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CONCERNS ABOUT INGESTED ASBESTOS "LAID TO REST," COMMENTS INDUSTRY GROUP

The international asbestos-cement pipe industry has urged the U.S. Environmental Protection Agency (EPA) to "close the book on asbestos in water, assure the public that it need fear no adverse health effects, and declare that a primary drinking water regulation for asbestos is unwarranted." The recommendation is part of a sixty-nine page document comprising comments of the Association of Asbestos Cement Pipe Producers (AACPP) to EPA's Advance Notice of Proposed Rulemaking (ANPRM) on National Revised Primary Drinking Water Regulations.¹ AACPP is the trade association representing all North American companies that produce and market asbestos-cement (A/C) pipe, as well as twenty-five other firms manufacturing A/C pipe products throughout the world.

EPA's ANPRM, issued under authority of the Safe Drinking Water Act (SDWA), is part of a comprehensive reassessment of requirements and implementation experience of the National Interim Primary Drinking Water Regulations. The basic questions raised are (1) which contaminants should be regulated, (2) what recommended maximum contaminants levels (RMCLs) and maximum contaminant levels (MCLs), if any, would be appropriate and (3) what monitoring and reporting requirements would be appropriate? The notice invites comment on forty-four, non-regulated organic, inorganic, microbial and radionuclide substances, including asbestos. EPA cautions that "inclusion on the list does not necessarily mean that regulations will be developed."

AACPP's comments point out that a ten year, \$30 million program of government and independent research has laid to rest any prior doubts about public health risks of ingested asbestos. Tentative conclusions that there is no cause for concern made by many independent scientific groups in the mid-1970's, have been confirmed. Substantial scientific data now show that there is no reason to believe adverse human health effects will result from drinking water containing asbestos, the comments assert. The following is a brief of the AACPP comments submitted to EPA.

Animal Studies

Numerous state-of-the-art animal bioassays, many of them conducted as part of the National Toxicology Program, have confirmed that even very high levels of ingested asbestos cause no adverse health effects, including cancer, in animals. Rat and hamster lifetime bioassays performed by McConnell et al (1983, 1982, 1981), Smith (1980), Donham (1980), Ward (1980), Hilding (1981), Bolton (1982) and others demonstrate that ingested asbestos is not an animal carcinogen. Moreover, all recent reviews of these bioassays agree that the ingestion studies provide no evidence for concern about potential human health effects of asbestos in water.

Human Studies

Similarly, many epidemiology studies of populations exposed for many years to relatively high concentrations of asbestos in drinking water have typically found no increased cancer risks. Some commentators have been unwilling to conclude definitively on the basis of these studies that ingested asbestos is not a human carcinogen. However, the studies clearly demonstrate — especially when the massive doses and sensitivity of animal bioassays are considered — that it would be unreasonable to conclude that ingested asbestos is likely to cause adverse human health effects. Continuing research also has confirmed the unlikelihood that any significant number of fibers migrate from the gastrointestinal tract into gastrointestinal tissue where they might potentially pose carcinogenic risks.

Exposure Studies

The absence of any likelihood that asbestos ingestion will cause adverse health effects is confirmed by the de minimis human exposures from United States drinking water. Monitoring data compiled by EPA demonstrate that all but a small percentage of U.S. drinking water contains asbestos concentrations below 1 million fibers/liter, which on a weight basis is roughly equivalent to 1 part-per-trillion. These very low concentrations — significantly lower than any maximum contaminant levels ever set by EPA for other chemicals — are due primarily to natural erosion. Preliminary EPA studies find such concentrations represent but a small fraction of total human gastrointestinal asbestos exposures.

Costs of Monitoring and Treatment

Finally, even were there reason to believe asbestos in drinking water causes health effects, neither monitoring nor treatment techniques are economically and technically feasible or generally available, as is required for drinking water standards under the Safe Drinking Water Act. The only available monitoring technique, transmission electron microscopy (TEM), is very expensive. Assuming that 20% of the 60,000 community water systems to which a regulation might apply have asbestos in their water supplies, the total cost of putting into place asbestos analytical capability would be \$3 billion plus \$600 million in yearly operational and maintenance costs. Moreover, the precision and accuracy of TEM, especially at the low asbestos concentrations found in most water supplies, do not meet acceptable criteria for legally enforceable standards.

Only six communities throughout the nation treat drinking water for asbestos, indicating the absence of generally available treatment techniques. The limited data from these facilities indicate such treatment is very expensive. Assuming again that 12,000 water systems might be required to undertake the least burdensome treatment technique — modification of existing facilities — EPA's own data show that total construction costs would be in excess of \$12 billion. Thus, no reasonable justification exists for diverting scarce public resources from control of the many potential health hazards in drinking water to the monitoring and treatment of asbestos.

AACPP therefore urges EPA to close the book on asbestos and declare in its next national drinking water standards proposal that no standard is warranted. EPA should join the World Health organization, other nations and numerous states in determining that no regulations need be established for monitoring or control of asbestos in drinking water. The Agency should fulfill its obligation to assure the American public that it need not fear any adverse health effects from the prevailing levels of asbestos in drinking water.

REFERENCES

1. U.S. Environmental Protection Agency, National Revised Primary Drinking Water Regulations; Advance Notice of Proposed Rulemaking, Federal Register, Volume 48, Number 174, page 45502, Wednesday, October 5, 1983.