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Asbestos 1972

ENVIRONMENTAL PROTECTION MONOGRAPH SERIES

ASBESTOS

SCANNED BY MIDLAND CRI
FEB 1 9 1987

PREPARED BY
ECOLOGY COUNCIL TASK FORCE
THE DOW CHEMICAL COMPANY

March 1972

S10000891

DOW CONFIDENTIAL

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RECEIVED
MAR 16 1972
CRI MIDLAND

D) TOXICOLOGY

1) Animals - Two distinct diseases result from the inhalation of asbestos, (1) asbestosis, a fibrogenic disease of the lungs and (2) mesotheliomas, cancers of the lining of the chest and abdomen. A great many experimental studies have been carried out on laboratory animals in an effort to demonstrate the fibrogenic and tumorgenic properties of asbestos. Such experimental studies are complicated by many variables including the type and dimensions of the asbestos fibers administered; the contaminants present in the asbestos (e.g. trace metals and hydrocarbons); the route of administration; the species and strain of animal; the dosage; and the time following administration (latency period).

a) Experimental Asbestosis

Asbestotic pulmonary fibrosis (scarring of the lungs) has been produced experimentally in several species of animals, including rats, guinea pigs, hamsters, rabbits and monkeys. In these studies various modes of administration were used, the most frequent being inhalation, and single intratracheal or intrapleural injections. The slowly progressive diffuse pulmonary fibrosis observed in laboratory animals is considered to be the counterpart of the human disease. A striking feature in both animals and man is the very long latency period between exposure and evidence of the disease.

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Experimental asbestosis has been produced in one or more species by at least three forms of asbestos (chrysotile, amosite, and crocidolite). The role, if any, played by various contaminants

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Biochemical Research Laboratory

The Dow Chemical Company

2100

EXPOSURE TO FINE DUSTS ENCOUNTERED BY WORKERS CUTTING VARIOUS TYPES OF PIPE COVERING MATERIAL

File: T2.1-3-1
Date: July 21, 1965
By: E. J. Schneider

Signed E J Schneider Date 7/22/65

Checked H R Hyslop Date 7-22-65

PROBLEM

A question was raised by shop personnel after reading an article of the health hazards associated with exposure to asbestos. Is there a health hazard from asbestos in cutting various types of pipe covering material used at Dow Corning? The Environmental Research Laboratory was asked to evaluate the exposures to the fine dusts encountered by workers cutting the pipe covering material and to determine the possible health hazard.

CONCLUSIONS

1. Concentrations of total dust in excess of acceptable levels can be encountered by workers cutting pipe covering material both by hand and in using a table saw.

2. A total dust count or the number of particles per million cubic feet of air also exceeds acceptable levels at times.

3. The amount of asbestos fibers of significant length found within the dust exceeds 25 per cent of the fiber content.

ST0000568

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however, fibers constitute only 10 per cent of the total dust. The possibility that Dow Corning workers are being exposed to excessive amounts of asbestos fibers within the important fiber lengths (20-50 microns) is unlikely, however, it is advisable and prudent to have workers wear respiratory protection while cutting pipe covering material. This is especially true when using a table saw.

4. No one type of pipe covering material was found to have a significantly greater amount of asbestos fibers than the others. The Phillip Carey Fibercel material does produce considerable more fine dust than the others when cut.

ST0000569

ASBESTOS

In reviewing the literature(1) it is learned that the most common form of asbestos is known as chrysotile, a hydrous magnesium silicate containing from 12.5 to 14 per cent water of crystallization. There is another form of asbestos derived from amphibole which occurs as a variety of minerals consisting of iron, calcium and magnesium silicates with little water of constitution. This latter type of asbestos consists of shorter fibers but is more stable chemically than chrysotile and more resistant to acids and heat.

(1) Industrial Toxicology - L. T. Fairhall, pp. 19-21, 1957.

THE DOW CHEMICAL COMPANY

REPORT

NOTED
AUG 31 1951
D.E.I.

1951

INDUSTRIAL HYGIENE SURVEY OF VARIOUS OPERATIONS AT THE CHLORINE CELLS, BLDGS. 261, 196, 137, 295, 236, 270, 303, 207.

T34.21-21-3 (E)

ST0032448

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Signature_____ Date_____

I have read this copy of this report

Signature_____ Date_____

Signature_____ Date_____

BIOCHEMICAL RESEARCH DEPARTMENT

14. The millions of particles per cubic foot of air of asbestos was found to be higher than the maximum allowable concentration of 5 for an eight-hour exposure for the handling of dry asbestos in covering the cell diaphragms. Since the exposure occurs only eighteen times a day for a short period with a total exposure of less than two hours, the amounts of asbestos found cannot be considered excessive.

ST00324S2

CHLORINE

I. Significance of Chlorine Exposure

1. For many years a gas concentration of 1 p.p.m. (by volume) has been used as a standard for evaluating workmens' exposures. Recently there has been some expression of opinion that 2 or 3 p.p.m. could be tolerated up to 8 hours daily without adverse effect. Gas concentrations much above 3 p.p.m. unquestionably produce irritation (tissue injury) to the eyes, nose, and throat; concentrations above 10 p.p.m. may cause serious effects on single relatively short exposures. Beginning at about 3 p.p.m. chlorine causes unmistakable pain in the eyes, nose and throat to which very little tolerance develops. This painful action serves as an excellent warning of the presence of harmful concentrations of gas. There appears to be no evidence of chronic effects from repeated exposures at concentrations of less than 2-3 p.p.m. (concentrations having no immediate acute effects). Repeated exposures above 2-3 p.p.m.. however, may maintain an irritation of the eyes and respiratory passages, produce an erosion of the teeth, and possibly a nonspecific debility.

UNITED STATES DEPARTMENT OF JUSTICE
Immigration and Naturalization Service
American Consulate General
6 Frankfurt, Germany

FILE: A 17 998 195 DATE: March 22, 1971

IN RE: Otto AMBROS

APPLICATION: Temporary admission to the United States pursuant to section 212(d)(3)(A), Immigration and Nationality Act

The applicant has (have) been found by a [V] consular officer
[ ] immigration officer to be ineligible to receive a nonimmigrant visa under the following paragraph(s) of the Act: Section(s) 212(a)(19)

Nationality:	Date and Country of Birth	Country of Residence:
German	May 19, 1901, Germany	Germany

Occupation:	Employer:
Chemist	Self-employed

Purpose in seeking entry into United States and destination:
He has been invited by The Dow Chemical Company, Midland, Michigan, to present seminars in Midland, Michigan, and in Walnut Creek, California. He also intends to visit his son, Dr. Dieter H. Ambros, President of BASF System, Inc., Bedford, Mass.

Time requested: travel to United States and period of temporary stay:
Enter on or about May 8, 1971, and remain one month.

Basis for favorable action:
Normal tourist reasons.

ORDER: It is ordered that the application be granted for the above indicated purpose, subject to revocation at any time, valid as set forth below.

ENTRY: One, during May 1971.

PERIOD OF TEMPORARY STAY: One month.

CGF: sc

Cecil Peterson
Officer in Charge

Form I-194
(Rev. 1-1-65)

File Copy

WESTERN DIVISION
2800 MITCHELL DRIVE
WALNUT CREEK, CALIFORNIA
[illegible]

July 21, 1967

Dr. Otto Ambros
Kniebisstrasse 14
68 Mannheim, Germany

Dear Dr. Ambros:

It is a great pleasure to comply with your recent request for a letter in support of your pending application for a visitor's visa to the United States.

I should like to review our past relations from two angles. Our first meeting in 1945 was solely in my capacity as a member of an investigating team for the Chemical Warfare Service of the U. S. Army. The following meetings were in my capacity as a Research Director for The Dow Chemical Company, later as Technical Advisor to the president of Dow and finally as a Consultant.

During the early part of 1945, I was on leave from Dow to serve as a member of a team which, under the auspices of the Chemical Warfare Service of the U. S. Army, was to study the chemical industry of Germany, more particularly, in so far as it could be of interest to Chemical Warfare in the still active war with Japan. I had spent a good part of the month of May and June on investigations in the northern part of Germany and had returned to our headquarters in London to write my reports. While there an order reached me during July to immediately proceed to Heidelberg, Germany, for investigation of the large I. G. unit at Ludwigshafen, formerly B.A.S.F., then under American occupation. Shortly thereafter, this [illegible] was turned over to French occupation, and on my arrival in Heidelberg, the U. S. Army Command furnished me a letter of introduction to the French Commander at Ludwigshafen asking him to give me any assistance in my mission. You will remember that on my arrival in Ludwigshafen, the French Commander, Col. Weiss, immediately introduced me to you, telling me that you would be in the best position to furnish the information I needed.

One of our first discussions concerned the development of rocket fuel. You referred me to Dr. Wassmann, the liaison agent between the government laboratories Pessemunde and the I. G. specialists, who arranged an interview with Lt. Col. F. R. Tarr, the chief of the Intelligence Division for Chemical Warfare in Europe and myself, which resulted in obtaining complete and satisfactory reports. The next item was Chemical Warfare's interest in the nerve gases developed and manufactured by the Germans.

You undertook immediate steps to summon all technical personnel engaged in this development for meetings with Chemical Warfare officers and consultants which lasted several days and were conducted at Carbage-Court-Center at Kohlhof near Heidelberg. Complete and detailed reports on the chemical and engineering phases of this development were written by two of my colleagues, Dr. J. Kern and Mr. C. Panero, which have never been declassified. Another item of interest in my mission was the problem of synthetic rubber (Buna) developed and manufactured in several locations. Nobody would have been better qualified than yourself in this matter since it was well known that you had been connected with this development at its inception beginning, with a study of natural rubber in Malaya. The reports we received through your efforts were of great value to the subsequent development of synthetic rubber in the United States.

In addition to these specific Chemical Warfare items, we discussed many chemical developments, and it was only natural for me to tell you in parting that I would look forward after conclusion of the peace treaty in continuing our relations as a representative of Dow.

I returned to Europe in September, 1949, on another government mission as a delegate to an international meeting on "Raw Materials for Atomic Energy" held in London. At the end of the session, I visited the continent on matters of interest to Dow and my first stop was at Ludwigshafen. Unfortunately, as a result of the outcome of the Munich trials, you could not be present, but owing to my acquaintance with B.A.S.F. personnel in 1943, I had a most cordial reception. Within one year my visit was returned by B.A.S.F. personnel at Midland, Michigan, and I believe I can say that already then the groundwork was laid for a closer relations between Dow and B.A.S.F. resulting in 1956 in the organization of a joint company, "Dow-Badische."

From 1952 on, I had the assignment of taking annual and even bi-annual trips to Europe in Dow's interest. Our pleasant relations were soon shared by other Dow personnel and many fruitful meetings resulted from it. Only last year, Dow was fortunate in having you as their guest in Sarnia, the seat of its Canadian subsidiary. Moreover, it is a well-known fact that a man of your attainments has many other national and international connections in the industry.

In conclusion, I wish to express my conviction that your cooperation was of great benefit to the U. S. Army and the United States Government immediately after the war and subsequently to American industry in spite of the handicap of travel restrictions which I hope will be discontinued.

With personal regards,

Sincerely,

W. Hirschkind

WH/lr

UNITED STATES DEPARTMENT OF JUSTICE
Immigration and Naturalization Service
6 Frankfurt, Germany

FILE: A 17 998 195 DATE: March 22, 1971

IN RE: Otto AMBROS

APPLICATION: Temporary admission to the United States pursuant to section 212(d) (3) (A), Immigration and Nationality Act

The applicant(s) has (have) been found by a [X] consular officer
[ ] immigration officer to be ineligible to receive a nonimmigrant
visa under the following paragraph(s) of the Act: Sections 212(a) (10)

Nationality:	Date and Country of Birth:	Country of Residence:
German	May 19, 1901, Germany	Germany

Occupation:	Employer:
Chemist	Self-employed

Purpose in making entry into United States and destination:

He has been invited by The Dow Chemical Company, Midland, Michigan, to present seminars in Midland, Michigan, and in Walnut Creek, California. He also intends to visit his son, Dr. Dieter H. Ambros, President of BASF System, Inc., Bedford, Mass.

Plans regarding travel to United States and period of temporary stay:

Enter on or about May 8, 1971, and remain one month.

Basis for favorable action:

Humanitarian reasons.

ORDER: It is ordered that the application be granted for the above indicated purpose, subject to revocation at any time, valid as set forth below.

ENTRY: One, during May 1971.

PERIOD OF TEMPORARY STAY: One month.

cc: [illegible]

Cecil Peterson
Officer in Charge

Form I-194
(Rev. 5-1-69)

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