



**Johns-Manville
Sales Corporation**

Ken-Caryl Ranch
Denver, Colorado 80217
(303) 979-1000

PLAINTIFF'S EXHIBIT

CAP-1493

November 6, 1981

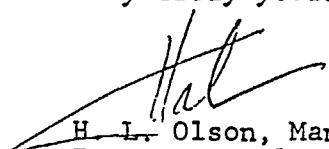
Mr. Legion C. Kramer
505 N. Clark Ave.
P.O. Box 158
Lakewood, CA 90714

Dear Lee:

It was a pleasure to meet you in Palm Springs, and I appreciate your taking the time to update Jim Reichel and myself on the Lakewood incident.

As I promised at our meeting, I'm sending you a copy of an article I found in the Long Beach Press Telegram while I was on the coast. I'm also attaching an office file copy from EPA Region VI in Dallas. This file was given to our local salesman by Mac Weaver who is acting Chief, Water Supply Branch for EPA Region VI. We were given no restrictions on the use of this file.

Very truly yours,


H. L. Olson, Manager
Environmental & Engineering Development

HLO:bja

attachment

bcc: J. Cran 3-01
John Welch AACPP
Jim Reichel, CAPCO
f/c

CAPCO JEN 0013148

comment

The power to destroy by press release

The power to tax, said the first Justice Marshall, involves the power to destroy. In the everyday exercises of the federal bureaucracy, the power to issue a staff press release can have the same effect. Ask the small-business men who used to install urea formaldehyde foam insulation.



James
Kilpatrick

The story is instructive. Most of us are at least dimly aware of the immense and arbitrary power of federal agencies. Few of us have felt the impact quite so keenly as the foam installers who had nice little businesses just over a year ago. Only 220 are known to be still in business today.

Forty-odd years ago an inventive German discovered how to turn formaldehyde resin into foam. Then it was found that the foam had excellent properties for insulation. No one imagined that the infinitesimal level of formaldehyde in the final product — less than half of 1 percent — could present any hazard.

Formaldehyde, after all, is the most common of all industrial chemical compounds. The pungent gas turns up in disinfectants and preservatives, in plywood, draperies, carpeting, shampoo and cosmetics. It puts the permanent press in fabrics. It appears in cigarette smoke. The makers of Gleem toothpaste, with the approval of the Food and Drug Administration, add a trace of formaldehyde resin to their product. Formaldehyde is all around us.

But on Nov. 24, 1980, zealous staffers of the Consumer Product Safety Commission seized upon a study that had been made of the effects of formaldehyde on laboratory rats. The animals were exposed to unrealistically massive doses of formaldehyde fumes for six hours a day, five days a week, for more than two years. Not surprisingly, some of the rats developed tumors in their noses. The study was replicated this year at New York University Medical Center.

In any common sense view, the two studies would indicate no significant risk to human beings. Indeed, the Environmental Protection Agency staff, in an unrelated action, last month looked at the two studies and came to precisely that conclusion. But over at the CPSC,

common sense is in short supply. Citing 1,600 consumer complaints — many of them quite dubious complaints — staffers took to TV and to the press.

Their press release warned in ominous terms that homeowners risked cancer if they installed urea formaldehyde insulation. Staff members urged an immediate ban. In January, by a 3-2 vote, the commission took indecisive action — not to ban the stuff, but to propose a ban and to invite comments. On Oct. 1, the commission voted 4-1 to extend the period of delay for another 130 days.

The delay is killing the industry. Formerly there were 34 manufacturers of the foam insulation. Now there are six. In 1977 a single manufacturer had 12 plants going; one of those plants alone had a monthly output of 7,500 drum sets. Today the monthly production for the entire industry is about 1,100 drum sets. Scores of installers, most of them mom-and-pop enterprises, have taken bankruptcy. And as the EPA's decision makes clear, there is still no convincing evidence whatever of serious hazard to humans.

The commission's irresponsible conduct has side effects. More than half a million homes have been insulated with foam in the past 10 years. If an outright ban should be imposed, a statement of defect presumably would have to be included when the home is sold. In Massachusetts, which imposed its own state ban, the value of foam-insulated houses has dropped by 25 percent.

This is not the first time the commission has acted with such reckless disregard for human consequence. The commission very nearly destroyed a toy manufacturer in Wisconsin by sheer negligence. Again, it drove a California importer to the wall, impounding his stock at the peak of his Christmas sales season. Now it's the foam insulators who are being ruined. Upon what meat do these our Caesars feed that they have grown so great?

Excerpts from Testimony
Presented to the Lakewood City Council
Evaluating the Health Effects of
Asbestos-Cement Water Pipe
July 14, 1981

John Gaston
California Department of
Health Services

Mr. Gaston is responsible for drinking water quality in California. He has been chief of the sanitary engineering section of the health department since 1968. He holds a master's degree in sanitary engineering from the University of California, Berkeley.



We have no problem with the use of asbestos-cement pipe in Lakewood.

Asbestos in drinking water is an issue that we have been involved with for some time. In looking at the asbestos fiber and water supply issues we have seen in California — [from San Francisco, Marin, Humboldt, and the California Aqueduct] — there is no problem in Lakewood.

A-C pipe when used in proper applications — as apparently it is in Lakewood — does not present a hazard to water consumers.

Dr. Herbert M. Conrad
Water Quality Scientist

Dr. Conrad has monitored the Lakewood water supply since 1959. He is president of Ecological Systems Corporation. Dr. Conrad received his PhD in biochemistry from the University of Southern California.



The findings of our tests demonstrate that the asbestos fiber content of Lakewood water is minimal. Furthermore, the protective nature of the water itself precludes the subsequent deterioration of the A-C pipelines, which might have served as a secondary source of asbestos fibers.

Specific tests were run to determine whether our water was corrosive. We determined that the water is scale-forming and protective.

We have shown that A-C pipe is safe and have confirmed these findings by three different methods, not just one.

Tests were run using an electron microscope to count the fibers. In all cases, it was found that the fiber content of the water, in all locations of the city, was safe and relatively low.

The only conclusion that can be drawn from these facts is that the City of Lakewood does not have an asbestos problem with its water system.

Robert S. Bryant
American Water Works Assn.

Mr. Bryant is the chairman of the Standards Committee for Asbestos-Cement Pressure Pipe of the American Water Works Association.



The American Water Works Association functions as the representative of the water purveying agencies in the United States. One of our functions is to formulate policy based on the understanding and knowledge that our members possess.

A typical standards committee such as the asbestos-cement pipe committee will develop and maintain on a five-year cycle all the standards that relate to the manufacture of the pipe, testing and quality assurance. There are also standards that relate to the design and selection of the pipe. There are also standards for the installation of the pipe and all the components that would go into the pipeline to form a water system. We also have manuals that are used concurrently with the installation standards to specifically address pipe installation.

I am a member of the AWWA committee organized to develop a policy statement on the safety of asbestos fibers in drinking water.

In listening to the presentation of your report [on A-C pipe], I felt I was on traveled ground. We have recently done the same type of work. Our final policy statement will be prepared by our committee.

We offer some precautions. But our basic statement is that asbestos-cement pipe is safe when used in accordance with the guidelines that we have established.

Dr. Arthur F. Gelb
Chest Disease Consultant and
Associate Clinical Professor
University of California, Los Angeles

Dr. Gelb is a member of the medical staff of Doctors Hospital of Lakewood. He is a specialist in internal medicine and pulmonary diseases. Dr. Gelb and his family are Lakewood residents and receive their water from the city water system.



I have reviewed the report on asbestos in the city water supply. I am in complete agreement with the conclusions of the study.

I am a resident of this community and I wholeheartedly support the conclusions.

I wish to reassure the members of the City Council that the opinions reached are fair. [Asbestos in the drinking water] provides no health hazards to the members of this community.

Dr. Kaye Kilburn
Professor of Medicine and
Director, Environmental
Sciences Laboratory,
University of Southern California

Dr. Kilburn is one of the nation's leading authorities on diseases which are caused by asbestos. In 1978, he was the co-director of a major symposium on asbestos associated disease held in New York City. He is the author of more than 125 professional journal articles on medicine, including four on asbestos-related diseases.

Under Dr. Kilburn's direction, the environmental sciences laboratory at USC focuses on the causes of disease in the occupational and environmental sectors. Projects include control of lung cancer in shipyard workers, asbestos disease in families of shipyard workers, and the development of health monitoring programs for workers.



The first thing I would like to say is that to inhale asbestos is hazardous. But this is entirely different than ingesting [drinking or eating] it.

If any of you think you can reduce your asbestos hazard by drinking beer, wine, soft drinks, or bottled water, I invite you to do so. But your asbestos fiber concentration will probably go up!

So, if you want to be totally safe, you should go off water and all other liquids.

I think the point that Dr. Conrad made that we have nonaggressive water is very important. That means that the asbestos that we are going to drink in Lakewood — or in Long Beach and Los Angeles — is the asbestos that comes out of the Sierras by reason of the Sierras catching rain and draining a certain amount of water [into the California Aqueduct].

I spend a good part of my working day seeing people who have been injured by inhaled asbestos. It is not a trivial matter.

We figure that less than one percent of ingested asbestos remains in the system. Let's compare that to our lungs. Probably, the lungs retain 50 percent of the asbestos that is inhaled.

The primary ingestion of asbestos through water or food is really trivial compared to secondary ingestion from inhalation.

I would affirm that asbestos is a hazardous material. But it is basically hazardous by only one mode of entry — airborne through inhalation.

There is really not much we can do about the natural asbestos we are faced with in the water supply. It is like natural radiation from the sun or from the rock that we live on. It is one of those risks we have to accept.

There are plenty of things that we have to be very worried about. Asbestos in water is one we don't have to worry about.



ROBERT S. BRYANT - Standards Committee for Asbestos-Cement Pressure Pipe, American Water Works Association, Denver.

After my introduction, I think possibly the functioning of the AWWA Standards Committee should be explained to you. The Standards Committees do provide standards and manuals, instruction manuals, for all of the materials that are used in water systems. All the way from reservoir maintenance and design down to the water meters and customer service and customer treatment. The Committees in the Standards group that I represent are based on the broad representation of people across the country and is further divided into three groups on each committee and a balance is struck at all times between the using members which you people would be considered in this case, as users, manufacturers and a general interest group, people who do not have a specific interest in the item or element of the water system, but do have general knowledge in serving on the Committee. A typical standards committee such as the asbestos cement pressure pipe committee will develop and maintain on a five year cycle all the standards that relate to the manufacture of the pipe, manufacture, testing, and the quality assurance of the pipe. There are standards that relate to the design and selection of the pipe, more or less the guides for the engineer to employ in selecting the type and size and rating of the pipe that will be used. There are also standards for the installation of the pipe and all the components that would go into that pipeline to form a water system. We also have manuals, in our case M-16 which has been mentioned, that are used concurrently with the installation standards to specifically address the installation, care and feeding of that type of pipe. And then from time to time other committees are formed from the standards committees to address particular policy matters. The AWWA functions as the representative more or less of the water purveying agencies of the country. Not only this country, but we even have quite a membership in Mexico and Canada, so that we are international in scope. To this extent, one of the functions of the AWWA is to formulate policy that is used for guidance for all of the member organizations, to indicate to people who are concerned what our policy is, based on understanding and knowledge that the organization possesses. In this particular

case, I am a member of an ad hoc committee that was organized a year ago and was charged last June to develop a policy for the AWWA on the safety of asbestos fibers in drinking water.

In listening to the presentation in your report, I felt I was on travelled ground. We have recently done the same type of work and our final policy statement will be prepared by our committee and forwarded to our general membership committee and then finally will be approved by the executive committee of the AWWA, we expect this January.

The policy statement is very short. It does have some, as always, precautionary statements that follow it, but the basic statement is that asbestos cement pipe is safe when used in accordance with the guidelines that we have established in our various standards for installation and the other M-16, which we like to talk about all the time because we are still in a missionary phase in that to get everybody interested in care of work practices for A-C pipe to accommodate both the construction work and the environment that will be in the pipeline.

Briefly, this is the function of the AWWA. We do have a number of committees, the A-C Pipe happens to be the one I am the chairman of. I am happy to be here and if I can help in any way, it's my pleasure.

Mr. Herbert M. Conrad, President, Ecological Systems Corporation, Santa Monica, California

The question asked initially is AC pipe safe to use and the answer to that question is, the AC pipe is safe to use if the water was nonaggressive. Specific tests were run to determine whether Lakewood water was indeed aggressive or corrosive and aggressive and scale forming. We ran four tests. One test is the marble test which is used to determine whether the water is super saturated with calcium carbonate. Since calcium carbonate is the substance that is released from the water and ^{costs} the pipe it is imperative to learn whether the water is super saturated with it, we ran the marble test. To confirm the marble test and since it is also a standard in the industry, we ran the aggressive index test since we believe that no one particular test should be used in a case of this importance. We ran it as a confirmatory test. Both of these tests are based upon the Ph of the water, the alkalinity of the water and the hardness of the water. We determined as quoted in the report that the water is indeed scale forming and protective. The aggressive index is divided into 3 sections: if the aggressive index is less than 10 the water is considered to be aggressive; if the aggressive index is between 10 and 12, it is considered to be moderately aggressive and if it is greater than 12, it is considered to be protective. The average of the well waters tested from all the wells in the City of Lakewood was about 12.4, which is considerably above the minimum for being classified as a protective water. We also wanted to see whether there was any erosion or destruction of the AC pipe after being in service in the City of Lakewood for several different periods. One was a new section of line, one was a section of line that was two years old and one section was about 25 years old. Different locations start at the top. Tests were run using electron microscope to count the fibers and in all cases it was found that the fiber content of the water

Page Two Mr. Conrad

in all locations of the city was relatively low and safe.

If you read the report carefully, there is a table which gives numbers of fibers. And, I want to caution you on the interpretation of these numbers. We are using statistics to prove certain things quite frequently, and the variability of the test and the precision at the low end of the spectrum that we are faced to measure is such that I wouldn't place great credence on the difference between one number and another. The take home lesson of the table should be the fiber content of the water is low, that the fiber content has not significantly increased over the ground water or well water supplies, and that the AC pipe did not contribute to the fiber content.

Finally we took a cross section of the AC pipe that had been in the ground over 25 years, had it analyzed by the United States Testing Company as well as _____ to verify that the component of the scale was indeed calcium carbonate and that was their finding.

So we have really shown that AC pipe is safe and have confirmed these findings by 3 different methods, not rely on one. One is the extended chemical test, the second is the electron microscope and the third is by using X-ray compression technique. The answer to the question is AC pipe safe to use had to be yes and when I summarize the data for the report, it came up with the conclusion that

1. the fiber content of the Lakewood water is minimum,
2. the asbestos cement lining did not contribute to the fiber content of the water and 3. there is no apparent asbestos problem in the City of Lakewood.

Mr. John Gaston, Chief, Sanitary Engineering Section,
California Department of Health Services.

As part of our state wide regulatory program involved in domestic water supply we developed a number of water quality regulations that appear in the California Administrative Code. One of those is drinking water quality regulations. They do not specifically address asbestos in a conclusive way in terms of quantity. Second to those regulations is a operations maintenance regulation we have termed the waterworks standard. In the waterworks standards, we indicate that it is sensible for water utilities in the State of California to use a number of different types of pipe in their distribution system, cast iron, steel, plastic, varieties on the above and asbestos cement pipe. We do not advocate the use of one above the other and we indicate that our regulations in the material that we have indicate that they are all, when used in the proper sense, are safe, if you will, and protect the public health in an equal way. As Dr. Conrad indicated we have no problem with the use of AC pipe in Lakewood. That is the choice of the people of Lakewood and in as much as you have nonaggressive water, it is something which is perfectly appropriate for you to look at here.

The issue of asbestos in water supply is another issue in which we have been involved for some time. In looking at all the asbestos and water supply issues that we have seen in California from the San Francisco, Marin County, Humboldt County, California Aqueduct most due to weather situations where we have what I consider to be a gross contamination of asbestos from the natural state. There is not a problem in Lakewood. This is so far off the bottom of the scale that it is really not a problem. AC pipe when used in proper applications as apparently it is being used here does not present a hazard to the water consumers, and does not present a hazard to the people installing the pipe and does not present a hazard or

Page 2 Mr. Gaston

any problem that we can see. The issue of AC pipe has been rolling around for quite some time. It is indeed involved with the issue of asbestos and the inhalation and ingestion of asbestos in some cases and this is one of them. It is unfortunate because really the two should not be tied together. We anticipate that indeed there will be some sort of asbestos and drinking water standard somewhere down the road.

I cannot conceive that the situation in Lakewood would place you in any danger of being in violation of that standard unless an astronomical or unforeseen changes are made that I cannot possibly foresee.

I am happy to be here and I will address any questions that you may have.

Dr. Kaye Kilburn, Professor of Medicine and Director,
Environmental Sciences Laboratory

Ladies and Gentlemen, Mr. Mayor, it is a pleasure to join you this evening and I think the first thing I would like to say is to inhale asbestos is hazardous. What I am going to come to in a very few points is that this is entirely different than ingesting it and the second point is that the degree of hazard can be calculated quite easily. I have run through a set of calculations that I will share with you.

I am much more worried in the use of AC pipe about the pipe makers than I am about the people who drink the water that runs through the pipe. My second concern I might just point out about the practices of using the pipe before it gets buried under ground where it is no longer of any great concern.

I might point out that the biggest body of fresh water in the world is heavily contaminated with asbestos--that is Lake Superior--the reason it is contaminated is for about 25 years we have permitted the dumping of tachinite from the Mesabi range iron mines into Lake Superior.

So this is not a small problem nor a problem that hasn't had a lot of attention for at least the last 10 or 12 years. So much so that there was a symposium about 5 years ago in North Carolina sponsored by the National Institute for Environmental Health Sciences on ingested asbestos.

It is also true that if you feed goats asbestos, you can sample asbestos having gotten into the goat's circulation. But to do that you would have to feed a whole handful of asbestos and that is probably something like a 900 year supply. So unless anyone is planning to live as long as Metusala and acts like a goat, they are unlikely to

Metuselah

age Three Dr. Kilburn .

see that you have 24 times the dose of asbestos from your work shift exposure. If we assume the bowel is open ended and anyone who doesn't have an open ended bowel, please see me after the meeting, there isn't much ingestion that remains in the system. We figure less than 1% of ingested asbestos remains in the system. Let's compare that to the lung. Probably there is disposition of 50% of the asbestos that is inhaled. So the inhalation of 24 million particles during the working day -- that half of those or 12 million remain or are deposited. Of those 50% are clear. We are down to 6 million. So the dose of residual material is somewhere in the order of 1 two hundredths which from just one working day is in the lung from the inhalation. Of course you may have reason to retain this. If you retain the asbestos, what's the medical information on the effect of that retained asbestos. Well, we know that from the lungs it is distributed all over the body. There is not substantial evidence yet that disease has been produced by the ingestion of asbestos either in man or experimental animals.

Of course, part of the reason is that you have such a colossally greater amount getting into the system by inhalation being cleared up the mucociliary escalator and swallowed that you've got probably 10 to a hundred times as much as your inhaled dose that is being ingested. So that primary ingestion through water or food is really trivial compared to secondary ingestion from inhalation anyway.

So I guess if you want to be totally safe you want to go off water and all other liquids and you obviously shouldn't spray water into the air where it might evaporate and you could inhale the particles.

Those to me represent the worst case issues in the problem and although I would affirm again that asbestos

Page Four Dr. Kilburn

is a hazardous material, it is basically a hazardous material by one mode of entry. That is the air borne mode and not by ingestion mode. So that I think (we) have safe water in the sense of its relative safety.

There is really not much we can do about the natural asbestos that we are faced with in the water supply.

It is like natural radiation from the sun or from the rock that we live on or also find in the High Sierras. It is one of those risks we have to accept. There are plenty of things that we have to be very worried about. This is one I feel and am tempted to say we don't have to worry about.

Question from Vice Mayor Wagner to Mr. Bryant regarding
water from the MWD system compared to water that comes
from the north.

Mr. Bryant: In our own system we use water from all three
sources to varying percentages. Our basic water supply is
our own aqueduct and it provides us at the present time with
close to 85% of our use. We do use what we call state
water which comes from northern California in very small
amounts, a few percentage points at the present time.

And, the balance of the water, I should say that our own,
is that we do use a lot of well water within our own system.
The balance of this then (is) Metropolitan Water District
Water which right now we are using around 12% of our total
consumption so that at this time we do not use a lot of
water from the Metropolitan Water District and from their
two sources.

The difference that I would characterize, the water I am
talking about their business here, but basically the water
that we receive from the Owens Valley is our softest
water in terms of dissolved solids. The next in order of
hardness is our well water and then comes what we call
state water. The hardest water of course is the Metropolitan
District Water. And in our system, we attempt to blend
Metropolitan Water District water within our ability to
do so at a time, simply to produce a water ^{that} has optimum
hardness which is as low as possible.

Question from Mr. Shepherd re why is asbestos being mined and
what is being put into the air when you wash your clothes.

(Mr. Stover answers and refers rest of question to Dr. Kilburn)

Dr. Kilburn: as far as we can measure asbestos in air from
aerosols, (?) such as Bridal Veil Falls and Yosemite, which
would be a prime example, it is below the levels which we
find in most metropolitan areas from the use of all the products
^{that} which are still in place.

Page Two Questions:

In other words in New York, New Jersey, ^{NY/NJ} there is New York metropolitan area, you can measure asbestos in the air at levels that are about 1/10th to 1/20th of the national standard. I am not aware of any demonstration that has ever been made using heavily contaminated area ^{water} such as Lake Superior water, ^{near} here the ^{tachinite} dumping area, or High Sierra water which is brought over the ^{even} open deposits that will approach the asbestos levels in New York or Washington. Actually, the levels in Los Angeles and San Francisco are quite a bit lower--they are about a tenth as high as that.

The answer to mining asbestos in the United States--we don't mine it any more. ^{here} There were about 7 small mines that were open as late as 1958 or 60. The asbestos now being used which has fallen off drastically since 1970 or even 1975 is in many nonsubstitutable items. Mr. Stover mentioned several of these. There are several I would not want to try to see substituted quite honestly. One is brake pads and brake linings. I hesitate to think ^{who} how it would be like driving down the freeways of Los Angeles County without brake linings in place. I hesitate to ^{consider} think of trying to shift gears in my cars which are manual transmission cars without asbestos in the clutch facings. Recently we completed a study in Mount Sinai in New York which shows that probably there is less than trivial exposure to asbestos from brake linings. The study was a study of brake liners, almost 2,000 of them and they showed so little asbestos disease ~~that~~ even after 20 to 35 years of exposure that it wasn't statistically significantly different from auto mechanics who have never touched brake lining.

Page Three Questions

So one of the spectors that haunted us for awhile ~~was~~
which is ^{was} an exposure hazard to the pedestrain every
time you put on your brakes. ^{I think,} We can answer now is
negative. It is possible to deactivate asbestos with
heat and fortunately that is about the amount of heat
that is produced on your brake drums or ^{on} your brake plates
when the pads are applied and you undergo a stop.

So as we learn more about it, I think I would agree with
the last gentleman who spoke that there are some hazards we
really can't do anything to minimize except to quit
breathing the air and quit drinking the water.

I would certainly agree with better work practices.

I certainly agree with better work practices if there has been shoddy contracting as has been alluded to. I think the recommendations that were suggested for doing something about this need to be taken to heart.

But I am a little bit reluctant to give up water brakes and clutch facings at the moment.

Mr. Bryant:

(question regarding forthcoming statement of policy)
(The statement of policy) is remarkably so they are just about the same as your recommendations that were contained in the report. Without looking them up basically that the underlying recommendations were that the installation of the pipe be made in accordance with the manuals and the standards that we have and that further investigations be either made or continuing investigations be observed so that should any positive information develop over the long period of time that we would be cognizant of that and distribute this information to our members.

I think this basically paraphrases the remarks that we made with policy.

Mayor Van Nostran questions where do they mine asbestos in the United States.

Dr. Killin there has not been an active US asbestos mine since about 1959. There are enormous mines in Quebec Province in Canada and most of the pressed tile asbestos the is used to make brake linings, gloves and suits and so on including most of what is put into Johns Manville pipe comes from Quebec Province but the last mine in California was the Caliga and I think it closed in 1959, 58 or 60.

Mayor Van Nostran questions does the manufacture of the pipe take place in the area here

Dr. Killin... in Long Beach, yes

Mayor Van Nostran, and under what conditions is it controlled as far as the manufacture as far as the exposure of the people to the product.

Dr. Killian I surmise that it has been well inspected by Cal Osha and so that the exposure is at the threshold limit value of 2 fibers per millilitre of air which is the legal standard in the United States at the present time. I can't swear on a stack of bibles. I have not been through that particular plant but I am quite aware that Johns Manville has been under the gun considerably and that has been an inspected work place.

As many of you are aware our shipyards in Los Angeles County mainly Long Beach have had some 300,000 workers in them in the last 40 years and that is where most of the people who carry a big burden of asbestos received their exposure. There is now not asbestos installed in Navy ships or in ships being built for the navy or in most ships being built for any purpose in the United States. So the major exposure risks are in asbestos removal. The big one that is staring us in the face is if the battleship, "New Jersey," is brought down from Seattle and deactivated before Mr. Reagan's Navy it's probably one of the richest sources of asbestos on the West Coast. If that's dismantled in Long Beach Harbor and the winds blow north, we've got something to worry about as far as asbestos in the air.

Vide Mayor Wagner questions to Mr. Bryant, "Where is roughly the point where you feel you would start to be concerned about the breakdown of AC pipe in terms of aggressive index. I am aware of the 3 general groupings, but there are also indications, there seem to be indications in the literature that at one time numbers somewhere around 11 above or below 11 was considered as non-aggressive.

Mr. Bryant

Well, the aggressive index as it exists right now the level of 10 is really a very adequate there is a safety factor built into that so that if you do have a 10 this would be a good reason not to use the pipe if that were your only consideration. There are other ways around this that allow you to use the pipe if there are other means that you have to address and this would mean treatment of the water that can be done to modify this aggressive condition that is in the water.

2209 //

Info.

~~to~~
~~sd~~
~~wp~~
~~st~~
gs.



**Johns-Manville
Sales Corporation**

Ken-Caryl Ranch
Denver, Colorado 80217
(303) 979-1000

November 6, 1981

Handwritten notes:
JLH
JLH
AC & Hantz

Mr. James Reichel
CAPCO
P.O. Box 11425
Santa Ana, CA 92711

Dear Jim:

Good seeing you again, even for a brief period. I've xeroxed the testimony of the witnesses Legion Kramer had at the Lakewood city council meeting and I am attaching a copy for your information.

Have fun

Handwritten signature: HLO
H. L. Olson, Manager
Environmental & Engineering Development

HLO:bj

attachment