SMFMA
Dustgrams

October 23rd, 1968

Industrial Hygiene Foundation of America, Inc.
5231 Centre Avenue
Pittsburgh, Pa. 15232

Gentlemen:

We read with extreme interest the September, 1968 issue of Industrial Hygiene Digest. I would like to request four copies each of the following reports referred to in this particular issue:

1- #866- "The Method Use by the U.S. Public Health Service for Enumeration of Asbestos Dust on Membrane Filters."

2- #872- "Asbestos Bodies in the Lungs of Inhabitants of Milan".

3- #873- "Occupational and Non-Occupational Asbestosis in Finland".

4- #874- "The Work Environment of Insulating Workers".

These copies are required for distribution to the members of our Association.

Very truly yours,

Sprayed Mineral Fiber Mfgs. Assn.

H.L. Levine

HLL/RB

c.t. Mr. Binger
Mr. Stumpf
Dr. Lieff
Mr. Jenne

PLAINTIFF'S EXHIBIT WV-08732

PLAINTIFF'S EXHIBIT 9373.0

863 A Technique for Determining Penetration as a Function of Particle Diameter. M. Taheri and R. K. Barton. Am. Ind. Hyg. Assn. J. 29, 252-256 (May-June, 1968).

A technique has been developed for obtaining the relationship between particle penetration (or collection efficiency) and diameter from experimental data. A general mathematical treatment provides the means of utilizing size distributions into and out of the experimental system for computing exact point values of efficiency. Previously published methods employ a difference or averaging technique which gives collection efficiency over a range of particle diameters. A new experimental technique enables one to use the Gorts aerosol spectrometer with convenience and rapidity to provide the needed data. There are 7 references. --Authors' abst.

864 A Stochastic Model Describing Bacterial Aerosol Concentrations in Enclosed Spaces. D. R. Heldman. Am. Ind. Hyg. Assn. J. 29, 285-292 (May-June, 1968).

A mathematical model to describe the population of airborne bacteria in an enclosed space has been derived. The derivation is based on a stochastic immigration and death process with two assumptions: (a) The population is relatively uniform throughout the enclosed space, and (b) the population at a given point varies in a random manner primarily owing to air turbulence. Three distinct situations are considered in the presentation. The first is a region of finite time where the mean concentration in the space is increasing owing to generation within the space. A second situation involves a region with constant mean concentration as time approaches infinity. The third situation is one in which generation within the space has stopped and the mean concentration decreases to zero. The mathematical model has been verified by generating a population of airborne bacteria within an enclosed space and continuous monitoring of the concentration by air sampling. Parameters such as aerosol generation rate, ventilation rate of the space, settling rate of the aerosol particles, and die-away characteristics of the aerosol are accounted for. There are 6 references. --Author's abst.

865 A System for Appraising Airborne Populations of Pollens and Spores. P. L. Magill, E. D. Lumpkins, and Judith S. Arveson. Am. Ind. Hyg. Assn. J. 29, 293-298 (May-June, 1968).

This paper describes a rotating arm impinger system and a method for quantitatively transferring collected particulate matter to glass microscope slides for assessment. The collector system employs two vertical bars mounted parallel to the axis of a constant-speed battery-driven motor. A thin coating of Dow Corning 360 Adhesive on the bars serves to retain impinged particles. The collected particles are transferred by pressure contact to microscope slides that have been lightly coated with General Electric G-627 Silicone compound. The system has a sampling rate of 80 liters per minute. Measured collection efficiency was 44.2% for Paper Mulberry pollen 11-13 microns diameter and 69.5% for P. Graminis spores 14 x 24 microns. There are 6 references. --Authors' abst.

866 The Method Used by the U. S. Public Health Service for Enumeration of Asbestos Dust on Membrane Filters. G. H. Edwards and J. R. Lynch. Ann. Occ. Hyg. (London) 11, 1-6 (Jan., 1968).

Samples of airborne mineral dusts are collected by drawing air through cellulose ester membrane filters. Particles smaller than nominal pore size are retained. Varying sampling rate and filter holder controls the distribution of dust across the filter face. Samples are mounted on standard microscope slides using a high-viscosity solution of membrane filter material in a mixture of diethyl oxalate and dimethyl phthalate to render the filter transparent. The mount is stable for 28-30 days, but after this period, migration of the dust particles causes a loss of areal concentration. The grain and fiber dust particles, which lie on the surface of the filter, are counted with a phase contrast microscope, using 10X eye-pieces and 4mm "high-dry" objective. The field area is delineated with a Porton graticule. Count data is recorded in a form allowing data reduction and statistical analysis by electronic computer. The method, although not suitable to determine compliance with the threshold limit value for asbestos that was developed from a different enumeration method, is highly suited for developing data for a more precise recommendation of the limit for asbestos. --APCA Abst

871 Potassium Carbonate Inhalation for the Prevention of Pneumoconiosis. R. K. Melnichenko, et al. Gigiena i Sanit. 32, 119-123 (July-Sept., 1967). Russian.

The concentrations of potassium carbonate which were effective when the dust in the air was fairly high were determined and the possibility that such concentrations were harmless to the body on prolonged inhalation was investigated. Albino rats were used for the experiments. The first series of animals was exposed to quartz dust for 4 hr over a period of nine months. The remaining series were also exposed to dust but the second inhaled a 0.5% solution of potassium carbonate, the third series a 3% solution and the fourth series a 7% solution of potassium carbonate. The dust content in the chamber varied from 150 to 250 mg/m³. The inhalation of potassium carbonate before and after exposure to dust retarded the development of silicotic changes in the lungs of experimental animals. The inhalation of 1 and 3% solutions of K_2CO_3 for 4 months did not give rise to any pathological changes in the experimental animals. It is suggested that the inhalation of a 3% solution of K_2CO_3 be investigated under industrial conditions. --APCA Absts.

872 Asbestos Bodies in the Lungs of Inhabitants of Milan. I. Ghezzi, G. Molteni, and U. Puccetti. Med. lavoro 58, 223-227 (March, 1967).

The incidence of asbestos bodies in the lungs of 100 inhabitants of Milan (aged 25-83, 64 males) was studied by lung smears obtained at autopsy. None of the subjects was believed to have been occupationally exposed to asbestos. Asbestos bodies were found in 51 (51%) of the autopsies, with 54% of the cases observed in males, and 44% in females. The older subjects (older than 50) exhibited asbestos bodies more frequently than the younger subjects. No parietal pleural plaques or thickenings were found in any of a group of 65 subjects examined, 35 of whom were positive for the presence of asbestos bodies. --APCA Absts.

873 Occupational and "Non-Occupational" Asbestosis in Finland. Yant Memorial Lecture. L. Noro. Am. Ind. Hyg. Assn. J. 29, 195-201 (May-June, 1968).

In summary of the Finnish experiences concerning asbestos, we feel that: (1) Asbestos is a rather dangerous material to workers' health, just as hundreds of other agents are if they are not properly controlled in industrial use. We, however, are at present able to control it and make the use of it as harmless as the use of other dusts or toxic materials, even radioactive substances, might be. Every occupation has its health hazards, so also does the asbestos industry; as a part of the total health of workers, asbestosis can be reduced by modern industrial hygiene to a very small hazard. (2) We cannot agree with the recent "horror propaganda" such as was written in the London Sunday Times by Dr. Byrne that asbestos is, "Capable of killing not only the exposed workman but also perhaps his womenfolk and even people living near his place of work." If so, the population in the asbestos area of Finland would already be dead and nobody could live there. Still at present in the asbestos area the mortality rate from cancer and other malignancies is equal to the other rural areas of the country, although in the worker population the frequency of lung cancer might be somewhat higher. (3) As industrial hygienists we, however, have to continue our work to reach better and better hygienic conditions and dust control in places of employment as well as in the environment of factories and mines to safeguard the workers and general population.

--Author's summary cond.

874 The Work Environment of Insulating Workers. J. L. Balzer and W. C. Cooper. Am. Ind. Hyg. Assn. J. 29, 222-227 (May-June, 1968).

With the cooperation of the asbestos workers' union and insulating contractors, a study is being made of the environmental exposures and the health of insulating workers in the western United States. Surveys have been made in a number of work situations, including small commercial building, major industrial construction and marine operations. Major emphasis has been on exposures to asbestos-containing materials, fiber glass, cork, plastics, and adhesives. Trends in product usage are presented, as well as illustrative dust counts, based on membrane filter and impinger samples, for various components of the insulator's job, e.g., prefabrication, application, finishing, mixing and tearing out of old insulation.

--Authors' abst.

2-SMFMA-0751

INDUSTRIAL HYGIENE FOUNDATION OF AMERICA, INC.
5231 CENTRE AVENUE PITTSBURGH, PA. 15232

October 30, 196[illegible]

TO IHF MEMBERS

The enclosed program is to announce a highly technical research seminar on bioeffects of asbestos and certain other fibrous dusts to be held at Mellon Institute (Conference Room) on November 22, 1968 from [illegible]

The Fibrous Dust Seminar's scope, while broad, will be confined chiefly to research being conducted and supported within Mellon Institute, in certain of IHF's member companies, and in the IHF Research Laboratory located in the University of Pittsburgh, Graduate School of Public Health, Department of Occupational Health. Preliminary findings presented at this meeting will be reported at a later date in appropriate publications, in IHF Bulletins and/or the open literature.

The action of the Foundation's Board of Trustees, Staff and Advisors has helped catalyze development of bioeffects and health research in support of the asbestos industry, manufacturers of fibrous glass, abrasives and ceramic fibers of all types. In addition, basic knowledge has been gained of the nature and extent of ferruginous bodies in the general population, and of their significance.

The Fibrous Dust Seminar co-sponsored by IHF and Mellon Institute exemplifies the continuing interest in applying university-type knowledge and research methodology in the solution of pressing problems arising in industry, in this case related to a question with public as well as industrial health implications.

In view of public exposure to fear-generating articles such as that in the October 12 issue of The New Yorker, every IHF member and company in industry must be better prepared in the future to present factual information to demonstrate adequacy of its industrial hygiene controls of asbestos. The Foundation will be happy to assist its members in evaluating any questions of hazard to health from use of asbestos which may arise.

No registration fee is required for the Seminar; however, to attend the luncheon a $5.00 ticket must be purchased.

Please call IHF headquarters if additional information is required. Our new number is listed above.

Sincerely,

Robert T. P. deTreville, M.D.
President

deT:sjc
Enclosure

AN ASSOCIATION OF INDUSTRIES FOR THE [illegible]