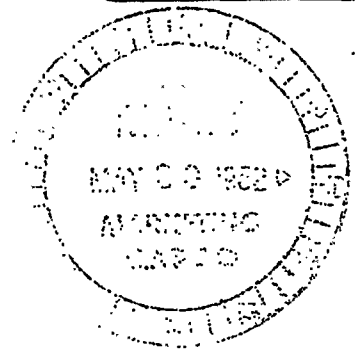
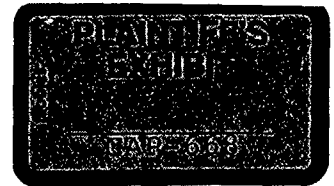




A/C Pipe
Producers Association

1500 Wilson Boulevard
Suite 1008
Arlington, Virginia 22209
(703) 841-1556

May 18, 1982



Linda W. Groome, Esq.
Assistant City Attorney
City of Chesapeake
P. O. Box 15225
Chesapeake, Virginia 23320

Dear Linda:

The document Plaintiffs' Responses to Defendants' Interrogatories (First Set) was reviewed. The following comments are offered for your consideration in preparing the City's defense.

Plaintiffs' Expert Witnesses

It is almost certain that Drs. Castleman and Harris will first attempt to establish the risks of asbestos in drinking water on the basis of studies of worker groups (commercial insulators, shipyard workers, asbestos product manufacturers) exposed to airborne asbestos. Some of these groups exhibit higher than expected rates of gastrointestinal (GI) cancer. The scientific shortcomings of such an argument are pointed out in Comments of the A/C Pipe Producers Association and the Asbestos Information Association/North America on EPA's Water Quality Criteria for Asbestos, previously transmitted.

As stated at our meeting, both witnesses are reasonably knowledgeable about A/C pipe; Castleman may be more emotional and strident in his views than Harris. Harris is well-educated, thoughtful, articulate and not prone to overreaching. Thus, he may come across as being more credible than Castleman. Enclosed for reference is Castleman's and Harris' testimony before a Virginia Senate Subcommittee Studying Asbestos (Cement) Pipes.

Scientific Documents

- 2a: The potentially damaging comment in this article is the statement in Conclusions and Discussion, "There is now some direct human evidence of a relationship between asbestos in drinking water and increased cancer risk." This statement simply is not supportable. The "direct human evidence" to which the author refers are the Kanarek et al studies of cancer incidence and asbestos in drinking water in the San Francisco Bay Area. Those were indirect epidemiological studies whose weaknesses are detailed in the review by Dr. Crump, previously transmitted. Enclosed is a brief analysis of the Millette article, as prepared by a biostatistician from the Johns-Manville Corporation.

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Millette also opines "that sufficient reason exists for the water supply community to make controlling of asbestos in all water supplies an official policy." This is no more than a personal opinion and does not reflect the past or present official policy of the Environmental Protection Agency (see EPA letters to A/C Pipe Producers Association and Senator Bill Bradley, previously transmitted).

- 2b: In using this document, the plaintiffs will argue that asbestos fibers can penetrate the gastrointestinal tract, thus causing disease in that site and, potentially, other sites in the body. Three counter-arguments can be made: (1) Cook's studies have never been duplicated in other populations administered asbestos in drinking water. Duplication of findings is, of course, a prerequisite to validity in any scientific study. As a matter of fact, a similar study conducted in Washington State (EPA status report enclosed) contradicts the Cook findings. If Cook actually observed the elimination of asbestos in human urine, it is likely to have occurred as a result of extremely high levels (billions of fibers per liter) over-riding the body's normal defense/clearance mechanisms or the extremely small fiber size which might have facilitated "penetration." It is extremely unlikely that the asbestos levels, if any, in Chesapeake's drinking water approximate by orders of magnitude those used by Cook. (2) elimination of asbestos in urine has not been documented in other primates (see enclosed Hallenbeck study), (3) penetration is largely a matter of theoretical interest since human epidemiological studies and animal studies do not demonstrate that asbestos in drinking water or food results in increased disease incidence.
- 2c: This article is an overview of the issue of asbestos in drinking water with particular attention to A/C pipe. If you did not obtain a copy during discovery, please call and one will be provided.
- 2d: Prior to publication of the Schock et al article (enclosed) this document was considered the definitive study on the behavior of A/C pipe in various waters. The Schock study, however, underlines the limited usefulness of the Aggressiveness Index (AI) in "predicting" whether or not A/C pipe will in fact release asbestos into drinking water. This is a knife that can cut two ways in this case, but Schock is careful to point out that the AI falsely predicts deterioration of A/C pipe more often than stability. In that regard, it is conservative. Also attached is a review of a report by Kanarek alleging asbestos release in non-aggressive waters.
- 2e: See Crump critique of Kanarek et al studies.

It is understood that Dr. Crump was retained as an expert for the defense.



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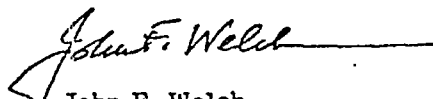
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- 2f: See W. E. Smith, M.D. review of the Donham study, previously transmitted. We are not familiar with the Dumelle letter. The decision of EPA Administrator Costle (October 10, 1979), as discussed, only acknowledges receipt of a citizen's petition to ban A/C pipe under the Toxic Substances Control Act. In the information packet transmitted to you, the Administrator made the appropriate caveat (in a Federal Register notice) that the acceptance of the petition did not necessarily mean that the product would be regulated or banned. That decision would result from the review of A/C pipe under the broader Section 6 rulemaking for asbestos-containing products.
- 2g: This document describes the administration of asbestos to a neonate baboon and the purported finding of asbestos in the kidneys and other organs. This study was repeated by the original investigators and contradictory findings were made (see Hallenbeck enclosure). The differences between the two studies also could be used to undermine the validity of the Cook article on alleged fiber penetration in humans.
- 2h: This document will be used by plaintiffs to hypothesize that asbestos in drinking water might result in exposure via inhalation i.e. by air humidifiers. The enclosed Meranger study shows that the transfer of asbestos from water to air via home humidification is negligible.
- 2i: No comment.
- 3b: No comment.

Enclosed are an overview report (Commings), three epidemiological studies (Toft, Sigurdson, Severson) and one animal study (Hilding) not previously provided. If you have any questions or we can be of further assistance, please do not hesitate to call.

Very truly yours,

A/C PIPE PRODUCERS ASSOCIATION


John F. Welch
Vice President

JFW/ajb
Enclosure

cc: A. Kahn, Esq.
Executive Committee

P.S. In reference to your letter of May 3, 1982, the Association does not have a deposition of Dr. Crump.

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Chrono