

FILE NAME: Asbestos Cement Pipe and Sheet (ACPS)

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CENTER FOR SCIENCE IN THE PUBLIC INTEREST

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December 10, 1973

REQUEST TO BAN ASBESTOS CEMENT PIPE FOR USE IN WATER SYSTEMS

The Honorable Russell Train
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C.

Dear Mr. Train:

We at the Center for Science in the Public Interest have been quite concerned about community and occupational exposures to asbestos. This past February we presented testimony before the Senate Commerce Committee's Environment Subcommittee, and issued a lengthy report calling for a broad range of actions to protect the public from asbestos hazards. Since then we have communicated with numerous officials in EPA in connection with the Agency's air pollution standard for asbestos and a burgeoning number of water problems (standards for new and existing point sources, drinking water contamination, the Reserve Mining Case in Duluth, and sewer pipe deterioration). Of all these, one problem stands out as warranting immediate, obvious action: we must cease manufacturing asbestos cement pipe for use in potable water supply.

Asbestos cement (A.C.) pipe has been used for carrying drinking water in the United States since 1938, and today over 200,000 miles of A.C. water pipe serve U.S. consumers. We estimate that about 8 per cent of U.S. asbestos consumption goes into cement pipe. In domestic pipe chrysotile and crocidolite asbestos make up 15 to 20 per cent of pipe weight of which about one-fourth (3-5%) is crocidolite.^{1,2} An electron microscope study by the Johns-Manville Corporation demonstrated removal of chrysotile asbestos from pipe walls by potable water in both serpentine (Malvern, Pa.) and non-serpentine (Glendale, Arizona) regions.³ Another Johns-Manville electron microscope study demonstrated addition of "asbestos" to potable water over a range of water hardness, in a test line 30 feet in length.⁴ Sargent, using optical microscopy, found an increase in "asbestos" fiber count in water systems in Vermont, where A.C. pipe is widely used.¹ Selikoff recently suggested that crocidolite in water can be used as an index of contamination by A.C. pipe, since there is no background level of this type of asbestos anywhere in the United States.⁵

In a letter this April to Regional Water Supply Representatives, James McDermott, Director of EPA's Water Supply Division, acknowledged that,

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"asbestos fibers and fibrils are contributed to drinking water during passage through asbestos-cement pipe," but made no explicit recommendation against the continued use of A.C. pipe.⁶

In a report issued publicly in February, 1973, we called for prohibition of A.C. pipe use in water supply systems.⁷ In response to an inquiry by Dr. Ervin Bellack of EPA's Water Supply Division, we gave reasons for our stand:

1. A.C. pipe contamination of drinking water from erosion and maintenance may present a major hazard to the general public;
2. Utilities workers who drill and cut A.C. pipe for maintenance purposes are exposed to airborne asbestos dust and presumably some increased risk of cancer; and
3. Substitute materials with better physical properties (e.g. cast iron, prestressed concrete) have been in use for years. Although these substitutes have higher initial cost, they have better strength and lower rates of failure. And of course, there is less hazard in the manufacture, handling and end use of substitutes for asbestos pipe.

As Dr. Selikoff of Mount Sinai and Dr. Wagoner of the National Institute of Occupational Safety and Health have recently testified in the Duluth case, there is ample reason to believe that ingestion of the major varieties of asbestos leads to increased risk of gastrointestinal cancer.

Environmentalists have been accused of sometimes having a narrow approach to problems, neglecting to consider the impact on the workers and communities where A.C. pipe plants, for example, are operating. We think it appropriate, therefore, to briefly discuss occupational disease among A.C. pipe workers. Enterline and Henderson in Pittsburgh have just published a study in which men who worked in plants manufacturing asbestos cement pipe had a respiratory cancer incidence 6.1 times the expected rate. We are only beginning to see the disastrous effects of this mixed chrysotile/crocidolite exposure, since it was possible to follow these workers for only an average of 32 years from the onset of exposure. Lapsed periods for asbestos cancers are often 40 years or more. Enterline, who has been active in asbestos epidemiology for a number of years, was obviously shocked by the disparity in his study between the A.C. pipe workers and men who manufactured A.C. shingles containing only Chrysotile (respiratory cancer risk 1.4 times the expected). He called for the elimination of crocidolite exposures wherever possible, citing a similar statement by Wagner, an eminent pathologist in the field of asbestos cancer.^{2,8}

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In addition to occupational disease, the air pollution and open dumps of asbestos plants have become notorious for causing neighborhood cases of mesothelioma, just as the dust on workmen's clothes has caused deaths of family members. These tragedies are discussed at length in our report.⁷

Asbestos cement pipe has been in use here for only 35 years, and unless its disease significance is massive, we will not see statistically significant effects for quite some time, if at all. Regional cancer trends and asbestos levels in water systems deserve intensive study, as quite a few researchers at the recent National Institute of Environmental Health Sciences Conference in Durham pointed out. But the problem of limiting the public's exposure to asbestos calls for immediate action.

We hope you will give this matter your urgent consideration, and take prompt action to eliminate the use of asbestos cement pipe for drinking water supply.

Sincerely yours,

Barry Castleman
Barry Castleman, M.S.E.

Albert J. Fritsch
Albert Fritsch, Ph.D.

cc. Senator Hart
Senator Muskie
Senator Nelson
Senator Mathias
Congressman Rogers
Congressman Annunzio

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