

INTER ORGANIZATION COMMUNICATION

Raybestos Manhattan

Corporate Trumbull
DIVISION and LOCATION

DATE: February 7, 1977

TO: Messrs. R. M. Gordon
W. S. Simpson

SUBJECT: Executive Committee Meeting
International Asbestos Information Conference
London - February 1, 1977

PRESENT: Mr. Alexandre - France
Mr. Angelotti - Italy
Dr. Costa - Italy
Mr. Cross - Director General
Dr. Gaze - U.K. (Presiding)
Mr. Marsh - U.S.A.
Mr. Piuze - Canada
Dr. Robock - Germany
Mr. Van der Rest - Benelux

ORGANIZATION

The duties of the Director General, a draft having been circulated previously by Dr. Gaze, were agreed upon. Although the title Director General was considered a bit pretentious, it was retained because alternatives, such as Executive Secretary, do not carry the appropriate connotation in some translations.

A minimum budget of £44,200 was approved with the understanding it would probably be found to be inadequate. Suitable quarters for the Secretariat have been located nearby the Cape office. Mr. Van der Rest suggested and the Committee agreed that a lease be negotiated and the Secretariat be staffed as soon as possible. Initially the Secretariat will consist of a secretary and the part-time services of Mr. Cross. Dr. Gaze explained that Cape had had difficulty in locating a replacement for Mr. Cross and were not able to relieve him of his responsibilities at Cape as early as had been anticipated. Member Associations will be billed according to the attached schedule as agreed upon in Hamburg and the funds will be deposited in a Swiss Bank Account.



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CURRENT DEVELOPMENTS OUTSIDE THE U.S.A.

Dr. Gaze asked each member present to comment on the present situation in his country.

The present situation in the United Kingdom is extremely delicate. The Government Advisory Committee on Asbestos established in May, 1976 has just issued a short interim statement, "to put the risks from asbestos in perspective in the light of present knowledge". Although the Committee does not recommend, at this time, a change in the standard, the following excerpts from the report give a clear indication of the thinking of the majority.

"Exposure to all forms of asbestos dust should be reduced to the minimum reasonably practical".

"In issuing this statement, the Committee emphasizes that there are a number of topics which will have to be investigated further before it can offer definite recommendations. These topics are;

- a. the ingestion of asbestos;
- b. dose-response relationships for various diseases;
- c. asbestos waste disposal;
- d. asbestos in the general environment;
- e. the substitution of safe or less hazardous substances for asbestos."

The BOHS Asbestos Sub-Committee has not been able to come to agreement concerning a revision in the standard. The Chairman, Dr. Gilson has resigned. Non-industry representatives on the Committee are in favor of reducing the present exposure limits from 100 fibre years to 43 fibre years. Industry members are not in agreement and dispute the statistics on which the proposed standard is based. Dr. Gaze believes industry must take some initiative to resolve the deadlock. Dr. David Muir of the University of Edinburgh has been commissioned to study the statistics and give industry his opinion.

Italy as yet has no official regulations. However in the present national labor contract, there is a provision limiting exposure to 5 fibres/cc. as is the case in mining operations in Quebec. The next national contract may specify a lower level. According to Mr. Angelotti, data compiled by Dr. Vigliani, show no excess of lung cancer among miners.

In Germany a new MAC (Maximum Allowable Concentration) list has just been published and within the next two to three

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months will be translated into law. The permissible exposure limits for chrysotile and amosite asbestos are 2 fibres/cc. and relate only to fine (respirable) dusts. A gravimetric standard is also being developed. A decision has not yet been made with respect to a standard for exposure to crocidolite. Dr. Robock stated that in Germany only 10% of asbestosis cases lead to lung cancer, as contrasted with 50% to 60% in the U.K. The question is why the difference?

Mr. Piuze reported that Quebec miners are finding it easier to meet the present gravimetric standard. Mr. Hutchison was not able to be present because of the current uproar over the Quebec government's proposal to take over or acquire a substantial interest in mining operations. He also reported measurements of ambient air concentrations in the town of Thetford varied from 0.02 to 0.06 fibres/cc. Presumably this represents the concentrations to which the general public has been exposed to for many years and the information may be of value in estimating the biological effects of non-occupational exposure.

At one point last year, the government in Holland was on the point of prohibiting any use of asbestos without special permission. Due to the intervention of industry representatives, including Mr. Van der Rest, the ban without special permission is limited to crocidolite and sprayed asbestos. All other uses of asbestos will be held to a maximum (not TWA) exposure of 2.0 fibres/cc.

It is expected that Belgium will shortly have regulations limiting exposure to 2 fibres/cc. (TWA) without any exceptions for crocidolite.

France, as yet, has no regulations. It is expected that recommendations will be made sometime this year. The industry has mounted an extensive information campaign to offset the negative reports that have been widely circulated. Following a meeting last December at the International Center for Cancer Research at Lyon, Dr. Selikoff called a press conference, which according to Mr. Alexandre, had a very bad effect. At the press conference, Selikoff announced the intention of NIOSH to recommend to OSHA that the U.S. asbestos standard be lowered to 0.1 fibres/cc.

WORK OF THE COMMITTEE

The Committee reviewed and approved the program of work for the Secretariat (attached) first proposed at the Hamburg conference.

Dr. Gaze stated that he believed the first priority of the Secretariat should be to collect, edit and distribute to the

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Member Associations information on asbestos and health. It was agreed that in order to expedite the distribution of such information during the interim period when Mr. Cross' services will be available only on a part-time basis, Executive Committee members will distribute to each other as well as to Mr. Cross any pertinent information which comes to their attention.

With respect to future operations of the Secretariat, Dr. Gaze stated he felt that any attempt to conduct public relations activities should be avoided at this time and that the Secretariat and the Executive Committee should concentrate on matters of practical and immediate value. In this connection, certain assignments were given to members of the Committee and others.

Medical Scientific Advisory Committee - It was suggested that either Dr. Wright or Dr. Kotin be asked to chair such a Committee. Dr. Gaze will take this up with Johns-Manville.

Bag Opening Methods - Mr. Piuze will provide information on best available methods.

Fiber, Packaging, Shipping and Waste Disposal Including Disposal of Bags - Mr. Dorner and Mr. Angelotti.

Asbestos Cement Processing - Mr. Alexandre.

Asbestos Textile Processing - Mr. Verrill.

Use and Handling of Asbestos Containing Friction Materials - Mr. Marsh.

International Standards or Codes of Practice for Countries Without Regulations - Dr. Robock.

EUROPEAN ECONOMIC COMMUNITY

A detailed communication (attached) concerning the objective evaluation of the risk to human health caused by asbestos has been circulated by the EEC to various European industrial societies for comment. It was agreed that Mr. Cross and Dr. Robock will represent the Executive Committee in dealings with the EEC office.

ACTIVITIES OF ORGANIZED LABOR

A representative of the International Metal Workers Federation attended the IAIC Conference in Hamburg last November. There appears to be an opportunity to revise the resolution taken up at Oslo last August (a 0.1 fibre/cc. limitation). It has been suggested that it would be useful to have a meeting of

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four or five representatives from the IMF and four or five from the Executive Committee to review responsible scientific papers and come to a pragmatic solution with respect to exposure levels.

Charles Levinson, Secretary General of the International Federation of Chemical and General Workers Union (7 million members) has issued a document calling for the industry to come down to a zero exposure level.

In December the Trades Union Congress (U.K.) recommended to the Government Advisory Committee on Asbestos that exposure levels be reduced to a 0.2 fibres/cc. level and that the use of asbestos be banned entirely within 10 years. This was done without consulting some of the member unions including the Transport and General Workers Union, which is not in favor of such a recommendation.

SUMMARY

It is now clear, to those who have followed events, that the asbestos industry, internationally, is literally engaged in a struggle for survival. Recent developments, an increasing concern with potential environmental hazards (i.e. risk to the general public) and association with cancers other than lung cancer and mesothelioma have greatly increased the scope of the problem.

Those seeking to ban the use of asbestos altogether or impose regulations which for technical or economic reasons would have the same effect are extremely vocal and powerful and command the attention of the news media and the politicians.

The crux of the matter is that science has not yet been able to establish a level of exposure below which disease will not occur. Insufficient time has lapsed to permit epidemiological studies of occupational groups working under modern well controlled conditions. In such circumstances, we are confronted with a social-political issue in which technical and economic issues are secondary.

If the industry is to survive, exposure levels in the processing and use of asbestos and asbestos products must be reduced to the lowest possible of achievement (regardless of any existing arbitrary numerical limits) and scientific studies to determine more accurately the level of risk must be strongly supported.

The final question will be whether the benefits of asbestos are worth the risk entailed in its handling and use.

John H. Marsh

/as

attachments

Forecast of Expenditures

Duties of the Director-General

INTERNATIONAL ASPECTOS INFORMATION CONFERENCE

EXECUTIVE COMMITTEE

Meeting on 1st February 1977

Forecast of Expenditure for Administration

		£
Salaries - Director General	}	16,000
Secretary		
Assistant		
Pension contributions, National Insurance etc.		2,400
Travelling, Entertainment, Car Expenses		10,000
Office expenses - Rent	£5,000	10,500
Rates etc.	2,000	
Telephone, telex, post	1,000	
Copying	1,500	
Stationery & printing	1,000	
Contingencies		2,000
		<u>40,900</u>
Provision for inflation during 1977		4,000
		<u>£ 44,900</u>

Suggested Income at rate of £2,000 per share per annum

		<u>total</u>
Existing Members - Canada, Japan, USA	£6,000	£18,000
France, Germany, Italy, UK, South Africa	£4,000	£20,000
Australia, Benelux, Scandinavia	£2,000	£ 6,000
		<u>£44,000</u>
Potential Members - India	£4,000	£12,000
Greece	£1,000	
Spain	£2,000	
Thailand	£2,000	
Austria	£4,000	
Switzerland	£1,000	
		<u>£12,000</u>
		<u>£58,000</u>

INTERNATIONAL ASBESTO INFORMATION CONFERENCE
STANDING COMMITTEE

Programme of Work 1977/78

1. Information

1.1 Collection and circulation of information affecting occupational and environmental problems associated with asbestos in accordance with the objects of the IAIC.

- (a) Opinions, criticisms, complaints, campaigns affecting the use of asbestos as a consequence of anxieties about its effect on health.
- (b) Existing or projected legislation or changes in legislation affecting asbestos.
- (c) Criteria for identification of harmful concentrations of asbestos dust, and methods of environmental measurement and monitoring.
- (d) Methods of dust control and worker protection.

1.2 Publication for the use of members of a quarterly news letter.

1.3 Preparation of information and advisory publications for members; codes of practice, guidance to users, recommended procedures similar to those produced by some members for use in their own countries. It is recommended that "pilot" documents of this kind should be made available as a basis for members' own publications in order as far as possible to avoid conflicting or inconsistent advice.

1.4 Assembly of information or data not available from existing sources.

2. Coordination of Investigation (where appropriate by the establishment of working or study groups) in the following areas:

- (a) dust measurement techniques and equipment;
- (b) dust control, protective equipment, cleaning equipment;
- (c) problems of packaging, handling, labelling;
- (d) worker education and training.

3. Epidemiology

To assist, where appropriate and helpful, the medical profession in the improvement of epidemiological studies on a consistent international basis

4. International Standards for Protection

Promotion of consistent international standards for the safe use of asbestos. Increasing use of asbestos is reported in countries with little earlier experience of asbestos manufacture or experience of protective measures. The ILO, with the participation and endorsement of industry representatives has recommended that measures comparable with those of most IAIC members should be universally applied, and the Standing Committee believes that the IAIC should actively encourage and assist countries where the accepted measures have not yet been recognised as necessary.

INTERNATIONAL ASBESTOS INFORMATION CONFERENCE

Duties of the Director-General

The Director General will be responsible to the Executive Committee through the Chairman. The following guidelines define his duties and manner of operation.

1. Responsibility for all administrative matters concerned with the operation of the Conference; these to include the administration of the Secretariat in an efficient and economical manner, all financial and budgetary questions, arrangements for meetings etc. and to ensure that all members of the IAIC are properly informed on matters of importance and interest.
2. To ensure that all relevant information concerning asbestos and health questions is collected and made available as required.
3. To maintain contact with other bodies of related interest.
4. With the agreement of the national member associations, to establish close contact with individuals, government bodies and other groups whose activities may in any way be related to the business of the members of the Conference and to the asbestos industry.
5. It is expected that the Director General will take such opportunities as arise to promote the interests of the asbestos industry in the safe and proper use of its products. At the same time it is not expected that the Conference will wish to engage in promotional or advertising activities, it being accepted that these are better undertaken by individual national member associations.
6. A major requirement is that the Director General should be able to bring to bear the best scientific, medical and negotiating skills on an international scale when problems arise in the asbestos and health field. In these circumstances it is expected that action will be taken quickly and effectively. At the same time it is essential that there should be full prior consultation with the national member associations involved, and it is of paramount importance that their wishes and interests should be respected. In the first place, such consultation should be through the Chairman and members of the Executive Committee who have the responsibility of deciding what action should be taken.

Draft for a Communication concerning the objective evaluation of the risks to human health from pollution by asbestos

INTRODUCTION

1. In the programme of Action on the Environment* (Part II, Title I, Chapter 1) asbestos is considered as a first category pollutant in air for priority investigation.

The Commission is required to submit to the Council the results of its work on the objective evaluation of the risks to human health and to the environment from pollution by asbestos.

This communication covers the various aspects outlined and contained in the above mentioned chapter of the Action Programme. It seeks to establish the consequences to public health of the use of asbestos.

2. As a part of this programme the Commission was asked to undertake as quickly as possible the following tasks with regard to asbestos.
 - compilation of as complete a bibliography as possible on the effects of the pollutants under consideration and a critical analysis of this information;
 - determination of criteria for certain pollutants;
 - standardization or harmonization of the measuring methods and instruments, so as to render the results of pollution measurements in the Community comparable;
 - ascertainment of gaps in knowledge of pollutants and their effects in order to select research subjects for inclusion, as appropriate, in the Community research and development programme.

3. To perform this work the Commission has, in collaboration with national experts, carried out studies to:
- establish the public health risks from exposure to asbestos,
 - standardise the diagnosis of mesothelial tumours,
 - inventory the data available in the Community on the presence of asbestos in the various environmental media,
 - initiate an intercomparison programme between laboratories concerning the sampling and measuring of inhalable asbestos dust at low levels.

4. This communication is in the nature of an interim report which summarises the results of the tasks so far performed. It contains the following main sections:

- I Uses
- II Measurements
- III Exposure and Effects
- IV Recommendations.

I USES

1. There are six main types of asbestiform minerals which belong to two large groups of rock-forming minerals, i.e. the serpentines (chrysotile) and the amphiboles (actinolite, tremolite, anthophyllite, amosite and crocidolite). Mining of asbestos (chrysotile) in the Member States only occurs in Italy.
2. Asbestos has certain unique properties: tensile strength; resistance to degradation, in particular by abrasion and by chemicals; fineness of incombustible fibres; and thermic and electrical insulation qualities.
3. It is employed in various ways, in many industries. The main fields of application are the building, construction, engineering, shipbuilding and automobile industries. The major use of asbestos fibres is in a mixture with cement which is utilised for construction purposes and

II MEASUREMENTS

1. Limited environmental measurements of asbestos in air, water and foodstuffs (beverages) have been carried out in some of the Member States.

Optical microscopy suffices in the situation where there is significant pollution with asbestos fibres. Where only traces of fine fibres are present in air and water, sophisticated and expensive techniques including electron microscopy are required. Research into the means of identifying and measuring fibres more economically is needed.

2. An intercomparison programme between laboratories has been initiated by the Commission concerning the techniques used for the sampling and the measurement of asbestos present in air, and to study the comparability of data. Harmonisation of sampling and sample preparation methods would be considered, as necessary, in a second stage.

III EXPOSURE AND EFFECTS

1. Man's exposure to asbestos can occur in several ways:

- a) occupational exposure

- direct, such as work in asbestos mines, factories, etc.
- indirect, such as workers in the vicinity of asbestos contaminated work situations.

- b) Para-occupational

- domestic exposure of members of households, as a result of exposure to asbestos contaminated clothing of asbestos workers,
- exposure through leisure time activities, such as the use of "do it yourself" asbestos-containing products, and through "second jobs".

- c) Neighbourhood exposure: as may occur in the vicinity of asbestos mines, asbestos factories, etc.

d) Environmental exposure not due to any of the sources mentioned above but which occurs through asbestos present in the ambient air, food, water, beverages, etc. The source of some of this asbestos and other fibrous minerals is the naturally occurring minerals in the earth's crust and their air- and water-borne dispersion. Exposures to the general public occur mainly from these sources.

2. The main exposures to asbestos arise from occupational, and occupationally related conditions.
3. The principal mode of entry of asbestos into the human body is through inhalation. Ingestion via the digestive tract, either directly by food and drinking water, or indirectly by ingested sputum following inhalation of asbestos, also takes place. There is uncertainty about whether ingested asbestos fibres pass through the gut into other organs.
4. The asbestos content of goods as such is not necessarily an indication of health risk. A potential health risk exists when fine asbestos fibres of inhalable geometric dimensions (diameter smaller than 3μ) are set free.

Relatively short term, high exposures may cause health effects, in particular certain tumours, but health effects usually occur after long-exposures.

5. The variability in concentration of the dust and of the size distribution of fibres, which affects the dose to the lungs, makes retrospective measurement of the severity of exposure difficult. But because asbestos is long retained in the lung after inhalation, measurement of the content may give a useful index of the integrated exposure of the individual, though the rate of elimination may differ with the type of fibre.

At the present time only a few systematic studies regarding the presence of asbestos in lung tissues have been conducted in the European Community, and therefore the results of measurements of asbestos in tissues can not be directly related to environmental levels.

6. The evaluation of public health risks is based on a determination of any increased incidence of those diseases which occur in occupational exposure or in population groups with neighbourhood exposure.

- Asbestosis, a progressive lung fibrosis, is restricted to massive and prolonged occupational exposure, and as such does not present a risk for the general public.

- Bronchial carcinomas. A clear relationship with asbestos exposure has been established, with cigarette smoking as a highly contributive factor, usually in combination with existing asbestosis. Occupational exposure need not necessarily be of long duration, but a high intensity usually has occurred. There is not yet enough evidence to exclude completely the existence of a risk of environmentally related bronchial cancers, arising from asbestos exposure, to the general public. But present evidence indicates that the risk, if present, is likely to be very small compared with that due to cigarette smoking.

- Laryngeal carcinomas. Certain of these tumours may have been caused by high level exposure to asbestos but a causal relationship is not proven. There is no evidence to indicate the existence of a risk from environmental asbestos exposure.

- Gastrointestinal carcinomas. Some studies have shown an increased prevalence of carcinoma of stomach, colon, rectum, and oesophagus in occupationally exposed workers, particularly in insulators. There is no evidence at present of an increased risk of cancers from asbestos fibres present in water, beverages, food or in fluids used for the administration of drugs. The evidence is difficult to establish since the incidence of gastrointestinal cancers varies both in time and place.

In addition the geographical prevalence of gastrointestinal tumours usually is not consistent with asbestos exposure; so exposure to asbestos even if assumed to be associated with gastrointestinal carcinomas could be regarded as only one of the causal factors.

- Mesotheliomas. Pleural mesotheliomas arise in the superficial (mesothelial) layers of the pleura, and peritoneal mesotheliomas in the mesothelial layers of the peritoneum. The majority of pleural mesotheliomas are occupationally or para-occupationally related to past exposure to asbestos; a certain proportion of pleural mesotheliomas do not appear to be so related. It is uncertain whether these are caused by other agents or undetected previous exposure to asbestos, but it would be unusual for a tumor type to be associated with only one factor.

There is general agreement that the risk of pleural mesotheliomas is fibre related in the order crocidolite > amosite > chrysotile > anthophyllite but the magnitude of the difference between, for example, crocidolite and chrysotile is not well established.

Peritoneal mesothelioma is probably only related to rather intensive occupational exposure.

Regional differences in incidence of mesothelial tumors in North America of from 1 to 6 cases per million inhabitants per year, appear to relate to sources of asbestos used in industry.

7. A number of factors such as the usually long term exposure, the changes in technical development and so in exposure over a period of time, the long latency period of asbestos induced tumors, the changes in methods of sampling and analysis make it very difficult, almost impossible to present reliable exposure levels, and so of quantitative exposure-response relationships.

With regard to occupational exposure a quantitative exposure response relationship is the basis of the present hygiene standards for the control of asbestosis but similar quantitative information does not exist for determining the risks of certain cancers which could be considered as due to exposure to asbestos.

However, there apparently exist qualitative exposure-response relationships since, with both increasing concentrations and increasing duration of exposure to asbestos, the health risk rises. Larger exposures are required to produce asbestosis and probably bronchial cancers than mesotheliomas. But the long latent period for induction of mesotheliomas

It is not known whether some groups or members of the general public have a higher susceptibility.

8. The presence of traces of asbestos in the lungs of the general population points to the possibility of a risk of asbestos related tumours, but it is not possible to come to a reliable quantitative assessment of the risk of asbestos related malignancies for the general public. Ambient air exposure of the general public is of an order of four to six magnitudes smaller than in well controlled industry. The small magnitude of this exposure of the general population may be sufficient to reduce the risk of tumours to a level that cannot be distinguished from the levels of tumours due to other causes.

Present evidence does not point to there being a threshold level of exposure, but there is very likely a practical level of exposure below which it will be impossible to detect any excess mortality or morbidity due to asbestos.

IV RECOMMENDATIONS

1. Mesotheliomas, especially of the pleura, are the cancers most closely related to occupational asbestos exposure and therefore most attention should be directed at establishing whether or not any occur in the general public as a result of environmental air pollution by asbestos.

To acquire this evidence requires:

- research to relate the burden of asbestos in the lungs to the occurrence of mesothelial tumours together with appropriate controls of those without these tumours;
- standardisation of diagnosis of the tumours by expert panels of pathologists and
- centralisation of information at a National and Community level in mesothelioma registers with the aim of providing essential information about secular and regional differences in incidence and material for further research into the exposure/effect relationships.

It is therefore recommended that:

- a panel continue in being on a Community basis to standardise the diagnosis of mesotheliomas,
- a harmonised Mesothelioma Register, including cartography, should be set up in the various countries of the EEC in accordance with criteria and procedures agreed upon by a panel of pathologists and epidemiologists,
- further information is gathered on the exposure/effect relationships by giving support to the further development of the means of identifying and measuring the amount of asbestos and other minerals in lung tissue. Well coordinated studies between Institutes within the Community are also required to establish the validity and accuracy of such sophisticated methods.

2. Asbestos dust should be reduced to the lowest practical levels in the general environment and this should first of all apply to crocidolite fibres. This requires:

- improved hygiene control in processing, industrial use, transport and disposal;
- the introduction of common codes of practice to achieve these improvements;
- that special attention is paid to unnecessary risks of exposure to asbestos dust by the general public.

The effect of such measures should be checked by a combination of biological and limited environmental monitoring.

3. Support should be given to the usage and development of substitutes, after careful evaluation of the economic and technical possibilities and of the health risks attached to them. High priority should be given to substitutes for application where sufficient control regarding dust emissions is difficult to maintain in practice.

4. Asbestos and asbestos-containing products should be clearly labelled where hazardous levels of dust are likely to occur; the sale of raw asbestos fibres to the general public should be forbidden.

5. The following studies should have priority:

- quantities and usage of asbestos-containing products,
- biological significance of physical and chemical properties of asbestos fibres and other mineral fibres,
- presence of asbestos bodies, asbestos and other mineral fibres in lung tissues in cases of mesothelioma,
- relationship between the presence of asbestos bodies and fibres in human organs, and, the cause of death and past exposure,
- relationship between the incidence of malignant tumours and exposure conditions,
- limited comparative study of the presence of asbestos fibres in air.