the Public Health Engineering Division, during the month of October, 1967, which is supplementary to the one made in April when the Bay was ice-covered.

The report indicates that some improvement has been made in the concentration of arsenic in Yellowknife Bay, since the April report. Factors which contribute to the apparent improvement are:

1. The efforts made by the Giant Yellowknife Mines Limited in the implementation of process changes -
 - (a) Through the use of lime, instead of sodium carbonate for pH control in the hot cottrell dust circuit.
 - (b) The mixing of the mill effluents and the addition of two pounds of lime per ton of effluent.

These have resulted in an appreciable reduction of dissolved arsenic leaving the mill.

2. Another factor contributing to the improvement is the dilution ratio of two to one based on the average water flows in the Yellowknife River, for the period 1952-62, of 1291 cu. ft. per second for the month of October, compared to 651 cu.ft. per second in April.

The improvement noted in the data collected during the month of October showing a marked decrease in concentration of the dissolved arsenic, should in no way alter the decisions reached on the basis of the April report.

Attach.

W. R. Edmonds
W. R. Edmonds, P. Eng.