



OFFICE OF THE COMMISSIONER
NORTHWEST TERRITORIES
CANADA

Yellowknife, N.W.T.
September 25, 1970

The Honourable Jean Chretien
Minister of Indian Affairs
and Northern Development
Ottawa, Ontario

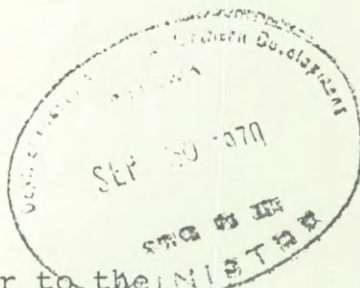
Dear Mr. Chretien:

I enclose for your information copy of a letter to the Director General of Medical Services, Department of Health and Welfare, Ottawa, from Dr. G. C. Butler, Chief of the Northern Region, Edmonton, concerning arsenic pollution at Yellowknife.

Doctor Butler's letter is most disturbing and contains a detailed report on the amount of arsenic escaping from the Con and Giant mines on a daily basis. In his letter Doctor Butler presses for immediate investigation by his department and the Department of Indian Affairs and Northern Development, and states that he feels compelled to make a public statement warning Yellowknife residents that they should not eat vegetables grown in the area. Doctor Butler is right in his belief that this is likely to hit the headlines and it is my opinion that this should be avoided if at all possible. Irreparable harm will be done particularly in this day and age when pollution and environmental control are household words.

I am going to write Doctor Butler and appeal to him to withhold any public announcements until such time as steps can be taken to see what can be done to improve the situation. I would think that one of the first things would be to check the report and discuss it with the two Yellowknife mines. Preventative action should be considered before allowing this problem to be blown out of all proportion.

Doctor Butler talks about a three-year old report. I well recall this study although I must admit that I don't believe we ever saw the results of the study but it seems

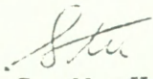


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to me your predecessor, Mr. Laing, was given assurances in early 1967 that arsenic would be no problem if Yellowknife was chosen as Northwest Territories capital. It would seem to me that senior officers of your department should immediately contact the Department of Health and Welfare to determine what steps should be taken in this matter before any news release is even contemplated. Finally, the growing season is over for this year in Yellowknife and 90% of any vegetables produced have been consumed. About the only item still in use is potatoes of which I note no mention made.

Trusting to hear from you,

Yours sincerely,


S. M. Hodgson,
Commissioner.

21805 H Wate

TO BE OPENED BY ADDRESSEE ONLY

MEMORANDUM

CLASSIFICATION

Director General, Medical Services .

TO
AYOUR FILE No.
Votre dossier

151-1-5-N (N1)

OUR FILE No.
Notre dossier

Sept. 23 1970

Northern Region

DATE

FROM
DeSUBJECT
SujetArsenic Pollution at Yellowknife

On February 3 1970 I raised the question of arsenic pollution in Yellowknife with Public Health Engineering (letter attached). I received a copy of a reply from Mr. Tait stating that the companies concerned had carried out all the recommendations of the Occupational Health Division (letter attached).

I now find that the mines are emitting the following amounts of arsenic per day:

Chimney Stack Emissions -

Con Mine - 508 lbs. per day
Giant Mine - 459 lbs. per day

Ground leakage -

To Kam Lake - 47 lbs. per day
To Great Slave Lake- 158 lbs. per day

These figures were provided by the Edmonton Office of Public Health Engineering.

The results of the arsenic analysis undertaken this summer on vegetables grown in the Yellowknife area are as follows:

Site 1 (town)

Carrots	- 1.15 ppm
Cabbage	- 0.43 "
Beet roots	- 0.61 "
Lettuce	- 1.01 "
Green Pea Pods	- 0.14 "
Kohlrabi	- 0.67 "

Site 2 (town)

Carrots	- 2.20 ppm
Lettuce	- 2.25 "

Site 3 (Con Mine)

Lettuce	- 1.42 ppm
Lettuce	- 1.55 "
Swiss Chard	- 1.05 "
Carrots	- 1.36 "

Site 4

Lettuce	- 2.65 ppm
Swiss Chard	- 3.15 ppm
Carrots	- 3.10 "
Beet Leaves	- 0.52 "
Lettuce	- 2.0 "
Lettuce	- 1.32 "
Lettuce	- 1.07 "
Carrots	- 4.15 "

Giant Mine -

Beet Leaves	- 3.10 ppm
Beet roots	- 4.80 "

The allowable limit of arsenic in vegetables is 0.5 to 1 part per million in major foods and 1 to 2 ppm in minor foods.

Analyses of vegetables grown in the area in 1965 were much higher, eg:

Giant Mine -

Lettuce	- 52.0 ppm
Swiss chard leaves	- 43.4 ppm
Swiss chard stems	- 7.5 ppm
Celery leaves	- 26.8 ppm
Celery stems	- 9.7 ppm

Fish samples taken from Great Slave Lake this summer showed arsenic levels ranging from 0.01 to 0.035 ppm which is well below the Food & Drugs actionable level of 0.5 ppm in the edible portion of fish.


On perusing these facts it is evident that a major problem of arsenic pollution of the atmosphere and terrain still exists at Yellowknife. A half ton of arsenic per day, (i.e. 180 tons per year) is being

emitted from the chimney stacks and at least 200 lbs of arsenic per day is leaking out of the tailing ponds and polluting the lakes and rivers around Yellowknife. It is also evident that vegetables grown in the Yellowknife area are unfit for human consumption according to the standards set by Food & Drugs.

This is a serious situation which should be immediately investigated by our Environmental Health Division and by the Department of Indian Affairs & Northern Development. We have repeatedly requested advice and assistance in this matter but to date we have had little of either. You are aware that to date we have not yet received the report of the arsenic survey which was carried out over three years ago, even though we have informed you that the Doctors at Yellowknife reported last year that they thought that women in the child bearing age become anaemic after about four months residence in Yellowknife.

I must now make a public statement warning the residents of Yellowknife that they should not consume vegetables grown in the area and this is likely to hit the headlines. However, before doing so, I want to have a conference call with you and Dr. Patterson on this whole matter. As far as I am concerned the whole matter of arsenic pollution at Yellowknife requires full and detailed study and immediate action, and if our Environmental Control Division cannot undertake this study and give prompt advice, I have no option but to seek assistance from one of the Universities and Provinces.

Early action would be appreciated.


Regional Director

cc - Commissioner, N.W.T.