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PLAINTIFF'S EXHIBIT

CAP-1571

RE: MONTHLY ASBESTOS/HEALTH MAILING

July 15, 1971

CAPCO KIN 0001265

July 15, 1971

ASBESTOS/HEALTH

Attached are documents on this subject accumulated since our May 27 mailing.

I. MEDICAL PAPERS OF INTEREST AND IMPORTANCE

(Evaluation Sheets Only)*

"Guest Editorial: Asbestos Cancers," JOURNAL OF THE NATIONAL CANCER INSTITUTE, May 1971. J. C. Wagner

"Bureau of Occupational Safety and Health Epidemiological Studies in Mineral and Non-Mineral Fibers: A Progress Report," PROCEEDINGS: INDUSTRIAL HEALTH FOUNDATION ANNUAL MEETING, October 1970. L. J. Cralley

"Study of the Secular Trend in Asbestos in Lungs in London 1936-66", BRITISH MEDICAL JOURNAL, MAY 1, 1971
Um, Chang Hyun,

II. MEDICAL PAPERS OF SOME INTEREST

(Evaluation Sheets Only)

"The Synthesis of Tritium-Labeled Asbestos for Use in Biological Research, ENVIRONMENTAL RESEARCH, April, 1971.
A. C. Turnock, et al.

"Peritoneal Mesothelioma," BRITISH JOURNAL OF SURGERY, September 1970 - G. H. Roberts and R. W. Irvine.

"Pleural Plaques, Asbestosis and Exposure to Asbestos: An Epidemiological Study from the Hamburg Area," PNEUMONLOGIE (West Germany), October 30, 1970. P. Dalquein, I., Hinz, et al.

*Entire paper attached to sets addressed to those individuals who have asked to see the full text of important papers.

- More -

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"A Case of Late Silicosis with Pleural Mesothelioma,"
ACTA TUBERCULOSEA ET PNEUMOLOGICA BELGICA (Belgium),
May-August 1970. C. Thzolov and K. Kolev.

"Lung Tumors of Primates and Rodents: Part II. Inhalation
Experiments," INDUSTRIAL MEDICINE, May 1971.
G. W. H. Schepers.

"Determination of Iron, Chromium, Cobalt, Nickel and Scandium
In asbestos by Neutron Activation Analysis," AMERICAN INDUSTRIAL
HYGIENE ASSOCIATION JOURNAL, May 1971. A. Holmes, et al.

"Occupational Asbestos Dust Exposure and Obstructive Lung Disease,"
INTERNATIONALE ARCHIV FUR ARBEITSMEDIZIN (Germany), December 31, 1970,
H.J. Weitowitz.

"Occupational Asbestos Dust Exposure and Obstructive Lung
Disease," INTERNATIONALE ARCHIV FUR ARBEITSMEDIZIN (Germany)
March 1971. P. K. Caves and J. Jacques.

"The Association Between Asbestosis and A B O Blood Groups,"
ANNALS OF OCCUPATIONAL HYGIENE (British), March 1971. F. M.
Badr and El-Sewefy, A.Z.

"Effects of Chrysotile and Acid-Treated Chrysotile on Macrophage
Cultures," BRITISH JOURNAL OF INDUSTRIAL MEDICINE, April 1971
E. G. Beck, P. F. Holt, et al.

"Some Aspects of Pathogenesis of Asbestosis," POLISH MEDICAL
SCIENCE AND HISTORY, July 1970. K. Szymczykiewicz.

III. MEDICAL PAPERS OF MINOR INTEREST

Two Lists Describing these papers.

IV. SPRAYED ASBESTOS

Attached is a recently updated status report of the asbestos
spray situation across the country. Also attached is a clip
from the BOSTON GLOBE concerning city's decision to ban sprayed
asbestos, and a NEW YORK TIMES article of June 29 on the
national situation.

V. TALCUM POWDER

In late June, New York City Environmental Protection Adminis-
trator, Jerome Kretcher, based on information supplied by
Dr. Selikoff, launched an attack on talcum powder because of
its asbestos content. Attached is an article on the subject

accusation from Johnson & Johnson, as reported in the NEW YORK POST. Dr. Selikoff is quoted in this article as saying that "just because asbestos is present in the material doesn't mean it's necessarily dangerous it depends on how much there is and how much is respirable."

VI. ASBESTOS INFORMATION COMMITTEE (U.K.)

The Asbestos Information Committee and the Asbestos Information Association/North America have agreed to exchange minutes of their meetings. Attached are minutes from the AIC meetings of April 27 and June 22, 1971.

VII. SENATE BILL S-1479 - "TOXIC SUBSTANCES CONTROL ACT OF 1971"

The attached memo from Hill and Knowlton describes the proposed legislation. Hearings before the Senate Commerce Committee are slated for August 2, 4 and Dr. Wright has been approached (but not yet formally invited) regarding testimony about asbestos.

VIII. CITY OF CHICAGO

During his testimony at the Chicago spray hearing on May 20, Dr. Murray Brown, Commissioner of Health for the City of Chicago, indicated that he was planning to recommend standards for asbestos manufacturing within the city limits. The relevant page from the transcript of Dr. Brown's testimony is attached.

IX. POWER MAGAZINE

In July 1970, POWER Magazine accepted for publication an article written by Matt Swetonic based on information supplied by J. B. Jobe, Dick Stapleton and others in the Industrial Insulations Division. F. L. Pundsack recommended Walter Hesse from Research as the "author" of the article. The purpose of the article was to refute Dr. Selikoff by showing that insulation workers are today exposed to far less asbestos than they were 30-40 years ago, when they began developing the various asbestos-related diseases that Dr. Selikoff has found in his research. Dr. Selikoff has claimed that conditions and

exposures are the same today as they were 30 years ago.

The article was finally printed in the June issue of POWER, eleven months after its acceptance. While the printed article is considerably shorter than the submitted version, it nevertheless makes the major points contained in the original. A copy of the printed article is attached.

X. OTHER ITEMS

1. A copy of the latest edition of the IIHRP "Insulation Hygiene Progress Reports," which contains the controversial article by Bill Nicholson on TLVs in the insulation trade.
2. A Hill and Knowlton Environmental Health Unit Memorandum on Federal Occupational Safety and Health Administration efforts to alert businesses across the country to get ready to comply with the stringent terms of the new Occupational Safety and Health Act.
3. An article from MD magazine on asbestos/health. The author attended the AIA/NA press briefing in March and contacted J-M for additional information later that month. The IIHRP is described in the last column of the article and J-M is given credit for its efforts.
4. A column from the June 14 issue of the NATIONAL OBSERVER consisting entirely of quotes from Bill Raines' presentation at the AIA/NA press briefing.
5. Selected pages from the Second Annual Report of the Department of Community Medicine of Mount Sinai School of Medicine. Dr. Selikoff and a number of his research programs, including those sponsored by J-M, are mentioned in the report.
6. Transcript of discussion by Dick Cavett and Jerome Kretchmer of asbestos-spray and talcum powder situations on Cavett's nationally televised evening talk show July 8 on ABC-TV.
7. A page from the June issue of ASBESTOS magazine, mentioning the formation of the Asbestos Information Committee in the Benelux countries (J-M is listed as a member). The page also contains a brief description of the Spring issue of the IIHRP "Progress Report" (not the issue with Nicholson's article).

8. A press release from the AIC/UK on the establishment by the Asbestosis Research Council of an Asbestosis Research Council Foundation within the Institute of Occupational Medicine in Edinburgh.
9. An article from the Montreal GAZETTE decrying the exaggerated claims made about hazards to the environment by some doctors and reporters.
10. An article from the July 12 WALL STREET JOURNAL discussing Federal government thinking re a possible tax on pollution as a means of forcing industry to clean up its problems.
11. Various clips from Great Britain, Canada and New Zealand.
12. A calendar of upcoming medical meetings relevant to asbestos/health.



W. P. Raines

SUMMARY AND EVALUATION

Subject: Editorial review of the asbestos-cancer association. Of interest and importance.

Evaluation: This journal devoted to basic research in cancer notes that periodically it "will publish solicited guest editorials as a means of transmitting to investigators in cancer research the essence of current work in a special field of study." Much of the reviewed material here is very familiar, but there are some new observations by the author. He had obtained a pre-publication copy of the study of Quebec asbestos miners conducted by the McGill University team (recently evaluated) and comments concerning neighborhood exposure: "Despite the heavy general air pollution by chrysotile dust over many years, the crude death rates for lung cancer in the population of the two mining towns are less than the death rate for the Province of Quebec. No mesotheliomas were recorded in the mining population. On the whole, the situation was entirely different from that in the asbestos fields in the North West Cape." The author also offers a possible explanation of his own ambiguous findings on mesothelioma in South Africa: "The fibers of crocidolite mined in the North West Cape and Australia are much thinner and shorter than those of the crocidolite and amosite mined in the Transvaal and consequently have a much greater chance of reaching the pleura. This hypothesis could account for the high rate of pleural mesotheliomas in the North West Cape...compared to only one case in the Transvaal." It is noted that a forthcoming publication by the author presents data on the comparative pathogenicity of chrysotile from different mines.

Author: Wagner, J.C. (British Medical Research Council, Wales).

Journal: Journal of the National Cancer Institute, May 1971.

Title: "Guest Editorial: Asbestos Cancers"

Summary: As given above.

SUMMARY AND EVALUATION

Subject: Description of U.S. Public Health Service study on the health of asbestos workers, fiber glass workers and other workers in fiber manufacturing industries. Of interest and importance.

Evaluation: This very short presentation reveals that the study of asbestos factory workers includes 7,800 workers in 30 different plants manufacturing various types of asbestos products. The group receiving the most attention initially are asbestos textile workers who generally have the heaviest exposure to dust. "Around 1,800 asbestos textile workers have been studied. This baseline study will be completed by the summer of 1971 and will include an estimated 2,500 workers. It is planned to have a report of these findings by late 1971."

Author: Cralley, L.J. (U.S. Public Health Service)

Publication: Proceedings: Industrial Health Foundation Annual Meeting,
October 1970. (published 1971)

Title: "Bureau of Occupational Safety and Health Epidemiological Studies in Mineral and Non-Mineral Fibers: A Progress Report"

Summary: As given above.

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SUMMARY AND EVALUATION

Subject: Incidence of asbestos bodies in lungs of London residents over a thirty-year period. Of interest and importance.

Evaluation: The author finds a progressive increase in the incidence of "asbestos bodies" each decade since 1936. However, he gives no recognition to the variety of possible sources for ferruginous bodies. Furthermore, his identification of so-called "asbestos bodies" is based on light microscopy, offering inadequate identification of the central core. In relating his finding of increased incidence of ferruginous bodies to increased use of asbestos products over the same decade, his study contradicts the similar study of Selikoff and Hammond, who reported in 1969 "no significant difference in the percentage of cases having asbestos bodies in 1967 or 1934" in New York City. The present author mentions the Selikoff study in passing, but fails to note the contradictory findings.

Author: Um, Chang Hyun (Brompton Hospital, London)

Journal: British Medical Journal, May 1, 1971

Title: "Study of the Secular Trend in Asbestos Bodies in Lungs in London 1936-66"

Summary: "Thick sections (30 microns unstained) cut from blocks of lung tissue from 100 consecutive necropsies for the years 1936, 1946, 1956, and 1966 at the Archway Hospital, London, have been searched for asbestos bodies. The incidence rose progressively -- 0, 3, 14, and 20% respectively."

SUMMARY AND EVALUATION

Subject: Preparation of radioactive "tagged" chrysotile for use in animal experimentation. Of some interest.

Evaluation: This paper is at least potentially important, in that the radioactive asbestos could be used for lung clearance studies, on which there are no conclusive data. The authors mention this use of the material, but did not conduct any specific studies themselves. The present paper is restricted to a discussion of the preparation and the characteristics of the synthesized chrysotile.

Authors: Turnock, A.C., Bryks, S. and Bertalanffy, F.D. (University of Manitoba, Winnipeg, Canada)

Journal: Environmental Research, April 1971

Title: "The Synthesis of Tritium-Labeled Asbestos for Use in Biological Research"

Summary: Natural chrysotile was maintained in the presence of tritiated water at 300 degrees for 20 days in order to produce an exchange of structural hydroxyls with tritium-oxyls. This procedure yielded well-labeled, needle-shaped material which could be used in accurately locating the fibers in lung tissue. "Moreover, the feasibility of measuring the clearance of asbestos from the lungs of animals suitably exposed to this dust could clarify the relative efficiency of pulmonary clearance of asbestos in relation to quantity or fiber size. Such information could contribute significantly to the understanding of the pathogenesis of asbestosis and the carcinogenic behavior of asbestos."

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SUMMARY AND EVALUATION

Subject: Four cases of peritoneal mesothelioma in a single year in one hospital in Glasgow, Scotland. Of some interest.

Evaluation: No explanation is suggested for the apparently high incidence of peritoneal mesothelioma in this hospital. However, the authors cite Thompson (1965) as authority for the possibility that mesothelioma may be increasing.

Case 1 -- An insulating worker who had worked for 44 years in the shipyards with "almost daily" exposure to asbestos.

Case 2 -- A housewife, with no history of exposure to asbestos. However, "scanty asbestos bodies" were found in the lungs on necropsy.

Case 3 -- A "labourer," who, when closely questioned gave "a history of exposure to asbestos for the previous six years and scanty asbestos bodies were found in the sputum."

Case 4 -- A housewife, with no history nor evidence of asbestos exposure. A necropsy was not performed.

Authors: Roberts, G.H. and Irvine, R.W. (Southern General Hospital, Glasgow)

Journal: British Journal of Surgery, September 1970

Title: "Peritoneal Mesothelioma"

Summary: As given above.

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SUMMARY AND EVALUATION

Subject: Study of pleural plaques and asbestos exposure in Hamburg, Germany.

In German with English summary. Of some interest.

Evaluation: Puts the phenomenon of pleural plaques in perspective as a "specific 'fossil' indicating an endemic asbestos exposure in certain populations." The authors say that pleural plaques should not normally be compensable as an occupational disease, but all cases should be registered, as a possible "basis for further prospective studies on the etiology of pleural mesotheliomas."

Authors: Dalquen, P., Hinz, I. and Dabbert, A.F. (Hamburg-Harburg General Hospitals)

Journal: Pneumonologie (West Germany), October 30, 1970

Title: "Pleural Plaques, Asbestosis and Exposure to Asbestos: An Epidemiological Study from the Hamburg Area"

Summary: "The following results have been obtained by an investigation of 133 cases of pleural plaques and 145 cases of asbestosis:

"In Hamburg, occupational and endemic exposure to asbestos seem to be the main causes of pleural plaques. Out of 92 cases of pleural plaques with dust history, 34 were occupationally exposed, 22 domestically, 21 by urban dwelling and 10 by multiple causes.

"The development of pleural plaques depends on

1. the space of time following the first exposure (at least 25 years). The 'latency period' between first exposure and initial diagnosis has been found to be 40.2 years in cases of plaques, 36.1 in cases of asbestosis with plaques, and 27.1 in cases of asbestosis without plaques.

2. an unknown 'initial dosis' of inhaled asbestos. On the other hand, the degree of asbestos fibrosis is influenced by the duration of exposure. Pleural plaques and mesotheliomas are apparently caused by similar dust conditions, as both may co-exist with and without fibrosis."

SUMMARY AND EVALUATION

Subject: A case of pleural mesothelioma with concurrent silicosis and a history of radiation exposure. In French. Of some interest.

Evaluation: The Bulgarian authors note that their experience indicates an elevated incidence of lung cancer among silicosis patients. However, this appears to be the first case of a mesothelioma associated with silicosis. They briefly review the literature on asbestos and mesothelioma, noting the well-documented phenomenon of endemic pleural plaques presumably due to asbestos in the soil in certain parts of Bulgaria. This endemic "asbestosis" is not accompanied by pleural mesotheliomas. Given these circumstances they say that "a great theoretical interest is presented" by the case under discussion. The patient had worked for ten years as a uranium miner "in contact with quartz dust in the sphere of action of ionized radiation... Since 1959 he had no further contact with asbestos dust, he did not live in a region of endemic asbestosis, and there was no asbestos industry in the neighborhood." In 1959 a diagnosis of silicosis was made, and in 1968 pleural mesothelioma. The authors say: "The radiation is considered as an added factor producing a pleural mesothelioma in a subject suffering from late silicosis."

Authors: Thzolov, C. and Kolev, K. (Sofia, Bulgaria)

Journal: Acta Tuberculosea et Pneumologica Belgica (Belgium), May-August 1970

Title: "A Case of Late Silicosis with Pleural Mesothelioma"

Summary: As given above.

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SUMMARY AND EVALUATION

Subject: Animal inhalation experiments with substances encountered in industry including tremolite and chrysotile asbestos. Of some interest.

Evaluation: This is Part II of an article dealing with the effects on animal lungs of 266 industrial chemical substances. Part I consisted of an introduction; Part III will discuss intratracheal injection experiments. The data on specific substances are given here only in tables, and there is no discussion concerning the health effects of asbestos. The most interesting facts emerging from the tables are that neither pure chrysotile nor tremolite produced cancers in any animals, and that tremolite produced a significantly greater number of noncancerous lung lesions compared with chrysotile when inhaled.

Authors: Schepers, G.W.H. (Department of Health, Washington, D.C.)

Journal: Industrial Medicine, May 1971

Title: "Lung Tumors of Primates and Rodents: Part II. Inhalation Experiments"

Summary: Data on asbestos are as follows:

Tremolite -- Pulmonary lesions observed in 69 percent of 18 rabbits, 40 guinea pigs and 30 rats. No indication of the concentration nor the expected percentage.

Ball Milled Chrysotile -- No lesions observed in rabbits, guinea pigs, rats or mice.

Long Fiber Chrysotile -- Lesions observed in 53 percent of 50 guinea pigs, 30 rats, 12 cats, 20 mice. Expected, 5 percent.

Short Fiber Chrysotile -- Lesions observed in 10 percent of 40 guinea pigs, 30 rats, 20 mice. No indication of expected percentage.

Chrysotile + Beryllium -- In 30 rats, 16 noncancerous lesions were observed, 7 expected, also 2 neoplasms.

SUMMARY AND EVALUATION

Subject: Analysis of trace metals present in different types of asbestos.
Of some interest.

Evaluation: Generally confirms the 1968 study of Cralley et al. Of all types of asbestos crocidolite is lowest in trace contaminants of the carcinogenic metals, chromium, nickel and cobalt. Canadian chrysotile, African chrysotile and Finnish anthophyllite all contain about ten times as much of these trace metals as crocidolite and amosite. However, experience suggests that crocidolite is the most dangerous type of asbestos. Whatever its cause, the generally accepted higher malignancy of crocidolite is apparently not due to chromium, nickel or cobalt. On the other hand, crocidolite and amosite contain about eight times as much iron as chrysotile and anthophyllite. The technique used by the present authors permitted them to determine also that the experimental milling method used in preparing the samples did not appreciably alter the content of trace metals.

Authors: Holmes, A., Morgan, A. and Sandalls, F.J. (British Atomic Energy Research Establishment, Harwell, England).

Journal: American Industrial Hygiene Association Journal, May 1971.

Title: "Determination of Iron, Chromium, Cobalt, Nickel and Scandium in Asbestos by Neutron Activation Analysis"

Summary: As given above.

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CAPCO KIN 0001279

SUMMARY AND EVALUATION

Subject: Study of the relationship between asbestosis and bronchitis or obstructive lung disease. In German with English summary. Of some interest.

Evaluation: The author finds that the prevalence of chronic bronchitis is no higher among asbestos factory workers than among the general population not exposed to asbestos dust. The findings are not inconsistent with those of Gross (1969 and 1971) who reported a negative association between pneumoconiosis and emphysema in experimental animals.

Author: Weitowitz, H.J. (University of Erlangen-Nuremberg, Germany).

Journal: Internationale Archiv fur Arbeitsmedizin. (Germany), December 31, 1970.

Title: "Occupational Asbestos Dust Exposure and Obstructive Lung Disease"

Summary: Because of the disagreement in the medical literature on the frequency of bronchitis and obstructive lung disease in asbestosis the author has investigated nearly 500 working or retired employees of one of the biggest asbestos processing factories of the German Fed. Republic by means of body plethysmography and spirometry. The results do not admit the assumption, that obstruction increases with the length of exposure or with the grade of asbestosis of the lung. Airway obstruction and resistance respectively were in no group significantly higher than in comparable populations without asbestos exposure and in cases with asbestosis the frequency of increased resistance did not increase with the higher grades of lung disease. Single cases of asbestos exposed persons with airway obstruction give reason to discuss as possible factors insufficient predisposition of the airway system, superinfection and smoking habits."

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SUMMARY AND EVALUATION

Subject: A very rare type of cancer occurring coincidentally with asbestosis and arthritic disease. Of some interest.

Evaluation: Primary neurogenic sarcoma of the lung is such a rare tumor that only five other cases have been reported in the literature. This case occurred in a former shipyard worker who had concurrent asbestosis. There has been no previous association between the sarcoma and asbestos exposure, and the present authors do not suggest that an association necessarily exists. However, they point out that the patient's asbestosis had initially misled them into diagnosing the sarcoma as a pleural mesothelioma. Besides asbestosis, the patient had an arthritic disease, pulmonary osteoarthropathy. It is noteworthy that pulmonary osteoarthropathy has been reported in at least one case concurrently with pleural mesothelioma.

Authors: Caves, P.K. and Jacques, J. (Royal Victoria Hospital, Belfast, Ireland.

Journal: Thorax (British), March 1971.

Title: "Primary Intrapulmonary Neurogenic Sarcoma with Hypertrophic Pulmonary Osteoarthropathy and Asbestosis"

Summary: As given above.

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SUMMARY AND EVALUATION

Subject: Possible relationship between blood groups and susceptibility to asbestosis. Of some interest.

Evaluation: Among Egyptian asbestos factory workers, it was found that individuals with Type "O" blood have a greater likelihood of contracting asbestosis than do individuals with other types of blood. However, the authors note that their finding is "based on a relatively small sample and might not have been so marked if a larger number of patients had been available." Also, either the design of the study, or the choice of terminology, results in an ambiguous reference to "chronic bronchitis" as an additional factor.

Authors: Badr, F.M. and El-Sewefy, A.Z. (National Research Centre, Cairo, Egypt).

Journal: Annals of Occupational Hygiene (British), March 1971.

Title: "The Association Between Asbestosis and A B O Blood Groups"

Summary: "Eighty-one Egyptian workers in an asbestos-cement pipe factory, who exhibited either the clinical or the radiological signs of asbestosis, or both, were classified into the blood groups A₁, A₂, B₁, A₁B, A₂B and O. A group of 97 healthy workers in the same factory, with no signs of chronic bronchitis, were classified in the same way as controls... There was, however, a significantly higher proportion of individuals in group O among the workers showing clinical signs of asbestosis than in the controls, and this was more marked in patients showing both clinical and radiological signs."

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SUMMARY AND EVALUATION

Subject: Study of the bioeffects of chrysotile on living cells in a culture. Of some interest.

Evaluation: A highly technical investigation of the activity of chrysotile at the cell level. The effect of chrysotile on macrophage cells is changed by steeping the chrysotile fibers in hydrochloric acid for one week. This coats the fibers with a silica surface. (Hydrochloric acid is the principal digestive acid in the stomach.)

Authors: Beck, E.G., Holt, P.F. and Nasrallah, E.T. (Universities of Dusseldorf, Germany, and Reading, England).

Journal: British Journal of Industrial Medicine, April 1971.

Title: "Effects of Chrysotile and Acid-Treated Chrysotile on Macrophage Cultures"

Summary: As given above.

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SUMMARY AND EVALUATION

Subject: Study of the mode of action by which chrysotile fibers produce asbestosis in experimental animals. Published in Poland in the English language. Of some interest.

Evaluation: A highly technical paper, describing a series of experiments with guinea pigs, rabbits and mouse lung tissue exposed to various crystalline dusts, including crystalline chrysotile, compared with "amorphous" chrysotile. The author explains that "Amorphous chrysotile was obtained by exposing crystalline chrysotile to the temperature of 1,000 degrees C. for 10 hours." He concludes that "a marked similarity exists in biological action of quartz and chrysotile and that the crystalline structure of these fibrogenic particles is responsible for their noxious effect. Therefore, it is quite probably that the radiological and histopathological differences encountered in cases of pulmonary fibrosis may depend on the various crystalline structures of the fibrogenic particles."

Author: Szymczykiewicz, K. (Institute of Industrial Medicine, Lodz, Poland)

Journal: Polish Medical Science and History, July 1970

Title: "Some Aspects of Pathogenesis of Asbestosis"

Summary: As given above.

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MEDICAL PAPERS OF MINOR INTEREST

The following medical papers have been screened and filed, but judged of insufficient interest to warrant full summary and evaluation:

Schepers, G.W.H., "Lung Tumors of Primates and Rodents (Part I)," Industrial Medicine, April 1971. Part One of a three-part review of experimental lung cancers induced in animals by exposure to 266 chemical substances, including asbestos. The author begins by noting his personal observations of 330 lung cancers in industrial workers, of which "the highest prevalence (22) was clearly among persons exposed to asbestos dust. Factory workers showed higher prevalences than did asbestos miners."

Hurlburt, J.F. and Schulson, N.G., "Study of Asbestos Workers in British Columbia," B.C. Medical Journal, March 1971. The very small number of Canadian insulation workers studied (33) "failed to disclose any cases of asbestosis, pleural plaques or malignancy."

Stoebner, P., Miech, G., Sengel, A. and Witz, J.P., "Basic Structural Elements of the Pleura - Mesotheliomas," La Presse Medicale (France), June 24, 1970. In French. A detailed pathological discussion. No mention of asbestos.

Viganotti, G. and Volterrani, F., "Mesothelioma of the Pleura," La Radiologica Medica (Italy), March 1970. In Italian. Five cases are discussed. The English-language literature on the asbestos association is briefly reviewed. However, the authors note: "In none of our patients was a previous exposure to asbestos demonstrated."

Prinos, G., "The Solitary Pleural Mesothelioma," Roentgenblätter (Germany), September 1970. In German with English summary. "The most recent pathological concepts are described of primary tumors of the pleura, which nowadays for practical purposes are assumed to be mesotheliomas. The difficulties of arriving at a definite diagnosis are indicated." No mention of asbestos.

Gracey, D.R., "Pulmonary Complications of Asbestos Exposure," Chest, January 1971. A clinical conference in pulmonary disease is devoted to a case of pleural mesothelioma in a former asbestos factory worker. The literature is briefly reviewed.

El-Sewefey, A.Z. and Hassan, F., "Immunoelectrophoretic Pattern Changes in Asbestosis," Annals of Occupational Hygiene (British), March 1971. Abnormal conditions of blood serum were found in 33 Egyptian asbestos factory workers; decreased albumin fractions and increased immunoglobulin fractions. "No correlation was found between these changes and the period of exposure or the degree of asbestosis."

El-Sewefey, A.Z. and Hegazi, S.M., "Serum Proteins and Amino Acids in Asbestosis," Annals of Occupational Hygiene (British), March 1971. Higher than normal amino acids and proteins were found in the blood serum of 29 Egyptian asbestos factory workers. "This suggests that the inhalation of asbestos and other dusts may lead to a disturbance of protein metabolism."

Valentin, H. and Weitowitz, H.J., "Asbestos as a Health Hazard: Importance, Environmental Risk and Prognosis," Fortschritte der Medizin (Germany), November 26, 1970. In German with English summary. A brief review and commentary, stressing "the need for further investigations of the biological effects of small amounts of inhaled asbestos dust."

Woitowitz, H.J. and Valentin, H., "Asbestos as a Health Hazard: Pathogenesis and Alveolo-Capillary Block Syndrome," Fortschritte der Medizin (Germany), November 26, 1970. In German with English summary. The authors investigated blood oxygen levels in persons exposed to asbestos. "They examined some 100 current and 30 retired male and female workers, and in a field study 314 male workers." They found no changes in blood oxygen levels "related to duration and level of exposure, or even to degree of radiological asbestosis."

Woitowitz, H.J., Schacke, G. and Voitowitz, R., "Estimation of Dust Hazard Ranges and Occupational Epidemiology," Staub-Reinhaltung der Luft (Germany) 30, 1970. In German with English summary. A method for estimating the health hazards from dust exposure considering the two factors of intensity and duration of exposure. The health hazard incurred by an individual worker at a given time could thus be graded on a scale ranging from zero upwards.

MEDICAL PAPERS OF MINOR INTEREST

The following medical papers have been screened and filed, but judged of insufficient interest to warrant full summary and evaluation:

Lynch, J.R., "Environmental Sampling and Analysis of Particulate Matter: Asbestos," Proceedings: Industrial Health Foundation Annual Meeting, October 1970 (published 1971). A repetition of the author's previously published work on this subject.

Balzer, J.L., "Fibrous Aerosols and Size-Selective Sampling," Proceedings: Industrial Health Foundation Annual Meeting, October 1970 (published 1971). Material previously presented at the International Symposium on Inhaled Particles, London, September 1970.

Utidge, H.M.D., "Fibrous Glass Manufacturing and Health: Report of an Epidemiological Study: Part I," Proceedings: Industrial Health Foundation Annual Meeting, October 1970 (published 1971). Material previously presented at the IHF Fibrous Dust Seminar, November 1968.

Hook, H.L., Morrice, G. and deTreville, R.T.P., "Fibrous Glass Manufacturing and Health: Results of a Comprehensive Physiological Study: Part II," Proceedings: Industrial Health Foundation Annual Meeting, October 1970 (published 1971). Part II of above, and data also previously covered.

Karasu, N., Akyol, T. and Alper, D., "Malignant Pleural Mesotheliomas," Tip Fakultesi Mecmuasi (Turkey), 23 (3), 1970. In Turkish with English summary. Clinical report of 13 cases in Turkey 1952-68. The English summary does not mention the asbestos association, but the Turkish text does mention the "Anglo Amerikan literaturude aspestozis," and the bibliography includes several of the familiar studies. Apparently, the authors have no information on possible asbestos exposure among their own cases.

Kiroglu, Y., "Pleural Mesothelioma," Tip Fakultesi Mecmuasi (Turkey), 32 (1), 1969. In Turkish with English summary. Another clinical-pathological discussion of six cases in Istanbul. No apparent mention of the asbestos association.

Schepers, G.W.H., "Lung Tumors of Primates and Rodents: Part III, Morphology," Industrial Medicine, June 1971. Although the strong association between asbestos exposure and human cancer was mentioned in Part I of this paper, subsequent installments have shed no light on the subject. The final part does not even mention asbestos.

Galphin, R.L., "Pulmonary Function Tests in the Early Recognition and Control of Industrial Pulmonary Disease," Industrial Medicine, June 1971. The author says: "This paper is more an editorial comment... than a scientific presentation of original research." One brief paragraph discusses asbestosis.

Medical Papers of Minor Interest -- Page 2

Harington, J.S., Miller, K. and Macnab, G., "Hemolysis by Asbestos," Environmental Research, April 1971. Additional observations by the authors on their highly specialized study of the destruction of red blood cells by asbestos.

Skikne, M.I., Talbot, J.H. and Rendall, R.E.G., "Electron Diffraction Patterns of the UICC Samples," Environmental Research, April 1971. The electron diffraction patterns of the three amphibole types of asbestos, amosite, crocidolite and anthophyllite, closely resemble each other, but may be differentiated. Chrysotile has a distinctive electron diffraction pattern.

Davis, J.M.G., "The Long Term Fibrogenic Effects of Chrysotile and Crocidolite Asbestos Dust Injected in the Pleural Cavity of Experimental Animals," British Journal of Experimental Pathology, December 1970. A highly technical detailed discussion of the differences in tissue response in rats, mice and guinea pigs subjected to intrapleural injection of chrysotile and crocidolite.

Davis, J.M.G., "Epithelial Outgrowths from Lung Tissue Following Intrapleural Injection of Asbestos Dust in Experimental Animals," International Journal of Cancer, March 15, 1971. Additional observations following the experiments noted above. These added observations concern activity at the cell level in guinea pigs injected with chrysotile.

Barbanti, A., De Guglielmi, F. and Cepollini, G.B., "A Case of Peritoneal Mesothelioma," Minerva Ginecologica (Italy), September 30, 1970. In Italian. The successful surgical and radiological treatment of a case occurring in a female aged 85. No mention of asbestos and no environmental history.

Humperdinck, C., "Occupational Lung Cancer," Medizinische Welt (West Germany), March 29, 1971. In German. A brief discussion of lung cancer caused by various kinds of industrial exposure. One paragraph devoted to asbestos.

Jagdschian, V., "Pleural Mesothelioma: Frequency and Treatment," Thoraxchirurgie (West Germany), October 1970. In German. Restricted to clinical aspects. No mention of asbestos.

Pfeiffer, W., "Asbestos and Bronchial Carcinoma," Arztliche Praxis (West Germany), December 5, 1970. In German. A review article. Notes that "asbestos exposure seldom results in bronchial carcinoma among non-smokers." The reference is an earlier German review citing the work of Selikoff.

Einbrodt, H.J., "Asbestos- and Pseudo-Asbestos (Ferruginous) Bodies," Hippokrates (West Germany), December 1970. In German. A brief, but thorough, review of the literature, including some early German references and concluding with the work of Gross and Cralley on the non-specificity of ferruginous bodies.

Panfilova, V.I. and Avstreikh, L.S., "A Case of Pleural Mesothelioma," Vestnik Rentegenologii y Radiologii (USSR), July-August 1970. In Russian. Not translated, but apparently a clinical discussion. No mention of asbestos.

Svirsky, E.L. and Kogan, F.M., "Dust Factor in the Heat Insulation Work Involving the Use of Asbestos-Containing Materials," Gigiena Truda y Professionalnye Zabolevania (USSR), December 1970. In Russian with English summary. Discussion with diagrams of the stripping of old insulation and the installation of new material. "The dust concentration reaches hundreds, and at times thousands, of milligrams per cubic meter... Among insulation workers that came under examination, three cases of suspected pneumoconiosis were singled out."

Troitsky, S.Y., Kuzminch, A.N., Andreyeva, T.D. and Bunimovich, G.I., "Hygienic Features of Working Conditions Prevailing at Production of Phenoplasts with Asbestos as Filling Material," Gigiena y Sanitariya (USSR), September 1970. In Russian. Not translated.

Kogan, F.M., Balagov, A.G. and Bunimovich, G.I., "Hygienic Assessment of the Magnesiaarfvedonsite Asbestos Production," Gigiena Truda y Professionalnye Zabolevania (USSR), October 1970. In Russian. Not translated.

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CURRENT STATUS
ASBESTOS SPRAY SITUATION
AS OF
JULY 7, 1971

1. LOCATION: New York City
STATUS: AIA/NA, NIMA and ACPA, and Sprayed Mineral Fiber Manufacturers association testified before City Council Environmental Control Sub-Committee on January 28. Dr. Selikoff testified at special hearing approximately one month later. According to the New York Times, City Council will vote on the new air pollution code, which contains the spray ban, sometime this month. Last month, Dr. Selikoff wrote a letter to Herbert Levine of the SMFMA, with copies to members of the New York City EPA, in which he reversed his opinion and came out in favor of a ban.
COMMENT: It appears likely that City Council will pass spray ban.
2. LOCATION: City of Chicago
STATUS: AIA/NA (F. L. Pundsack) testified before Chicago Committee on Environmental Control on March 3. Dr. Selikoff testified at same hearing. Second hearing was held March 23. Dr. G.W. Wright and Dr. Lewis J. Cralley testified. AIA/NA has complete transcripts of both hearings. Additional days of hearings were held on May 11 and May 20.
COMMENT: The Chicago City Council passed the Spray Ban in late May.
3. LOCATION: City of Boston
STATUS: AIA/NA, NIMA and ACPA, and SMFMA testified before the City of Boston Air Pollution Control Commission on March 5.
COMMENT: On May 12, the mayor of Boston promulgated a complete ban of asbestos spraying in the city.
4. LOCATION: City of Los Angeles
STATUS: On April 13, Cliff Sheckler of J-M, representing AIA/NA, NIMA and ACPA, participated in a round table discussion of a proposal by the City of Los Angeles Department of Building and Safety to ban sprayed asbestos by the unique method of cancelling the general approval for sprays containing asbestos.
COMMENT: The Department of Building and Safety announced a decision in May to halt asbestos spraying in Los Angeles.
5. LOCATION: State of Washington
STATUS: A bill was introduced into the State legislature that would have banned the use of all "asbestos slurries" throughout the state. We later learned that by slurry, they were specifically referring to sprayed asbestos. Our latest information is that the bill was not brought up for a vote before the end of the recent legislative session. It could, however, be reintroduced next session. A Hill and Knowlton representative in the state is watching this situation for the AIA/NA.

COMMENT: A decision on what should be done about this bill will be made if and when it is reintroduced into the state hopper.

6. LOCATION: City of San Francisco

STATUS: The City of San Francisco decided not to ban sprayed asbestos, but to regulate it. A series of regulations were put into effect in January of this year. Reports from the coast indicate that the City is pleased thus far with the regulations, and presently has no plans to go to a ban.

COMMENT: We were able to use the San Francisco decision in our presentations to other city and state governments looking to ban or regulate sprayed asbestos. Thus far, we have used it in Los Angeles, in the State of Washington and in the State of New York hearings.

7. LOCATION: City of Philadelphia

STATUS: AIA/NA, NIMA and ACPA, and SMFMA testified before the Philadelphia Board of Health on April 19 re a proposed ban. A number of people from Johns-Manville have worked long and hard with Philadelphia health officials on the problem, so we had some hopes of being able to influence their decision. At the end of the hearing it was announced that those who presented testimony would be notified of the Board's decision or of additional hearings, if the Board felt more were needed.

COMMENT: As in New York, political considerations have played a major role in the decision to ban in Philadelphia. While it is not certain, indications are that Philadelphia will elect to ban. The full Board of Health has not as yet acted on the proposed ban.

8. LOCATION: State of Illinois

STATUS: A very comprehensive regulation governing the use of asbestos has been proposed by the Illinois Pollution Control Board (attached). It would ban the use of asbestos-containing spray materials and would require strict regulations over spraying of any other substances.

COMMENT: The AIA/NA is investigating this situation thoroughly and is planning concerted effort re this regulation, particularly against that section of the regulation banning asbestos-containing brake linings.

9. LOCATION: State of New York (I)

STATUS: In May the New York State legislation passed a bill that would require the obtaining of a state permit for spraying. The bill has been signed by Governor Rockefeller.

COMMENT: Because of the greater importance of the proposed N.Y. State environmental Conservation Department ban on sprayed asbestos (see below), it was decided not to bother trying to influence this bill.

10. LOCATION: State of New York (II)
STATUS: The New York State Department of Environmental Conservation has proposed an addition to the existing air pollution code that would ban the use of asbestos-containing sprays throughout the state. Hearings on this proposal were held in New York City on May 4, in Rochester on May 6, and in Albany on May 10. The AIA/NA, and NIMA and ACPA presented testimony at the Albany hearing.
COMMENT: Our impression, based on the Albany hearing, is that the state will ban sprayed asbestos.
11. LOCATION: State of California
STATUS: The AIA/NA received a postcard request from the California Air Resources Board asking for information on the health effects of asbestos.
COMMENT: Under investigation.
12. LOCATION: State of Connecticut
STATUS: On April 13, Assemblyman Yedziniak introduced a bill into the State of Connecticut house of representatives that would have prohibited the use of fiber glass or asbestos on the inside of air duct systems. This would include sprayed plenums. C. L. Sheckler testified on behalf of NIMA at a public hearing on the bill on April 26 in Hartford.
COMMENT: According to Sheckler, the bill has been killed.
13. LOCATION: City of Detroit
STATUS: We have received indications from the Bureau of Industrial Hygiene, Department of Health, that they may shortly ban asbestos-containing spray. There is no indication of public hearings.
COMMENT: Under investigation.
14. LOCATION: United States of America
STATUS: We have learned that the asbestos section of the Federal Environmental Protection Agency air pollution emission standards, now being prepared by the EPA, may contain a ban of asbestos-containing spray insulations.
COMMENT: Under investigation

Matthew M. Swetonic