CONFIDENTIAL

PLAINTIFF'S EXHIBIT CT-12

Ardmore

Mr. Malcolm Meyer

Ardmore Legal

February 27, 1968

C. E. DeLong / kh

AC PIPE HEALTH PROBLEM

cc: Mr. James R. Reichel - Ambler 45 (w/encl.) THIS COPY FOR

Enclosed is a letter from Herb Ball of JM enclosing certain attachments pertaining to the health hazards of AC pipe, including a very important letter by Dr. Snell and further newspaper articles on the Nashville situation.

Please note the request in Mr. Ball's letter that all this information be kept strictly on a top executive level.

Encl.

GENERAL

FEB 28 1968

JOHNS-MANVILLE CORPORATION
TWENTY-TWO EAST FORTIETH STREET
NEW YORK, N.Y. 10016

HERBERT MORTON BALL
VICE PRESIDENT AND GENERAL COUNSEL

February 26, 1968

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

Dear Charlie:

Attached is a copy of a letter from Dr. Irving J. Selikoff which presents the same point of view that Dr. Selikoff expressed in his letter to Dr. Bistowish of Nashville last December 7. This letter is certainly more positive than negative for our cause and seems to take the wind out of Vanderbilt University's Dr. Snell's sails, since Dr. Snell used the previous writings of Dr. Selikoff in making his original allegations.

We are now proceeding full steam with the position paper on asbestos-cement pipe. A due date of March 15 has been placed on this position paper.

Also enclosed are some reproductions of newspaper clippings in connection with an appearance of Mr. J. Baker of Johns-Manville before the Metro Health Board of Nashville and an additional appearance before the Metro Councilmen.

I repeat that as agreed at our meeting on January 3, this information is to be kept strictly on a top executive level. It is definitely not to be distributed to the field.

It is with this understanding that the attachments are sent to you.

Sincerely yours,

HMB:LH
Encs.

MOUNT SINAI SCHOOL OF MEDICINE
of The City University of New York
FIFTH AVENUE AND 100TH STREET · NEW YORK, N.Y. 10029

Department of Community Medicine

February 16, 1968

Dr. F. L. Pundsack, Director
Division and Corporate Research and Development
Johns-Manville Research and Engineering Center
P. O. Box 159
Manville, New Jersey 08835

Dear Dr. Pundsack:

I have been aware that inquiries have been made concerning the possible health hazard associated with the drinking of potable water circulated through asbestos-cement pipes.

I presume this concern is derived from the recognition of the carcinogenic hazard of asbestos. While this hazard exists, I would qualify such categorization at this time, by adding the phrase "under certain industrial conditions." Workmen occupationally exposed to asbestos have an increased risk, in many instances, of lung cancer, pleural and peritoneal mesothelioma, possibly gastrointestinal cancer, asbestosis and possibly several causes of death, not yet well defined.

We are on very much less secure ground in judging whether any health hazard exists with non-occupational asbestos exposure. While there is evidence that environmental asbestos contamination occurs, association of disease with the minimal levels involved has not been unequivocally demonstrated despite some suggestive evidence under special circumstances.

To compound the difficulties in answering the question you ask, studies on environmental asbestos disease have been concerned with inhalation exposure. There is no way to translate these experiences into exposure by ingestion. Thus, we cannot equate a priori the response of the respiratory mucosa with that of the mucosa of the gastrointestinal tract; I am sure that these responses to asbestos are markedly different. For example, asbestos bodies are often formed in lung parenchyma following inhalation of asbestos fibers yet such bodies occur rarely, if at all, in the gastrointestinal mucosa, following ingestion.

Moreover, experimental work so far has not yielded evidence of significant adverse effects associated with ingestion. For example, Russian work with dog-feeding experiments has demonstrated some mucosal changes, but these were minor, while in our own Laboratory feeding experiments in hamsters have produced very few sub-mucosal asbestos bodies and an adenocarcinoma of the colon in only one animal (very likely coincidental, since such are known to occur spontaneously in these animals). Yet, 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.

This is not to say that the problem of ingested asbestos does not require further study; it obviously does. First, such studies will be useful in determining whether any relationship exists between ingestion of such material and the occurrence of peritoneal mesothelioma or gastrointestinal carcinoma (alternate routes of contact can be suggested in the pathogenesis of these tumors) and, second, as part of wider necessary studies to define whether any health hazard exists with low-level exposures in general.

Thus, there is no evidence at this time that the presumably very low-level exposures by ingestion which might occur by intake of water supplied through asbestos cement pipes has resulted in a recognized health hazard. Even if such a hazard could be defined, it would be difficult to be sure that asbestos-cement pipe water were the only source since a number of foodstuffs and other substances are filtered through asbestos filters and may presumably contain small numbers of the fibers (including beer!).

The question of potential health hazards associated with low-level environmental asbestos exposure is under intensive study at this time. As noted, the potential hazard of asbestos-cement pipes is part of this general problem. I hope and trust that we will find that no hazard exists with the very low level of exposure associated with environmental contamination and that the problem will be found to be confined to the much heavier exposure in industry. If I had to hazard a guess at this time, I would suggest that this is what we will find.

I hope that this information will be of assistance to you in your research on this problem.

Sincerely yours,

I. J. Selikoff

Irving J. Selikoff, M.D.
Professor and Chairman
Division of Environmental Medicine

IJS:df

—THE NASHVILLE BANNER, Wed., Feb. 21, 1968

Health Board To Review Asbestos Water Pipe Use

The Metro Health Board on a motion by Dr. David Strayhorn Sr. voted today to reconsider its stand on the use of asbestos-concrete pipe for water lines.

The board voted Jan. 17 to "not approve the use of the pipe" until sufficient information could be obtained to prove the pipe was medically safe.

Metro health director Dr. Joseph Bistowish said the board's action did not mean that it would change its position concerning the pipe but only that it would reconsider any information concerning the safety of the pipe.

"Asbestos is a known cancer causing agent when inhaled," Dr. Bistowish said, but added that sufficient information is not available concerning its use as a water conducting material.

The U.S. Public Health Service is initiating a study into asbestos pipe, probably as a result of an inquiry to them from the health department.

"The service told us we were the first municipal health board to raise the question concerning the safety of the pipe," Dr. Bistowish said.

Representatives of an asbestos-cement pipe producer spoke to the board to explain their position. The spokesmen said they objected "to being guilty until proven innocent."

THE NASHVILLE TENNESSEAN Thursday, Feb 23, 1956

Pipe-Cancer Tie Stirs Furor

By FRANK RITTER

Metro councilmen and a Vanderbilt University professor clashed verbally yesterday over what prompted the professor to infer recently that asbestos cement pipe might cause cancer.

Dr. James Snell, assistant professor at the Vanderbilt school of medicine was questioned at length by Councilman James Hamilton about a letter he wrote recently in which he raised the cancer question.

"THE IMPLICATION of your letter," Hamilton told Snell during a council committee meeting, "was that Metro Council, under the guise of saving a few cents, was going to place hundreds of thousands of people in danger of getting a dread disease—cancer.

"We certainly don't want to do that. And coming at the time it did, and in the alarming way it was written and distributed to the public, it would seem to me the letter was unfair."

The meeting, a joint session of the finance and public works committees of Metro Council, was called to consider whether the city should permit asbestos pipe companies to bid on Metro pipe contracts.

Cast iron pipe has been used exclusively, although it is more expensive initially than asbestos pipe, for at least 40 years in the Nashville water system.

HAMILTON asked Snell yesterday if there have been any studies to determine if iron oxide from cast iron pipe might cause cancer. Snell replied that there have been no such studies, to his knowledge.

"There has been no research," Hamilton asked, "on whether asbestos cement pipe or cast iron pipe can cause cancer, has there?"

Snell said there has not been.

Hamilton said if Snell was sincere in raising the question about asbestos pipe, he should have raised the same question about cast iron pipe.

"I think it is perfectly reasonable to raise such a question" about cast iron pipe, Snell replied.

"WOULD YOU raise the question, doctor?" asked Councilman James LaPenna.

"I would be very happy

(Turn to Page 12, Column 7)

Pipe-Lancer Tie Stirs Forum

(Continued From Page One)

to write the Public Health Service about it," Snell answered. "The whole question of contamination of food and water should be raised, in my opinion."

Snell sent his letter last November to Robert L. Lawrence, Metro waterworks director, supporting Lawrence's decision to prohibit asbestos cement pipe manufacturers from bidding on Metro waterpipe purchases.

The professor said he would consider the use of asbestos pipe "a medical hazard of significant degree" until the Public Health Service has checked it out completely.

EXPLAINING TO the councilmen yesterday that he had no ulterior motive in writing the letter, Snell said:

"I regret the vindictive attitude that some people have against me, merely as a result of my raising this question."

"I'm not vindictive against you, doctor," Hamilton interrupted. "In fact, I had never met you until now. It just seems to me that a scientist is under a requirement to state all factors in a case."

"I don't think you understand how this came about," Snell said. "I simply raised thought that before Nashville undertakes to buy large amounts of asbestos pipe, this question should be raised.

"IF YOU DESIRE to raise the same question about cast iron pipe, then I think it is very reasonable. I have no political motive. I have no financial interest in these pipe companies. I am not aligned politically with any group."

Hamilton reacted angrily at this statement by Snell and declared:

"We're not inquiring, doctor, into your political alignments, your religion, or anything else."

The exchange between the councilmen and Snell followed presentations by representatives of both Clow Corp., which has supplied all Metro waterpipe the past four years, and Johns-Manville Sales Corp., an asbestos pipe dealer seeking to bid on pipe purchases here.

K. RAYMOND Augst, assistant district sales manager for Johns-Manville, told the councilmen that there are strong indications Metro could save 34% on its pipe purchases if the city permitted the asbestos pipe firms to bid.

Augst said Metro bought $1.3 million worth of cast iron pipe from July, 1956, to September, 1957. Asbestos pipe, Augst added, would have cost only $864,000 — giving Metro a savings of $459,000.

Lawrence has defended buying the more expensive pipe on grounds it is better and has "a greater factor of safety."

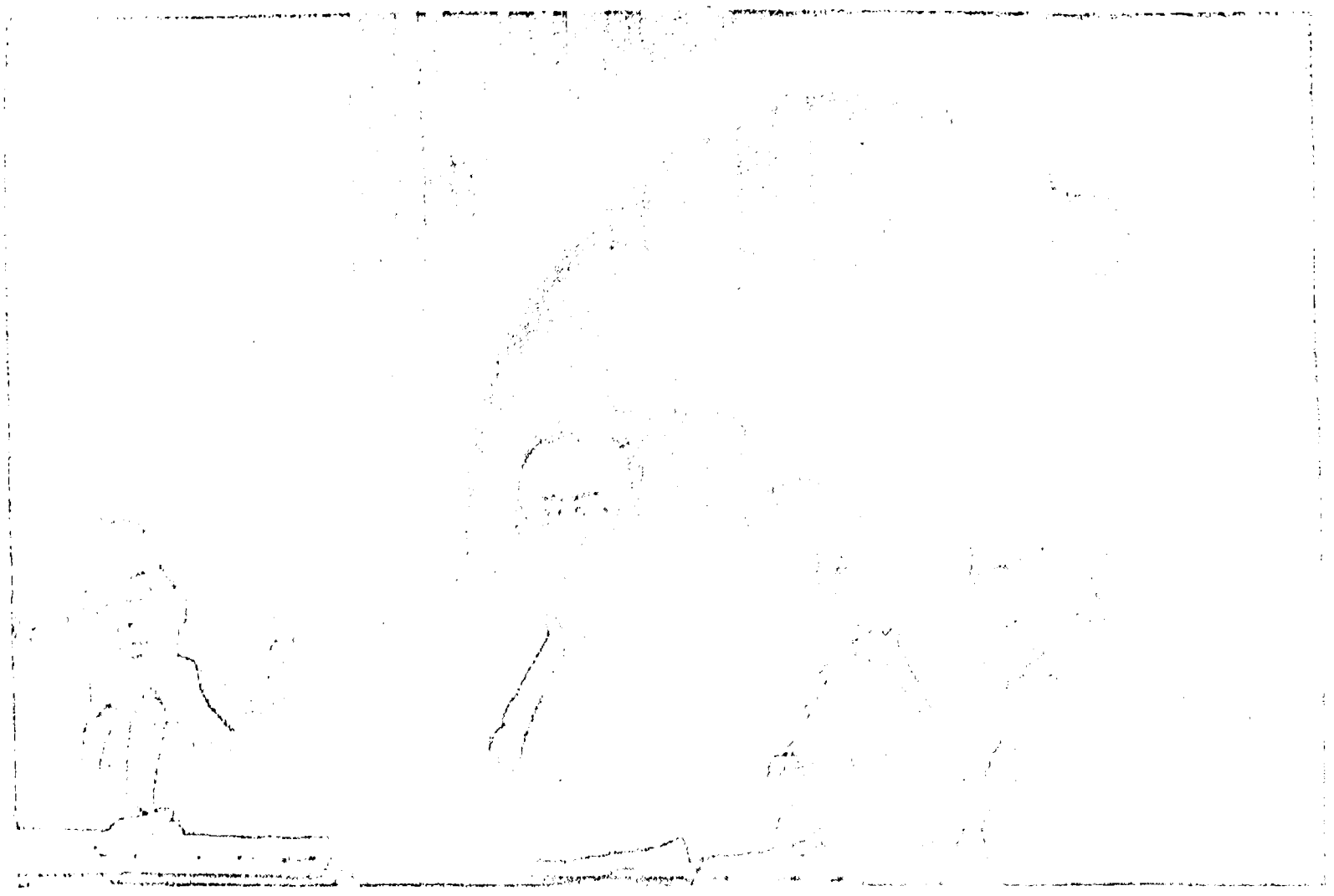
However, Johns - Manville representatives insisted yesterday that their product will serve the city equally as good as cast iron pipe if it is installed properly.

SHORTLY AFTER Snell wrote his letter last year to Lawrence, raising the question of whether asbestos pipe could cause cancer, the Metro Health Board took a similar stand.

The board voted Jan. 17 to "not approve the use of asbestos pipe" until sufficient information could be obtained to prove if it is medically safe.

Yesterday, at an early morning meeting, the board voted to reconsider its stand on the basis of evidence submitted by Johns-Manville Co. representatives.

THE NASHVILLE TENNESSEAN, Thursday, Feb. 22, 1968



—Staff photo by Jack Corn

It's Cast Iron vs. Asbestos in Council Squabble

Metro councilmen listen intently as spokesmen for cast iron and asbestos cement pipe firms argue the relative merits of their products. The piece of pipe in the foreground is cast iron. It was taken from an old city waterline after serving without any breakdown for nearly 75 years, Metro waterworks officials said. The councilmen, from left, are Tandy Wilson, Thurman Brooks and Richard Taylor.

FORM 117 8-62

ACTION MEMO

Subject ☐ See attached

M. S. Davis

- ☐ For Your APPROVAL
- ☐ For Your COMMENT
- ☐ Advise COMPLETION Date
- ☐ CONTACT Me About This
- ☐ Per ☐ Our ☐ Your CONVERSATION
- ☐ For DISCUSSION
- ☐ Prepare ESTIMATE
- ☐ For Your FILE
- ☐ For FOLLOW-UP Record
- ☐ Please HANDLE
- ☐ For Your INFORMATION
- ☐ INVESTIGATE And Report
- ☐ READ ☐ Destroy ☐ Return
- ☐ Per Your REQUEST
- ☐ Advise STATUS

TO ~~C. E. Reichel~~

FROM ~~C. E. DeLong~~

DATE 2/8/68

RETURN BY

FORWARD TO

☐

Please note Herb Roll's Memo M. Meyer and I have the only other copies

Memo from Herbert Morton Ball

The attached is a progress report on our common environmental health problem in the asbestos-cement pipe area.

As agreed at our meeting on January 3, this information is to be kept strictly on a top executive level. It is definitely not to be distributed to the field.

It is with this understanding that the attachments are sent to you.

2/7/68

General Headquarters
February 5, 1968

H. M. Ball

Herb:

Attached is a progress report on our environmental health project in the asbestos-cement area.

In line with our agreement at the January 3rd meeting of a/c pipe manufacturers, you may want to pass this report on to them.

If there are questions before so doing, please let me know.

F. J. Solon, Jr.

cc-Dr. George W. Wright, Cleveland,Ohio
M. Harris
J. Baker
W. P. Raines

PROGRESS REPORT
Environmental Health Project
Asbestos-Cement Pipe

At the conclusion of the January 3rd meeting of asbestos-cement pipe manufacturers, several of us volunteered for specific assignments. This is the first report of progress on those assignments.

Assignment: H. M. Ball to visit the General Counsel of the Cast Iron Pipe Research Association to discuss the desirability of eliminating reference to alleged health hazards in the promotion of various types of water pipe.

PROGRESS

Mr. Ball and Jay Baker carried out this assignment on January 18, meeting with both the General Counsel and the Executive Secretary of the Association at the Counsel's Washington, D.C. office. Mr. Ball has reported the successful results of that meeting to the other a/c pipe manufacturers. J-M Pipe Division people report no new "incidents" since that time.

Assignment: F. J. Solon, Jr. to visit Dr. Murray Brown of the U.S. Public Health Service to sound him out on what PHS plans to do about questions regarding the safety of a/c pipe and whether he would be receptive to the idea of broadening any PHS study to include cast iron, plastic and other types of pipe used to carry potable water.

PROGRESS

At a subsequent meeting with Dr. George W. Wright, Medical Consultant to the President of Johns-Manville, it was deemed advisable for Dr. Wright, who knows Dr. Brown well, to make the contact. He did so by phone the week of January 21. Dr. Brown told Dr. Wright he was aware of the problem, that Senator Gore of Tennessee had shown interest in it and that he (Dr. Brown) had an appointment with Dr. Stewart, the Surgeon General, that week and that the subject of a/c pipe could very well come up. He promised to report after his visit with Dr. Stewart.

He did not report that week so Dr. Wright called him January 31 to learn:

1. The subject did not come up in Dr. Brown's meeting with the Surgeon General.
2. If there is to be a test program on a/c pipe, it will probably be given to Dr. Brown's group - and that he has already made up his mind to include cast iron, plastic and other types of pipe in the program.
3. Dr. Brown has written to Dr. I. J. Selikoff asking for a copy of Dr. Selikoff's letter to Dr. Bistowish, Director of Health of Nashville and Davidson County. He is awaiting receipt of that letter before writing to Senator Gore, as the Senator had requested. He

has had no pressure from Senator Gore in the meantime and believes the political pressure is off.

In light of the above, it would not seem to be necessary for a delegation of a/c pipe manufacturers to visit Dr. Brown or anyone else in the PHS at this time regarding the inclusion of cast iron pipe, etc., in any test program. However, we will keep in touch with the situation through Dr. Wright so that should consideration of a test program become imminent, we will be on top of it and can then mutually decide strategy.

Assignment: Johns-Manville will prepare a position "background" paper on the a/c pipe environmental health question.

PROGRESS

The first rough draft has been completed. To the comments of Dr. Wright which form a firm base for this paper, we wanted to add those of Dr. Selikoff. Ivan Sabourin, Counsel to the Quebec Asbestos Mining Association, obtained from Dr. Selikoff a copy of the Selikoff letter to Dr. Bistowish along with his (Dr. Selikoff's) permission to give it to F. J. Solon, Jr. This gave us direct knowledge of the letter instead of the indirect knowledge we had had previously.

Now, in order to get "our own" letter of comment, Dr. Fred Pundsack of Johns-Manville who, with a group including

Mr. Sabourin, has been having exploratory scientific meetings with the Selikoff Mount Sinai group for several months, wrote to Dr. Selikoff on January 30th, requesting his comments on health aspects of a/c pipe. We understand that Dr. Selikoff will answer this request - so that in the next two weeks, we should have our own letter from which we can excerpt for our position "background" paper. If this works out as scheduled we should have a final position paper ready by March 1st.

Assignment: F.J. Solon, Jr. to talk with Dr. Wright re possible research programs on the a/c pipe health question.

PROGRESS

Dr. Wright contacted Dr. Robert T. deTreville of the Industrial Hygiene Foundation, Pittsburgh, where much asbestos fiber research has been and is being carried on. Dr. deTreville's letter to Dr. Wright with an attached report from Dr. Paul Gross, shows that in tests already underway, involving rat feeding, no abnormalities have yet been found in the gastro intestinal tracts of these animals in the 21 months since the test program began. This is encouraging and we hope this preliminary report will be borne out on the final report when all animals have been processed. We have no date as yet for this final report.

Since these tests involve chrysotile fiber only, Dr. Wright is now considering the advisability of a similar test program involving crocidilite fiber. This will be further discussed at a meeting on February 20.

Further on the Nashville "situation":

Attached are copies of two clippings from the Nashville Banner, January 17 and the Nashville Tennessean, January 19 showing that Dr. Bistowish is still openly opposing a/c pipe despite the point of view expressed in Dr. Selikoff's letter to him. At a meeting this past week with Moke Harris and Jay Baker of the J-M Pipe Division, we agreed on strategy aimed at getting the "full story" into the Nashville papers (i.e., Dr. Selikoff's letter to Dr. Bistowish which takes a much more temperate view of the hazard than Dr. Bistowish has thus far verbalized to the press and others.)

WATER CONTAMINATION STUDIES

At the January 3rd meeting we covered briefly the water test program we were getting underway at the Manville Research Center. Attached is a confirming memo from Ed Fenner, Director of our Environmental Control Department regarding that program.

Generally, I would say good progress is being made. We will continue to report as that progress warrants.

F. J. Solon, Jr.

NASHVILLE BANNER

JANUARY 17, 1968

Health Board Advises Against Asbestos Pipe

By DICK BATTLE

The Metropolitan Board of Health recommended today asbestos cement pipe not be used in the Metropolitan water system "until more evidence can be developed" concerning any health hazard from asbestos fibers.

Dr. Joseph Bistowish, director of health, said the board "has instructed me to recommend to Mr. Lawrence (director of water and sewerage services Robert L. Lawrence) against the use of asbestos pipe at this time, until we can get more evidence. We want more information about it before we can make a firm decision."

Councilman James LaPenna has been urging that bidding be opened to allow purchase of asbestos-cement pipe.

Rejected Plea

Lawrence, who is responsible for specifications on materials, has rejected LaPenna's suggestions on the basis cast iron pipe is superior to the asbestos pipe in tensile strength and suitability for use here.

Several medical experts have suggested the possibility that the ingestion of asbestos fibers from the use of asbestos pipe might be a cause of intestinal cancer.

Dr. Bistowish said he also has asked the Nashville Academy of Medicine, through its Public Health Committee headed by Dr. Alvin Keller, to investigate the use of asbestos pipe.

The board in other actions this morning voted to add measles vaccination to the immunizations required for admission to schools, nursery schools and day care centers.

Delays Clinic

The board delayed opening of a public health clinic in the Edgehill Urban renewal project pending "discussion of several problems . . . including the level of indigency and how we can assure follow up care . . ." The director said he would probably discuss the matter with Vanderbilt and General Hospital officials.

Dr. Bistowish said a study of influenza cases involving employes at a local industrial plant indicates a new strain of flu virus, "A-2 Taiwan" was the cause of much of the recent flu epidemic.

He said clinical evidence might develop another strain but "we know this new (A-2 Taiwan) strain has been prevalent here based on the small number of cases checked at one industrial plant."

NASHVILLE TENNESSEAN

JANUARY 19, 1968

NASHVILLE TENNESSEAN 1/18/68

Bistowish Opposes Asbestos Pipe Use

By FRANK RITTER

Dr. Joseph Bistowish, Metro health director, recommended to a council committee last night that asbestos cement pipe not be used in the water system here because of "possible health hazards."

There is no evidence, Bistowish explained, to prove that the ingestion of asbestos fibers is not related to cancer. And until further tests are conducted to show that no hazard exists, the health director added, "I would not like asbestos pipe carrying water to my house."

However, a sales representative for a major asbestos pipe manufacturer replied that cities which have used asbestos pipe for decades show no greater incidence of cancer than cities that don't use the pipe.

BISTOWISH MADE his recommendation to the council's public works committee, headed by Councilman Richard Taylor. The public works committee, along with the council's purchasing committee, has been studying the relative merits of asbestos and cast iron pipe.

Nashville has used cast iron pipe exclusively, although it is more expensive than asbestos pipe, for at least 40 years in the water system here. Robert L. Lawrence Jr., Metro waterworks director, has defended the practice on grounds cast iron pipe is better.

Bistowish, in raising the question relating to a possible health hazard inherent in asbestos pipe, said it is a proven fact that inhalation of asbestos fibers can cause cancer.

"We do know that you can get cancer by inhaling asbestos fibers," he added, "but we aren't certain about the ingestion of fibers -- there have been no studies to prove it doesn't cause cancer.

"It is my understanding that such studies are now underway, and perhaps they will shed some light on the question. But to my mind, there are too many unanswered questions at this time about asbestos pipe."

K. RAYMOND August, assistant district sales manager for Johns-Manville Sales Corp., a manufacturer of asbestos pipe, said asbestos pipe has been used for 25 to 30 years in some cities without adverse consequences.

"There is nothing to prove," he added, "that there are not agents in cast iron pipe which would cause cancer."

August then raised the question of whether the "tar which is used for the inside lining of cast iron pipe is carcinogenic (cancer-producing)?"

Taylor called last night's meeting of the public works committee primarily to permit representatives for Clow Corp., manufacturer of cast iron pipe, to explain why they feel their product is better than asbestos pipe.

LENNART A. Fahlander, general sales manager for the corporation, spoke for an hour about what he termed the advantages of using cast iron pipe, using colored slides to illustrate his talk. He spent another half hour answering questions.

Taylor sharply limited discussion of questions raised by August, competitor of Clow Corp., and would not allow the asbestos pipe representative to give a full presentation of his views.

W. J. Hayes Jr., direct sales representative for Johns-Manville, said he thinks most of the adverse comments about asbestos pipe could have been refuted if Taylor had permitted others the freedom he gave Clow representatives in speaking out.

"We were not given an opportunity at this meeting," Hayes added, "to make a presentation or offer a rebuttal to the questions raised.

"IF WE HAD been permitted to speak out, we would have shown asbestos pipe has been used for many decades in all parts of the nation, and used with great success.

"We would have discussed, if we had been given a chance to reply, U.S. Department of Commerce figures which show that the use of asbestos pipe throughout the country has increased from 21.7% of the business in 1945 to 31% in 1965. During the same period, the use of cast iron pipe has dropped from 78.3% to 61.2%.

"This indicates that the use of asbestos pipe in water systems throughout the nation is accepted."

The public works committee made no recommendation last night on whether Metro should purchase asbestos pipe instead of cast iron pipe.

Under present policies of the waterworks department, the asbestos pipe representatives are not permitted to bid on contracts for supplying pipe to the local government.

January 3, 1968

George W. Wright, M. D.
Head, Medical Research
Department
St. Luke's Hospital
11311 Shaker Blvd.
Cleveland, Ohio 44104

Dear George:

As requested, I am sending, herewith, a copy of Paul's preliminary report on the feeding of chrysotile to rats.

Best regards.

Sincerely,

Robert T. P. deTreville, M.D.

deT:sld
Enclosure
cc-Dr. P. Gross

DATE: January 3, 1968

TO: Dr. Robert T. P. deTreville

FROM: Dr. Paul Gross

SUBJECT: Asbestos Feeding Study--Preliminary Report

As part of our investigation of the bio-effects of asbestos, we prepared an intimate mixture of finely divided ball-milled chrysotile asbestos so that the chrysotile constituted 5 percent of the food by weight. This was fed to ten young growing rats for 21 months. A comparable control group of rats of the same age and weight was fed the same diet but without chrysotile.

The weight curves of the two groups of animals were not significantly different from one another.

At autopsy, 21 months after the beginning of the feeding experiment, no significant abnormality was found.

Sections were prepared from various portions of the gastro-intestinal tract as well as from the heart, lungs, liver, kidneys, and spleen. Although all animals have not yet been processed, no abnormality has been found in the sections so far examined.

P.G.

P.G.-ejd

Environmental Control Department
Research & Engineering Center
January 2, 1968

CONFIDENTIAL

W. P. Raines - GHQ

Water Contamination Studies

The water contamination studies planned by the Research Center are in three groups. In the first two the samples collected will be checked as follows:

(1) Filtration tests, and microscopic examination of the particulate matter to detect asbestos, if present.

(2) Water hardness.

(3) Water pH.

(4) Iron content of the water.

The Group I program involves tests of water from Bound Brook, N. J., "an all cast-iron pipe town" and Manville, N. J., "an all asbestos-cement pipe town". The sampling and testing program will begin immediately after the first of the year. Samples will be taken weekly from each town. The program will continue until definitive results are obtained.

The Group II test program involves water samples from the following cities:

Globe, Arizona
San Diego, California
Long Beach, California
Providence, Rhode Island
Wichita, Kansas
Memphis (Capleville District), Tennessee.

Two samples will be taken from each city. The first sample will be the source water before it has passed through asbestos-cement pipe and the second will be water after it has passed through the pipe. Samples from Globe, San Diego, and Long Beach have been received and the others are due soon.

The Group III tests will be made on a new pipe test loop stand under construction at the Research and Engineering Center. This test stand will permit controlled studies of the erosion or disintegration of asbestos-cement pipe by water of different pH and hardness values. The system utilizes a 30-ft test run of asbestos-cement pipe and is equipped with fairly sophisticated control equipment. The water run through the test will be filtered and examined for asbestos fiber content. The water, which will not be recirculated, will be continuously and automatically adjusted to the proper pH and hardness values. This system is scheduled to be in operation in April 1968. The first long-term test is planned with very severe water conditions insofar as asbestos-cement pipe is concerned - low pH and low hardness.

E. M. Fenner

EMF/ems

cc: F. L. Pundsack
J. H. Swensen
File
C

CERTAIN-TEED PRODUCTS CORPORATION

TAINTEED

Ambler 45	Ardmore Legal
ATTENTION OF: Mr. J. R. ~~Roe~~ Reichel	DATE: January 19, 1968
ANSWERING YOURS:	DICTATED BY: C. E. DeLong / kh
SUBJECT: HEALTH HAZARDS OF ASBESTOS CEMENT PIPE	

cc: Mr. Malcolm Meyer - Ardmore

Mr. Herbert Ball of Johns-Manville called on Friday, January 19, 1968, to report certain developments in the controversy about the health hazards of asbestos cement pipe.

Following Mr. Ball's meeting with the General Counsel for the Cast Iron Research Institute, the Cast Iron people had a meeting and they have now decided not to use publicity about suspected health hazards of asbestos as a sales medium for promoting their products.

Doctor Wright through Murray Brown of the U. S. Public Health Service has submitted the asbestos problem to the Surgeon General, and his views about the need for studying the problem will be received shortly.

It has been learned that Senator Gore has entered into the controversy at Nashville concerning the use of asbestos cement pipe and has been promoting the interest of the Public Health Service in this matter. There is still a great deal of controversy in Nashville as to whether specifications should be open to asbestos cement pipe. There have been certain meetings or hearings held, in the course of one of which the possible health hazards of cold tar products used by the Cast Iron people were mentioned.

RECEIVED
GENERAL SALES A/C PIPE
JAN 23 1968

FORM 117 8-62

ACTION MEMO | Subject ☐ See attached

- ☐ For Your APPROVAL
- ☐ For Your COMMENT
- ☐ Advise COMPLETION Date
- ☐ CONTACT Me About This
- ☐ Per ☐ Our ☐ Your CONVERSATION
- ☐ For DISCUSSION
- ☐ Prepare ESTIMATE
- ☐ For Your FILE
- ☐ For FOLLOW-UP Record
- ☐ Please HANDLE
- ☐ For Your INFORMATION
- ☐ INVESTIGATE And Report
- ☐ READ ☐ Destroy ☐ Return
- ☐ Per Your REQUEST
- ☐ Advise STATUS

TO: J. L. Reichel

FROM: C. E. Adams

DATE:

RETURN BY:

FORWARD TO:

☐ Copies returned per your request.

4L

NASHVILLE BANNER - 1/17/67

Health Board Advises Against Asbestos Pipe

By DICK BATTLE

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NASHVILLE BANNER - 1/17/67

Health Board Advises Against Asbestos Pipe

By DICK BATTLE

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Councilman James LaPenna has been urging that bidding be opened to allow purchase of asbestos-cement pipe.

Rejected Plea

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Asbestos-Cement Warning Sounded

By DICK BATTLE

Health and medical authorities have warned Metro Director of Water and Sewerage Services Robert L. Lawrence Jr. that substitution of asbestos-cement pipe for cast iron water mains may create a "medical hazard" of significant degree."

"Asbestos has been fairly well established in medical circles as causing a high incidence of cancer" in the lungs or gastro-intestinal tract, one letter to Lawrence stated. A copy of the letter was also sent to Councilman James J. LaPenna, chairman of the council's purchasing committee who has urged broadening water pipe specifications to include bidding by asbestos-cement pipe manufacturers.

Warning

The warning expressed by Dr. James D. Snell Jr., assistant professor of medicine, Vanderbilt University, and by Dr. J. M. Bistowish, Metro director of health, follows efforts by Councilman LaPenna on Nov. 21 to promote an all expense paid trip for councilmen to visit the "research center" of an asbestos-cement pipe manufacturer "30 minutes outside New York City."

For many years Lawrence has insisted on the use of cast iron pipe for the local water system. He has informed LaPenna he does not consider asbestos-cement pipe comparable

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Asbestos

(Continued From First Page)

in durability to cast iron pipe.

LaPenna has not insisted that asbestos-cement pipe be installed in the Metro water system. He has urged that specifications be rewritten to allow bidding by asbestos-cement manufacturers or suppliers as a means of forcing lower bids from castiron pipe manufacturers. Lawrence has said he will not approve use of the pipe and changing specifications under these circumstances is not "honest."

'Work Trip'

The trip for councilmen to the eastern research center of an asbestos-cement pipe manufacturing firm is a "work trip," LaPenna states, to gain information about the product.

He told the council on Nov. 21, however, it was "very possible no tangible results will come from it (the 'work trip')" but urged they make the overnight junket in a company plane at no cost to themselves and also invited newsmen and Metro officials to sign up for the free trip. Copies of the two letters from Doctors Snell and Bistowish dated Nov. 14 and 17 respectively were mailed to LaPenna.

Dr. Snell's letter to Lawrence states:

"I read with great concern the council's recommendation that Metropolitan Government rewrite their specifications on water pipe to allow asbestos-cement to competitively bid. I was not aware, nor apparently are many medical people aware that asbestos containing pipe has been used in water systems.

"Asbestos has been fairly well established in medical circles as causing a high incidence of cancer in the lungs if breathed or the gastrointestinal tract if swallowed even in amounts small enough to be visible only under a microscope.

"Regardless of who is using it now, and regardless of any reassurances by salesmen from asbestos-cement pipe manufacturers, I would [illegible] medical hazard [illegible] degree to its [illegible] water system. [illegible] to Health Service [illegible] it our community [illegible] city's expense. [illegible] Health Service [illegible] to be the burden of [illegible] would suggest that it is [illegible] sible to wars on the [illegible] ade to it without releasing [illegible] cles of asbestos into the [illegible] If any particles were released current medical knowledge [illegible] gests that a rise in certain [illegible] of cancer could be expected [illegible] about 20-50 years among the population.

"[illegible] such things as water [illegible] not have to be tested [illegible] any U.S. Public Health Service agency except those to whom sure pacts or contract [illegible] the pipe. If so, there has been a terrible mistake made in allowing use of asbestos containing pipe in water systems.

"It is my opinion that although it is common practice in many cities, we would be unwise to change our specifications to allow asbestos-cement pipe to compete at the bids until the full facts can be ascertained. I intend to pursue this matter with public health officials at the U.S. Public Health Service. While this pipe has some safety features in construction which make it less hazardous."

Dr. Bistowish

Dr. Bistowish wrote the following letter on Nov. 17 in response to communication from Dr. Snell:

"Following your telephone call relative to the use of asbestos pipe for water systems, I contacted the Division of State Health Services and was informed while they would prefer not to have asbestos pipe used, there was no prohibition against it and such pipe are used in some parts of the country. I can find no one at the state level who has knowledge of any adequate studies to rule out health hazards from the use of asbestos piping. I have written for information from the U.S. Public Health Service and to the National Center for Chronic and Occupational Health to determine if they have knowledge of studies being made on this material.

"It may interest you to know that in one area near Memphis, ph (parts hydrogen) of the water was about 10 or 11 and complaints from residents were received that the water was milky. Investigation revealed that the lime had been dissolved from a cement component of the pipe and constant flushing had to be continued to keep the pipes clear.

[illegible]

[illegible] Dr. Snell [illegible] Dr. Lawrence [illegible] and I found [illegible] was evasive [illegible] to [illegible] the [illegible] insurance [illegible] has [illegible] on for many [illegible]

Lawrence said his rejection of the asbestos-cement pipe was based [illegible] not [illegible] the engineers [illegible] cost from [illegible] advantages [illegible] pipe for [illegible] such use.

Be Resolved

"The point which you have raised is a correct, recognized of serious importance and it [illegible] should be resolved to any doubt by the [illegible] of competent members of the medical and engineering professions. A matter of this nature should always be resolved in such a manner as to remove any doubt whatsoever."

Lawrence, in response to questions said LaPenna has been furnished with copies of all correspondence from Drs. Snell and Bistowish and his (Lawrence's) reply and addition to engineers and consultants reports and findings relative to comparisons of cast iron pipe and asbestos-cement pipe. The director of water-sewerage services said he had noted LaPenna would report to the council, the committee and the public the [illegible] correspondence and information relevant to the controversy.

Today the Metropolitan Council office reported LaPenna and [illegible] council members have [illegible] the New York trip [illegible] the manufacturer. The councilmen making the trip will be LaPenna and Raymond Farmer, Frank Grimm, Archie Driver, Earl Shacklett, Johnny Fox, Robert McBride, Mansford Douglas, Paul Blankenship, Martin Garrett and Thomas Sharp.