



UNION CARBIDE BELGIUM N.V.

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DEC 5 1967

J.F. FRANGOS

BRUXELLES 5. 30 November, 1967

149, AVENUE LOUISE

V. REF.

N. REF.

1415 /TJH/MLF

Mr. F. Dexter
Union Carbide Corporation
New York Office

Dear Frank:

As you know we have been trying to keep close to the asbestos toxicology work in the U.K. Fred Mumpton at Niagara Falls arranged for some work to be carried out on a sample and gave us a report on this. Ian Sayers took the report to the laboratory group in the U.K. which is co-ordinating this work. I am enclosing a copy of his hand written report for your information. When they come back to us for additional analytical work we will pass it on to you. There continues to be a great amount of concern about this subject and we are going to have to learn to live with the problem in the U.K. So far there has been no indication of it being passed on to the continent.

OVER

In this report Ian passes on the request for permission to publish our data and I would like your comments on this. Even if you agree we would try to find out in more detail the conditions under which this data would be presented before agreeing directly with them. Perhaps it would be better to have this sort of publication first approved by Carl Dernehl before we finally agree. Also I will ask Ian to follow directly on obtaining the spectrographic analysis method.

If you or any of the others receiving this letter have any comments I would welcome them.

Best regards,

Very truly yours,

THOMAS J. HALL.

UCC 015631

A03150

There is a good deal of background information which is not familiar to me but is supplied here. I suggest we hold the matter for discussion with Sam when he gets here.

SUMMARY ON SAYER'S REPORT OF VISIT TO PNEUMOCONIOSIS RESEARCH UNIT 7-11-67

GAVE DR. TIMBRELL MUMPTON'S ANALYTICAL DATA.

PRU NOW SAYS THAT CHRYSOTILE FIBERS, BEING CURVED, ARE LESS LIKELY TO GO DEEP INTO LUNGS. INJECTED CHRYSOTILE DOES CAUSE CANCER IN RATS, SO THE FACT THAT IN PRACTICE IT IS LESS RESPONSIBLE FOR TUMOR PRODUCTION IS PROBABLY DUE TO ITS GREATER ELIMINATION RATE AS WELL AS ITS GEOMETRY.

A03157



INTERNAL CORRESPONDENCE

cc: ~~REB, NF, Cdy~~
cc: JAR
5-1-70

UNION CARBIDE CORPORATION

270 PARK AVENUE, NEW YORK, NEW YORK 10017

RECEIVED

To (Name)
Division
Location

Mr. C. E. Metten
Chemicals & Plastics
2770 Leonis Blvd.
Los Angeles, Calif. 90058

Date

March 21, 1970

APR 6 - 1970

Originating Dept.

Medical Department

UCC - CALIDRIA
KING CITY, CA.

Answering letter date

Copy to

bcc: M. B. VerNooy - TT
W. J. Fitzpatrick - LA
W. G. Farrell - LA
John Meyers - King City

Subject

Toxicity of Calidria Asbestos

Asbestos has practically no acute toxicity regardless of its type or form. The harm associated with asbestos is from the fibrogenic properties of the inhaled dust. This usually is seen only after prolonged exposure measured in terms of 15-20 years although cases rarely will occur in less time.

Because of the rather unique structure characteristics of Calidria Asbestos, there was concern that it might be unusually fibrogenic and perhaps cause an acute asbestosis.

To test this possibility, Calidria Asbestos was injected into rats and rabbits intraperitoneally using a standard long fibre asbestos as a control. The results of this test showed Calidria Asbestos to be slightly more fibrogenic than long fibre asbestos but the difference was not so great as to suggest an unusual degree of hazard. From this I conclude that the same precautions to avoid breathing asbestos dust must be observed whether the dust be from Calidria Asbestos or from a standard long fibre form.

Some people believe there is an association between exposure to asbestos dust and the development of lung cancer and mesothelioma. There is no information regarding Calidria Asbestos in this respect as yet. It would be prudent to assume that Calidria Asbestos will behave like other asbestos in this regard.

C. U. Dernehl M.D.

C. U. Dernehl, M. D.
Associate Medical Director

CUD:dp

A03158

UCC 015633

Union Carbide Corporation
Mining and Metals Division
270 Park Avenue
New York, New York 10017

RECEIVED

FEB 9 1968

T. F. FRANGOS

February 8, 1968

Mr. Peter R. Cheston
Union Carbide Limited
8 Grafton Street
London, England

*Asbestos
Toxicology*

Dear Peter:

Your suggestion that we consider including "UK paper industry" comments in our General Sales Meeting is well taken -- and I plan to review the notes with Ian Sayers.

Apropos of your letter on toxicological studies relative to asbestos -- we have reviewed the two excerpts you sent us with Dr. Carl Dernehl. He counsels that the papers "do not by any means present incontrovertible proof nor do they profess to do so." Further: "Our position should remain that in United States experience there has been no increased incidence of lung cancer when the threshold limit has not been exceeded."

From past publications, we have also noted the references to organic contaminants, with the thought that proof of absence of polycyclic aromatics in Union Carbide asbestos might be useful. We are planning some extraction studies and analyses for 3,4-benzo(a)pyrene by techniques employed at South Charleston. We will let you know the results, probably in an appropriately written statement by Dr. Dernehl.

The matter of soft papers, facial and other tissues, has been a recurring subject with us. Primarily this is a question of skin sensitization. While the over-all statements by our Industrial Medicine and Toxicology people should suffice -- we have given thought to "patch tests," which, incidentally, cost appreciably to run. It would be meaningless to conduct such tests with paper containing UCC asbestos, since the other components of the furnish bear on the results. Hence we are considering patch tests using straight asbestos -- which, of course, would absolve only our product. The other components (including, as you know, a variety of organic compounds) of specific furnishes would have to be considered by the paper company involved. We shall let you know our plans.

Very truly yours,

A.E. Pufahl:dk

cc: M. F. Reichard
T. F. Frangos
R. F. Gray (Australia)

A.E. Pufahl

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UCC 015634



UNION CARBIDE BELGIUM N.V.

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BRUXELLES 6, 1 August, 1967

148, AVENUE LOUISE

SEP 1 1967

T.F. FRANCOIS

VIREF.

NIREF. 1415 TJH/MLF

Mr. Frank Dexter
Union Carbide Corporation
Chemicals & Plastics Division
270 Park Avenue
New York, N. Y. 10017

Re: ASBESTOS TOXICOLOGY

Dear Frank:

During a recent conference on Physics and Chemistry of Asbestos Minerals at Oxford, England, I met with representatives of the group who are coordinating an analytical program for asbestos samples. These were:

Dr. V. TIMBRELL
Medical Research Council
Pneumoconiosis Research Unit
Llandough Hospital
Penarth, Glamorgan. U.K.

Dr. T.G. MORRIS
M.R.C. Llandough Hospital
Penarth, Glamorgan.

This meeting was to arrange for Union Carbide's cooperation in trace element analyses of standard samples.

Dr. Mumpton, who, incidentally, gave an exceptionally good and well received paper at the meeting, is bringing the samples back to Niagara Falls and is aware of the requirements of the group for analysis. Briefly, they would like to have all possible trace elements analyzed to the highest possible degree of accuracy.

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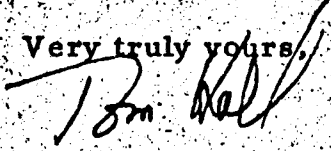
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There are two samples of chrysotile asbestos, one of amosite and, I believe, two of crocidolite. Dr. Timbrell has sizable quantities - close to one ton each of these materials - which have been "thoroughly" blended. In the case of chrysotile he also has samples of the different types from which the standard sample mix was prepared. He asked if we could possibly analyze samples of these original components in order to see if any components were present which might be used as a key to the efficiency of their mixing and blending procedures. Dr. Mumpton agreed to determine the cost of these further analyses to see if we could justify also doing some of them.

We had a lengthy discussion with Dr. Timbrell and Dr. Morris and Dr. Mumpton can fill you in on the details. I believe it is fair to say that there are certainly many questions and problems still unanswered and realistically there is not much evidence yet as to the true "danger" of using asbestos.

I expect to be in New York during the week of August 14 and would like to talk to you more about this and other asbestos subjects.

Very truly yours,


THOMAS J. HALL.

cc: Dr. C. U. Dernehl, M.D.
Mr. T. F. Frangos - N. Y. ✓
Dr. F. Mumpton - Niagara Falls
Mr. L. D. Polderman - Office
Dr. A. E. Pufahl - New York
Mr. I. C. Sayers - London
Mr. R. G. Woolery - Niagara Falls

A03161

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UNION CARBIDE CORPORATION

270 PARK AVENUE, NEW YORK, N. Y. 10017

MEDICAL
DEPARTMENT

June 7, 1967

Dr. T. J. Hall
Union Carbide Europa A.A.
40, Rue Du Rhone
1211 Geneve 3
Suisse

Dear Tom:

I have reviewed the report, "Asbestos As A Health Hazard In The United Kingdom", prepared by I. C. Sayers, and in general I find that it is reasonably accurate. I do not attach very much importance to the data on the incidence of asbestosis and death from asbestosis and cancer because these are merely tabulations of events and do not take into consideration the numbers of people who were subjected to the possibility of the event occurring.

We had been interested in the possibility that the short fiber Coalinga product might have a greater hazard than the more conventional forms of asbestos because sub-micron silica has been known to cause a rapidly progressive silicosis after exceedingly brief exposure. We were concerned about whether the Coalinga material with its exceedingly fine fibril diameter might have a similar effect in causation of asbestosis. We therefore made some preliminary studies in which the material was injected into the belly cavity of guinea pigs, rats and rabbits and also was injected intratracheally by a method which distributes the asbestos throughout the lungs of rats. The materials injected were the standard fiber, a refined fiber and a long fiber obtained from Johns Manville for purposes of comparison. In the injection study the Coalinga refined fiber produced the most severe reaction in the belly cavity, whereas the

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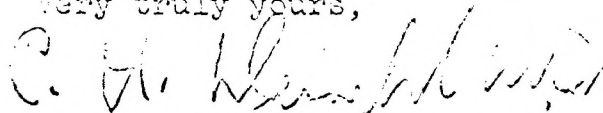
standard fiber and the Johns Manville fiber were essentially the same and less severe. In the injection study in the lung the crude fibers caused a more severe lesion, the refined fiber was intermediate and the Johns Manville fiber was least reactive. The only conclusion we can draw from this crude test is that it is possible that our Coalinga product may be more hazardous to use than long fiber asbestos in that it may induce the disease, asbestosis, at an early time after exposure.

The question was raised whether the 5 million particles per cubic foot were really valid as a Threshold Limit Value. I maintain that this value is still correct in terms of preventing the disease, asbestosis. There is no evidence of asbestosis occurring among people who have worked in an environment where the concentration was kept within the Threshold Limit Value. It is probable that the 5 million particles per cubic foot will not be acceptable for the prevention of mesothelioma. I have no idea what concentration might be effective in preventing this disease and I would wonder whether even a limit of 1 million particles per cubic foot would be effective in this regard.

Finally, I would give my unquestionable support to the request of the Pneumoconiosis Research Council for trace element analysis of the standard sample of asbestos. By so doing we would develop techniques which could be applied to our product from King City and which would be useful in making comparisons with the standards.

I hope this will be helpful to you, if you have any further questions please let me know.

Very truly yours,



Associate Medical Director

C. U. Dornahl, M.D.
cd

May 9, 1969

Mr. T. Frank Tobin
Plant Manager
Stedfast Rubber Co., Inc.
50 Oliver Street
North Easton, Mass. 02356

Dear Mr. Tobin:

The enclosed "Asbestos Toxicology Report" explains some of the facts concerning handling of asbestos. Our CALIDRIA Resin-Grade 144 Asbestos is nearly pure chrysotile asbestos. A different type, known as crocidolite, is believed by many authorities to be implicated in causing mesothelioma and lung cancer. Our asbestos products do not contain crocidolite, which is a product of South Africa. A connection between chrysotile asbestos and mesothelioma or lung cancer has not been clearly determined.

The Federal Government recently promulgated new occupational health standards under the Walsh-Healey Act, applying to noise, dust, gases, etc. The new standards were published in the Federal Register, Vol. 34, No. 12, Jan. 17, 1969. They apply to firms doing business with the Federal Government, and if your company sells directly to a Federal Agency, it may be well to refer to them.

We require that all employees exposed to asbestos dust in excess of the threshold limit value wear a respirator with a U.S.B.M.-approved filter for pneumoconiosis-producing dusts. The particular respirator we use is a Willson Monomask, Style No. 600A, U.S.B.M. approval No. 2170.

I hope this will answer your questions satisfactorily. Please let me know if you wish any more information.

Yours very truly,

JARIDOLE
J. A. Riddle
Plant Manager

JAR/clg
encl:

A03164

UCC 015639



STEDFAST RUBBER COMPANY, INC.

Manufacturers of — COATED FABRICS

FOR THE SHOE INDUSTRY

Factories

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NORTH EASTON, MASS.
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TELEPHONE 617-298-1456

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MAY 10 1969

U.C.C. CHEM. & PLASTICS
KING CITY, CALIF.

MAY 2, 1969

Union Carbide Company
Chemical Division
300 First Street
Needham, Massachusetts 02192

Gentlemen:

During a recent safety survey by our insurance company, they were very much interested in the material we purchase from you, namely; asbestos resin. They would like to obtain some information from you regarding the asbestos content and if protective respirators are required when handling this material.

I would appreciate your comments, in duplicate, addressed to the writer.

Very truly yours,

T. FRANK TOBIN
PLANT MANAGER
STEDFAST RUBBER COMPANY, INC.
50 Oliver Street
North Easton, Massachusetts

TFT/FTH

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