

 A/C Pipe  
Producers Association

Board of Directors  
International Affairs Committee

TO  
FROM J. I. Welch, Vice President

SUBJECT State of California - Study of Permeation of Water Pipe Materials

- REF: (1) JFW correspondence, American Water Works Association (AWWA) -  
Advisory on Plastic Pipe, January 27, 1984  
(2) JFW correspondence, State of California - Study of Chemical  
Contaminants from Water Pipe Materials, August 5, 1983  
(3) JFW correspondence, same title, June 28, 1983  
(4) JFW correspondence, same title, May 27, 1983

ACTION REQUIRED: Review for information

#### Background

The above references describe the long-standing controversy between plastic pipe manufacturers and metal pipe manufacturers/trade unions on the safety of plastic pipe. Initially, the focal point of the controversy was the potential flammability and fume toxicity of plastic pipes used in commercial and residential construction. When metal pipe interests and unions were unable to conclusively demonstrate any such problems, their attack shifted to potential leachates from plastic pipes into drinking water. Little progress was made on that issue although the California Department of Housing and Community Development is formally studying the matter. Finally, the potential permeability of plastic pipe materials when subjected to organic solvents in soils, as from chemical spills, was raised.

In mid-1983, the California Legislature approved funding for a study of health impacts of contaminants passing through all water pipe materials (see Reference 3). Governor Deukmejian vetoed the budget request, but under pressure from environmental and possibly union interests, recently authorized an inter-agency study of water pipe permeability.

#### Current Status

The inter-agency study will be conducted by the Department of Health Services and the Department of Housing and Community Development. PVC, ductile iron pipe, and A/C water pipe will be studied under a test protocol yet to be developed.

AACPP became aware of this situation and provided the enclosed comments to the study coordinator.

#### Battelle Columbus Laboratory Study

The attached report, sponsored by the Vinyl Institute, evaluates permeation of organic solvents through PVC, A/C and ductile iron pipes. Table 1 is of particular importance because it shows that the "solvent breakthrough" times for A/C pipe are much shorter than for PVC or ductile iron pipe. The results of this study, although preliminary, favor ductile iron pipe more than A/C or PVC. The "solvent breakthrough"

times for ductile iron pipe are comparable to, and in one case better than those for PVC pipe. Moreover, there presumably is no loss in structural strength of ductile iron pipe and A/C pipe as is the case for PVC pipe.

#### AACPP Action Plan

1. Members are requested to submit as soon as possible any in-house or independent research studies conducted on the permeability of the A/C pipe wall or joined A/C pipes.
2. Comments are requested on (a) the shortcomings, if any, of the Battelle Columbus Laboratory protocol for evaluating permeation and (b) what other protocol might be more suitable for evaluating pipe permeability.

All comments should be submitted no later than April 30, 1984. If you have any questions, please do not hesitate to call.

JFW/ajb

cc: A. Kahn, Esq.  
Timothy S. Hardy, Esq.

copies to: Board of Directors

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