

INSTITUTE OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH

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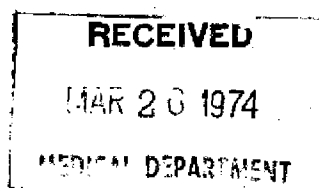
1) A new research project was accepted by the Scientific Committee and the Executive Committee of IOEH and by QAMA and became IOEH No 19: Dr. Alison McDonald: "Epidemiological study of mesothelioma in U.S.A." The investigation is currently well under way.

2) A meeting of the Scientific Committee was held in Denver on February 23 and 24, 1974.

3) International Labour Organization (ILO) Meeting of Experts on the safe use of asbestos was held in Geneva, Switzerland, in December 1973. Dr. Pelnar attended in the capacity of an observer for the Permanent Commission and International Association on Occupational Health. There was no representation of the Canadian or U.S. asbestos industry. A full report of Dr. Pelnar on this conference was circulated in January 1974. The final document edited and distributed by ILO secretariate was obtained in March 1974 and is enclosed. (Enclosure 1)

4) International Shipyard Health Conference organized by the Society for Occupational and Environmental Health (founded by Dr. Selikoff) was held in Los Angeles, Calif., in December 1973. It was attended by about 80 persons out of whom 50 were union representatives. Although all health hazards in shipyards were covered asbestos was prominent in the papers and discussions. A number of papers of known tendencies were given by Dr. Selikoff and his group, by Dr. Ferris of Boston, by Dr. Harries (U.K.), by Swedish visitors, and by U.S. Navy speakers. Nothing strikingly new was reported from the conference. The Johns-Manville Corporation was represented and details can be obtained from them. The presented papers will be circulated by IOEH as published.

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5) The Report on the Quality of Air at Asbestos for the year 1972 was released by the provincial Service of environmental protection in February 1974 (with the date of February 1973). The fall-out of all particulates (not asbestos fibres alone) was followed at four stations in the city area of Asbestos, Quebec, throughout the year. There is no standard in existence for asbestos fibres in city air and the federal standards in Canada for all particulates are as follows: 1) yearly average a) acceptable 70 micrograms per m³, b) desirable 60 micrograms/m³, 2) maximum for a single day 120 micrograms/m³. The results of the measurements are summarized in the enclosed tables. (Enclosures 2, 3, 4). The yearly averages at the four sampling stations were 72.8, 102.0, 96.9 and 53.2 micrograms per cubic meter respectively and the overall yearly average was 78.0 micrograms/m³. The proportion of fibres examined in some samples of collected dust revealed at two stations 5.6-21.4%, at two other stations up to 72%. The full report will be circulated in IOEH documentation. At the press conference where the report was released Dr. Goldbloom, the provincial minister responsible for the environment, stressed that all these measurements were taken prior to opening the new CJ-M mill. The measurements have continued and a report for 1973 was announced for the near future. *with in*

6) A progress report was submitted by Dr. W. Smith on his project IOEH No 14: "Fibre shape and biological activity." It is enclosed. (Enclosure 5). *not included*

7) A progress report was submitted by Dr. W. Gibbs on his project IOEH no 15: "Fibre diameter of dust in mining, milling, manufacturing and insulation operations - A pilot study." (Enclosure 6). *not included*

8) A report was given to the Quebec asbestos mining companies and their unions by McGill University (Dr. Becklake) on transfer of some research activities provided by McGill under IOEH project No 10 into routine health surveillance activities provided for the workers by the industrial clinics in Asbestos and in Thetford Mines. It is a testimony of one direct benefit for the day to day health care for the workers as derived from a IOEH research project. The report is enclosed. (Enclosure 7).

9) The government of The Netherlands plans to promulgate an Asbestos Regulation. The draft is enclosed. (Enclosure 8). Total ban is suggested of crocidolite and use of asbestos is generally prohibited for thermic and acoustic insulation and for preserving and decorative purposes, and for any spraying. ✓

10) In the Australian state Victoria there only were 2 cases of asbestosis seen by Industrial hygiene division during the year ending June 30, 1973, among 85 cases seen for suspected occupational disease. Of the two cases only one was a new case. (Enclosure 9). — *not included*

11) A Survey of all research projects supported by IOEH since its foundation in 1966 and a list of the scientific publications which were generated by them was prepared by IOEH and will be circulated to the directors of IOEH.

12) Visitors to IOEH:

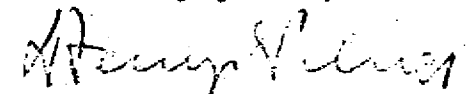
Dec. 5/73 - Mr. A.W. Easton, Cominco Ltd.
Toronto, Ontario.

Dec. 5/73 - Mr. H.M. Giegerich, Cominco Ltd.
Trail, B.C.

Jan. 8/74 - Ms G. Robineau, National Research
Council, Ottawa, Ontario.

March 1/74 - Dr. Michel Lesage, Social Affairs
Ministry, Quebec Government,
Montreal.

Sincerely yours,



Premysl V. Pelnar, M.D.
Scientific Secretary

To: Members of Scientific Committee
QAMA member-companies
Cassiar Asbestos Corporation
Dr. Karl V. Lindell
Mr. Paul-A. Filteau

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DEPARTMENT OF EPIDEMIOLOGY AND HEALTH
3775 UNIVERSITY STREET, MONTREAL 112, QUE., CANADA
McGILL UNIVERSITY

Health surveillance in asbestos workers

Previous studies carried out by this Department of the health effects of asbestos exposure pointed to the desirability of certain practical measures in respect of health surveillance of asbestos workers. Over the past three years, the Department of Epidemiology at McGill University, in consultation with Drs. P. Cartier and Dusseault (of the Industrial Clinic at Thetford Mines) and Dr. Grainger of the Clinic at Asbestos have worked on a program to incorporate these measures as effectively as possible into the already existing extensive health surveillance system. This work has been supported under a research grant from the Institute of Occupational and Environmental Health.

In brief, the additions to the pre-existing health surveillance system were the logical outcome of our earlier research work published in several papers in the medical literature which have previously been circulated. They incorporate into practice two general conclusions reached as result of these studies:

- 1) that the health effects of exposure to chrysotile asbestos in the mines and mills of Quebec are dust-dose related: this applies to symptoms and lung function, while changes in the chest radiograph only appear to be dust-dose related in Thetford Mines;
- 2) that of the available tests of lung function, one of the more simple ones, vital capacity, appears to show an early response to dust exposure, and that with increasing exposure there is a consistent decrease in this measurement. From this it seems likely that longitudinal changes in this measurement might best reflect the effects of dust exposure on an individual's health status. Subsequent reports from other groups have reached similar conclusions;
- 3) in addition, since the prevalence of respiratory symptoms (elicited by an administered questionnaire) appeared to be dust-dose related, it was thought to be worthwhile to develop a similar questionnaire, self administered, as an aid to the examining physician.

Development of each of these measures for practical application is described in more detail below.

Dust Indices:

In the early work of the Department, a great deal of effort by Dr. Gibbs and Mr. Lachance was put into developing personalized dust indices for all workers in the Quebec Asbestos Industry, past as well as present, based on dust and job records provided by the industry. It seemed reasonable that this information should be



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Montreal, December 19th, 1973.

Mr. N. Messel, President, Quebec Asbestos Mining Association
Lake Asbestos, Thetford Mines, P.Q.;
The Governors, Industrial Clinic, Thetford Mines, P.Q.;
M. R. Geunt, Président, Les Métallurgistes Unis d'Amérique, Thetford Mines,
P.Q.;
M. L. Nadeau, Président, Les Métallurgistes Unis d'Amérique, Local 7649,
Black Lake, P.Q.;
M. L. Boucher, Président, Syndicat national de l'amiante d'Asbestos, Asbestos,
P.Q. and
Mr. C. Couture, Conseiller Technique, Confédération des syndicats nationaux,
Thetford Mines, P.Q.

Dear Sirs,

We are now pleased to submit our report (enclosed herein) on
"Health surveillance in asbestos workers", a short summary of our activities in
this respect over the last three years.

We would like to take this opportunity to acknowledge with great
appreciation:

- 1) the assistance, patience and support of the Directors of the clinics,
Dr. Paul Cartier and Dr. R. Grainger, in helping us to develop the present
changes, while at the same time having to ensure the steady day-to-day
clinic operation,
- 2) the cooperation of the Unions and their members in accepting the new
procedures and
- 3) the support of the industry in facilitating the introduction of, in parti-
cular, the function test measurements.

Yours sincerely,

Margaret R. Becklake

Margaret R. Becklake, M.D., F.R.C.P.

S. Ducid, M.D., M.Sc., Dip. Epid.

cc: Dr. M. Pelnar, Institute of Occupational & Environmental Health, Montreal, P.Q.;
Dr. G. Wright, 460 South Marion Parkway, Denver Col. 80209
Dr. P. Cartier, Industrial Clinic, Thetford Mines, P.Q. and
Dr. R. Grainger, Industrial Clinic, Asbestos, P.Q.

Enclosure

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incorporated into the health surveillance system, so that it could be brought to bear on health decisions affecting the individual worker. To do this, it was necessary to devise an updating system for these indices of dust exposure; this system which incorporates the current information on dust levels furnished by the industry is the subject of a separate proposal recently submitted to the Quebec Asbestos Mining Association by Prof. F.D.K. Liddell.

Lung function tests:

In order to incorporate the measurement of lung function into the clinic surveillance system, we tested out a commercially available apparatus appropriate for making the measurement (VR 5000, supplied by Hewlett-Packard Co.) and developed a calibration system for regular checking to ensure quality control of the measurements. In addition we did a pilot study of the most appropriate testing procedure, and arranged for a period of training for the two technicians, one from each clinic, who have subsequently carried out the tests on the asbestos workers at the clinics under the supervision of the medical directors of the respective clinics, Dr. Cartier and Dr. Grainger.

Questionnaire and report:

To date almost 3,200 men have been processed in the system, information on their cases has been recorded on tape files and a running report, including information on symptoms, X-ray changes and lung function, prepared for the clinics. An important step in elaboration of the surveillance system occurs at their second visit when their clinical data will be updated. Second visits should be starting shortly.

General conclusions

- 1) As indicated in the report, the system herein described exceeds in volume and scope most existing systems of occupational health surveillance, and we are most anxious that it should serve its purpose effectively.
- 2) We believe the system has now been developed to an operational status and we have handed over the major responsibility for its continuation to the two clinics concerned.
- 3) We will of course be most interested to continue our association with the work in an advisory capacity, possibly to help in the evaluation of its effectiveness, as well as to help its smooth operation in any other way we can.

Margaret R. Becklake, M.D., F.R.C.
(London)

S. Ducic, M.D., M. Sc., Dip. Epid.

December 19th/1973

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