

ADDITIONAL REPLIES:
KENNEDY ALBERT BUILDING
OTTAWA, ONTARIO



OFFICE OF THE COMMISSIONER
NORTHWEST TERRITORIES
CANADA

OTTAWA

24 March, 1964.

PLEASE QUOTE

FILE 530-69-1

MEMORANDUM FOR CHIEF, NORTHERN HEALTH SERVICE

Schedule of Sampling Requirements -
Arsenic Surveillance Program - Yellowknife, N.W.T.

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I attach a copy of the Schedule of Sampling Requirements established by the Resources Division for the Arsenic Surveillance Program at Yellowknife. It would appear that our mining safety people are doing everything possible to control the arsenic problem at Yellowknife.

W. G. Brown
W. G. Brown,
Deputy Commissioner.

REC'D
MAR 28 1964
NORTHWEST TERRITORIES
MEDICAL SERVICES

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MEDICAL SERVICES
SUB-REGISTRY

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FILE NO:

SCHEDULE OF SAMPLING REQUIREMENTS
ARSENIC SURVEILLANCE PROGRAM
YELLOWKNIFE, N.W.T.

A. WATER SAMPLING

1. The Resident Mining Inspector will be responsible for seeing that water samples are taken monthly at the under-mentioned sources:
 - (a) Giant Mine Water supply.
 - (b) Yellowknife Townsite water supply.
 - (c) Con Mine water supply.
 - (d) Mouth of Baker Creek.
2. When the arsenic level in any of the three domestic water supplies approaches 0.05 p.p.m., sampling frequency is to be increased to a minimum basis of once per week and maintained at that frequency until normal levels are indicated. If the arsenic level exceeds 0.1 p.p.m., sampling will be done daily. Note that the arsenic level in the samples taken at the mouth of Baker Creek is not to be used as an indication of when to increase the frequency of sampling from monthly to weekly but, when weekly sampling is indicated, samples must be taken weekly at all four sources mentioned above.
3. During the spring run-off period, a weekly sampling schedule shall be in force at all four sources. The decision as to when this weekly schedule will begin and terminate will rest with the Resident Mining Inspector.
4. Until such time as the Yellowknife Assay Office is in operation, all samples collected will be sent to the Public Health Engineering Laboratory in Vancouver as quickly as possible for analysis.
5. After the Yellowknife Assay office is in operation and equipped to carry out arsenic analyses, duplicate water samples will be taken. One sample will be sent to the Public Health Engineering Laboratory and the other one will be sent to the Yellowknife Assay office. This procedure will be followed only until it is established that the results from the two laboratories are fairly uniform. When this is established, all samples will be analyzed at the Yellowknife Assay office.

6. If any of the mining companies wish to run check samples at their own laboratories, arrangements should be made with the Mining Inspector to have additional samples taken.
7. The Yellowknife Assay office will forward seven copies of the results of water analyses to the Resident Mining Inspector.

B. STACK SAMPLING

1. The Con-Rycon Mine and the Giant Yellowknife Mine are to conduct stack sampling tests on their roaster stacks on not less than four occasions each year, as evenly spaced throughout the year as is practical. Because of the physical layout of their sampling station, the Con-Rycon Mine can do this at regular three-month intervals. Giant Yellowknife Mines probably will not be able to conduct such tests during the winter months; if this is so, it will be acceptable for them to conduct one test as early in the spring and another as late in the fall, as conditions permit, plus two other tests in the intervening months (provided at least one month elapses between each test).
2. From the results of these tests, the following will be calculated:
 - (a) the percentage of arsenic that is collected of the total amount of arsenic going to the collector;
 - (b) the weight of arsenic that is being discharged to the atmosphere, expressed as pounds of arsenic per day.
3. Four copies of the results of these tests shall be forwarded to the Resident Mining Inspector as soon as possible after each test.
4. If the mining companies so desire, they may discontinue collection of arsenic fallout samples.

C. OTHER SAMPLING AND REPORTING

1. The Con Rycon and the Giant Yellowknife mines will submit a monthly report which will show the following.

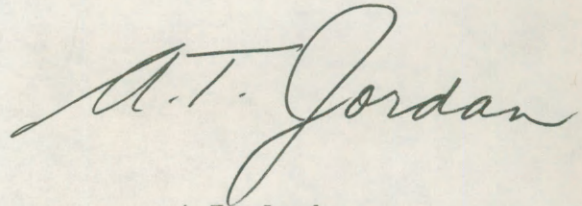
- (a) The total amount of arsenic in solution which is discharged to waste for each day of the month, expressed in pounds of arsenic.
- ★ (b) The total volume of wastes discharged for each day of the month.
- ★ This does not apply to arsenic from the Con Rycon mine which is discharged to the arsenic storage ponds.
- 2. The mines will report to the Resident Mining Inspector any abnormal occurrence which may contribute to a rise in the arsenic content of local waterways. Included in this would be any abnormal operations of the Giant tailing pond and its subsequent effect on Baker Creek.
- 3. Four copies of reports submitted under this section (C) shall be sent to the Resident Mining Inspector.

D. DISTRIBUTION OF REPORTS

- 1. The Resident Mining Inspector will be responsible for seeing that each of the under-mentioned receives one copy of each of the reports mentioned in this Schedule.
 - (a) The Chief,
Public Health Engineering Division,
Dept. of National Health and Welfare,
45 Spencer Street,
Ottawa, Ontario.
 - (b) The Chief,
Occupational Health Division,
Dept. of National Health and Welfare,
45 Spencer Street,
Ottawa, Ontario.
 - (c) The Chief,
Resources Division,
Dept. of Northern Affairs and National Resources,
150 Kent Street,
Ottawa, Ontario.

2. In addition, the Resident Mining Inspector will send each of the under-mentioned, one copy of the results of the water analyses outlined in (A).

- (a) Giant Yellowknife Mines Ltd.,
Yellowknife, N.W.T.
- (b) Con Rycon Mines,
Consolidated Mining and Smelting Co. of Canada Ltd.,
Yellowknife, N.W.T.
- (c) Medical Health Officer,
Yellowknife, N.W.T.

A handwritten signature in cursive script that reads "A.T. Jordan". The signature is written in dark ink and is positioned above the typed name and title.

Ottawa,
March 9, 1964.

A.T. Jordan,
Chief Mining Inspector.