

FILE NAME: Johns-Manville (JMA)

DATE: 1966-1968

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Environmental Problems

A. C. Smith

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APR 19 1976

Asbestos-environmental Problems
Status Report October-November 1966

LEGAL SERVICES

1. Packings and Friction Materials Division

Study of wear products from friction materials (J. Dec)

During the period October 1 through November 30, 1966 the wear dust collected from the special dynamometer enclosure was analyzed in detail. The results were unexpected in that asbestos fiber could be detected only by the electron microscope which indicated a maximum of 1.4 per cent by weight fibrous debris. This is in contrast to about 70 per cent by weight chrysotile fiber in the original friction material.

David Sinclair has accounted for the difference in fiber content by suggesting that high surface temperatures and severe abrasion convert the asbestos fiber into an amorphous mineral. He further demonstrates mathematically that the very high temperatures (2000F) required to break down fiber to this extent could be generated at the contact surface of a friction material even during "mild" braking in which the apparent temperature does not exceed 200F. This derives from the fact that the true area of contact in the friction couple is about one per cent of the apparent area.

From this work it would appear that the fear of large quantities of asbestos fiber being introduced into the atmosphere as part of the wear dust of friction materials is unfounded. However, the tests to determine the biological effects of such dust, regardless of its fiber content, are not complete, and we are therefore not in a position to draw final conclusions.

2. Pipe Division

A. An inexpensive inner coating for TRANSITE pipe (J. H. Swensen)

A development program (Project P-22) is under way to develop an "Improved Soft Water Coating for Potable Water Pipe." The present coating, based on asphalt, has become more and more unacceptable due to taste and odor problems. Efforts are being directed toward a clear coating which will not affect water quality. Polyterpene-type coatings have looked promising although their UV resistance now appears to be less than satisfactory. A coating developed within this program will have to be inexpensive and may fill the needs for a general TRANSITE pipe coating. It is hoped that the improved soft water coating can be commercialized in the first quarter of 1967.

B. Effect of water flow through TRANSITE pipe

A layout of a system for studying the effects of flow and water composition on TRANSITE pipe has been prepared, and an assignment has been placed on the Engineering Department. Probably this system will not be operational until the second quarter of 1967.

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JAN - 73

78.33.

December 13, 1966

3. Fiber Glass Insulations

Residue from flow of air through fiber glass ducts, etc. (G. J. Hannes) *Free- talk see who is doing? what.*

Initial tests run by the Kettering Institute with Owens-Corning Fiberglas duct indicated no measurable release of fiber into the air stream. Much more extensive tests are under way now in the O-C laboratories under the supervision of the Kettering Institute. Johns-Manville duct liners and duct board are part of these tests, which will include a variety of air flow conditions. Complete data will not be available until about March 1, 1967.

4. Building Products Division

*Geo. Clomby nothing -
Nagler started.*

A. Degradation products of asbestos felt built-up roofs (J. Q. Trice)

The Instrument Development Company of Reston, Virginia, a division of Resources Research, Inc., is preparing a preliminary engineering drawing and specifications for equipment which they propose for the actual weathering and collection of materials. Briefly the environmental chamber will consist of four components: (a) the mechanical chamber, (b) the radiation system, (c) the air handling system, and (d) the liquid handling system. Detailed information will be available from the Instrument Development Company by December 15. *we'd agree request*

We now believe that the actual samples for weathering will have to be prepared outside the environmental chamber because of the high concentration of material thrown from the hot asphalt and from working with the roofing felts. After the samples have been prepared, one will be exposed in the environmental chamber and a second exposed on the roof of the Research laboratory so that at least visual observations can be made comparing the performance of the two samples.

Materials produced or released during the weathering process will fall into three categories:

- (a) particulate - which will be collected on membrane filters
- (b) water-soluble - which will be picked up by the wash water which must also be put through a membrane filter in order to collect solids which are removed by washing
- (c) vaporized materials - which will be collected at the low temperature traps in the air circulating system.

B. Degradation products of asbestos-cement materials

A program for sampling and testing materials has been drawn up. The test program will include an examination of field-exposed material which has been in service for many years as well as laboratory exposure of products. In the case of field-exposed products, since shingles are partially exposed and partially covered in use, it is possible for us to obtain good reference samples and analyze the changes that have occurred to the exposed surface.

A preliminary examination of some vertically exposed normal-cured products after long exposure shows the following.

December 13, 1966

<u>Source of Samples</u>	<u>Products</u>	<u>Exposure Period</u>	<u>Thickness decrease during exposure, inches</u>
JM office building, Manville, New Jersey	Dry process shingles	1918-1964	0.003 to 0.020
JM plant, Nashua, New Hampshire	Dry process shingles	pre-1926-1966	0.001
JM plant, Nashua, New Hampshire	Flat TRANSITE	1921-1966	0.006
JM plant, Nashua, New Hampshire	Corrugated TRANSITE	1924-1966	0.012

The small amount of weathering exhibited by these products points up the need for very precise measurements in this test program.

5. Flooring Division

Wear products from flooring materials (J. Q. Trice)

Experimental work has not yet been started in this program.

6. General Company Research

Organic material in asbestos fibers (F. L. Pundsack)

Cape S Blue, packed in paper bags and in jute bags, was obtained from the Manville Pipe Plant, and the organic content extracted. The blue fiber packed in jute bags contained up to sixty (60) times as much organic material as did the fiber packed in paper bags. Jeffrey chrysotile packed in paper bags and in jute bags is being analyzed in the same way, and data will be available soon.

We are working with a company named Analtech to develop methods of identifying all the trace organic substances present in asbestos.

It may be of interest to note that in 1965 in the United States approximately five (5) times as much benz(a)pyrene was released in the form of cigarette smoke as was contained in all the asbestos used in this country for all purposes in the same year. Incidentally, more than one-half the benz(a)pyrene associated with asbestos was contained in the approximately 40,000 tons of imported blue fiber.

F. L. Pundsack

(Signature)

ae

C. B. Bm

cc: F. J. Solon - GHQ
K. W. Smith, MD - GHQ

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General Headquarters
December 21, 1966

F. J. Solon

ENVIRONMENTAL HEALTH TASK FORCE
December 21, 1966

1. Survey of Causes of Death of Retirees and Group Life Participants

This study is progressing, and the analysis and summary will be completed by January 15, 1967.

2. Dr. A. J. Vorwald - Wayne University, Detroit

The Wayne University Laboratory is continuing its preliminary examination of the analysis of the large volume air samples, as well as the animal tissue slides. A formal Research Proposal will be developed along the lines suggested by the results of these preliminary studies. Dr. Speil of our Research organization is collaborating with this group in the preliminary investigations.

3. National Insulations Manufacturers Association

The Association, through its Safety and Health Committee, of which Dr. Smith is Chairman, has initiated discussions with Dr. Cralley of the U. S. Public Health Service toward designing and implementing an industry-wide environmental health study.

C. L. Sheckler participated in the initial presentation of environmental control, injury prevention, and Workmen's Compensation to the first of a series of meetings with the Insulations Contractors Association's regional groups.

4. Industrial Hygiene Foundation Prospectus

This four-year study of the biologic effects of fibrous materials is under way.

5. U. S. Public Health Survey

The U.S.P.H.S. environmental study of the Asbestos Textile Industry is in process. Dr. Smith recently attended a meeting called by this group, at which asbestos research currently being conducted by many individuals and groups throughout the country was reviewed. The information from this conference will be summarized and reported on in the February Status Report.

cc: C. E. Burnett
R. M. Jackson
K. W. Smith, M.D.

C. W. HITE

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Research and
Engineering Center
December 30, 1966

Brake Decomposition Products Public Health Service

During a recent meeting on asbestos and health at the Public Health Service, I learned that the Public Health Service had performed brake wear studies utilizing dynamometer equipment at the American Brakes Shoe Company in Mahwah, New Jersey. These data were reported on April 8, 1966, to the Assistant to the Chief for Epidemiology and Field Studies, Department of Health by Jeremiah Lynch, Senior Sanitary Engineer, Engineering Section, Research and Technical Services Branch. Briefly, the results showed practically no fiber in the decomposition product at "test temperatures" up to approximately 400-500F. Sample evaluation was by electron micrograph.

When the "test temperature" approximated 700F in so-called panic stops, the overload condition apparently deteriorated the resin bond permitting fiber to be ripped out of the brake instead of being worn off. Approximately 15 per cent of the fiber was visible in this decomposition material. The results are summarized below.

Type of Brake	Test Condition	Per Cent Fiber
Disc brake	normal city driving	less than 5%
Bus brake	normal city driving	0
Auto brake	100-200F	0 (few fibers)
Auto brake	300-500F	less than 1%
Auto brake	600-700F	15%
Auto clutch	normal city driving	0
Bus brake	450-550F	0
Auto brake	400-600F	0 (few fibers)
Auto brake	100-300F	0
Bus brake	450-550F	0

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December 30, 1966

Mr. Lynch believes that the results clearly indicate that wear of brake linings is not a significant factor in contributing fiber to the atmosphere. He intends to publish his data as a brief note very shortly. I have invited him to visit the Research Center to review our results with you and have indicated that we would give him permission to quote our figures.

I believe that publication under the auspices of a government laboratory would be far more beneficial than by Johns-Manville. I shall notify you as soon as a firm date has been established for this visit.

Asbestos Decomposition Products
Public Health Service

During a recent meeting in Washington and New York, I learned that the Public Health Service is planning to conduct a study of asbestos decomposition products in the atmosphere.

S. Spell

BS/mmc

and Internal Services Branch. I am sure that the results of this study will be of great value to the Public Health Service.

F. L. Pundack

W. C. Streib

Dr. K. Smith, DHI

J. P. Leinweber

Attn: G. Helmschussel

From a study of the results of the study, it was found that the results of the study are as follows:

Sample	Test Results
Sample 1	100-3000
Sample 2	300-1000
Sample 3	600-700
Sample 4	normal city
Sample 5	450-550
Sample 6	400-600
Sample 7	100-300
Sample 8	450-550

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INDUSTRIAL HYGIENE FOUNDATION OF AMERICA, INC.

MELLON INSTITUTE, 4400 FIFTH AVENUE

PITTSBURGH, PA 15213

January 5, 1967

Dr. Kenneth W. Smith
Medical Director
Johns-Manville Corporation
22 East 40th Street
New York, New York 10016

Dear Ken:

I am sending you a slide of asbestos bodies that were collected from a small piece of lung of Frank Makovec, Industrial Hygiene Foundation Report A 60-9.

If you wish, I can send you a small vial containing a heavy suspension of asbestos bodies in dimethyl sulfoxide.

In addition to asbestos bodies, there are very many naked fibers and some mineral dusts.

I believe I am now in a position to isolate and concentrate the non-specific ferruginous bodies present in the lungs of urban dwellers.

With best regards.

Sincerely yours,

Paul Gross

Paul Gross, M. D.
Director of Research Laboratory

PG:cb

Enclosure

P. S. Our Proposal is in typing and will follow.

INDUSTRIAL HYGIENE FOUNDATION OF AMERICA, INC.

MELLON INSTITUTE, 4400 FIFTH AVENUE

JF PITTSBURGH, PA 15213

January 6, 1967

Dr. Kenneth W. Smith
Medical Director
Johns-Manville Corporation
22 East 40th Street
New York, New York 10016

Dear Ken:

Identification of Central Fibre of Tricorynus Bodian

Attached is Paul's Proposal for that part of Phase IV of the Foundation's Investigation of Fibrous Dusts in which industrial sponsorship is needed.

Please let us have your suggestions regarding Johns-Manville Corporation versus Quebec Asbestos Mining Association support. If there should be questions, please feel free to call Paul or me.

With best wishes for the New Year and kindest regards.

Sincerely,

Bob

Robert T. P. deTreville, M.D.
Managing Director

deT:cb
Enclosure
cc: Dr. Paul Gross

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INDUSTRIAL HYGIENE FOUNDATION OF AMERICA, INC.

MELLON INSTITUTE, 4400 FIFTH AVENUE

PITTSBURGH, PA. 15213

January 6, 1967

Dr. Kenneth W. Smith
Medical Director
Johns-Manville Corporation
22 East 40th Street
New York, New York 10016

Dear Ken:

Investigation of Central Role of Foreign-born Radiation

Attached is Paul's Proposal for that part of ~~Phase IV~~ of the Foundation's Investigation of Fibrous Dusts in which industrial sponsorship is needed.

Please let us have your suggestions regarding Johns-Manville Corporation versus Quebec Asbestos Mining Association support. If there should be questions, please feel free to call Paul or me.

With best wishes for the New Year and kindest regards.

Sincerely,

Bob

Robert T. P. deTreville, M. D.
Managing Director

deT:cb
Enclosure
cc: Dr. Paul Gross

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OWENS-CORNING FIBERGLAS CORPORATION

NEW YORK OFFICES • 717 FIFTH AVENUE • NEW YORK, NEW YORK 10022 • 759 3810

January 10, 1967

Dr. L. J. Cralley
U. S. Department of Health, Education and Welfare
Occupational Health Research and Training Facility
Bureau of State Services
1014 Broadway
Cincinnati, Ohio 45202

Dear Dr. Cralley:

In a conversation with Dr. K. W. Smith, he asked that I send to you the listed attachments regarding fibrous glass so that you could review and have in your files in the event any questions arise on this subject.

It is also understood that Jack Barnhart will send to you in the near future available reports of medical studies and investigations that have been conducted with fibrous glass.

It was indeed a pleasure to meet you at the recent committee meeting in New York and I hope we will have the opportunity to meet again and become better acquainted.

Very truly yours,

OWENS-CORNING FIBERGLAS CORPORATION

John Vyverberg
Director-Industry Relations

JV/c
attachments

cc: Dr. K. W. Smith - J-M
F. H. Edwards - Toledo
J. M. Barnhart - NIMA

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OWENS-CORNING
FIBERGLAS

Separate letters are attached from:

1. Lloyd B. Yepper, M.D.
Associate Director Kettering Laboratory
College of Medicine
University of Cincinnati
Cincinnati, Ohio
2. Robert T. P. de Treville, M.D., Managing Director
Industrial Hygiene Foundation of American, Inc.
Mellon Institute
Pittsburgh, Pa.
3. Dr. Paul Gress
Mellon Institute
Pittsburgh, Pa.
4. George W. Wright, M.D.
Head, Medical Research Department
Saint Luke Hospital
Cleveland, Ohio
5. John Vyverberg's - Director of Industry Relations - OCF
letter of December 27, 1966 to Mr. Robert W. Fuller, Coordinator
Architectural Services, The Board of Public Instructions
Administrative Annex, West Palm Beach, Florida.
6. Internal Owens-Corning Fiberglas bulletin of 6/1/66, itemizing
reports of medical studies and investigations that have been
conducted with fibrous glass.
7. Article from Volume 13, August 19, 1966 Architectural Environmental
Health by Doctors Keane and Zaven.

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UNIVERSITY OF CALIFORNIA, BERKELEY

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

Dr Cooper - 1681

SCHOOL OF PUBLIC HEALTH

EARL WARREN HALL
BERKELEY, CALIFORNIA 94720

January 26, 1967

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Kenneth W. Smith, M.D.
Medical Director
Johns-Manville Corporation
Twenty-two East Fortieth Street
New York City, New York 10016

Dear Ken:

I have your two letters of January 16 and will make one reply, hoping that it doesn't confuse those who do your filing.

The Academy meeting will be held in the San Francisco Hilton Hotel on February 8 to 10. I am enclosing a program which covers the time and gives the location of the sessions. I do not have a copy of my paper yet, as I have not prepared the final version; but I will see that you have one in advance of the meeting. What I propose to do is to review briefly the present evidence of the major health effects of asbestos and to point out the many gaps in our knowledge and the hazards of extrapolation. I will emphasize, however, my own feeling that it is not improper to speculate as to the significance of certain findings which we are in the process of studying. I will get this to you in more specific terms for your critique.

F The periodic health examination program to which you refer is that run by Dr. Morris Collen of the Permanente Medical Group. I am enclosing a reprint describing the setup. I talked to Dr. Collen this morning and understand that arrangements have been made for visitors on Thursday morning, February 9.

I am looking forward to seeing you; and if you will call me when you get into town, we can arrange to get together sometime on February 7. I hope you will be able to visit us in Berkeley.

Sincerely yours,

W. Clark Cooper, M.D.
Clinical Professor
Occupational Medicine

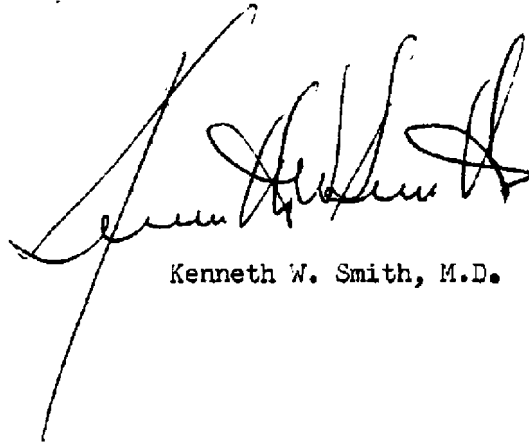
WCC:js
Enclosures (2)

7/6 4-3 30
Confidential

January 30, 1967

A. B. Marchant

I regretfully offer my resignation from Johns-Manville
for health reasons.



Kenneth W. Smith, M.D.

Produce

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SANTA BARBARA • SANTA CRUZ

SCHOOL OF PUBLIC HEALTH

EARL WARREN HALL
BERKELEY, CALIFORNIA 94720

February 2, 1967

Dr. Kenneth Smith
Medical Director
Johns-Manville Corporation
22 East 40th Street
New York, N. Y. 10016

Dear Ken:

I am enclosing a draft of the paper I will present next Wednesday at the American Academy of Occupational Medicine meeting. It is approximately as I plan to give it.

I will look forward to seeing you on Tuesday. We should have a chance then to talk over the work we are doing, and I can get your comments on the paper.

Best wishes.

Sincerely yours,

W. Clark Cooper, M.D.
Clinical Professor
Occupational Medicine

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WCC/18

Enclosure

Enclosure

46 phone N.C.E.* program does not have. xxx
Dr. Tabanahaw Bay ... H.G. Borky
D'Alonzo
Dr. Vigiani visiting - Dr. ...
to be 'documented'
(for proof)

Dr. W. J. Vorwald

-2-

February 7, 1967

The original sample was separated into fractions by sedimentation in water. The fractions were then analyzed for the presence of spherules with a scanning electron microscope. The individual particles in the fractions were, with a considerable fraction, about 10 microns in diameter. The material which was not sedimented was soluble material which was not analyzed.

For electron spectroscopy, February 8, 1967

removal of the water phase (Dictated February 7) by vacuum drying.

In this instance, the sample was dried in a vacuum oven.

Dr. W. J. Vorwald, Department of Occupational Medicine, Wayne State University, 100 Antonette Street, Detroit 2, Michigan. A few of the particles in the sample were spherules, but they constituted a small percentage of the total sample. Asking the person who collected the sample to provide a list of the materials in the sample.

Dear Dr. Vorwald: The material, but not the spherules, was analyzed.

We have completed our examination of the airborne dust sample which you had sent to our Dr. K. W. Smith. This sample was labeled as "Air-borne dust collected over a busy street intersection in Detroit". The methods used to examine this sample included X-ray diffraction, petrographic microscopy, and electron microscopy.

X-ray diffraction examination of the "as-received" sample showed the presence of gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$), quartz (SiO_2), and a trace of magnetite (Fe_3O_4). The presence of a considerable amount of non-crystalline material was indicated by the nature of the diffraction patterns. After the sample was heated to 1000°C , the following crystalline phases were detected: anhydrite (CaSO_4), quartz (SiO_2), hematite (Fe_2O_3), and traces of feldspar ($\text{Na}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 6\text{SiO}_2$) and cristobalite (SiO_2). The hematite and cristobalite are high-temperature reaction products of the magnetite and quartz, respectively. The feldspar may be the result of a reaction during heating, or it may have been present but not detected in the as-received sample.

Petrographic examination on the as-received sample showed the following materials to be present:

Glass (fly-ash, etc.)	- possible major
Quartz	- minor
Gypsum	- small
Opaque material	- minor
Carbonates	- small
Cellulose fiber	- trace

(rank of amounts: major > minor > small > trace)

John J. H. Research and Engineering Center

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Dr. H. J. Vorwald

-2-

February 8, 1967

The original sample was separated into coarse, medium, and fine fractions by sedimentation in water. More detailed petrographic examination of the medium and fine fractions revealed that the glassy component exists as agglomerates of spheroids with an overall diameter of 30 microns and below. The individual particles in the agglomerates range from 5 microns down with a considerable fraction below 1 micron. The quartz particles are about 10 microns and below. The fine fraction contained considerable water-soluble material which was identified as gypsum.

For electron microscopic examination the medium and fine fractions, after removal of the water solubles, were rubbed out by conventional methods in nitrocellulose. These micrographs, two of which are attached, showed irregular particles (mainly quartz), and spheroids ranging from 0.4 microns down. The latter fine particles frequently form agglomerates. There is also some very fine sealy or micaceous and some fine, irregular particles that could be carbon or gypsum. A few short fibrils which may be chrysotile asbestos were noted, but these constitute only a small fraction of 1 per cent of the total sample. Ashing the sample at 400°C seemed to reduce the incidence of very fine material, but otherwise had little effect on the appearance of the dust.

I hope that this information will be of some value to your research effort.

Very truly yours,

J. P. Leineweber
Chief, Basic Chemistry Research Section

cc: L. Pundack
E. Spell
R. C. Strick
H. M. Jackson, GHO
K. V. Lindell, AFD Asbestos

Johns-Manville Research and Engineering Center
P.O. Box 159
Manville, N.J. 08835

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JWA - 23



WAYNE STATE UNIVERSITY

SCHOOL OF MEDICINE

1400 CHRYSLER FREEWAY
DETROIT MICHIGAN 48207

DEPARTMENT OF OCCUPATIONAL
AND ENVIRONMENTAL HEALTH

February 8, 1967

Mr. Hugh Jackson
Johns-Manville Corporation
22 East 40th Street
New York, New York 10016

Dear Hugh:

You will recall the paramount reason for my visit with you last week was to clarify the status of certain studies which Dr. Ken Smith authorized us to conduct. The authorization was given verbally on a number of occasions, and especially after a letter of October 14, 1966, which was written by Dr. Ralph Smith, my deputy, while I was away in Europe and Tokyo. A copy of that letter is enclosed for your immediate reference. Subsequently, and in view of that letter, Dr. Ken Smith again verbally authorized us to proceed.

The enclosed letter outlines the concept of the study. Currently, we have completed cutting a large number of thick sections, which have been processed through various staining procedures and which have been studied microscopically. Smears of the lung have also been made and studied in order to detect the possible presence of fibers and/or bodies, either asbestotic or otherwise. Also, we have prepared a number of samples of airborne particulates collected by various means from the exposure rooms and from the outdoor air at street level. The preparations have been processed at different temperature levels in order to remove combustible organic material and to leave a residual of temperature-resistant particulates and fibers. These samples have been subjected to conventional light microscopy, phase microscopy and electron microscopy. Currently, enlarged photographs are being made for purposes of detailed visualization and counting. In a few days, all observations will be compiled for

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February 8, 1967

a comprehensive report to you. Incidentally, the studies were undertaken in consequence of views expressed at the Asbestos Conference in Antigua, last year.

In accordance with the enclosed letter of October 14, 1966, a figure of \$7,000.00, was given as the estimated budget. Irrespective of our expanded efforts, I will abide by that figure. Up to the present time, however, we have been financially supporting the study with limited funds, but I have verbally agreed to give overtime reimbursement to certain staff members for their efforts in behalf of the study. I did this, believing that such disbursements were proper on the basis that the total sum would be forwarded to me as a fee for consultation. In that regard, and in view of the circumstances, Hugh, I defer to the decision by you and your company. Above all, I do wish to avoid any embarrassment to you and your company. In any event, we will proceed toward completion of the study as originally conceived and authorized.

With all best wishes.

Sincerely yours,



Arthur J. Vorwald, Ph.D., M.D.
Professor and Chairman
Department of
Occupational and Environmental Health

AJV:dhs

enclosure

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JM - 83

October 14, 1966

Dr. K. W. Smith
Medical Director
John Manville Corporation
22 East 40th Street
New York, New York

Dear Doctor Smith:

Confirming our phone conversation I should like to describe the research effort to be carried out by our Department relating to the detection of asbestos bodies in animals not exposed to asbestos. Specifically over the past five years approximately 3,000 animals have been sacrificed and tissue specimens preserved for microscopic study. Approximately half of these animals have breathed outside air somewhat enriched in automotive exhaust products, while the other half have never breathed air containing particulate matter. It appears that it will be necessary to cut thicker sections than have already been cut and accordingly a representative number of animals tissue will be so treated. These thick sections will then be scrutinized to determine whether or not asbestos bodies are present. As a corollary study particulate matter which was removed from the air by filtration will be examined to determine whether or not asbestos fibers can be identified. We recognize, of course, certain experimental difficulties which may render it nearly impossible to be certain of the presence or absence of fibers and will welcome any technical guidance which your laboratories may offer. In this connection we are sending a sample of atmospheric dust and will be interested in your findings.

Although it is difficult to estimate the expenses, it is the opinion of Dr. Vorwald and myself that approximately \$7,000.00 will be required. In the event that the findings are sufficiently interesting, and we mutually agree that even more work is required, it is our understanding that you would favorably consider additional

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October 14, 1966

fundg upon request. In order that the work can be done more expeditiously we would suggest that funds be made payable to "Asbestos Study Project" Arthur J. Vorwald, Ph. D., M. D., Agent. A checking account will be opened with this designating and will of course be subject to audit at any time.

We look forward to carrying out this interesting study and hope that the results are informative. Perhaps when you see Arthur in Tokyo next week you may comp up with other ideas which will further enhance the scope of the study. Have a good trip.

Very truly yours,

Ralph G. Smith, Ph. D.
Professor
Department of Occupational
and Environmental Health

RGS:glg

cc: Mr. V Tokyo

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JM - 83

QUEBEC ASBESTOS MINING ASSOCIATION

c/o P. O. Box 189

Thetford Mines, Que.
August 15, 1968

Mr. A. B. Marchant,
Vice-President - Relations,
Johns-Manville Corporation,
22 East 40th Street,
NEW YORK, N. Y. 10016

Dear Mr. Marchant:

At the request of Mr. Karl V. Lindell,
we are enclosing a bank draft for US \$2,374.15 payable to the
order of Dr. Kenneth W. Smith to reimburse him for expenses
incurred in attending the meeting of the U.I.C.C. at Tokyo in
1966.

Yours very truly,

QUEBEC ASBESTOS MINING ASSOCIATION

Robert L. B. B.
Treasurer.

GR:ED

Copy to Mr. K. V. Lindell

66-20
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UNITED STATES POSTAL SERVICE
665 PLYMOUTH ROAD
AURORA, ILLINOIS 60005

June 25, 1968

Mr. A. B. Marchant
Vice President - Industrial Relations
Johns - Manville Corporation
22 East 40 Street
New York, N. Y. 10016

PRODUCED
JM - 83

Dear 'A B':

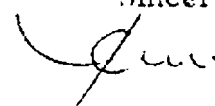
In 1965, Dr. Paul Cartier and I went to Europe at the request of the Quebec Asbestos Mining Association to evaluate industrial health centers in various countries, in order to recommend plans for the establishment of a similar center for the Association in Montreal. We visited several countries, many clinics, and duly reported.

At the request of the QAMA, Dr. Cartier and I went to Copenhagen, Denmark, in 1966, to attend the international meeting of the College of Chest Physicians. At this time, in the suite of Karl Lindell in the Hotel Royale, Dr. Cartier and I were asked to attend the international meeting on occupational health to be held in Vienna in September, 1966, and the international meeting on cancer in Tokyo in October, 1966. The travel schedule seemed to be too arduous, so it was recommended that Dr. Cartier should go to Vienna, and that I should represent the QAMA at the Tokyo and associated meetings. As requested, and accompanied by my wife, Marjorie, I went to Tokyo for the international conference and attended associated meetings on pulmonary physiology and pathology at other centers.

I obtained travel expense money from Johns-Manville and submitted my expense account to Karl Lindell and the QAMA in December, 1966. This was thoroughly discussed in the presence of Dr. Cartier, Mr. Ivan Sabourin, Dr. John Beattie, at our meeting when I reported December 17, 1966, at the hotel in New York.

Subsequently, our paths diverged and it appeared there was some confusion about the authority to use the funds for travel to the Orient. Now, after many months of reflection, I feel that I must re-submit my statement for expenses incurred in the name of the Quebec Asbestos Mining Association. I plan to do this, but first, I would appreciate your feeling on the method of doing so--you always have been a close friend and a good confidant, so I am seeking any suggestions or advice before submitting my statement to the QAMA. I do not wish to cause any embarrassment to you, whatsoever, because of our past association.

Sincerely,



Ken W. Smith, M.D.

May 3, 1968

Kenneth W. Smith, M.D.
The Brush Beryllium Company
17876 St. Clair Avenue
Cleveland, Ohio 44110

Dear Ken,

It was nice hearing from you again and I do appreciate your sending me a copy of "Medical Radiography and Photography." I found it to be very interesting and helpful.

I often think of you and hope you will contact me when you are next in this area. Hear indirectly about you and understand you are getting along fine. That is great and I am delighted to learn that things are going well for you now.

Please remember me to Marge.

Sincerely,

A. B. Marchant
Vice President for
Industrial Relations

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Kenneth W. Smith, M.D.
The Brush Beryllium Company
17876 St. Clair Avenue
Cleveland, Ohio 44110

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Sincerely,

A. B. Marchant
Vice-President for
Industrial Relations

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THE BRUSH BERYLLIUM COMPANY

17876 ST. CLAIR AVENUE

CLEVELAND, OHIO 44110

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5/22/68

Dear Hugh,

Many thanks for the birthday card - it was kind of you to remember. Also was good to see you in Pittsburgh if even for a few hours - incidentally, I wish the BTHF would start their meetings earlier in the morning. The same thought was expressed by others last time and I forced the word on to Bob. Most of us arrive the day or evening before and could start early the following morning. Transportation late Friday afternoon is the bane of Pitt for most people.

Here is an announcement of a meeting that I thought might interest you. Someone may want to follow up on what Selahoff says (see marked page). George Wright probably will refer to CTHF & the 11th floor for Lindell seems to like to

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have friend Irving in bed with the Q.P.M.A.
If I get anything else I'll let you know

Life is quieter and more serene with much less travel. Saw Ed Mendell's wife, Tom Douché & Van briefly in S.F.O. but I had to leave early unexpectedly to go to one of our jobber men - when I returned on Friday they all were gone.

Harj and I are going to the College of Blat Physicians meeting in S.F.O., leaving June 8 and stopping en route. Maybe I'll see some other of our mutual acquaintances and if there is any news I'll contact you.

Have seen Geo. Wright only once since last Fall - he seems to travel more every day - even Van (Ordetmund) wonders where he is. Hope he enjoys it.

Best regards

Jen

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7/15
June 28, 1967

Dr. Kenneth W. Smith
250 Riverside Avenue
Riverside, Connecticut 06878

Dear Ken:

I am aware of the fact that you have an outstanding travel advance of almost \$2,500, and also that Hugh has contacted you about this numerous times by phone and correspondence over several weeks.

As he indicated in his letter of June 1, your failure to forward the expenditure data leaves us no alternative but to arrange for recovery of this amount through deduction from your salary continuation.

I would appreciate your forwarding the expense report data to Hugh prior to July 15. If it is not received by that time, \$240.00 will be deducted from the semi-monthly checks until the total outstanding advance of \$2,374.15 has been repaid.

I hope that you will respond promptly so that it will not be necessary to take this action.

Sincerely yours,

A. B. Marchant
Assistant Vice President for
Industrial Relations

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Smith, Kenneth M.D.

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