

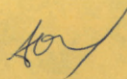
850-5-12 → P.A.  
Jan 18, 77

Commissioner Hodgson, Commissioner,  
Northwest Territories Government,  
YELLOWKNIFE, Northwest Territories.  
XOE 1HO

Dear Commissioner Hodgson:

As I could not reach you on the telephone, the Honourable Marc Lalonde has asked me to send you a copy of the following press statement which was released today.

Original  
L. M. BLANK  
a signé l'original



**Bruce Rawson**

Attch.





# news release

1977 - 6

January 18, 1977

## TASK FORCE TO STUDY ARSENIC

OTTAWA - The following statement was issued today by Health and Welfare Minister Marc Lalonde:

"It was with great concern that I was made aware, through the press, of the reported high levels of arsenic found in Indian children and smelter workers in Yellowknife. I understand that a study was carried out jointly by the National Indian Brotherhood, the United Steel Workers of America and Professor Robert E. Jervis of the University of Toronto. My officials, however, have been unable to obtain a copy of the report from either the National Indian Brotherhood or from the University of Toronto.

"In 1975, my Department conducted a study of 700 individuals in Yellowknife. The studies were made public at the time and were summarized in the attached press releases, dated May 27, 1975 and October 3, 1975. The findings of this study and the study reported over the weekend appear to differ substantially. This may, in part, be accounted for in the size of the sample used, which I understand was 66 individuals.

"Recent studies on behalf of the Northwest Territories carried out by two environmental health experts of the federal government, resulted in the submission of two differing reports



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to the Yellowknife Environmental Study Committee. The report of this committee is in the final stages of preparation although the environmental health reports submitted to it received local publicity some months ago. In all of the above-mentioned reports there appear to be differences of view over the significance of the data and the interpretation to be derived from that data.

"As Minister of Health, responsible for issues affecting the health of Canadians, I am determined to ascertain the true facts in this matter. I, therefore, plan to appoint a task force of three independent scientific experts. The task force members will be chosen for their impartiality and expertise, will not be members of the Federal Public Service, and will be given a completely free hand in their endeavours. The Canadian Public Health Association has agreed to provide me with the names of three eminent scientists for this task. I have undertaken to ensure they receive full financial support and complete access to all available data. If requested, I will ensure they receive staff support.

"The terms of reference of this task force will be;

- (a) to review all available data relevant to arsenic in Yellowknife, and to receive submissions from interested individuals and groups;
- (b) to advise on any additional data required and to ensure steps are taken to obtain such data;
- (c) to specify areas requiring further scientific research;
- (d) to assess the present monitoring program and to recommend improvements;



- (e) to recommend any remedial action required;
- (f) to provide a public report of their findings.

"I will be requesting that the task force submit an initial report within three months primarily focused on their independent assessment of the data currently available. The members of the task force will be assured of the support of my colleagues the Minister of the Environment, Roméo LeBlanc and the Minister of Indian Affairs and Northern Development, Warren Allmand and their officials.

"I plan to announce the members of the task force once recommendations have been received from the Canadian Public Health Association."

Ref.: Michael Alexander

Tel.: (613) 996-4950





# news release

1975 - 86

May 27, 1975

## YELLOWKNIFE ARSENIC STUDY RESULTS PUBLISHED

OTTAWA - Health and Welfare Minister Marc Lalonde today released the findings of the recent survey of arsenic levels in hair samples taken from residents of Yellowknife, N.W.T. The survey was conducted as a follow-up to a previous study on arsenic in the environment in Yellowknife. Arsenic levels in hair are not a measure of a degree of health risk since actual body levels may be substantially lower. They do however indicate the degree of exposure to arsenic and are therefore of value in determining whether individuals should be further examined for body levels.

Major findings of the survey are:

- individuals employed in specific mill occupations showed significantly higher levels than the population as a whole, and require further examination and investigation. Underground miners did not show significant levels
- over 90 per cent of the other Yellowknife residents tested had arsenic levels of less than 5 ppm in their hair
- there is no correlation between arsenic levels and drinking water sources in Yellowknife
- samples which were analysed for mercury contamination as well as arsenic all showed levels well within accepted norms.

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The survey program was carried out in February, and consisted of the taking of hair samples from a large number of Yellowknife residents for the purpose of analysis for arsenic content. Hair sampling is the most rapid method of initial screening for a large number of people and provides a measure of the degree of exposure to arsenic of those tested. Persons who have no significant levels of arsenic in their hair will not have significant levels in their bodies. On the other hand, arsenic in hair may result from ingestion of arsenic or may merely represent arsenic deposited on the surface of the hair from fallout in the air, and significant levels in hair have often been found associated with insignificant levels in the body. For this reason, it was announced at the time of the survey that those persons whose hair samples revealed a significant degree of exposure would be asked to have a further investigation to determine if any risk to their health exists.

In assessing the results of the survey, Medical Services Branch officials emphasized that there are differences of opinion among scientists as to what constitutes an elevated arsenic level in hair. Levels up to 10 ppm have been found in populations with no known exposure to arsenic and this level is considered to be acceptable by some authorities. Others regard 5 ppm as a level that can be accepted as occurring in non-exposed populations.

A total of 700 persons volunteered to be tested. The survey findings for arsenic are as follows:

	<u>Under 5 ppm</u>		<u>5-10 ppm</u>		<u>Over 10 ppm</u>		<u>TOTAL TESTED</u>
	<u>No. of persons</u>	<u>% of total</u>	<u>No. of persons</u>	<u>% of total</u>	<u>No. of persons</u>	<u>% of total</u>	
Mine & mill workers	<u>61</u>	45.2	<u>30</u>	22.2	<u>44</u>	32.6	<u>135</u>
Other residents	<u>516</u>	91.3	<u>30</u>	5.3	<u>19</u>	3.4	<u>565</u>
All persons tested	<u>577</u>	82.4	<u>60</u>	8.6	<u>63</u>	9	<u>700</u>

In addition to testing all hair samples for arsenic, 20 per cent of the samples were also tested for mercury content, as an earlier study had indicated the possibility of mercury contamination also occurring as a result



of the processing of gold ore in the mill. All samples tested for mercury had levels of less than 10 ppm with one exception which was 25 ppm. Since the presently accepted maximum safety level for mercury is 60 ppm it is not considered necessary to do any follow-up studies on the mercury levels at this time. Furthermore, mercury has not been used in the processing of gold ore in Yellowknife since September 1968.

Clearly, the mine and mill workers as a group have a higher level of arsenic in hair than would be expected in a non-exposed population and follow-up action in respect of this group is necessary.

Although levels of arsenic in the vast majority of other Yellowknife citizens are below 5 ppm, and are therefore similar to levels for a non-exposed population, the levels of certain individuals in this group indicate the need for further investigation.

There was no correlation found in the survey between arsenic levels and drinking water sources. Particularly close attention was paid to any possible relationship between arsenic levels and drinking water sources in Yellowknife as a result of concerns which had been expressed in recent months. The study found no correlation between the two, and therefore corroborates the findings of the water testing program carried out earlier this year.

As a result of the survey, further work will be carried out as follows:

1. All persons found to have hair levels of arsenic greater than 10 ppm will be asked to undergo an investigation which will include a specially designed diagnostic questionnaire combined with a physical examination, including a 24-hour urine sample for arsenic levels.
2. Concurrent with the above, and in co-ordination with other agencies, the environment in the mine and mill will be examined to identify sources of arsenic pollution and to measure the concentration of arsenic to determine the extent of exposure and to recommend corrective measures if indicated.
3. If the results of the medical examinations of those people whose levels exceeded 10 ppm indicate the need, similar investigations of persons found to have arsenic levels in the hair of between 5 and 10 ppm will then be undertaken.



In summary, the results of the survey indicate:

- (a) a health hazard may exist for workers in specific jobs in the mill and mine.
- (b) it is not likely that arsenic poses a health hazard for residents other than mill or mine workers. A small number of individuals had levels of arsenic in hair higher than expected in a non-exposed population, and these persons need further examination.
- (c) there is no correlation between arsenic levels and the source of the water supply in Yellowknife.

Further work will be carried out to determine the risk to the health of individual persons and to assess whether the levels of exposure in the mill and mine need further control.

Letters have gone out to all persons who participated in the survey informing them of their individual results and advising them of the significance of those results and of the further planned investigation.





# news release

1975 - 128

October 3, 1975

## ARSENIC LEVELS IN YELLOWKNIFE NWT

OTTAWA -- Health and Welfare Minister Marc Lalonde today released the findings of a comprehensive series of clinical and laboratory examinations of Yellowknife residents whose hair had shown elevated arsenic levels in previous testing.

The latest study was a follow-up of the earlier screening investigation which had been prompted by allegations that the health of Yellowknife citizens was being threatened by excessive exposure to arsenic. The report compiled by Dr. Otto Schaefer concluded that present mine operations do not pose a hazard to the health of the general population of Yellowknife. The final report indicates that:

- there is no evidence that the general public of Yellowknife is being exposed to excessive or dangerous amounts of arsenic;
- employees working in certain areas of Giant Mill and Refinery were found to have elevated arsenic levels in hair and slightly elevated levels of systemic arsenic;
- there was no clinical evidence of systemic arsenic toxicity although evidence was found of local skin irritations and rashes consistent with arsenic dust exposure. In all cases persons experiencing these reactions were employed at the mill.



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The Department tested hair samples of 700 Yellowknife residents earlier this year and of this number, 63 were found to contain in excess of 10 p.p.m. arsenic. Levels up to 10 p.p.m. have been found in populations with no known exposure to arsenic and this level is generally considered to be acceptable. Medical Services Branch chose this level to select those individuals warranting a more comprehensive examination. Based on findings of the initial survey, Medical Services Branch undertook a thorough examination which included blood samples, liver function tests, EKG, chest X-ray, 24 hour urine specimens, and in some cases further hair samples from the scalp and body, in addition to a thorough clinical examination. A review of the individual examination files, including laboratory, electrocardiogram and X-ray findings, shows a complete absence of definitely pathological findings suggestive of chronic systemic arsenic poisoning.

The clinical examinations were conducted in June of this year in Yellowknife and included 58 individuals, 50 of whom had been identified in the initial survey. Of the original 63 persons, 8 had left Yellowknife, their new addresses unknown, and 5 others were out of town on vacation. Six new persons who had not participated in the original hair screening and who were concerned about potential risk due to their long mine or mill experience were included in the comprehensive tests at their own request. The other two were native children who had been found by an independent National Indian Brotherhood study to have elevated arsenic levels in their hair.



Five of the 58 persons examined were found to have slightly elevated levels of body arsenic with urine samples ranging between 0.1 and 0.3 milligrams per 24 hours. The five individuals in question were employed as either roasters, cottrell operators, or laboratory workers in the mill. Their levels although higher than any others in the Yellowknife survey were nevertheless well below a toxic level. A widely held scientific opinion is that urine levels ranging from 0.7 to 1.0 milligrams do not represent an undue hazard for workers in an arsenic environment. The Yellowknife miners were all well below these levels. In addition, a recent study stated that arsenic related disease is not found in people excreting less than 1.0 milligrams per day. The remaining 53 persons examined did not show evidence of excessive arsenic ingestion.

Clinical examination showed a total of 17 persons, including the 5 persons found to have slightly elevated levels of body arsenic, who had experienced episodes of irritation and skin rashes after exposure to arsenic dust. Each of these individuals were mill employees and had experienced the "arsenic rashes" while working either as roasters, cottrell operators, or in the "bag house" where arsenic laden dust is collected. Rashes of this kind are commonly found in workers exposed to chemical dust. The examinations did not reveal any skin lesions of the type generally associated with the development of cancer. Medical Services Branch wishes to be satisfied about possible long range effects of exposure, and will monitor a program of regular medical



examinations for workers in those areas of high dust exposure.

The Branch has also monitored and will continue to monitor regularly the working environment in the mill for occupational health hazards.

The examinations identified a number of medical problems unrelated to arsenic or mine work. In all, 24 people have been referred to their own physician for examination or treatment of these medical problems.

A program of regular medical assessment has been recommended for the five individuals found to have elevated arsenic levels, and the branch will follow-up to assure that examinations are being carried out satisfactorily. In addition, all mill personnel employed in areas of high dust levels will be regularly examined. Dust levels have been measured and surveillance will continue.

Dr. Schaefer's report has been forwarded to mine and union officials as well as to the Federal and Territorial Governments concerned.

Ref. H.L. Brigstocke

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