



FORT WASHINGTON MARKETING
AUGUST 6, 1968

TO: *ALL/DISTRICT MANAGERS*
MARKETING - WEST
FROM: *S. E. PRICE/cw*

SUBJECT: HEALTH HAZARDS AND A-C PIPE

PLEASE READ THE ATTACHED PAPER AND COVER LETTERS VERY CARE-
FULLY. YOU ARE TO USE THIS PAPER IN THE SAME MANNER OUTLINED
BY J-M -- WHICH IS:

1. DO NOT DISTRIBUTE TO SALESMEN.
2. WHEN A SITUATION ARISES YOU ARE TO PERSONALLY
PRESENT THE CASE FOR A-C.
3. RECORD ALL INTERVIEWS WITH ME.

ATT.

CC - MR. B. C. RADAKER
MR. W. R. BLANKENSHIP
MR. M. W. BLAKE
MR. J. V. GEAR



CERTAIN-TEED PRODUCTS CORPORATION

Ambler 45

Ardmore Legal

ATTENTION OF:

Mr. B. C. Radaker

DATE:

July 19, 1968

ANSWERING YOURS:.

DICTATED BY:

C. E. DeLong / kh

SUBJECT:

HEALTH HAZARDS AND AC PIPE

cc: Mr. Malcolm Meyer - Ardmore (w/encl.)

Enclosed is a letter from Herbert M. Ball of Johns-Manville Corporation, to which is attached a position paper of Johns-Manville on "Asbestos-Cement Water Pipe and Human Health." This is their reply to the questions raised last year in Nashville, Tennessee concerning the health hazards in the use of asbestos-cement pipe.

You will note that Mr. Ball cautions against giving this information to the press and news media without prior approval of "responsible public relations people" in our organization. He also specifies that this material is not to be distributed generally in the field, but must be limited to district managers.

I am sure that your sales group will be interested in the information developed in this position paper and I see no reason that the arguments and facts which have been developed should not be used in answering any questions we receive about this alleged problem.

Encl.

RECEIVED

JUL 22 1968

JOHNS-MANVILLE CORPORATION

TWENTY-TWO EAST FORTIETH STREET

NEW YORK, N. Y. 10016

HERBERT MORTON BALL
VICE PRESIDENT AND GENERAL COUNSEL

Charles E. DeLong, Esq.
Secretary and Resident Counsel
Certain-teed Products Corporation
120 East Lancaster Avenue
Ardmore, Pennsylvania 19003

Dear Charlie:

Attached are the instructions used in sending to our District Managers the official position paper on "Asbestos-Cement Water Pipe and Human Health". Since this is a common problem, I think it would be useful to you whenever the question is raised in the field by a customer or a municipality. Please note that originally the paper could be used in the salesman's arguments and presented to the customer. Our most recent thinking is as expressed in the company telegram: "For next 3 months only district or area management should show or discuss this paper with customers."

It is recommended that the same policy be used by your organization in handling the problem in order that responsible management personnel make the necessary presentation to the customer.

This is not a matter that should be treated lightly and handled sometimes ineptly by a salesman. Please note that the paper is not to be given to the press or news media without prior approval of responsible public relations people in your organization. This material is sent to you with the distinct understanding that it is not to be distributed generally to the field but to be limited to district and area management.

It is our feeling that this material would be of help to the asbestos-cement pipe industry of which you are a member, and it is our hope that it will be useful in refuting the unwarranted and unjustified attacks on asbestos-cement pipe for the conveyance of potable water.

Sincerely,

HMB:LH
Encs.

7/15/68

TO: DISTRICT MANAGERS AND REGIONAL MANAGERS
(SEE ATTACHED LIST)

FOLLOWING INSTRUCTIONS REGARDING ASBESTOS AND HEALTH PAPER RECENTLY
MAILED TO YOU. FOR NEXT 3 MONTHS ONLY DISTRICT OR AREA MANAGEMENT SHOULD
SHOW OR DISCUSS THIS PAPER WITH CUSTOMERS. RECORD ALL SUCH INTERVIEWS
WITH ME. BASED ON FEEDBACK ON THIS INITIAL PROGRAM WE WILL ISSUE
FURTHER INSTRUCTIONS ON FUTURE USE.

M. HARRIS

CC: DRQ STAFF

To: District Managers
Region Managers

cc: DHQ Staff and Region Staff
Assistant District Managers

ASBESTOS-CEMENT WATER PIPE
AND HUMAN HEALTH

Our official position paper on the above subject is attached along with a covering letter by D. L. Hinmon.

The prime responsibility for utilizing this paper and controlling its use will rest with the District Managers. They will personally make sure that the following procedures are followed in its use:

1. Confirm that a legitimate question has been raised by a customer before providing salesmen with the paper (the managers may decide to personally present the paper to customers with the salesmen).
2. The District Manager, or his assistant, will personally go over the paper with a salesman before the salesman presents it to a customer.
3. Make sure that under no circumstances is the paper given to the press or news media without prior approval of F. J. Solon, Jr. or W. P. Raines at GHQ.

A limited supply of the paper will be provided to each district with the Region Managers having additional copies available if needed.

Each District Manager will advise his Regional Manager, with a copy to me, that he understands the procedure outlined above and agrees to personally implement it.

M. Harris

Att:

JOHNS-MANVILLE CORPORATION

TWENTY-TWO EAST FORTIETH STREET

NEW YORK, N. Y. 10016

EXECUTIVE OFFICES

June 26, 1968

"Asbestos-Cement Water Pipe and Human Health"

The attached paper "Asbestos-Cement Water Pipe and Human Health" has been prepared to answer medical questions which have been raised in recent months. These questions relate to a product we have brought into common use in Domestic Water Systems over a period of nearly 40 years. Therefore, we feel an obligation to our customers to answer these questions.

We have initiated studies and sought the advice and guidance of the most qualified medical consultants in this country to obtain factual evidence on this matter. All of this evidence is against the allegation that the use of TRANSITE Water Pipe has any influence on the development of any disease.

Don L. Hinmon
Senior Operating
Vice President

May 10, 1968

ASBESTOS-CEMENT WATER PIPE AND HUMAN HEALTH

Asbestos-cement (A/C) pipe for water supply and disposal systems was developed in Europe in 1913 and introduced into the United States in 1929. Asbestos fiber, added to Portland cement and silica, provides the structural strength required for durable, lightweight, rustproof, economical piping.

These advantages have led to the use of great quantities of asbestos-cement pipe over the past half century, for water supply and sewer systems, irrigation projects, drainage systems, industrial processes, heating and cooling installations, gas systems, and as conduits for electrical and telephone wires.

For water supply systems, A/C pipe meets the specifications of the American Water Works Association and of the U.S. Government. Under Federal Specification SS-P-351A, A/C water pipe is sold to the U.S. Public Health Service. The World Health Organization uses large quantities of A/C pipe in its programs to improve the quantity and quality of water systems throughout the world.

Because of asbestos-cement pipe's unique advantages for community water systems, it is important to clarify a question raised, late in 1967, in Nashville, Tenn., concerning the suggestion of a possible health hazard related to the use of A/C pipe.

More

6

ORIGIN OF THE HEALTH ISSUE

In 1967 the metropolitan government of Nashville was considering a proposal to include asbestos-cement pipe in its specifications for water pipe.

On November 30, 1967, THE NASHVILLE BANNER, in a story on this proposal, reprinted a letter from Dr. James D. Snell, Jr., Assistant Professor of Medicine at Vanderbilt University, suggesting that it would be "a medical hazard of significant degree to use such pipe in a water system until the U.S. Public Health Service had checked it out completely ..."

Dr. Snell's letter stated that medical circles have established "fairly well" that asbestos causes a "high incidence of cancer in the lungs if breathed or in the gastrointestinal tract if swallowed, even in amounts small enough to be visible only under a microscope." He added that if any particles of asbestos were released from A/C pipe into a municipal water system, "current medical knowledge suggests that a rise in certain types of cancer could be expected in about 20-50 years among the population."

Dr. Snell offered no evidence in his letter to support his allegations. Later, when Nashville Councilman James LaPenna asked to see medical literature in support of this position, Dr. Snell submitted two papers which dealt solely with the problem of occupational exposure to the inhalation of asbestos fibers. Neither paper suggested any problem arising out of the swallowing of asbestos fiber by the general public.

Upon receiving Dr. Snell's letter, Nashville authorities turned to the U.S. Public Health Service for advice.

REACTION OF THE SCIENTISTS

The Public Health Service discussed the allegations with two prominent medical authorities in the field of asbestos and health "to confirm our view that there is a low probability of any health hazard associated with this use of asbestos-cement pipe."

The two experts were Dr. George W. Wright and Dr. Irving J. Selikoff, who are referred to by the PHS as "recognized authorities in the field."

Dr. Wright is Chairman of the Institute for Occupational and Environmental Health, and head of the Medical Research Department, St. Luke's Hospital, Cleveland, Ohio. Dr. Selikoff is professor and chairman, Division of Environmental Medicine, Mt. Sinai School of Medicine, New York City.

Briefly, the opinions of these two prominent authorities are as follows:

DR. WRIGHT: "To my knowledge, there have been no reports in medical literature of a relationship between gastrointestinal (GI) cancer and the drinking of water supplied through an asbestos-cement pipe water system. Most assuredly, the ingestion of one or a hundred or a thousand asbestos fibers, on one or more instances, cannot be related to gastrointestinal cancer, since in asbestos workers exposed far more heavily five days a week, over a period of many years, there is no scientifically acceptable evidence of a higher than average frequency of GI cancer."

More

8

DR. SELIKOFF: There is "no evidence at all at this time that the presumably very low level exposure by ingestion which might occur by intake of water supplied through asbestos-cement pipe has resulted in a recognized health hazard."

EVIDENCE SUPPORTS COMMENTS BY DOCTORS

The comments of Dr. Wright and Dr. Selikoff are supported by four types of evidence:

1. Workers in certain asbestos-related trades have been exposed to heavy concentrations of asbestos dust on the job and have, as a result, swallowed considerable quantities of this material. Despite this exposure, no unusually high rate of gastrointestinal cancer has been reliably demonstrated among these workers.
2. The exposure of laboratory test animals to heavy concentrations of asbestos dust has resulted in no cases of gastrointestinal cancer.
3. Recent research indicates that no significant amounts of asbestos are released into drinking water which flows through asbestos-cement pipe.
4. In the face of ever-increasing use of asbestos-cement pipe and of asbestos fiber, the death rate from gastrointestinal cancer in the United States has shown a steady decline over the last 20 years. This national trend also applies, in general,

More 9

to those cities where A/C pipe has been used in water system for long periods of time. Similarly, in most of the European countries where A/C pipe has been used extensively -- in many countries for more than half a century -- the death rate from this type of cancer has also declined.

These four points will now be discussed in further detail.

1. OCCUPATIONAL EXPOSURE TO ASBESTOS HAS NOT RESULTED IN ABNORMALLY HIGH GI CANCER RATE

Scientists are now investigating a possible relationship between heavy occupational exposure to inhaled asbestos dust and lung cancer; however, there is no scientifically acceptable evidence whatever to support the contention that the swallowing of asbestos fibers produces any disease.

Dr. Wright points out that insulation workers are "heavily exposed" to the ingestion of asbestos because a certain percentage of inhaled asbestos dust is coughed up and then swallowed.

"I would reason from this, therefore, that in the insulation workers the gastrointestinal exposure to fiber would be high and therefore if there was a strong relationship of fiber ingestion to gastrointestinal cancer, it should not be difficult to demonstrate it." Dr. Wright declares, "there is no evidence to support the contention that even the highest intensity of exposures that we know of in industry leads to clear-cut increased frequency of gastrointestinal cancer."

10

More

SUMMARY: Studies made on workers exposed to a heavy concentration of asbestos dust do not support the allegation that the minute amounts of asbestos present in water would lead to increased GI cancer risks.

2. ANIMAL EXPERIMENTS WITH ASBESTOS HAVE NOT PRODUCED
GI CANCER

Laboratory test animals are used extensively in cancer research to study their reactions to various substances that are suspected of having some relationship to cancer in humans. Tests of this nature, using asbestos, have been conducted on mice for periods as long as two years and on dogs for four or more years. The amount of fiber swallowed by these experimental animals far exceeds even that of insulation workers.

These animal tests have shown no relationship between fiber exposure and gastrointestinal cancer. In fact, there is no record of a tumor of any sort forming in the gastrointestinal tract of the test animals.

In addition, experiments conducted by Dr. Selikoff on hamsters generally support the dog-and-mice feeding findings.

"Yet," Dr. Selikoff commented, "the exposure to ingested asbestos in this experimental work was very much larger--indeed than might be anticipated in water obtained from asbestos-cement pipes."

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SUMMARY: Animal experiments confirm the studies made of the health records of asbestos workers, which show no relationship between asbestos exposure, whether by inhalation or swallowing, and GI cancer.

3. MUNICIPAL WATER AND ASBESTOS

Even the so-called "pure" water distributed through municipal systems contains traces of many minerals and chemicals, the amount and type depending upon the source and location of water supplies. It would not be surprising, therefore, to find trace particles of asbestos in water supplied through almost any type of piping system.

A study was recently conducted of the drinking water in nine cities that have used asbestos/cement pipe for periods ranging from eight to 17 years. The highest asbestos content in this water was a mere 6 micrograms -- about one five-millionths of an ounce -- of asbestos fiber per gallon. In terms of human consumption this means that if a man were to drink eight glasses of water per day, he might swallow a total of twenty-seven-ten-thousandths of an ounce (.0027) of asbestos in a lifetime of 70 years.

How does this compare with the exposure of a man working in an asbestos plant? Under the accepted Threshold Limit Value (TLV) for asbestos inhalation in industry, in 45 years a worker would inhale 5,000 times more fiber than anyone could get from the drinking water in 70 years. What is revelant here is the fact that there is no reliably demonstrated increased frequency of GI cancer among asbestos workers, who cough up and swallow a substantial portion of the fiber they inhale.

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SUMMARY: Although additional research is being carried on, present evidence does not support the contention that asbestos-cement water pipe releases asbestos into water in amounts that can constitute any health hazard to the general public.

DECREASE IN FREQUENCY OF GASTROINTESTINAL (GI) CANCER
IN THE UNITED STATES

Figures from both the National Office of Vital Statistics of the United States Public Health Service and from the American Cancer Society show a steady decline in the frequency of GI cancer in the United States from 1947 to 1966. The death rate per 100,000 of population from GI cancer dropped from 55.2 in 1947 to 48.4 in 1966. Available U.S. figures also show GI cancer declining since 1960 as a percentage of total deaths:

Table I. Deaths from Selected Causes for the U.S.

<u>Year</u>	<u>Total Deaths All Causes</u>	<u>Deaths from GI Cancer</u>	<u>GI Cancer as % of All Deaths</u>
1960	1,711,982	91,035	5.3
1962	1,756,720	92,047	5.2
1964	1,798,061	93,158	5.1
1965	1,828,136	94,305	5.1

Similar trends can be found in cities all across the country.* Of special interest is the comparison between Nashville, Tenn. where no A/C pipe has been used and Knoxville, Tenn., where asbestos-cement pipe has been used since 1938. Here's how U.S. government figures apply to those two cities.

More 13

Table II. Nashville-Knoxville Comparisons

	Nashville (no A/C pipe)		Knoxville (A/C pipe since 1938)	
	<u>1960</u>	<u>1965</u>	<u>1960</u>	<u>1965</u>
Deaths from All All Causes	3,675	3,704	3,038	3,256
Deaths from GI Cancer	129	166	131	133
GI Cancer Deaths as Percent of Total	3.5%	4.5%	4.3%	4.1%

* (In considering these figures, it is important to remember (a) that cities tend to have higher rates of cancer than rural areas, so some city figures will run higher than the U.S. average, and (b) that minor fluctuations from year to year in the percentage figures, whether up or down, are of little or no significance, especially if the numbers are small.)

Similarly, in Europe, where asbestos-cement pipe has been in use for fifty years or more, the death rate from GI cancer is generally downward. For example, in Switzerland, where the use of A/C pipe is the highest per capita of any Western European country, the death rate, for GI cancer has dropped from 81.9 per 100,000 of population in 1951 to 63.9 in 1962, according to the latest figures available from the World Health Organization.

Thus, the actual frequency of gastrointestinal cancer in no way supports the allegation that the use of asbestos-cement water pipe can cause an increase in this type of disease. In fact, during the very years that the use of A/C pipe has increased in

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the United States, the rate of GI cancer has declined. It is clear that no causal connection has been demonstrated between the use of A/C water pipe and GI cancer in human beings.

SUMMARY: "Substantial and increasing amounts of asbestos fiber have been used in various ways from 1930 on in the United States, and one would anticipate that if this fiber was playing a role in the causation of gastrointestinal tumors, it might be expected to have led to an increase in tumors, rather than the observed decrease."

(Dr. George W. Wright)

CONCLUSIONS

Four types of evidence have been examined: (1) occupational exposure of workers to inhaled and swallowed asbestos dust particles; (2) results of experiments with test animals exposed to large quantities of asbestos particles; (3) results of tests to determine the amount of asbestos in municipal water supplies; and (4) the frequency of GI cancer in the U.S. and Europe, including those areas using asbestos-cement water pipe.

All of this evidence is against the allegation that the use of A/C water pipe has any influence on the development of GI cancer.

Finally, it is important to view Dr. Snell's concern about the health safety of A/C pipe in its proper perspective.

Asbestos is by no means alone in having the finger pointed toward it as a possible health hazard. Literally hundreds of substances -- as common and everyday as fuel oil, charcoal broiled steaks, iron rust

15

More

and egg yolks are known or suspected of being cancer causing agents under certain experimental conditions.

The point is that nearly everything we use and create in our increasingly complex society has been suspected, by someone, of being a potential hazard.

To forego the many benefits of these products of modern technology -- simply on the basis of suspicions that are unsupported by medical evidence, would be a great and unwarranted disservice to the American public.

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