HB

63

File 2

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION
OFFICE OF THE COMMISSIONER
POUCH O, JUNEAU, ALASKA 99811

Telephone:(907)
Address:
(907)465-2600

February 13, 1986

Honorable Peter Goll
Alaska State House
Box V
Juneau, AK 99811

Dear Representative Goll:

In response to an inquiry from your office concerning the possibilities of contamination of drinking water carried by plastic pipe, my staff has prepared the following information:

A. Permeation of organic compounds through plastic pipe walls

Both laboratory studies and actual field incidents have shown that passage of organic contaminants contained in soil or groundwater into plastic pipe and the water that it carries is possible, and indeed has occurred in municipal water systems. Studies have shown that this mode of contamination is possible for all common varieties of plastic water pipe.

B. Leaching of organic compounds from uncontaminated plastic pipe or pipe glue materials

Existence of organic contaminants in potable water carried by non-contaminated plastic pipe has been shown to occur in laboratory studies. The origin of these compounds has been traced to the actual pipe itself and to the solvents used to cement sections of pipe together. It appears to be a phenomenon common to all types of plastic pipe.

The highest concentrations of contaminants are usually found within the first two weeks following installation of the pipe, with concentrations decreasing to below detectable levels after this period. However, use of higher than average amounts of pipe cement has been shown to increase the levels and persistence of these contaminants in the water carried.

I hope this information was sufficient to provide you with the preliminary information on this subject that you requested. Please contact Dick Farnell of my staff at (907) 465-2653 for additional information.

Sincerely,

Bill Ross
Commissioner

BR/DF

Bill No. Committee Substitute for House Bill 63 (L&C)

Title "An Act relating to the Plumbing Code."

Date February 11, 1986

Contact: Eileen Plate 465-2700
Bob Bacolas 465-4870

Committee Substitute for House Bill 63 provides for the modification and adoption of the 1985 Uniform Plumbing Code; and for adoption of the Uniform Solar Energy Code, and Uniform Swimming Pool, Spa and Hot Tub Code. The 1979 Uniform Plumbing Code currently in effect in Alaska is outdated.

The International Association of Plumbing and Mechanical Officials revises its minimum standards for the installation of plumbing every three years to incorporate technological advances, and the 1985 edition is the most recent effort in this regard. The standards for the installation of solar energy and the spa and hot tub standards have not previously been adopted in Alaska; the minimum standards for swimming pools were formerly included in the Uniform Plumbing Code.

In response to a number of water quality, worker safety and fire safety questions that have been posed on the use of plastic pipe in drainage and water distribution systems, the Committee Substitute modifies several provisions in the 1985 plumbing code to limit the use of plastic pipe in Alaska. As modified in this bill, Alaska's minimum plumbing standards on the use of plastic pipe would, therefore, be less restrictive than the 1979 code presently in effect and more restrictive than 1985 code per se. This appears to be a reasonable compromise on the issue.

The Department notes that Section 4 of the Committee Substitute provides that plastic pipe which was installed in the state prior to the effective date of the bill need not comply with either the 1979 code or the 1985 code as modified in this bill. The Department's understanding is that this "grandfather" clause stems from confusion that was created when various local governments adopted the 1982 or 1985 Uniform Plumbing Codes, which permitted such installations of plastic pipe. While the Department does not object to such a "grandfather" clause, it should be noted that it may be perceived as inequitable by those persons whom the Department has required to comply with the 1979 code. In several instances the Department's enforcement action in this regard has necessitated the removal of plastic pipe and installation of permissible materials.

This bill also removes an anomalous provision that instructs the Department of Labor to adopt the specific publications that constitute the plumbing code. The current statute leaves no discretion in the department as to whether to adopt or as to what to adopt. Thus the actions of the department in going

POSITION PAPER/Department of Labor

through the formal adoption procedures are unnecessary. Under the amendment in this bill, the statute will simply declare what constitutes the plumbing code. This is the approach already employed for the electrical code under AS 18.60.580.

Committee Substitute for House Bill 63 would not have a fiscal impact on the Department of Labor.

APPROVED:

Jim Robison, Commissioner
Department of Labor

International Association of Plumbing & Mechanical Officials

PROPOSED CODE CHANGE TO A SECTION AND/OR SECTIONS OF THE UPC - USPC - USEC

1004 (A)

Note: All Code Sections that may be affected by this change must be listed.

Name Robert J. Duffey Class of Membership D

Jurisdiction/Company You Represent U.A. Local Union #393 Date January 15, 198

Mailing Address 370 Umbarger Road

City San Jose State California Zip 95111

THE FOLLOWING AMENDMENT IS SUBMITTED:

Section 1004 - Materials

(a) Water pipe and fittings shall be of brass, copper, cast iron, galvanized malleable iron, galvanized wrought iron, galvanized steel or other approved materials. Asbestos-cement, CPVC, PB, PE, or PVC water pipe manufactured to recognized standards may be used for cold water distribution systems outside a building. ~~CPVC and~~ PB water pipe and tubing may be used for hot and cold water distribution systems within a building. All materials used in the water supply system, except valves and similar devices shall be of a like material, except where otherwise approved by the Administrative Authority.

REASON FOR CODE REVISION:

The California Department of Health Services Commissioned the Montgomer Testing Laboratory (MTL) to conduct the first government-authorized stu to measure the amount of solvents that leached into drinking water fron plastic pipe.

Excessive levels of carbon tetrachloride, telbracholoroethene and tricholoroethone were found in the MTL data. Because of the cancer risk associated with some of these chemicals, EPA suggests zero the safe I.E. non-threshold assumption level.

Use additional sheets if necessary Do not wr low this li.

CODE CHANGE **COMMITTEE'S RECOMMENDATION** No. 72

International Association of Plumbing & Mechanical Officials

PROPOSED CODE CHANGE TO A SECTION AND/OR SECTIONS OF THE UPC - USPC - USEC

1004 (A)

Note: All Code Sections that may be affected by this change must be listed.

Name Robert J. Duffey Class of Membership D

Jurisdiction/Company You Represent U.A. Local Union #393 Date January 15, 198

Mailing Address 370 Umbarger Road

City San Jose State California Zip 95111

THE FOLLOWING AMENDMENT IS SUBMITTED:

Section 1004 - Materials

(a) Water pipe and fittings shall be of brass, copper, cast iron, galvanized malleable iron, galvanized wrought iron, galvanized steel or other approved materials. Asbestos-cement, CPVC, PB, PE, or PVC water pipe manufactured to recognized standards may be used for cold water distribution systems outside a building. ~~CPVC and~~ PB water pipe and tubing may be used for hot and cold water distribution systems within a building. All materials used in the water supply system, except valves and similar devices shall be of a like material, except where otherwise approved by the Administrative Authority.

REASON FOR CODE REVISION:

The California Department of Health Services Commissioned the Montgomer Testing Laboratory (MTL) to conduct the first government-authorized stu to measure the amount of solvents that leached into drinking water fron plastic pipe.

Excessive levels of carbon tetrachloride, telbracholoroethene and tricholoroethone were found in the MTL data. Because of the cancer risk associated with some of these chemicals, EPA suggests zero as the safe I.E. non-threshold assumption level.

Use additional sheets if necessary

Do not write below this li.

CODE CHANGE **COMMITTEE'S RECOMMENDATION** **No.** 72

incurred by such aggrieved parties in enforcing this agreement or in preparing the defense, preparing against, or seeking to obtain an abatement of or injunction against such action or proceeding, or in establishing or maintaining the applicability or validity of this agreement, or any provision thereof, or in prosecuting any claim or cross-claim based thereon.

10. CONSTRUCTION:

This agreement is the product of a collaboration among all parties hereto and shall not be construed against any party.

IN WITNESS WHEREOF, the parties have executed this Release and Settlement Agreement in person or by duly authorized officers or agents as of the days and years written below.

Dated: [redacted].

(Signature) [redacted]

(Signature) [redacted]

7. REPAIR:

(a) RELEASOR(S) acknowledge that RELEASED PARTIES have no obligation to investigate, design, perform, or otherwise participate in the identification and correction of any defects, deficiencies, code violations, or other dangerous or damaging conditions relating to the plumbing system in said residence.

(b) Nothing herein shall give RELEASED PARTIES a right or obligation to direct or compel RELEASOR(S) to make any repairs or perform any maintenance on the above-noted residence, with respect to the alleged plumbing-related defects in their residence.

(c) RELEASED PARTIES assume no responsibility for and have no control over the method or means of repair and bear no responsibility for the success or failure of either the method or means of which repair or replacement of the plumbing system is performed on the above-noted residence.

8. RELEASOR(S) who currently own the real property commonly known as _____, City of San Jose, County of Santa Clara, State of California, acknowledge the right of RELEASED PARTIES to record the Disclosure Statement previously executed by RELEASOR(S) in connection with this settlement.

9. ATTORNEYS' FEES:

In the event of any breach of this agreement, any party aggrieved, including third party beneficiaries to this agreement, shall be entitled to recover from the breaching party or parties, in addition to other relief awarded, all such damages, costs, reasonable attorneys' fees and expert fees,

RELEASOR(S) hereby expressly waive the provisions of §1542 on behalf of themselves, their heirs, assigns, and successors in interest.

5. HOLD HARMLESS AND INDEMNIFICATION:

RELEASOR(S), on behalf of themselves and their heirs, successors and assigns, hereby agree to indemnify, hold harmless and defend RELEASED PARTIES and their heirs, agents and assigns, and any of them, from and against any and all past, present and future claims, demands, lawsuits, arbitration, or other proceedings, including, but not limited to, claims for personal injury, property damage, economic loss, or any other form of injury or damage, or subrogated claims of any person, entity, or insurer, regardless of merit or lack thereof, made upon or initiated against any or all of RELEASED PARTIES and their heirs, agents and assigns, and any of them,, whether a party or stranger to this agreement, or by any past, present, or future owner of any interest whatsoever in the above-noted residence, arising out of or in any way related to any matter herein released.

6. EXECUTION:

This Releases and Settlement Agreement may be executed in any number of counterparts and signature pages and by different parties hereto on separate counterpart or signature pages and each of which, when so executed and delivered, shall be an original, and all such counterparts shall together constitute one and the same instrument.

Norwood Creek subdivision specifically reserve their rights to continue to pursue their claims for non-plumbing related construction defects in their residences against the William Lyon Company and expressly do not release the William Lyon Company in that regard.

(b) There is a risk that, subsequent to the execution of this release, RELEASOR(S) will suffer further damage related to the matters herein released, or which is unknown or unanticipated at the time this release is signed. There is also a risk that the damage presently known may be or may become more serious than RELEASOR(S) now expect or anticipate. RELEASOR(S) shall assume the above-mentioned risks, and this release shall apply to all unknown or unanticipated results of the matters described above, in that a portion of the settlement is premised on the entire plumbing system complained of being replaced by said RELEASOR(S).

(c) RELEASOR(S) and RELEASED PARTIES acknowledge that this Release and Settlement Agreement applies to all unknown or unanticipated injuries or damages, including claims for personal injury, property damage, economic loss, or other damage, including any and all claims now existent or which may arise in the future, arising out of the alleged defective plumbing system in said residence, and, under the terms of §1542 of the Civil Code of the State of California, which reads as follows:

> "A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor."

attorneys, and each of them, of all claims, demands, causes of actions, damages or liabilities of any kind and character whatsoever whether known or unknown, which RELEASOR(S), or their successors and assigns can, shall, or may have against RELEASED PARTIES arising out of the plumbing system in said residence, including but not limited to, any work, materials, acts, omission, fraud, misrepresentation, non-disclosure, breach of warranty, breach of contract, or other obligations of RELEASED PARTIES in connection with the design, manufacture, installation, construction, financing, sale, or repair of the plumbing system and tools and components used in the installation thereof, contained within the above-noted residence, including, but not limited to, damage to structure or improvements thereon, personal or bodily injury, damage to personal property, or economic loss, resulting from any defects or deficiencies in design, manufacture, installation, construction, disclosure, repair, or sale, of the plumbing system contained within the above-noted residence, whether now known or unknown, and any damages or deterioration arising therefrom whether now known or unknown, latent or patent or non-existent at the present time and which may arise in the future, or arising out of the facts, circumstances of issue or issues, raised or which might have been raised or in the future could be raised, pertaining to RELEASED PARTIES in the above-referenced litigation, including any past, present or future damage which may be or may have been sustained by RELEASOR(S), with respect to the plumbing system contained within the above-noted residence. RELEASOR(S) and RELEASED PARTIES acknowledge and agree that the RELEASOR(S) who are owners or former owners of residences in the William Lyon Company/

disclosure statements and dismissals, have been obtained. It is the intent of all parties that the terms of this agreement and release be approved and accepted by all parties and that the agreement be signed as expeditiously as practical.

(e) On receipt of signed releases, disclosure statements and dismissals, JOHN R. GRIFFITHS shall tender the settlement funds plus any interest earned to RELEASOR(S)' attorneys of record.

2. DISMISSALS:

RELEASOR(S) hereby agree to dismiss with prejudice the above-noted lawsuits, save and except the causes of action against the William Lyon Company. Because litigation is still pending between RELEASOR(S) and the William Lyon Company, Inc., referrable to non-plumbing related construction defects, which claims are not settled, released or affected by this Release and Settlement Agreement, RELEASOR(S) cannot at this time dismiss with prejudice their complaint against the William Lyon Company, notwithstanding the fact that RELEASOR(S) acknowledge the fact that they have settled with and released the William Lyon Company with respect to the alleged plumbing-related defects in their residence.

3. COSTS:

Each party shall bear its own costs and attorneys' fees upon dismissal.

4. RELEASE:

(a) RELEASOR(S) hereby forever release and discharge RELEASED PARTIES, and each of them, and their respective officers, agents, servants, employees, owners, predecessors, successors, assigns, insurers, related business entities, and

(e) All parties identified in this document desire to fully settle, once and for all, all claims and controversies of any kind existing between them regarding the plumbing system in each residence to the end that RELEASOR(S) agree that no further claims, controversies, or litigation involving the parties hereto regarding the plumbing system installed in the above-noted residence may or can arise in the future and that said settlement included funds specifically for the entire replacement of the polybutylene and Celcon plumbing system.

NOW, THEREFORE, for and in consideration of the terms herein, the undersigned parties agree as follows:

1. PAYMENT:

(a) The sum of $872,500.00 shall be paid by or on behalf of RELEASED PARTIES to the RELEASORS(S), and their attorneys of record.

(b) The settlement sums, as represented by settlement drafts and/or checks shall be tendered to Special Master JOHN R. GRIFFITHS, who shall receive the sums on behalf of RELEASOR(S).

(c) The settlement sums as represented by settlement drafts and/or checks shall be made payable to Special Master JOHN R. GRIFFITHS, TRUSTEE ACCOUNT, and tendered on or before June 9, 1985.

(d) On receipt of the settlement sums, JOHN R. GRIFFITHS shall be permitted to deposit the drafts, and/or checks into an interest bearing trust account on behalf of RELEASOR(S). The settlement funds shall not be withdrawn from the trust account or otherwise used for the benefit of RELEASOR(S) until all signatures to this agreement, the

RECITALS

(a) RELEASOR(S) are past or present owners of the real property commonly known as _____, which is located in the City of San Jose, County of Santa Clara, State of California, hereinafter referred to as the RESIDENCE.

(b) RELEASOR(S) have previously brought lawsuits against released parties, and others in the Superior Court of California, County of Santa Clara. In the above-noted lawsuits, RELEASOR(S) have alleged inter alia that the RELEASED PARTIES negligently, carelessly, improperly, or defectively performed, or failed to perform, plumbing work on the above-noted residence and/or supplied defective material, or fraudulently sold or misrepresented the residence, or otherwise committed some act, omission, fraud, misrepresentation, breach of warranty, or other breach of contract or are in some way responsible for damage to RELEASOR(S) because of an alleged defective polybutylene and Celcon plumbing system.

(c) RELEASED PARTIES deny the allegations of RELEASOR(S) as raised in the lawsuits, and each further denies the allegations of any and all cross-complaints in the lawsuits.

(d) RELEASOR(S) and RELEASED PARTIES, and each of them, understand that the liability of the RELEASED PARTIES, or any of them, for the above transactions, or any damage sustained by any party to this agreement or stranger hereto is disputed, and that the payment herein provided for is not to be construed as an admission of liability, which is expressly denied, and that this Release and Settlement Agreement arises from a compromise of said liability.

RELEASE AND SETTLEMENT AGREEMENT

PARTIES

I. The following parties are referred to as RELEASOR(S):

Name:

Street:

City, State:

II. The following are collectively referred to as RELEASED PARTIES:

1. United States Brass, Inc.
2. Wallace Murray Corporation.
3. Household Manufacturing, Inc.
4. Qest Products, Inc.
5. Lionel T. Wade, Individually.
6. Lionel T. Wade Company.
7. Shell Oil Company.
8. Kaufman & Broad of Northern California, Inc.
9. Kaufman & Broad, Inc.
10. William Lyon Co., Inc.
11. Joe Amaral Plumbing, Inc.
12. H. K. Porter Company.
13. Celanese, Inc.

and any and all of their successors, any and all of their predecessors, officers, employees, heirs, administrators, executors, assigns and related business entities.

SUMMARY SHEET

PLASTIC PIPE WATER SERVICE FAILURES

Breakdown of Costs:

LOCATION	COSTS
Memphis, Tennessee	6.2 million
Napa, California	$208,000
San Antonio, Texas	50 million
El Paso, Texas	2 million
Irvine Ranch, California	38.1 - 38.25 million
Germantown, Tennessee	1.2 million (estimate)
TOTAL:	97.5 - 97.65 million

SUMMARY OF PLASTIC PIPE

WATER SERVICE FAILURES

The following is a summary of plastic pipe water service failures which have occurred throughout the United States.

MEMPHIS, TENNESSEE

This community used polybutylene from approximately 1972 to 1979. The pipe was used primarily for water service lines to the hookup to individual residences. Failures were recognized as early as 1972, and included stress cracks, pinhole leaks and cramps and creases. The water utility discontinued use, and is replacing the pipe as it fails. Estimated cost to the community is 6.2 million dollars.

NAPA, CALIFORNIA

This community used polybutylene and polyethylene from 1972 to approximately January, 1982. Polybutylene was used exclusively from 1972 to 1978, and polyethylene from 1978 to 1982. The city experienced failures which included sidewall cracks, pinholes, penetrations by pebbles, splits on the sides, stress failures and sheer breaks at a fitting. The City of Napa is replacing the plastic pipe as it fails, and the use of plastic pipe has been banned by the City Council. Estimated cost for the failures is $208,000.

SAN ANTONIO, TEXAS

This community has used polyethylene and polybutylene 2110. Polyethylene was used from 1966 to 1970, and polybutylene from 1970 to 1978. The pipe was used as standard material for all service lines and was used exclusively for new services as a replacement for copper. The failures which were experienced included pinholes, splits and sheers throughout the system. The city is replacing the plastic pipe en masse. At first, they only replaced it as the pipe failed, but then decided it was necessary to replace the entire system because of the extent of failure. The estimated cost to the city, as determined from a lawsuit which has been filed, is approximately 50 million dollars.

EL PASO, TEXAS

This community used polyethylene, 3406, Hyd-molecular. It was used for approximately eight years and began to be phased out in approximately 1979. No plastic pipe is used at this time. The failures included fine stress cracks, longitudinal cracks, caused by stress on the pipe itself. The water utility is replacing the pipes as they fail, and is not doing mass replacement. The estimated cost for the failures is approximately 2 million dollars.

SUMMARY OF PLASTIC PIPE

WATER SERVICE FAILURES

(continued)

IRVINE RANCH WATER DISTRICT, CALIFORNIA

This community used polyethylene beginning in 1961 and discontinued use in approximately November, 1982. It was used primarily in new development areas, and was not used to replace copper unless the whole line had to be replaced. Failures included the pipe splitting in half, which was attributed to a stress problem, longitudinal cracking and soil conditions. In addition, there was a hardening and shattering of pipe. A management decision was made to replace the pipe as it fails. The cost from the failures is approximately 38.1 to 38.25 million dollars.

GERMANTOWN, TENNESSEE

This community used polyethylene and polybutylene from approximately 1973 to 1978. Ninety percent of the plastic pipe was polyethylene. It was installed primarily in all new subdivisions. Failures from the pipe included breaking due to brittleness and snapping, usually very close to the connection at the main or the meter where there was the most stress. The pipe split around the circumference rather than longitudinally. Costs from the failures are estimated, due to the fact that this community is also involved in a lawsuit against the manufacturer. Estimated cost is 1.2 million dollars.

TOTAL ESTIMATED COSTS FOR FAILURES FROM THE ABOVE JURISDICTIONS:

97.5 - 97.65 million dollars

1/11/83.

Seattle Post-Intelligencer
Saturday, June 22, 1985
25 Cents
FIRST NEWSPAPER

Cloudy
High mid-60s
Details/D2

Ueberroth: teams will stay put/B1

NCAA is getting tough/B1

City fear: Plastic pipe lets poisons in

By Jane Hadley
P-I Reporter

The first time Alicia Berger, 29, drank a glass of water at the West Seattle house she was renting, she spit it out because it tasted so bad.

Soon, she and her boyfriend, Jeffrey Lewis, 38, found that their water was contaminated by xylene and toluene, two organic solvents commonly found in airplane glue, gasoline, paint solvents, plastics and other products.

As a result of five or six similar cases, the Seattle Water Department may stop using plastic water pipes, an official said.

The city already has tightened its policy within the past year on plastic water pipes, no longer installing them in industrial or commercial areas, said Jim Chapman, supervisor of water quality at the city Water Department.

Organic solvents

But now Water Department executives soon will discuss going even further and discontinuing their use altogether, he said.

The main problem with plastic pipes is that organic solvents can permeate the pipe, polluting the water they carry, said Roy Jones, an environmental scientist for the U.S. Environmental Protection Agency.

Typically, the ground around the pipe becomes saturated with a solvent, such as gas or oil or paint thinner, which passes through the pipe wall to the water.

A second problem is that certain kinds of adhesives used to join some plastic pipes also permeate the pipe and contaminate the water.

Plumbing code

The plumbing code requires that the right combination of adhesive and plastic be used, but Jones says it's hard for plumbing inspectors to know whether an installer has used the correct adhesive.

Chapman said the city began to use plastic pipe in the early 1960s and estimates that maybe half the city water lines serving residences are on plastic pipe today.

In the last two or three years, there have been about six cases in which residents have reported drinking water contaminated with organic solvents such as toluene, xylene and benzene, Chapman said.

Benzene is a known human cancer-causing agent, linked to leukemia. Xylene and toluene are

Page TWO, Page A-1

JOHN COLUMBERG / P-I PHOTO

Jeffrey Lewis and Alicia Berger had to leave a rental home because the water there was contaminated with organic solvents. Plastic water pipes may have been part of the problem.

Two leave rented house because city water there is contaminated

From Page A-1

not linked with cancer but can cause kidney, liver and central nervous system damage.

In all but one of the cases, the residents lived in commercial or industrial areas, Chapman said. But in one case, the home was in a residential neighborhood.

Chapman speculated that in that case somebody poured oil or some other petroleum product into the gutter and it leaked through an expansion joint in the concrete to saturate the soil around the water pipe.

In each case, the city replaces the plastic pipe that runs from the street to the property line with copper pipe. It's up to the property owner to replace the pipe from the property line to the house.

Berger and Lewis moved into a rented house last Nov. 28 on a sparsely populated, overgrown ridge in West Seattle just above Marginal Way Southwest. By Jan. 1, they had moved out.

The two were so upset by their experience they didn't even want to talk about it for several months, said Lewis, a teacher of Indian music.

He complained that officials at various agencies were slow to respond initially, never called back when they said they would, were timid and uninformative and tried constantly to limit their responsibility for the problem.

"Everybody was very nice, but nobody would make a commitment," he said. Meanwhile, the couple was driving 40 miles round-trip to shower every day, borrowing water from people across the street and eating elsewhere.

Berger, a graduate student at the University of Washington, and Lewis hired a private lab to test the water, because they felt the Water Department would not do a test.

ground near the meter box along Marginal Way Southwest to install copper pipe, the soil was clearly contaminated and gave off a strong solvent odor, said Jones of the EPA.

Lewis said, "From 20 feet away you could smell this ground they were digging up. It stunk."

But though the Water Department did replace the pipe, nobody ever did anything about the contaminated soil.

In fact, Water Department crews started to cover over the new pipe with the old contaminated soil until Lewis questioned the wisdom of that move.

"Aren't you just asking for trouble?" Lewis asked. The crews then decided to haul the soil away and put clean dirt down instead.

Jones said he was at the site "strictly as an observer." Jane Lee of the Seattle-King County Department of Public Health said once she saw that the water department replaced the pipe, she considered her responsibility over.

Chapman said the Water Department's responsibility was only to replace the plastic pipe.

He said nobody checked to see whether the contamination is widespread or limited to the meter box area. And nobody checked the source of the contamination.

He said it would be hard to know where it came from, though he added, "Obviously, with the painting contractor next door, that would be suspicious." The meter box is adjacent to the property of Central Painting Inc. on Marginal Way Southwest.

Both Jones and Chapman said any soil contamination would be in the jurisdiction of the state Ecology Department. But the Ecology Department was never called about the case.

And Joan Thomas, director the Ecology Department's regional office in Redmond, said soil con-

groundwater pollution almost always starts as soil pollution.

When asked whose responsibility the soil contamination would be, Thomas said: "I can't say it was nobody's responsibility. I'm saying I don't know."

Tom Hubbard, a water quality biologist for Metro, said he considers it important to follow up such reports of soil contamination. Hubbard has been meticulous in testing the shores of the Duwamish River the past several years trying to figure out where various river pollutants come from.

Jones of EPA said: "The problem is because of different jurisdictions since the delegation of programs back and forth, that has leave some pretty big gaps in the system. I'm not saying they're right, but they exist."

Chapman said: "It's an area of mixed responsibilities. It's not entirely clear who does have responsibility. I agree it's not a terrific situation."

One person who has taken a stand on the source of the pollution is the owner of the house Berger and Lewis were renting. Landlady Carol Knox, a Cashmere resident, recently filed suit against Central Painting Inc.

Knox's Seattle lawyer, Linda Larson, said the suit alleges that the paint company released chemicals into the soil which ended up in the water line to Knox's house.

Though the new copper pipe put in by the Water Department reduced the levels of contamination, the drinking water is still contaminated, said Chapman.

Knox probably will have to replace at least some of the pipe on her property. To replace all of it up to her house, a long distance up a steep hill, would cost an estimated $23,000, said Knox's lawyer.

John Hamilton, president of

Section D | Classified D/5
Wednesday
August 14, 1985
Seattle Post-Intelligencer

D-2 WEATHER
D-4 COFFEE BREAK
D-12 FUNERALS

City halts use of plastic pipes for drinking water

By Jane Hadley
P-I Reporter

The Seattle Water Department has placed a moratorium on its use of plastic pipe that delivers drinking water.

"We're not using any until we do come to a final decision" about the safety of the pipe, said Jim Chapman, water quality supervisor for the department.

"We've been contacted by a number of people who claim to have further information."

Water contaminated

The moratorium follows the discovery by a couple renting a home in West Seattle that their water was contaminated with toluene and xylene, two substances commonly found in airplane glue, gasoline, paint solvents and other products.

When the department investigated, it found soil around the meter box contaminated with a strong-smelling solvent. The department then replaced the plastic pipe from the street main to the meter box with copper pipe.

Plastic pipe is a problem because it can be permeated by organic solvents such as gasoline or trichloroethylene, a widely used degreasing solvent. Also, certain glues used to join the pipes are toxic and permeate the pipe to contaminate the drinking water inside.

The city first began to use plastic pipe in the early 1960s for service lines that run from the mains in the street to meters, Chapman said. He estimated that about half the service lines in the city are some type of plastic pipe. The mains are not plastic.

Many lines from the meters to the houses probably also are plastic, Chapman said, but property owners are responsible for installing those.

Forbidding use of plastic for those lines would require a change in the plumbing code, which the City Council would have to do by ordinance.

Chapman said there have been six or seven cases in Seattle within the past two or three years in which drinking water was contaminated when organic solvents penetrated plastic pipe.

All but one were in primarily commercial or industrial areas, where the likelihood of gasoline spills and other soil contamination is greater than in residential areas.

Installations halted

Consequently, the city already has stopped installing plastic water pipes in commercial and industrial areas. The new moratorium applies to residential and all other areas.

Bob Giron, business agent for the United Association of Plumbers and Fitters Local No. 82 in Seattle, said yesterday that plumbers oppose the use of plastic pipe for drinking water.

"It's not delivering as pure an item as it should be," he said. "And from the workers' standpoint, the glues and solvents we have to use we feel are dangerous."

Reeves Journal - July 1985

Southwest Gas Replacing ABS Pipe in Gas Lines

PHOENIX, — Southwest Gas Corp. has been given the central business area top priority in its program to replace an estimated 2,300 miles of possibly defective gas pipe.

The utility acquired the gas distribution system from Arizona Public Service (APS) last November.

The first phase of the project is expected to require between three and four months and will depend on several contractors working simultaneously in various sections of the target area. Some of the work is already underway, according to John Hanenburg, program manager.

Utility officials noted that the program will involve all ABS-type plastic pipe. APS had used the pipe extensively in the Greater Phoenix area and in other parts of Arizona between 1959 and 1971.

Officials said the pipe constitutes about 23 per cent of the entire system. The whole replacement program will cost an estimated $120 million and will last about six years.

The ABS pipe was involved in an explosion in Phoenix last September that killed five persons and prompted an investigation. The probe revealed that the pipe was aging more rapidly than expected initially.

Reeves JOURNAL - JULY 1985

Oregon City Seeking $3 Million to Replace Broken Plastic Pipe

by Jim Norland

MEDFORD, Ore. — This southern Oregon city of 50,000 is asking seven suppliers of plastic pipe to reimburse more than $3 million in damages the city expects to sustain in replacing the polybutylene water pipe bought between 1971 and 1981.

Attorneys for the Medford Water Commission and the City of Medford told the suppliers by letter, "It would appear . . . that this water pipe does not meet the requirements, warranties or representations made by you at the time of sale."

The city and the water commission have recently discovered defects and consequent breaking of "numerous pipe," says W. V. Deatherage, a member of Frohnmayer, Deatherage, deSchweinitz, Pratt & Jamieson, P.C., Attorneys at Law, in Medford.

Deatherage has asked each of the seven suppliers to notify his firm by June 26 whether they want to reimburse the two government entities "for the damages they have suffered as a result of said defective pipe.

"The Medford Water Commission will be required to replace all of this water pipe, which it has estimated will be at a cost in excess of $2,000,000," Deatherage's letter continues.

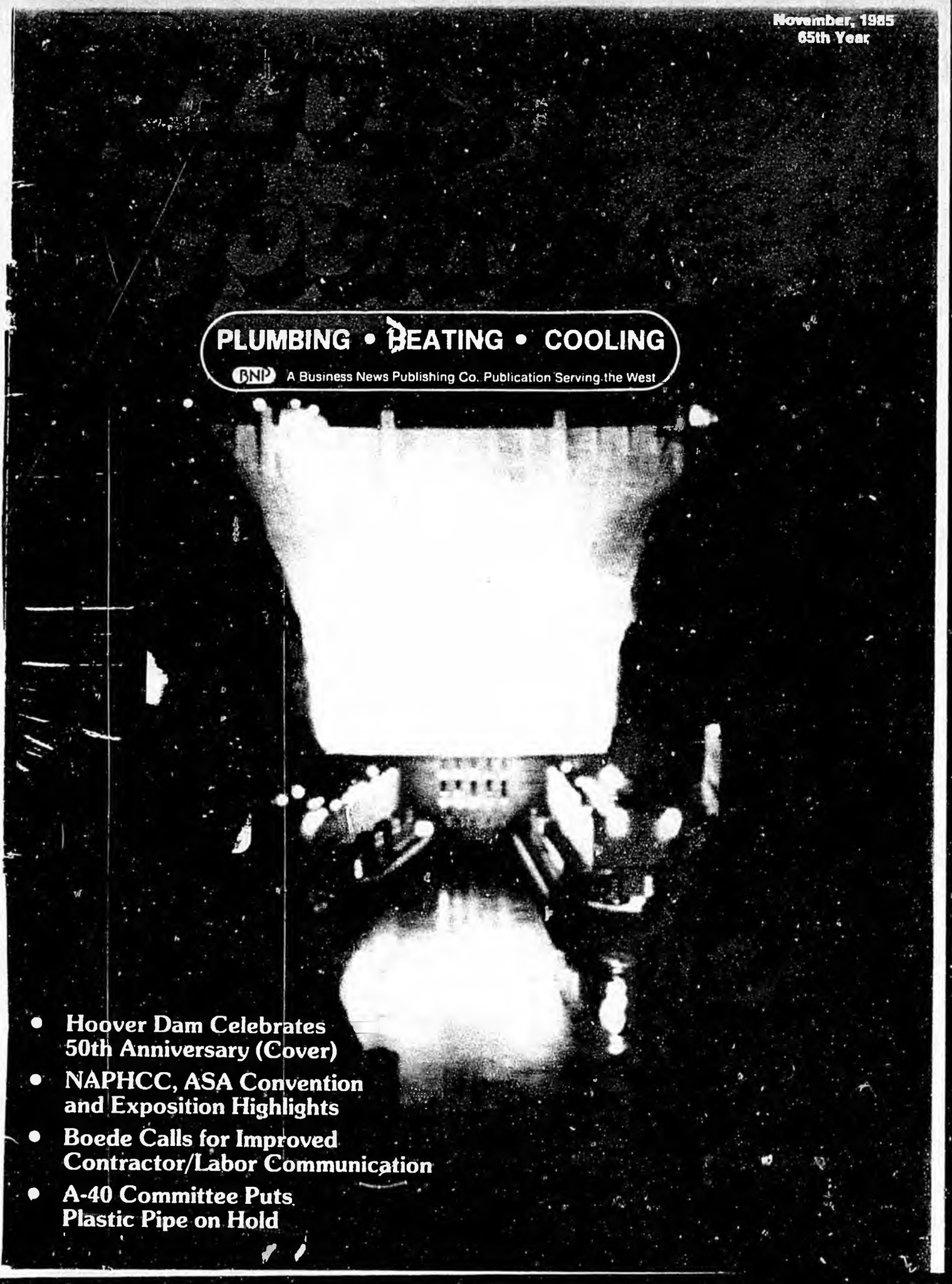
Medford City Attorney Gene Clark told **Reeves Journal** that the total damage is expected to be "in excess of $3 million, but no one supplier is expected to be responsible for more than $2 million."

Letters identical to the one quoted went to The Flintkote Co., Pipe Products Group, Orangeburg, N.Y.; Clow Corp., Plastics Division, P.V.C. Plastic Pipe, Bensenville, Ill.; Western Products Co., Union City, Calif.; Hinds Supply Co., Beaverton, Ore.; Westflex Manufacturing Co., Division of Western Plastic & Rubber Co., Richmond, Calif.; Budge-McHugh Supply Co., Medford; and Consolidated Supply Co., Portland, Ore.

November, 1985
65th Year

PLUMBING • HEATING • COOLING

BNP A Business News Publishing Co. Publication Serving the West



- Hoover Dam Celebrates 50th Anniversary (Cover)
- NAPHCC, ASA Convention and Exposition Highlights
- Boede Calls for Improved Contractor/Labor Communication
- A-40 Committee Puts Plastic Pipe on Hold

Calif. Attorney General Critical of IAPMO Decision

SACRAMENTO — California's attorney general has written a brief of amicus curiae in support of the anti-plastics factions involved in an appeal of a court decision requesting that an injunction ordered against the International Association of Plumbing and Mechanical Officials (IAPMO) in 1983 be extended to IAPMO's 1985 Uniform Plumbing Code (UPC).

A number of parties, including the State Building Constructio Trades Council of California (backed heavily by the United Association), filed suit in 1982 in an attempt to prevent IAPMO from circulating its 1982 edition of the UPC in California because of the addition of several new plumbing code changes which allowed plastic piping materials to be used for potable water within buildings for the first time under UPC guidelines.

The anti-plastics concerns attempted to stop circulation of the 1982 UPC in their lawsuit, which was also filed by the former director of the state's Department of Consumer Affairs, Richard Spohn, and a handful of environmentalist groups and individuals. The original suit alleged that IAPMO did not have the jurisdiction to make such additions to the code and that it was violati[illegible] the state's Business and Professions Code.

Los Angeles Judge Jack A. Crickard ruled in the county's superior court, however, that IAPMO was not in violation of any laws or alleged unfair business practices and ruled against the anti-plastics factions' efforts to stop the publication of the 1982 UPC.

Crickard based much of his decision in favor of IAPMO on his opinion that there was not sufficient evidence to back up the anti-plastics camp's claims that plastic piping could be hazardous to the public health. Crickard did rule in favor of an environmental impact report to provide further input and agreed to issue an injunction on the code calling for a disclaimer to be distributed with the 1982 UPC in California, stating that an environmental impact report is in progress and advising users of the newly added plastics materials to consult with their local officials as to the status of plastics.

IAPMO had already agreed to voluntarily print the disclaimer before the injunction was ordered.

The injunction was scheduled to be in effect only for the 1982 UPC. Now, as the 1985 UPC is being published (IAPMO issues a new update every three years), the plaintiffs in the case have attempted to continue the injunction through the appeals process.

California District Attorney John Van De Kamp issued his opinion, which has no enforcement powers, on Oct. 15. In his statement, Van De Kamp stated that he felt the appeals case in question falls "within the ambit of Business and Professions Code Section 17500" and that "IAPMO's conduct constitutes a violation of that section."

Van De Kamp called for the extention of the trial court's injunction to apply to the 1985 UPC and the 1985 IAPMO Research Directory (which lists approved products).

One of the primary contentions of the original lawsuit was that IAPMO did not have the authority to list products or grant product approval for products said to be in compliance with the standards of the UPC. Crickard rejected this claim and, in fact, praised IAPMO's efforts and professionalism in making such determinations, citing the input and testimony of the National Sanitation Foundation, which provides testing information for IAPMO and other model code writing bodies.

Van De Kamp's opinion challenges IAPMO's right to make such determinations and contends that the organization's operations should be governed under the Business and Professions Code.

A-40 Committee Puts Plastic on Hold

by Larry Dill

CAMBRIDGE, Mass. — In an effort to avoid becoming bogged down in a never ending materials debate that could slow progress on the American National Standards Institute's A-40 Committee on Safety Requirements for Plumbing, the committee voted during its Oct. 22-25 session here to withhold acceptance of plastic piping materials for use in domestic hot and cold water systems for potable use until it can receive more input on the subject from impartial, outside sources.

The action took place following a follow-up to the controversial discussions about plastic pipe at the committee's last session in July in Universal City, Calif. The July session of the A-40 Committee was highlighted by presentations from plastic pipe advocates and opponents. It was during the July session that both sides of the issue were provided with equal time to discuss the plastics issue.

The anti-plastics camp headed by the United Association presented a well organized and emotional program featuring its two key "expert witnesses," attorney Raymond Leonardini, and Dr. Marc Lappe, PhD., two of the key figures in the union-backed California Pipe Trades council's long running legal battle with the International Association of Plumbing and Mechanical Officials (IAPMO) over the use of plastic pipe in Uniform Plumbing Code (see page 24).

The Plastic Pipe and Fittings Association's participation in the July presentations consisted of a brief six-minute summary of its position on the issue of alleged permeation and leaching of plastic piping materials and the distribution of two documents supporting its position.

After much debate after the July program, PPFA, which had contended that it was not properly notified of the format of the July presentations (which was refuted strongly by A-40 officials), was extended a second invitation to present its case before the A-40 body during the October session. The presentations were established on a similar format with each side given 45 minutes to present its testimony. Following the testimonies equal time was also provided for rebuttals and question answering sessions.

This time it was the plastics advocates who rolled out their team of hired guns in the expert witness derby.

The United Association, which was called upon to make its presentation first, was content to have its legal counsel briefly state that the union felt it had adequately presented its case in July and that it did not feel further input was necessary to express its views on the plastics issue. The United Association then distributed new documents for the committee members' consideration including an opinion (which has no legal binding power) by California attorney general John Van De Kamp on the on-going IAPMO court case over the use of plastics in the Uniform Plumbing Code (see page 24). In his statement, Van De Kamp voiced the opinion that an injunction which called for the inclusion of a disclaimer notifying users of the 1982 UPC in California that an environmental impact report was in progress to study plastic products, be extended for distribution with the 1985 UPC in California.

The United Association also distributed copies of a study being conducted by scientific experts at the University of California, Berkeley. The study, commissioned upon the request of the state's Department of Health Services, is providing a review of recent literature and research on the permeation of plastic pipe. The materials distributed were released Sept. 30 and represent the first half of a study that is scheduled to be concluded by April 1, 1986.

Also distributed were copies of correspondence to Leonardini from a representative of the California Department of Housing and Community Development which included a recent press release explaining the suspension of the environmental impact report assigned to Versar, Inc., a Virginia based research firm. This was accompanied by an audit of the work performed by Versar before suspension of the project.

Plastics Testimony

The plastics proponents were keyed by PPFA representative Jack Lancaster, who repeated PPFA's position following the July presentations. Lancaster continued to state that "PPFA believes, as it has stated other times, that this committee is not the appropriate group to decide complex, scientific and technical issues with regard to plastics or with regard to any other materials."

"None of us has the professional expertise to decide issues like alleged permeation and leaching that have been raised against plastic pipe in this committee," Lancaster continued.

Apparently intent upon stressing its position that the members of the A-40 Committee did not have the technical or scientific background to make decisions on plastics materials, the PPFA representatives innundated the voting committee members with more than 50 documents on the plastics issue. They then presented three witnesses of their own to provide technical testimony on various aspects of the plastics issue.

PPFA's witnesses included Steven C. Packham, PhD, of Salt Lake City, a longtime toxicologist who has worked with a number of governmental and scientific agencies, who announced that he is currently conducting a study of all available data on plastics.

Another witness was Joseph Zicherman, PhD, of Innovative Fire Technology, Berkeley, who discussed his work with studies concerning plastic piping materials in fire stations.

The third PPFA witness was Alan Olson, PE, of B.F. Goodrich's chemical group. Olson addressed the charges of permeation in plastic piping.

Put on Hold

Following the presentations, the committee was still faced with the monumental task of forging ahead with the A-40 document's Table 3.1.3 which provides "standards for materials, equipment, joints and connections."

Realizing that the table, which must be passed before any definative progress can be made toward completing the document, contains hundreds of pro-

Continued on page 44

Edward Brabec of the United Association ponders the large stack of technical materials presented to A-40 members for their study on the plastic pipe issue.

REEVES JOURNAL

PLUMBING • HEATING • COOLING

A Business News Publishing Co. Publication Serving the 14 Western States

...Committee Holds
...in Los Angeles

...ndustry Financial
...Looks Good for '85

...ntractors May Have

A-40

Continued from page 26

duct listings and their relating standards, the committee members were faced with the possibility of having progress slowed by debates on every plastics product that appears in the table.

In an effort to avoid such delays, Donald Dickerson, representing the American Society of Plumbing Engineers, suggested a motion which stated:

"Serious concerns regarding the suitability of plastic pipe to convey domestic hot and cold water for potable use have been brought before this committee.

"The committee has heard presentations and received materials regarding data which has been compiled and tests performed, planned and underway which deal with and address the 'complicated chemical, medical and public health questions' involved in such issues.

"It has been stated, and we believe, that much more work must be done in order to provide those data necessary to (make) a sound decision on these important matters.

"With all of the above in mind, the A-40 Committee is withholding acceptance of plastic pipe for use in domestic hot and cold water systems for potable use until such time as clear, definitive and impartial data are available which can substantiate its use for this purpose."

After acceptance of the motion, the committee members agreed that material from an outside source should be submitted and then studied before the committee made any decisions on plastics.

Refuting the charges by PPFA that the A-40 body is not capable of making the proper decisions on plastics, Dickerson noted that the body was qualified to make such determinations provided that it was given sound and impartial study results to evaluate. "I believe we have within this body the ability to analyze pretty technical reports," Dickerson said.

Vincent Doyle, co-chairman, said, "Collectively, we're probably the finest minds in the country in the plumbing industry."

PPFA's Richard Church protested the singling out of plastics materials and asked that all piping materials be studied. His pleas fell upon deaf ears. He continued his contention that the plastics industry would be willing to participate in such studies "if it was done across the board."

The A-40 Committee scheduled its next session for January in Tampa. At that time it will resume work on Table 3.1.3, which is nearly halfway completed with the exception of the plastics materials which have been placed on hold.

Materials Controversy Continues

Anti-Plastics Forces Bring Out Hired Guns in LA A-40 Session

by Larry Dill

UNIVERSAL CITY, Calif. — It was only fitting that the American National Standards Institute's A-40 Committee on Safety Requirements for Plumbing hold its latest meeting at the Universal Sheraton Hotel here July 23-25.

Overlooking the Universal Studio lots, soundstages and outdoor arenas used for western stunt shows and the like as part of the studio's tours, the hotel was the perfect site for an old fashioned shootout between the advocates and opponents of plastic piping materials. The only trouble with the shootout, however, was that it was as one-sided as Custer's debate with Sitting Bull. If it was a fight, it would have been stopped on cuts in the third round.

While the majority of the three-day exercise was dominated by tedious reviews of the A-40 Committee's Table 3.1.3 (Standards for Materials, Equipment, Joints and Connections) and discussions regarding the chapters pertaining to such products in the developing model code being formulated by the committee, the liveliest session took place on the opening afternoon when it was announced that there would be a 90-minute discussion on permeation of plastic piping materials, providing 45 minutes for both advocates and opponents of plastic pipe to speak, to be followed by a 10-minute question-and-answer session.

The first speaker called to the podium was Jack Lancaster, spokesman for the Plastic Pipe and Fittings Association (PPFA). Lancaster briefly outlined PPFA's position on the issue of pipe permeation and reviewed two documents — a review of the plastics industry's position on permeation (which had the joint letterheads of the Plastic Pipe Institute, the Vinyl Institute, the Uni-Bell PVC Plastic Pipe Association and PPFA) and a copy of PPFA's position that characteristics of water and soil should be considered when making materials selections.

The former document listed the advantages of using plastic piping materials and the latter stressed that proper evaluation of soil and water conditions would lead to responsible selection of materials. The conclusions of the second document stated that "in order to maintain a viable supply of potable water, thought must be given to the installation of affected materials in known or suspect soil and ground water conditions which may cause permeation, corrosion or structural failure of the pipe, tubing or fittings."

Jack Lancaster, Plastic Pipe and Fittings Association, reviews PPFA's position on pipe permeation.

The point of Lancaster's presentation, it appeared, was that all piping materials are subject to failure or permeation and leaching under particular circumstances.

Lancaster's statement was concluded in approximately six minutes and he sat down with nearly 40 minutes still alotted to him. The shortness of Lancaster's presentation was surprising to many of the committee members present at the session, including one who candidly told **Reeves Journal**, "I went to the bathroom and when I got back Jack was sitting down."

Opponents Speak

After Lancaster concluded his remarks and left the podium, chairman Vincent Doyle, representing the Mechanical Contractors Association of America as part of the joint committee with the National Association of Plumbing-Heating-Cooling Contractors as joint secretariats of the committee, called for the other speakers to step forward.

If Lancaster's presentation appeared to be surprisingly short and light to the committee members, what was to follow was a grand performance.

The committee members next witnessed a very organized, polished, professional and dynamic presentation by Raymond J. Leonardini, the attorney who has represented the California Pipe Trades (consisting primarily of United Association interests) in its legal battles with the International Association of Plumbing and Mechanical Officials (IAPMO) during the last three years over the addition of certain plastic pipe products to the Uniform Plumbing Code. He was followed by Marc Lappe, PhD and the chief consultant to the California Pipe Trades on matters concerning its charges that plastic pipe contains toxic materials which are hazardous to the health of the public.

Leonardini, in his best courtroom manner, delivered a moving presentation blasting plastic piping products and their usage in plumbing systems. He also called for the A-40 Committee members to use their own judgment to keep plastics from their model code document. Lappe followed with supporting statements from a health policy consultant's viewpoint, before Leonardini delivered the closing summation.

Toxic Spills

Addressing the subject of permeation, Leonardini cited statistics that estimate 300 toxic waste spills in California every three months. "You don't know where those spills are going to be," he said, "so the idea of analyzing permeation and saying not to put them (plastic pipes) in areas where there are known toxins" is similar to "closing the corral after the horses are out."

"How are you going to know where there is going to be a toxic spill?" Leonardini asked, labeling the committee members "public policy makers and public health officials."

The attorney then pointed out that while efforts are made to determine locations that were once the sites of hazardous wastes, several cases pop up each year where housing tracts have been found to be built on waste sites three or four years after their construction.

One of Leonardini's strongest contentions was that research performed by the American Water Works Company revealed that toxic vapors, particularly from gasoline products, can permeate plastic piping as well as liquids.

"Now where are you going to put pipe to avoid infiltration and permeation by vapors?" he asked.

Leonardini went on to discuss a recent lawsuit filed in the San Jose region concerning polybutylene piping system failures. Submitting a deposition on the issue for the record, Leonardini called the failure rate of PB "time dependent."

"Because of the chemical development of that pipe (PB), if you wait long

enough that particular installation will fail," he claimed.

Leonardini concluded his opening remarks and called upon Lappe, a former official with California's Department of Health and the chief consultant in the lawsuit brought forward by the California Pipe Trades Council and the state's former director of the Department of Consumer Affairs, Richard Spohn, who lent his name to the IAPMO lawsuit under the banner of the Department of Housing.

"I want to thank this group for giving me the opportunity to speak, and the United Association for bringing me here," Lappe said in his opening remarks.

Lappe later explained that the quality of drinking water is generally measured at its source in public treatment facilities. "We assume that nothing happens to it to aid and abet any levels of contaminants in transit," he added, charging that contaminants are being picked up through plastic piping systems.

"We also know of contaminants from metal ions and we are assuming that they are not raising the level of lead, copper or arsenic above the levels that are permissible from the source."

Lappe pointed to three studies conducted by the Pipe Trades Council (under his supervision), the American Water Works Company and the Vinyl Institute.

"What each of these studies found was that there are differences as clear as day and night between plastic and metal," he said. "Plastic permeates certain organic chemicals of health concern. Metal absolutely unequivocally does not."

Leonardini Summarizes

Leonardini followed with a tight, passionate conclusion that hit home with a number of emotional charges and pleas to the committee members.

The attorney challenged IAPMO (which has successfully defended its position on plastics against the Pipe Trades Council, et al in the courts, largely from a judge's ruling that no sufficient evidence has been produced to show any health hazards from plastic piping) and its 1982 UPC additions of plastics. He also questioned the validity of the National Sanitation Foundation which presented key testimony in IAPMO's California lawsuit.

Noting that IAPMO relies upon NSF testing, Leonardini said "NSF 14 is an inadequate standard for the evaluation and analysis of leaching characteristics in plastic pipe.

"Can you trust EPA? EPA is talking about relying on NSF. EPA has not developed drinking water standards for any of the chemicals that are involved."

Leonardini concluded by stating that all of the data is yet to be received and that it would probably take at least another year and a half to gather all information and comments on the conclusions.

"You have nothing to gain and everything to lose" by acting before governmental studies are completed, he said in closing.

John Woodward, Cast Iron Soil Pipe Institute, expresses his opinion during a discussion of the A-40 Committee's proposed product standards.

Confusion Begins

The polished presentation by Leonardini and Lappe was followed by Doyle's announcement that "in the interest of fairness to both sides and everyone who is on the committee," a 10-minute question-and-answer period would follow.

Lancaster returned to the podium and began to comment on the remarks made by the other two speakers by first acknowledging that he, indeed, represented PPFA and that the other speakers were employed to represent the interest of the United Association.

Lancaster's remarks were quickly met with an objection from Edward Brabec, executive vice president of the United Association. This was followed by Doyle's announcement that the remaining time would be limited to questions from the floor, not rebuttal statements.

Lancaster protested the procedures and then left the podium where Leonardini and Lappe proceeded to answer several questions from the committee members regarding their statements.

Very Convincing

To the members of the audience, it must have appeared as though the anti-plastic speakers clearly presented a very convincing argument for their case, while the plastic concerns failed to prove any of their contentions.

When confronted with the question of why Lancaster had failed to make a more comprehensive and prepared statement, PPFA attorney Robert Creamer and Lancaster both charged that they had no prior knowledge that speakers were going to be given 45 minutes each nor were they informed of the type of presentation Leonardini and Lappe were going to make.

While the plastics representatives claimed that they had not been contacted directly by the committee, but that a message was delivered through a third party, chairman Doyle told **Reeves Journal** that he did speak to Lancaster personally by telephone. William Abernathy, committee secretary, George Kaufman, co-chairman, and at least two A-40 members told **Reeves Journal** they had been told that PPFA was notified of the anti-plastics concerns' plans to appear at the meeting more than a month prior to the sessions.

Creamer told **Reeves Journal** that PPFA did not have any plans of making a similar presentation before the committee because the organization did not feel it was the proper venue to air such testimony.

"This group, regardless of what they call themselves or how they self-anoint themselves, is not competent to make these kinds of decisions, and we are not going to engage in a debate before the A-40 Committee on scientific and technical matters.

"The union can bring in people to talk about whatever they want, but we are not going to do anything that would imply that this committee is competent enough to make those kinds of judgments.

"For us to bring in toxicologists would be, in effect, to submit this issue to this group; and it doesn't belong here. This may be a safety code in terms of traditional concern of plumbers for safety, in terms of what is a safe plumbing system, but I don't believe that makes this group competent to decide whether a particular kind of plastic pipe leaches or is permeable to

Continued on page 50

Final Arguments Presented In Calif. Suit Challenging AC Efficiency Rates

by Larry Dill

SACRAMENTO, Calif. — A Sacramento county superior court judge is expected to deliver a final decision in early October on the lawsuit pitting air conditioning manufacturers against the California Energy Commission (CEC) over the CEC's proposed 1988 and 1993 minimum energy efficiency standards.

Judge James I. Morris heard final arguments from attorneys on July 16, and agreed to allow both sides of the litigation to file final closing briefs within 15 days. Upon filing of the briefs, which will be limited to material presented during the July 16 court session, the parties involved in the suit will then have 30 days to file written responses. Upon review of the material submitted, Morris will then deliver his written decision, probably in early October.

The suit was filed by Lennox Industries, Inc., Bard Manufacturing Co., Heil Heating and Cooling Products and Borg-Warner Central Enviromental Systems, Inc.. In a related action, American Standard's Trane Division has petitioned the CEC to reconsider its decision to adopt a minimum seasonal energy efficiency ratio (SEER) of 8.9 — beginning in 1988. The SEER would raise to 9.9 in 1993. California's current minimum SEER is 8.0.

The majority of the July 16 session centered around closing arguments by attorneys Thomas Knox, who represents Lennox Et Al. and Bruce Dodge, legal counsel for Trane.

The plaintiffs' attorneys focused their attention on charges that the CEC staff was selective in its use of reference materials, particularly data from the Department of Energy, and claims that the proposed regulations would drastically increase costs while resulting in products and requirements that would not be cost effective for consumers.

"We're very optimistic about the outcome," David F. Lewis, director of marketing for Lennox Industries, told **Reeves Journal.** "We think that the regulations will end up costing the consumer a lot more money. The key is that we don't feel it will be cost effective for the consumer."

Lewis also pointed out that the manufacturers contend CEC reached its decision through the selection of data that would only support its position.

Knox outlined a number of points raised in previous testimony which are being challenged by the manufacturers.

While questioning the methodology used to evaluate such factors as feasibility of compliance, discount rates, maintenance costs and particularly the "design life of units," Knox zeroed in on his clients' contention that the CEC did not have sufficient evidence to develop its regulation. Knox contended that CEC used the wrong "baseline" to determine the cost efficiency of air conditioners that would be subject to the regulations.

"They used the wrong yardstick to measure the cost effectiveness of the 1993 standards," Knox said. "There is no evidence considered that states SEER 9.9 will be cost effective in 1999," he added.

A large portion of the final session was spent arguing the language used in the regulation. The primary question was whether units covered by the regulation should be classified as residential or commercial or single and triple phase air conditioners.

Dodge stated that no data was submitted on a commercial category and that there is no evidence to support the contention the proposed SEERs would be cost effective. He suggested that the regulation be sent back to the CEC staff to either add language specifying commercial air conditioners or that commercial units be exempted from the action.

Exemption would be more favorable, he argued, because of the projected difficulty in enforcing such distinctions, particularly in light of the possibility of units designated for commercial applications being used for residential installations.

In challenging the CEC's selection of data in its regulation formulation process, Knox contended that the CEC staff ignored workshop testimony and input from industry sources and instead selectively referred to data that only tended to back its position on SEER minimums, particularly information from DOE.

Alan B. Lilly, deputy attorney general representing the CEC and the State of California, responded that CEC didn't rely on testimony supplied by industry because it was "just the opinions of their engineers."

CEC has been joined in the defense of the proposed regulation by Carrier Corp. and the Natural Resources Defense Council.

A-40 Committee

Continued from page 10

such a point that it should not be used in plumbing systems.

"No one on that committee is competent to make those kinds of decisions, and it's ironic to note that through all of the procedures they have said they are incompetent to decide whether lead should be used. They have decided they aren't competent to decide whether certain kinds of asbestos products should be used in the code. They have said they are not competent to make judgments whether certain kinds of pipe assemblies are fire retardant. They have denied competence to determine all kinds of issues, but yet when it comes to these extremely complex, complicated and controversial issues about plastic pipe, then all of a sudden there is a group of people that is in there who deem themselves highly competent to decide if plastic pipe should be used.

"And that's what we have, but we simply aren't going to submit that issue to this group. So we're not going to come in with our own dog and pony show."

Both Lancaster and Creamer contend that governmental agencies such as EPA and the Department of Health should be involved in the study and evaluation of the issue.

Couldn't Rebut

Lancaster protested the fact that he was not provided the opportunity to answer the charges made by Leonardini and Lappe, stating that they made several misstatements of fact.

As an example, he countered that the lawsuit in San Jose is centered around a mechanical fastening system, not issues concerning cancer. "He was pulling apples and oranges," Creamer added of his legal counterpart.

When it was pointed out to the plastics spokesmen that a member of the audience would surely have to be influenced by the presentation made by their foes, based on PPFA's lack of performance, Creamer concluded, "You got the message that the sponsors and the union people wanted you to get because, again, we were never told what was going to happen and they had a canned, rehearsed, slick presentation. The other thing to remember, and I'll stop saying it eventually, is that this is not the forum for that kind of thing."

Regardless of the contentions of PPFA, they may find that their counterparts on the committee left with a very strong impression from the presentation made by Leonardini and Lappe. If they were keeping score in the grandstands, the committee members may have concluded that it was no contest. The hired guns scored a TKO.

2 CIV. B008952
(LASC No. C395294)

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

SECOND APPELLATE DISTRICT

FRIENDS OF THE EARTH, CONSUMER FEDERATION OF CALIFORNIA, STATE BUILDING AND CONSTRUCTION TRADES COUNCIL OF CALIFORNIA, AFL-CIO, and AILEEN ADAMS,	)
Plaintiffs and Appellants.	)
v.	)
INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, a California corporation,	)
Defendants and Respondents.	)

ON APPEAL FROM THE SUPERIOR COURT OF LOS ANGELES COUNTY

HONORABLE JACK A. CRICKARD, JUDGE PRESIDING

BRIEF OF AMICUS CURIAE IN SUPPORT OF APPELLANTS' FRIENDS OF THE EARTH, ET AL.

JOHN K. VAN DE KAMP, Attorney General
of the State of California
ANDREA SHERIDAN ORDIN,
Chief Assistant Attorney General
THEODORA BERGER,
Assistant Attorney General
CRAIG THOMPSON,
SUSAN L. DURBIN,
Deputy Attorney General
3580 Wilshire Boulevard
Los Angeles, California 90010
Telephone: (213) 736-2105

Attorneys for Amicus Curiae
People of the State of California

TOPICAL INDEX

	Pages
INTRODUCTION	1
STATEMENT OF FACTS	2
ARGUMENT	
I IAPMO IS ENGAGED IN ACTIVITIES THAT COMPRISE THE PERFORMANCE OF SERVICES WITHIN THE MEANING OF BUSINESS AND PROFESSIONS CODE SECTION 17500	5
A. The Status of IAPMO As a Nonprofit Organization Is Not Relevant	5
B. IAPMO has Disseminated Statements With the Intent to Dispose of Goods or Services	6
II IAPMO'S STATEMENTS ARE MISLEADING WITHIN THE MEANING OF BUSINESS AND PROFESSIONS CODE SECTION 17500	10
A. Section 17500 Prohibits Untrue and and Misleading Statements	10
III THE INJUNCTION SHOULD BE EXTENDED TO THE 1985 UPC	15
CONCLUSION	19

TABLE OF AUTHORITIES

	Pages
State Cases	
Ball v. American Trial Lawyers Assn. (1971) 14 Cal.App.3d 289	11
Chern v. Bank of America (1976) 15 Cal.3d 866	10
Fletcher v. Security Pacific National Bank (1979) 23 Cal.3d 442	11
Ford Dealers Assn. v. Department of Motor Vehicles (1982) 32 Cal.3d 347	13
Garvai v. Bd. of Chiropractic Exmrs. (1963) 216 Cal.App.2d 374	13
Hanberry v. Hearst Corp. (1969) 276 Cal.App.2d 680	7-8
In re Application of O'Connor (1927) 80 Cal.App. 647	10
IT Corp. v. County of Imperial (1983) 35 Cal.3d 63	16
People v. Superior Court (Olson) 1979) 96 Cal.App.3d 181 cert. den. (1980) 446 U.S. 935	11
People v. Wahl (1940) 39 Cal.App.2d Supp. 771	11
People ex rel. Mosk v. Lynam (1967) 253 Cal.App.2d 959	11
Smulson v. Bd. of Dental Exmrs. (1941) 47 Cal.App.2d 584	13
Federal Cases	
Aronberg v. FTC (7th Cir.1942) 132 F.2d 165	11-12
Exposition Press, Inc. v. FTC (2d Cir. 1961) 296 F.2d 869	11

TABLE OF AUTHORITIES

	Pages
Federal Cases	
FTC v. Standard Education Society (1937) 302 U.S. 112	11-12
FTC v. Sterling Drug, Inc. (2d Cir. 1963) 317 F.2d 669	13
Koch v. FTC (6th Cir. 1953) 206 F.2d 311	13
Murray Space Shoe Corp. v. FTC (2d Cir. 1962) 304 F.2d 270	13
People ex rel. Mosk v. National Research Co. of Cal. (1962) 201 Cal.App.2d 765	11
Rhodes Pharmaceutical Co. v. FTC (2d Cir. 1953) 208 F.2d 382, mod. for other reasons 384 U.S. 940	13
State Statutes	
Bus. & Prof. Code, § 17500	5,6,8,9,10,11,14 15,16,17,18
Bus. & Prof. Code, § 17535	16
Civ. Code, § 17200	10
Opinions	
66 Ops.Cal.Atty.Gen. 40 (1983)	9

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

SECOND APPELLATE DISTRICT

FRIENDS OF THE EARTH, CONSUMER FEDERATION OF CALIFORNIA, STATE BUILDING AND CONSTRUCTION TRADES COUNCIL OF CALIFORNIA, AFL-CIO, and AILEEN ADAMS, Plaintiffs and Appellants. v. INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, a California corporation, Defendants and Respondents.	2 CIV. B008952 (LASC #C395294)

BRIEF OF AMICUS CURIAE
IN SUPPORT OF APPELLANTS'
FRIENDS OF THE EARTH, ET AL.

* * *

INTRODUCTION

This Amicus Brief is filed by John K. Van de Kamp, Attorney General of the State of California, pursuant to his duties as chief law enforcement officer to assure uniform and adequate enforcement of state laws. (Cal. Const., art. V, § 13; Daily v. Superior Court (1977) 19 Cal.3d 132, 149-150.) The specific focus of this brief will be the applicability of Business and Professions Code sections 17500, et seq. to the type of conduct and type of defendant at issue in this case.

The central issue in this case is the applicability of section 17500 of the Business and Professions Code, forbidding false and misleading advertising, to the publication by the International Association of Plumbing and Mechanical Officials ("IAPMO") of the Uniform Plumbing Code ("UPC") and the IAPMO Research Directory. The Attorney General believes that Business and Professions Code section 17500 is applicable to these activities of IAPMO.

STATEMENT OF FACTS

The facts have been set out at length by the parties in their briefs, and will be reviewed only briefly here, as they are germane to the applicability of Business and Professions Code section 17500.

IAPMO is an organization made up of plumbing inspectors, and governmental entities and officials who enforce or administer plumbing codes, or who regulate plumbing, heating, air conditioning, and related construction matters. (Complaint, ¶ 10; Answer, ¶ 6.) IAPMO publishes a model plumbing code called the Uniform Plumbing Code, or UPC. The UPC has remarkable prestige and influence in the plumbing industry. Testimony shows that it is regarded as the industry bible, and is used widely by contractors and architects. (R.T. pp. 304-311, 388.) It is also used widely by government. The evidence

demonstrated that the UPC is widely carried by local plumbing inspectors in the field; in California, inspectors very often carry the UPC in place of the California Administrative Code sections relating to plumbing. (Id.) Many jurisdictions use the UPC, either as the basis for their plumbing codes, or by simply adopting the UPC by reference. California is among these jurisdictions, in that state law provides that the California Department of Housing and Community Development must adopt a plumbing code that imposes substantially the same requirements as the most recent edition of the UPC. (Health & Saf. Code, § 17922(a).) Evidence in the record, then, shows that the UPC is recognized, used and substantially relied upon both by private industry and by local and state government.

The UPC itself makes statements regarding the degree and type of reliance that may be made on the UPC. The UPC states that its purpose is to provide "minimum requirements and standards for the protection of the public health, safety and welfare." It also carries the IAPMO seal, bearing the inscription, "plumbing safety." (Complaint, ¶ 11; Answer, ¶ 7.)

IAPMO also publishes a Research Directory. While the UPC lists materials that may be used for specific purposes (e.g., copper piping of one-inch diameter may be used for certain applications in home plumbing), the

Research Directory lists specific products that IAPMO states are acceptable for use under the UPC (e.g., "X" brand of one-inch copper piping is acceptable for use in the applications listed in the UPC). (Respondent's Brief at p. 2.) IAPMO also affixes its seal of "plumbing safety" to the Research Directory. (Complaint, ¶ 11; Answer, ¶ 7.) The Forward to the Research Directory also states that a listing is a representation by IAPMO that the listed product has been found to "meet or exceed applicable standards and requirements of the latest edition of the Uniform Plumbing Code." (Exh. 7.)

In compiling and publishing the UPC and Research Directory, IAPMO reviews products for compliance with what IAPMO regards as "applicable recognized standards" as well as the UPC requirements. (Respondent's Brief, p. 17.) IAPMO also does a certain amount of quality control of its own on the products it lists, performing unannounced inspections at listed manufacturers' plants. (Id., at p. 18.) IAPMO recognizes that inspectors use the IAPMO publications to evaluate products. (Id., at p. 17.) However, IAPMO does no testing of the products it lists, although it sometimes requires independent laboratory testing to be done of some products. (R.T. pp. 676-677.)

IAPMO requires, and receives, a fee from any manufacturer seeking to have a product or products listed in

the IAPMO publications. In fact, the UPC is totally paid for by the fees paid by manufacturers. (Complaint, ¶ 15; Answer, ¶¶ 6 and 9.)

ARGUMENT

I

IAPMO IS ENGAGED IN ACTIVITIES THAT COMPRISE THE PERFORMANCE OF SERVICES WITHIN THE MEANING OF BUSINESS AND PROFESSIONS CODE SECTION 17500

A. The Status of IAPMO As a Nonprofit Organization Is Not Relevant

IAPMO argues that it is not engaged in the sort of activity--namely disposing of a product or performing a service--that is covered by Business and Professions Code section 17500. As support for this argument, it cites the fact that it is a nonprofit organization, which makes no profit on the publication and sale of its publications. This argument is irrelevant.

The applicability of section 17500 depends upon the nature of the activities engaged in by a person or entity, not upon the person or entity performing those activities. Whether a corporation is a for-profit or a nonprofit corporation has no bearing on the question of whether or not it offers goods or services for sale. As an example, if a charity sells goods of some kind to raise funds, and it makes a false or misleading statement in selling them, then

section 17500 would apply. The statute simply makes no exemptions for nonprofit organizations; it applies, on its face, to any person who makes false or misleading statements in the course of selling goods or services. The provisions of IAPMO's corporate charter, or the state of its balance sheet, are irrelevant. It is IAPMO's activities and intent that are germane here.

B. IAPMO Has Disseminated Statements With the Intent to Dispose of Goods or Services

IAPMO also argues that it has not made any statements with the intent of disposing of goods or services, as required by the statute. This is not correct.

It is true that IAPMO does not make the statements at issue in this case with the intent of disposing of piping or other construction materials that it manufactures itself. IAPMO appears to argue that it simply acts as a neutral umpire, impartially calling balls and strikes, and then just reporting the score, with no intent as to how its calls affect the salability of listed products. This argument does not square with what IAPMO actually does. IAPMO knows that it is widely and heavily relied upon by government and industry. It is well aware that contractors may select products, and building inspectors approve them, because IAPMO lists them. Indeed, IAPMO takes considerable pains to ensure that government and industry will rely on IAPMO's

listings. IAPMO observes listing procedures, reviews products, and inspects some manufacturers. It makes representations that it is competent to evaluate the safety and fitness of products, and that the products it lists may be trusted to meet applicable standards and to meet minimum safety requirements in the listed use. Were this not true, IAPMO's publications would not be purchased and its primary activity and purpose would vanish.

IAPMO here is in the role, not of a direct seller of goods, but of an endorser of goods, an entity that presents itself as an expert and presents its expert evaluation of products it evaluates. It cannot avoid responsibility for its representations simply by saying that it does not manufacture the products it endorses.

A similar argument was rejected in Hanberry v. Hearst Corp. (1969) 276 Cal.App.2d 680. Plaintiff in that case alleged that she had purchased defectively designed shoes bearing the Good Housekeeping Seal. Defendant argued that it had no responsibility for any consequences, since its seal constituted nothing more than a statement of opinion. Rejecting that argument, the court said:

> "Respondent was not the seller or manufacturer of the shoes; it held itself out as a disinterested third party which had examined the shoes, found them satisfactory, and gave its

endorsement. By the very procedure and method it used, respondent represented to the public it possessed superior knowledge and special information concerning the product it endorsed. Under such circumstances, respondent may be liable for negligent misrepresentations of either fact or opinion." (276 Cal.App.2d at p. 686.)

IAPMO is similarly responsible for its representations concerning the safety of plastic pipe.

More importantly, IAPMO is in the business of selling its own services as a product endorser. It is with intent to dispose of its services as an endorser that it makes its statements that the products it lists meet applicable requirements and are safe. Having presented and established itself as an expert on plumbing codes, IAPMO actively attempts to preserve that image. As a result, manufacturers come to IAPMO to be evaluated and listed, and they pay for the IAPMO seal and the IAPMO endorsement that their products may be relied upon to meet all applicable standards and to meet minimum safety requirements.

The situation of IAPMO as an endorser, selling its services as an endorser, falls within the ambit of section 17500 as surely as if such services as writing wills or repairing cars were being sold. The statute requires only that a person make certain kinds of statements with the

intent to sell goods or services for section 17500 to be applicable. IAPMO meets this test. It publishes the UPC and the Research Directory publications, which state that certain materials and products meet applicable standards and are safe, with every apparent intention that these publications will be widely bought and relied upon. IAPMO also evinces every intent that manufacturers avail themselves of IAPMO's services as an endorser, and that they pay for these services. This meets the test of section 17500.

This office has held that section 17500 is not limited to "misrepresentations in commercial situations involving a quid pro quo." (66 Ops.Cal.Atty.Gen. 40, 46 (1983).) That opinion dealt with charitable solicitations, but noted the broad sweep of the section:

> "The general purport of section 17500 evident from its language is to protect a person from being deceived or misled when statements and representations concerning the disposing of property or the performing of services seek to induce such person to expend money for a result he desires." (Id., at p. 46.)

IAPMO's publications unquestionably have such effects. Manufacturers surely would not pay to have their products listed if such listing did not have a positive effect on sales.

II

IAPMO'S STATEMENTS ARE MISLEADING WITHIN THE MEANING OF BUSINESS AND PROFESSIONS CODE SECTION 17500

A. Section 17500 Prohibits Untrue and and Misleading Statements

Business and Professions Code section 17500 makes it unlawful for any person to make any statement which the person knows or by the exercise of reasonable care should know to be untrue or misleading in order to dispose of goods or services. It is not necessary that any person be misled by the statements; the gravamen of the offense is the making of untrue or misleading statements, and the offense is "complete without regard to whether or not anyone is deceived or damaged." (In re Application of O'Connor (1927) 80 Cal.App. 647, 652.) A statement is impermissibly untrue or misleading if the statement merely has the capacity to deceive members of the public:

> "A statement is false or misleading if members of the public are likely to be deceived. Intent of the disseminator and knowledge of the customer are both irrelevant. Referring to both section 17500 and Civil Code section 3369 [the predecessor to section 17200], it has been said: 'The statute affords protection against the probability or likelihood as well as the actuality of deception or confusion.'" (Chern v. Bank of America (1976) 15 Cal.3d 866, 876; emphasis added.)

See Fletcher v. Security Pacific National Bank (1979) 23 Cal.3d 442, 451; Ball v. American Trial Lawyers Assn. (1971) 14 Cal.App.3d 289, 310; People ex rel. Mosk v. Lynam (1967) 253 Cal.App.2d 959, 965-966; People v. Wahl (1940) 39 Cal.App.2d Supp. 771, 773. These cases clearly indicate that an action predicated on violations of section 17500 is not the same as an action for fraud or common law deceit: intent to deceive, reliance, and damage are not elements of a section 17500 cause of action. (See also People v. Superior Court (Olson) 1979) 96 Cal.App.3d 181, 190, 198, cert. den. (1980) 446 U.S. 935.)

In determining whether a representation has the capacity to deceive, the courts look to the least sophisticated members of the public. (Exposition Press, Inc. v. FTC (2d Cir. 1961) 296 F.2d 869, 872.[1/] Although a statement may not deceive or mislead a sophisticated consumer, the statement may be misleading or deceptive to others who are less experienced or more vulnerable. As the United States Supreme Court stated nearly fifty years ago:

> "The fact that a false statement may be obviously false to those who are trained and

---

1. Because of the similarity between California and federal statutes in the area of deceptive business practices, decisions of federal courts are more than ordinarily persuasive. (People ex rel. Mosk v. National Research Co. of Cal. (1962) 201 Cal.App.2d 765, 772.)

experienced does not change its character, nor take away its power to deceive others less experienced. There is no duty resting upon a citizen to suspect the honesty of those with whom he transacts business. Laws are made to protect the trusting as well as the s spicious. The best element of business has long since decided that honesty should govern competitive enterprises, and that the rule of caveat emptor should not be relied upon to reward fraud and deception." (FTC v. Standard Education Society (1937) 302 U.S. 112, 116.)

Accordingly, courts have ruled that:

"The law is not made for experts but to protect the public, -- that vast multitude which includes the ignorant, the unthinking and the credulous, who, in making purchases, do not stop to analyze but too often are governed by appearances and general impressions." (Aronberg v. FTC (7th Cir.1942) 132 F.2d 165, 167.)

IAPMO's statements may not be actively false, only misleading or incomplete. However, the law provides that words and sentences may be literally and technically true and still be used in a manner to mislead or deceive the

public. (FTC v. Sterling Drug, Inc. (2d Cir. 1963) 317 F.2d 669, 675; Koch v. FTC (6th Cir. 1953) 206 F.2d 311, 31.) If a representation is susceptible to both a misleading a truthful interpretation, the representation will be construed against the person making it. (Murray Space Shoe Corp. v. FTC (2d Cir. 1962) 304 F.2d 270, 272; Rhodes Pharmaceutical Co. v. FTC (2d Cir. 1953) 208 F.2d 382, 387, mod. for other reasons, 348 U.S. 940.) As the Court of Appeal has stated:

> "'The use of a word having a double meaning is a common device of those desiring to deceive or mislead others. One who does this cannot escape the charge of misleading or deceiving by saying that to him or as he meant the words, they were true.'" (Garvai v. Bd. of Chiropractic Exmrs. (1963) 216 Cal.App.2d 374, 379, citing Smulson v. Bd. of Dental Exmrs. (1941) 47 Cal.App.2d 584, 590.)

Further, even the failure to disclose information can be actionable, for as the California Supreme Court has noted:

> "[T]he omission of crucial information can be as misleading as a direct misstatement of fact." (Ford Dealers Assn. v. Department of Motor Vehicles (1927) 32 Cal.3d 347, 363-364.)

* * * * * *

The listing by IAPMO of certain plastic piping in the UPC and the Research Directory is such an incomplete, and therefore misleading, statement. By listing them in the Research Directory for use for potable water, IAPMO has brought plastic pipe products within the representation made as to all listed products, namely that it meets all applicable standards. By listing it in the UPC, IAPMO has brought plastic piping within the statement in the UPC that materials listed therein meet minimum safety requirements.

In the case of plastic piping for drinking water uses, such statements are, at best, incomplete when made in California. Plastic pipe is not approved for use in California in carrying potable water inside structures; plastic pipe therefore does not meet all applicable requirements in California. Any generalized statement that materials listed in the UPC meet all applicable requirements is false as to this use of plastic pipe in California; it is certainly a statement so incomplete as to be misleading. The carefully self-cultivated influence of IAPMO makes it even more likely that its listing of plastic pipe in the UPC and the Research Directory will mislead the many persons in government and private industry who use the IAPMO publications into assuming that the listed materials and products are acceptable in California for the uses IAPMO lists. This is more than sufficient to bring IAPMO's statements within the ambit of section 17500.

III

THE INJUNCTION SHOULD BE EXTENDED TO THE 1985 UPC

The applicability of section 17500 to IAPMO's conduct in this case is not an academic question of law, but a vital matter of public safety. The State of California is deeply concerned about the possibility that known or suspected human carcinogens may enter the drinking water of families and individuals because of the use of plastic piping for the carrying of potable water in homes. The state is sufficiently concerned to take the unusual step of researching and preparing a full environmental impact report (EIR) on the use of this building material for carrying water people drink, bathe in, and cook with. See judgment entered by Honorable Judge Crickard on January 24, 1984, pages 2-3.) The state has not yet approved plastic pipe for certain drinking water uses precisely because of the unknowns and the risks, and the state is attempting to ensure that sufficient time and sufficient effort is taken to evaluate the risks before it does so approve plastic pipe.

It was in this context of many unknowns and substantial potential risks that the trial court issued its injunction requiring that IAPMO inform all users of the 1982 UPC that plastic pipes are not approved for certain potable

water uses in California. The injunction reflects concerns the trial court obviously must have had for protection of public health and protection of the public against possible exposure to carcinogenic chemicals.

The injunction was well founded and, indeed, compelled by the evidence in the case. However, given the showing made by appellants, the trial court erred in limiting the injunction to the 1982 UPC and Research Directory. Under a proper application and interpretation of Business and Profession Code section 17500, the injunction should be continued until an appropriate change in circumstances occurs.

The injunction provisions connected with section 17500 create a different situation from the normal request for an injunction. Under Business and Professions Code section 17535, a court may issue an injunction upon a finding that section 17500 (or other sections of that code dealing with false advertising or unfair business practices) has been violated. The finding of a violation is all that is required; no showing of irreparable harm need be made, and no balancing of the equities need be done. Rather, a rebuttal presumption of irreparable harm arises in such a case. (IT Corp. v. County of Imperial (1983) 35 Cal.3d 63.) In effect, the Legislature has itself decided the questions of harm and of the balance of equities, and has decided that

whenever section 17500 has been violated, an injunction may issue.

Here, a very convincing showing was made that IAPMO's conduct in publishing the 1982 UPC and the Research Directory violated section 17500. The trial court very properly issued an injunction requiring appropriate disclaimers regarding the use of plastic pipe for potable water uses in structures. However, this injunction was limited to the 1982 editions of these publications, and automatically terminated when the 1985 editions were published. This was an error on the trial court's part.

The identical facts exist as to the 1985 editions of the UPC and Research Directory as existed as to the 1982 editions. The influential and well known IAPMO is widely circulating publications that imply that plastic pipe is acceptable and approved for use in carrying potable water. It expects that these publications will be relied on in both the public and private sector and, indeed, actively encourage such reliance. IAPMO circulates these publications in California, a state in which it knows that plastic pipe is not accepted for certain of these uses and is being studied by a government agency for possible health hazards, including cancer. IAPMO does not inform its California readers of what it well knows, that they cannot rely on IAPMO's implied representations of acceptability and

safety as to plastic pipe for drinking water uses in California. Now, as when the injunction issued, an EIR is being prepared. Neither the facts nor the law has changed.

Where a violation of section 17500 has been shown, and where identical facts exist to those that existed when the injunction was issued, the injunction should not be terminated but should continue until either the underlying facts or the underlying law change significantly. Amicus believes that the injunction should be extended to apply to the 1985 UPC and Research Directory.

* * * * * *

CONCLUSION

The Attorney General believes that this case falls within the ambit of Business and Professions Code section 17500, and that IAPMO's conduct constitutes a violation of that section. Accordingly, the Attorney General feels that the trial court's injunction should be extended to apply to the 1985 editions of IAPMO's publications.

DATED: OCTOBER 15, 1985

Respectfully submitted,

JOHN K. VAN DE KAMP, Attorney General
of the State of California
ANDREA SHERIDAN ORDIN,
Chief Assistant Attorney General
THEODORA BERGER,
Assistant Attorney General
CRAIG THOMPSON,
SUSAN L. DURBIN,
Deputy Attorneys General

By _____
SUSAN L. DURBIN

Attorneys for Amicus Curiae
People of the State of California

SLD:CT:dm

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

MARIE SHIBUYA-SNELL, DIRECTOR OF THE CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS, FRIENDS OF THE EARTH, CONSUMER FEDERATION OF CALIFORNIA, STATE BUILDING AND CONSTRUCTION TRADES COUNCIL OF CALIFORNIA, AND AILEEN ADAMS, Plaintiffs, vs. INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, a California corporation, and DOES I through XX, Defendants.	CASE NO. C 395 294 JUDGMENT EXTENDING AND MODIFYING INJUNCTION

The above-captioned matter was duly and regularly called for trial on December 12, 1983, in Department 32 of the Superior Court, the Honorable Jack A. Crickard, Judge Presiding. Roger Dickinson, Esq., appeared on behalf of plaintiff Marie Shibuya-Snell, Director of the California Department of Consumer Affairs ("Director"); Michael H. Remy, Esq., and Tina A. Thomas, Esq., appeared on behalf of plaintiff California State Building and Construction Trades Council, AFL-CIO ("Union Council"); and Geoffrey Cowan, Esq.,

entered an appearance on December 12, 1983, behalf of plaintiffs Consumer Federation of California, Friends of the Earth and Aileen Adams.

John F. McKenna, Jr., Esq., appeared on behalf of defendant International Association of Plumbing and Mechanical Officials ("IAPMO").

The matter was heard on December 12, 13, 14, 15, 16, 20 and 21, 1983. Evidence, both oral and written, was submitted by all parties, and the matter was duly submitted.

IT IS NOW ORDERED, ADJUDGED AND DECREED:

1. Upon the authority of Code of Civil Procedure Section 526, Subdivision (1), the existing preliminary injunction, granted upon the application of plaintiff Director's predecessor in office, is partially modified and continued in force as the permanent order of this Court.

2. Pursuant thereto, Defendant IAPMO, its agents, officers, employees, and representatives, and all persons acting in concert or participating with IAPMO are hereby permanently enjoined from disseminating, directly or indirectly, to any individual or organization in California, the 1982 Edition of the Uniform Plumbing Code ("UPC") or the IAPMO Directory of Plumbing Research Recommendations ("Research Directory"), without including a warning notice. The warning notice required to be included shall appear in no less than 10-point bold type and shall state as follows:

> NOTICE: An Environmental Impact Report is now being prepared in California to determine whether the use of CPVC, PVC, or PB plastic pipe for transing potable water poses a danger to public health or the environment. At the time of this printing of the 1982 Edition of the Uniform Plumbing Code,

and this update of IAPMO's Directory of Plumbing Research Recommendations, the State of California does not permit any expansion of the use of such pipe, in applications permitted by the Uniform Plumbing Code, beyond those applications permitted in the 1979 Edition of the Uniform Plumbing Code.

For information on California restrictions, contact the State Housing Law Section of the California Housing and Community Development Department.

Immediately below the notice, in the same size or smaller type, the following statement may appear, at the option of IAPMO:

(This notice is inserted herein pursuant to a court Order in the case of CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS v. INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, Los Angeles Superior Court No. C-395294.)

The notice shall not contain, include, or be accompanied by any other information or materials.

3. The notice shall be affixed

(a) To the inside cover of each copy of the UPC affected by this Order, and

(b) Upon the reverse side of the division page entitled "Water Systems and Related Items" (No. 5) of each copy the Research Directory,

(c) By suitable adhesive material along the notice's top and bottom borders, in a manner calculated to ensure that the accidental removal of the notice does not occur.

4. The foregoing orders shall take effect 30 days after entry of this Judgment, and the foregoing orders shall automatically terminate, both as to the UPC and the Research Directory, upon the date the 1982 Edition of the UPC is superceded by the publication of the 1985 Edition of the UPC.

5. All relief sought by plaintiffs, other than the relief granted to plaintiff Director by the foregoing orders, is denied.

6. Each party shall bear their own court costs.

DATED: _____.

JACK A. CRICKARD
JUDGE OF THE SUPERIOR COURT

STATE OF CALIFORNIA—STATE AND CONSUMER SERVICES AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF Consumer Affairs (916) 445-4465
1020 N STREET, SACRAMENTO, CALIFORNIA 95814

December 20, 1984

Mr. Thomas Higham
Executive Director
International Association
of Plumbing and Mechanical
Officials
5032 Alhambra Avenue
Los Angeles, CA 90032

Dear Mr. Higham:

As you know, this department actively participated in litigation concerning IAPMO last year. While our formal role in that matter has ceased, we remain abreast of current developments and are involved, in conjunction with HCD, in the ongoing environmental impact report.

I recently learned that IAPMO voluntarily has elected to include the notice concerning the use of plastic pipe in your upcoming edition of the Uniform Plumbing Code. It is also my understanding that the language to be used is identical to that which appeared in the last publication.

I applaud your decision. This action on the part of IAPMO carries forward the spirit of the trial court decision and allows all interested parties to focus their attention upon other critical problems.

While I trust that the information which I have received is correct, please don't hesitate to contact me if I have misstated your decision.

Sincerely,

Marie Shibuya-Snell

MARIE SHIBUYA-SNELL
Director

cc: Shirley Chilton
Secretary
State & Consumer
Services Agency

bcc: Mitch Wilk
Julie Nauman (HCD)
Tom Cecil

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIAL

5032 ALHAMBRA AVENUE, LOS ANGELES, CALIFORNIA 90032-3490 • (213) 223-1471

January 14, 1985

Marie Shibuya-Snell, Director
Department of Consumer Affairs
1020 N Street
Sacramento, CA 95814

Dear Ms. Shibuya-Snell:

This is in response to your letter of December 20, 1984, regarding the insertion of the notice on the status of plastic pipe in California in the 1985 edition of the Uniform Plumbing Code.

At its recently held meeting, the IAPMO Board of Directors determined that IAPMO will voluntarily continue to insert the notice in copies of the Uniform Plumbing Code sold in California. The wording of the nctice will be substantially the same as at present. We are, however, contemplating deleting the portion in parenthesis which refers to the "pending litigation". Since the litigation is no longer pending, there is no reason to continue to refer to it.

Very shortly I will be forwarding a copy of the proofs of the 1985 edition of the Uniform Plumbing Code to John Worsley so the Building Standards Commission can proceed with its adoption in a timely fashion.

Thank you for your letter and your interest. I hope we can continue to work closely together for the mutual benefit of the citizens of California.

Cordially,

Tom Higham

TOM HIGHAM
EXECUTIVE DIRECTOR

INTERNATIONAL ASSOCIATION OF
PLUMBING AND MECHANICAL OFFICIALS

TH:jg

cc: Jack McKenna

STATE OF NEW YORK

8988

IN SENATE

March 30, 1982

Introduced by Sen. DUNNE—read twice and ordered printed, and when printed to be committed to the Committee on Finance

AN ACT providing for a study into the feasibility of establishing a program to analyze and measure the fire-related behavior of certain materials and making an appropriation therefor

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The legislature hereby finds that there is a growing concern regarding injuries and deaths related to the toxic behavior of certain building and furnishing materials when exposed to fire or high temperatures. The legislature further finds that model test methods exist for rating the toxicity of combustion products, but that no adequate program exists to improve upon and integrate such tests into the state uniform fire prevention and building code established pursuant to article eighteen of the executive law.

§ 2. The secretary of state is hereby directed to conduct or have conducted a study of the toxicity of smoke and gases given off under various temperatures by materials used in building construction and furnishings. Such study shall assess the hazards from smoke and gases produced by the combustion of such materials, and the feasibility of developing or adopting a system of rating the toxicity of such materials, and shall result in the development of a set of recommendations to the state fire prevention and building code council established pursuant to section three hundred seventy-four of the executive law. Such recommendations shall be in the form of performance standards for various materials at various temperature conditions. For purposes of effectuating this section, the secretary of state shall consider appropriate tests and standards as currently exist in the field of combustion toxicology. The secretary of state shall report the results of the study, together with his recommendations, to the governor and the legislature on or before June thirtieth, nineteen hundred eighty-three.

EXPLANATION—Matter in *italics* (underscored) is new; matter in brackets [ ] is old law to be omitted.

LBD2-21-27-262

Fire Gas Toxicity

Recommendations of the Secretary of State to the Uniform Fire Prevention and Building Code Council
MAY 1984

New York State
DEPARTMENT OF STATE

Gail S. Shaffer
Secretary of State

Francis A. McGerry
State Fire Administrator
Office of Fire Prevention and Control

§ 3. The sum of three hundred thousand dollars ($300,000), or so much thereof as may be necessary, is hereby appropriated to the department of state out of any moneys in the state treasury in the general fund to the credit of the state purposes account not otherwise appropriated, for its expenses, including personal service, maintenance and operation, and travel in the state, in carrying out the provisions of this act.

§ 4. This act shall take effect immediately.

STATE OF NEW YORK
DEPARTMENT OF STATE
ALBANY, N.Y. 12231

GAIL S. SHAFFER
SECRETARY OF STATE

May 4, 1984

Honorable Yvonne Scruggs-Leftwich
Chairwoman
Uniform Fire Prevention and
Building Code Council
Two World Trade Center
New York, NY 10047

Dear Commissioner Scruggs-Leftwich:

Chapter 552 of the Laws of 1982, directed the Secretary of State to conduct a study of the toxicity of smoke and gases in fires. The legislation further required the Secretary to make recommendations to the Uniform Fire Prevention and Building Code Council based upon this study. The study report and my preliminary recommendations were previously transmitted to you and the Code Council. The attached recommendations fulfill the legislative mandate and follow-up on my previous transmittal.

I will be pleased to continue to work with you to promote the implementation of these recommendations.

Sincerely,

Gail S. Shaffer

INTRODUCTION

It is estimated that 80% of the people who die in fires die not as a result of flames but from inhaling toxic smoke and gases.

The reality of this statistic and the toll it represents in terms of human life were made particularly clear in a fire at the Stouffer's Inn in Westchester County in 1980 in which 26 people died.

This tragedy prompted then-Governor Hugh L. Carey to establish the Special Fire Safety Task Force to review fire safety conditions in New York State with a special emphasis on the adequacy of existing fire codes and recommendations for their improvement. In 1981, the Task Force, working with the Department of State's Office of Fire Prevention and Control, issued its report to the Governor. Among its conclusions: most fire deaths are caused by smoke inhalation and further, the apparent increase in such fatalities has occurred as a result of the toxic gases and smoke produced when certain materials, now commonly contained in buildings and furnishings, burn.

Accordingly, the Task Force recommended that the State undertake an intensive study of "combustion toxicity" -- an increasing threat to human life and safety. The Legislature in recognition of the Department of State's lead role in fire prevention and control, authorized the Secretary of State to conduct a study of the toxicity of smoke and gases given off under various temperatures by materials used in building construction and furnishings.

In undertaking this study, New York State has assumed a leadership role in developing public policy to address the causes and effects of combustion toxicity. Our work in the field of fire safety will serve as a model for other states and for the federal government to

follow. While the study of combustion toxicity is in its early stages of development, the Department of State is committed to learning more about the problems of toxic emissions of burning materials.

Contained on the following pages is a summary of the findings issued by Arthur D. Little Inc., which conducted the Department's study, and the resultant recommendations of the Secretary of State to the Uniform Fire Prevention and Building Code Council.

LEGISLATIVE HISTORY

Chapter 552, Laws of 1982, recognized the growing concern of the people of the State of New York about injuries and deaths resulting from the toxic behavior of building materials and furnishings when exposed to fire or high temperatures. At the time Chapter 552 was enacted, the Legislature acknowledged that while model test methods exist for rating the toxicity of combustion products, no adequate program exists to improve upon and integrate such tests into the Uniform Fire Prevention and Building Code. In light of this, the Legislature directed the Secretary of State to conduct a study of the toxicity of smoke and gases given off under various temperatures by materials used in building construction and furnishings.

The specific tasks to be performed by the study were as follows:

- *to assess the hazards from smoke and gases produced by the combustion of materials used in building construction and furnishings.*
- *to assess the feasibility of developing or adopting a system of rating the toxicity of materials used in building construction and furnishings.*

The study was to result in the development of a set of recommendations to the New York State Uniform Fire Prevention and Building Code Council. Considering the appropriate tests and standards that currently exist in the field of combustion toxicology, the Legislature anticipated that the Secretary's recommendations might take the form of performance standards for various materials at various temperature conditions.

Assessing the Feasibility of Incorporating Combustion Toxicity Requirements into the Uniform Fire Prevention and Building Code

The firm of Arthur D. Little of Cambridge, Massachusetts, was awarded a contract to undertake a study on the feasibility of incorporating combustion toxicity requirements into the Uniform Fire Prevention and Building Code. Arthur D. Little considered four possible regulatory options available to the State of New York as follows:

- *data filing, which would involve submission of data on combustion toxicity to a designated agency;*
- *product labeling, which would require test results or similar information to be affixed to building materials and furnishings;*
- *performance standards, which would require products to meet or exceed specified test result limits;*
- *material-specific regulation, which would ban materials based on regulatory agency determinations.*

Fourteen test methods for evaluating combustion toxicity were identified and reviewed. Two methods, the National Bureau of Standards Test Method and the University of Pittsburgh Test Method, were selected for more intensive scientific analysis. Both are bio-assay tests involving the exposure of rodents to the products of combustion.

The study concluded that:

- *The University of Pittsburgh Test Method is the most useful test currently available for assessing the hazards of the products of combustion; and*
- *A filing requirement for numerical test data (LC_{50}) is the appropriate performance testing standard at this time. (The*

LC_{50} is the lethal concentration which will cause the death of 50% of exposed animals within the test period.)

The Secretary of State submitted the findings of the Arthur D. Little study to scientific peer review prior to formulation of the following recommendations.

Recommendations of the Secretary of State to the Uniform Fire Prevention and Building Code Council

It is recommended that the Uniform Fire Prevention and Building Code Council require that certain building materials and furnishings be subjected to performance testing to provide information related to the hazard they pose to life safety in a fire scenario. The results of these performance tests should be filed with the Department of State in a Building Materials and Furnishings Data File and this information should be made readily available to the scientific community, the building and construction industry, the fire service and consumers of these products.

The tests and standards that currently exist in the field of combustion toxicology are sufficiently refined to support such performance testing and disclosure at this time. The information subject to public disclosure as a result of adoption of these recommendations will lead to a time when specific performance standards could be considered to minimize the hazards posed by building materials and furnishings in a fire scenario.

The specific recommendations regarding the creation of a Building Materials and Furnishings Data File follow:

- *It is recommended that the Uniform Fire Prevention and Building Code Council establish a Building Materials and Furnishings Data File in the Department of State, that will contain information on specific classifications of building materials and furnishings to be subject to performance testing, and that the file be available for public scrutiny.*

There is without question a need to increase the quality and quantity of information readily available to the public regarding the various properties of building materials and furnishings. The availability of this information will advance combustion toxicology

research and enable architects, builders, owners and occupants of buildings to make better informed decisions when selecting building materials and furnishings.

- *It is recommended that the Uniform Fire Prevention and Building Code Council require that the following classifications of building materials and furnishings be subjected to performance testing, the results of which shall be filed at the Department of State at the earliest practicable date as determined by the Uniform Fire Prevention and Building Code Council:*

  - *Furniture Upholstery*
  - *Mattresses*
  - *Bed Pads*
  - *Interior Wall Finish*
  - *Interior Ceiling Finish*
  - *Interior Floor Finish*
  - *Electrical Wire Insulation and Conduit*
  - *Water Distribution and Sanitary Pipes installed in buildings*

- *It is recommended that the Uniform Fire Prevention and Building Code Council prohibit the installation of any building materials or the use of newly acquired furnishings subject to the recommended performance testing and filing requirements, if the manufacturer of such product has not complied with the performance testing and filing requirements.*

This will help to ensure that the performance test and filing requirements are enforced.

- *It is recommended that the performance testing and data filing requirements imposed by the Uniform Fire Prevention and Building Code Council on these building materials and furnishings include the use of the University of Pittsburgh bio-assay protocol for measuring combustion toxicity.*

This test method was certified by Arthur D. Little as an appropriate performance test considering those currently available in the field of combustion toxicology.

- *It is recommended that the Uniform Fire Prevention and Building Code Council require manufacturers to disclose the percentage of halogens (chlorine, bromine, iodine, fluorine) contained in the products included in the categories of building materials and furnishings listed above. This information should be incorporated into the data filed with the Department of State and should be calculated to the nearest percent.*

Bio-assay tests alone do not fully account for the action of acid gases produced by products containing halogens or other chemical elements which are inclined to release acid gases. This limitation is attributable to the differences in the way rodents and humans breathe under stress: humans, unlike rodents, breathe through the mouth, exposing the lungs and trachea more directly to acid gases.

- *It is recommended that the Uniform Fire Prevention and Building Code Council require that information regarding the ignitibility and flame spread characteristics of the building materials and furnishings listed above be included in the Building Materials and Furnishings Data File.*

The following standard fire performance tests will provide the necessary information for these classifications of materials and furnishings to which these performance testing and filing requirements should apply:

- *Wall and ceiling materials - the Steiner Tunnel Test, also known as ASTM 84, NFPA 255 and UL 723.*

- *Interior Floor Finish - Critical radiant flux of floor covering systems using a radiant heat energy source, NFPA 253 and ASTM E 648.*
- *Upholstered furniture - NFPA 260A, Standard Methods of Test and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture, 1983. This method is to be used for upholstered furniture, other than that used in facilities, such as hospitals, nursing homes, residential-custodial care, and supervisory facilities, such as (1) educational, (2) assembly, or (3) residential occupancies. NFPA 260B, Standard Method of Test for Determining Resistance of Mock-up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes, 1983. This method is to be used for upholstered furniture used in facilities, such as hospitals, nursing homes, residential-custodial care and supervisory facilities or in public areas or facilities, such as (1) educational, (2) assembly, or (3) residential occupancies.*
- *Mattresses and Mattress Pads - Standard for Flammability of Mattresses and Mattress Pads (16 CFR Part 1632).*

The public interest in arriving at a meaningful approximation of the fire hazards posed by building materials and furnishings, is further served by requiring the disclosure of flame spread and ignitibility, in addition to combustion toxicity and chemical components.

CONCLUSION

The Uniform Fire Prevention and Building Code Council will review these recommendations and has indicated an intent to act upon them in six months. In its deliberations, the Council is urged to consider whether complying products should be labeled, tagged or otherwise identified.

Furthermore, It is recommended that the Code Council conduct a series of public hearings throughout the State prior to taking final action.

Adoption of these recommendations by the Code Council will raise a number of issues for consideration by the Governor and the Members of the Legislature as follows:

- *Possible restriction on sales of affected products which have not been tested or for which appropriate data have not been filed.*
- *Extension statewide of the applicability of the performance testing, filing and labeling requirements and the related use of sales restrictions. This would provide that building materials and furnishings used in New York City, as well as any other municipality in the State not covered by the Uniform Fire Prevention and Building Code, be subject to the requirements.*
- *Appropriation of adequate funding to the Department of State to support the recommended responsibilities related to data filing and analysis.*

LEGISLATIVE ACTIVITIES OF INTEREST REGARDING ELECTRICAL NON-METALLIC TUBING AND OTHER PLASTIC CONSTRUCTION MATERIALS

CONFERENCE OF INSURANCE LEGISLATORS

The Conference of Insurance Legislators is an organization of influential state legislators whose legislative duties include or have included state insurance codes. As an organization, COIL and a number of its members have been very active in fire safety. On November 1, 1981, the Resolutions Committee of COIL and members of the Missouri Legislature held a public hearing aimed at finding legislative responses to the fires at MGM Grand and Stouffers' Inn, among other tragedies. As a result of that public hearing, COIL adopted Resolution No. 6. Of particular interest to this Committee is the following finding by COIL:

> "Whereas, there are several avenues which state legislatures can take to marshall the power of state and local governments to bring about greater safety in hotels and other facilities of public accommodation, such as the enactment of laws which:
> --improve structural and fire safety codes to include among others, recently obtained data on toxicology . . ." (emphasis added)

To further refine that finding of fact and its ultimate resolution, COIL created a Task Force on Hotel Fire and Structural Safety. That Task Force is chaired by the Honorable Charles Butts, Senator of the State of Ohio. Senator Butts addressed the Symposium on Combustion Toxicology recently held at the NFPA's Annual Meeting. During his address, Senator Butts said:

"One of the things that I think is important to say and why I am grateful for the opportunity to speak to you is that when you have the fire storms in the media as we have had with the hotel fires particularly, but some of the other things; supper clubs and others, that there will be legislative reactions good or bad, and we will enact laws. We will enact into the statutes, code changes!"

Sen. Charles Butts,
NFPA Symposium on Toxicity
May 17, 1982

Senator Butts' observations were not only prophetic in terms of future legislation but he was relating some of the reactions that law makers and public officials across the country have already had when the issue of fire-gas toxicity and codes, such as the electrical code came before them.

STATE OF NEW MEXICO

In late July, 1981, the Electrical Bureau Chief of the Construction Industries Division of the Commerce and Industry Department of the State of New Mexico added Article 331 to the 1979 National Electrical Code under which the state was then operating. Upon learning of the development Allied brought the facts regarding the potential hazards of PVC in a fire situation to the attention of the Construction Industries Committee, a group appointed by the Governor to oversee the adoption of codes throughout the State of New Mexico. Although the state's approval of proposed Article 331 was quickly withdrawn by the Electrical Bureau, the Committee, on the basis of the evidence presented by both Allied and the proponents of combustible, toxic electrical conduit decided there was sufficient evidence to warrant holding a full evidentiary hearing on the use of toxic building

materials. The Construction Industries Division held that hearing, which was chaired by Richard W. Lisle, Director of the Division on April 15, 1982. The purpose of the hearing was to gather information on the various kinds of plastic materials used in New Mexico.

The New Mexico statute, under which all minimum codes are adopted for the entire state, requires that the Division begin with model codes such as the National Electrical Code and amend those only so as to increase the standards. Prompted by the abortive attempt to gain approval for proposed Article 331, and by the facts regarding fire-gas toxicity, the state is now considering the question of whether PVC, along with other synthetics commonly used in construction materials, ought to be prohibited from use in the state.

Richard W. Lisle has now released a report recommending cutbacks on the use of synthetic building materials. His report cited growing evidence of injuries and often lethal effects of synthetic products when they decompose in a fire. New Mexico is the first state to study the issue and recommend that PVC conduit no longer be permitted in high-rise buildings or non-fire-rated high density occupancy structures.

CITY OF CHICAGO

The City of Chicago is one of the largest cities which does not authorize the use of combustible, toxic electrical wiring methods or water, drain, waste or vent systems in any of its codes. In October, 1981, the Major of Chicago proposed wide-sweeping revisions to the City's electrical, plumbing and building codes so as to promote the rehabilitation of existing but dilapidated housing in Chicago. There were several extensive hearings before the Committee on Buildings and Zoning of the City Council of the City

of Chicago. At those hearings, both the opponents and the proponents of combustible, toxic building materials had a full opportunity to present their view of the facts to the Committee. The result of those hearings was that, while extensive changes were made to Chicago's codes, the Committee and later the full City Council, voted to retain the City's ban on the use of plastic wiring and plumbing methods. The Chairman of the Building and Zoning Committee, Alderman Edward R. Vrdolyak, was quoted as saying:

> "There are too many questions the experts can't answer. I certainly am not a chemist or a toxicologist . . . but there are safety questions. We're going to take a good look until most, if not all, of the evidence is in."

Chicago Tribune
February 27, 1982

STATE OF NEW YORK

Chicago is not the only major city to protect its citizens from the unrestricted loading of its buildings with combustible, toxic materials. New York City has, for many years, prohibited the use of building materials which, in a fire, produce smoke more toxic or denser than that produced by wood. The City of New York has been requiring toxicity testing of building materials using several commercial testing laboratories for several years.

Until the unfortunate tragedy of the Stouffers' Inn fire, however, the State of New York did not have a uniform, state-wide code. Following that fire, the Governor of New York appointed a special fire safety Task Force chaired by the Honorable Basil A. Paterson, Secretary of State of New York. A key conclusion of that Task Force report, which was issued to the Governor of New York on February 19, 1981, was:

"Most fire deaths are caused by smoke inhalation with an apparent increase of involvement of petrochemical based and other synthetic materials."

Special Fire Safety Task Force Report, p. 3

The Task Force recommended that a Uniform Fire Prevention and Building Code to take effect on January 1, 1984, be adopted. That Act, which provides for mandatory and uniform state-wide construction and material requirements for public and private buildings, based on performance standards, was passed in 1981. To facilitate the work of the Council which is required to formulate this state-wide code, State Senator Dunne and Assemblyman Branca introduced legislation in March, 1982. This legislation contains very important legislative findings. It says:

"The legislature hereby finds that there is a growing concern regarding injuries and deaths related to the toxic behavior of certain building and furnishing materials when exposed to fire or high temperatures. The legislature further finds that model test methods exist for rating the toxicity of combustion products, but that no adequate program exists to improve upon and integrate such tests into the state uniform fire prevention and building code established pursuant to article eighteen of the executive law."

On May 6, 1982, the Fire Safety Subcommittee of the Senate Finance Committee held a public hearing to consider toxicity and fire safety. Several of the statements made during the course of that hearing are particularly important to note:

"Neither building codes nor fire regulations seem to have taken much account of the dangerous aspects of plastics. Such codes and

regulations are inadequate. Many buildings were made to withstand fire rather than smoke, but some flame retardants minimize burning and maximize smoke. Those codes and regulations, based on heat generated by fires, may not be sufficient for smoldering plastic."

Hon. Basil A. Paterson, p. 12
Secretary of State of New York

"We think it (N.Y. Senate Bill S8988, Attachment 3,) is a milestone piece of legislation, something that should be done on a national level. I don't foresee it at a national level, so I feel fortunate to live in the State of New York where we are assured that we will have some further study done in the area of toxic materials and the effects that it not only has on firefighters but the effects it's having on civilians.

We know it's killing people. We know it is coming from gases. If this study will help prevent some of these materials from being used in the buildings in the state, then it's a major step forward. Particularly, as I cited before, plastic pipes and plumbing should be outlawed, some of the other plastic materials that are being used in building construction."

Mr. Robert Gollnick, President
New York State Professional
Firefighters Association, p. 51

"From my experience, many thermoplastics, such as styrofoam, polyethylene, polyvinyl chloride, to name a few, used as building materials make the difficult job of firefighting more difficult. They, by virtue of their high fuel values, their ability to generate toxic thick smoke, and their thermoplastic melt-flow nature at fire

ground temperatures too often deprive firefighting [illegible] from reaching their objective to seat the fire."

Officer Scott Kirchhofer,
Ladder Company No. 40
New York City Fire Department
p. 106

"Polyvinyl Chloride (PVC), polychlorinated biphenyl (PCB) are only a few of the compounds that can produce immediate or delayed injuries or death when involved in fire. State and federal legislation is needed to control the composition of materials used in furnishings and building construction so that the public may be properly safeguarded in the case of fire."

Chief Joseph C. Hess,
Chief of Fire Prevention
New York City Fire Department
p. 218

This testimony and the clear and cogent testimony of toxicologists experienced in fire-gas toxicity such as Dr. Merritt Birky formerly of the National Bureau of Standards, Center for Fire Research and now of the Foundation for Fire Safety and Dr. Yves C. Alarie, Chairman, Department of Respiratory Physiology and Toxicology, Graduate School of Public Health, University of Pittsburgh that it was feasible to rate the toxicity of materials resulted in Senate Bill 8988 being unanimously passed in the New York State Senate. On July 3, 1982, despite enormous budgetary pressures, this legislation was passed 140 to 1 by the New York State Assembly and was signed by the Governor on July 20.

At the same time as the New York legislature was considering this landmark toxicity legislation, a dispute arose regarding PVC electrical conduit installed in the New York City subway system. As in the other

instances where the facts on fire-gas toxicity were brought to the attention of responsible lawmakers charged with the duty to protect the safety of their constituency, there was quick governmental action. The New York Subway Authority discontinued the use of PVC electrical conduit based upon their concerns about the toxic hydrogen chloride gases emitted by the PVC electrical conduit in a fire. The controversy did not end, however, with discontinuance of the use of such material. On June 2, 1982, Carol Bellamy, President of the New York City Council called for the removal of all of the PVC tubing in use in the New York subway system. Answering the standard assertion that combustible, toxic PVC conduit presents no imminent hazard, Ms. Bellamy was quoted as saying:

> "The system-wide use of PVC tubing indoors poses a clear and present danger to millions of subway passengers and transit workers, as well as to firefighters responsible for controlling fires in the system. Our first concern must be safety. Using PVC tubing is perilous economy."(emphasis added)
>
> Journal of Commerce Daily
> June 2, 1982

Finally, on June 25, 1982, the New York City Council appropriated $2,000,000 to remove PVC electrical conduit from the subway system.

TULSA, OKLAHOMA

The recent action of the Board of Commissioners of the City of Tulsa is another example of the overwhelming response of lawmakers to the facts on fire-gas toxicity. In Tulsa's case, when asked to permit the use of flexible non-metallic conduit, the Mayor and Board of Commissioners referred the matter to the Fire Marshal. His conclusion was to reject the material and said, "The danger of PVC, particularly under fire conditions,

are well known because of the hazardous, death-dealing products of combustion."

STATE OF CALIFORNIA

The Supreme Court of California recently enjoined the publication in California of a model plumbing code which would have expanded the use of plastic pipe in California. The Court decided that unless the public was adequately informed about the health hazards of such pipe, that that model code could not be sold in California until a complete environmental impact report, currently about to begin, was completed. How that report would deal with the problem and solution to the problem of combus_ible, toxic building materials was not clear enough for members of the California Assembly. As a result, on June 29, 1982, Assemblywoman Maxine Waters, a member of the majority leadership, introduced Assembly Concurrent Resolution No. 146 which would direct the development of a standard toxicity test method by the state and require the environmental impact report to include the toxicity of all building materials included in the electrical, plumbing, structural, or any other building code of the state.

On August 31, 1982, the legislature of the state of California passed the resolution with amendments requiring the establishment of tests to determine the fire-gas toxicity and combustibility of materials used in buildings. The measure calls for the Department of Industrial Relations and the State Fire Marshal to review combustion toxicology test methods and to "adopt or adapt the most appropriate existing test method to rate the relative toxicity of all materials intended for use in or as part of high-density occupancy buildings."

####

allied TUBE & CONDUIT CORPORATION
16100 South Lathrop
Harvey, Illinois 60426
(312) 339-1610
NEWS

POLYVINYL CHLORIDE FUMES CAUSE LONG-TERM HEALTH PROBLEMS FOR FIRE SURVIVORS, STUDY SHOWS

Long-term health effects of exposure to polyvinyl chloride fumes from electrical fires can include permanent damage to lungs, heart, vocal cords and other organs, a study of fire survivors discloses in the November, 1981 issue of Journal of Combustion Toxicology.

The study covers survivors of the 1977 fire that claimed 161 lives in the Beverly Hills Supper Club near Cincinnati and the 1975 New York Telephone Company fire, in which 239 fireman required medical attention for toxic gas inhalation. The fires are described as two of the largest polyvinyl chloride electrical fires in the 1970's.

Deborah N. Wallace, president, Public Interest Scientific Consulting Service, reports in the study that four Beverly Hills Supper Club survivors died of severe respiratory impairments several weeks to several months after the fire. Autopsies also revealed kidney damage in three of the four victims, Dr. Wallace reports.

In-depth interviews of eight other survivors showed "a consistent picture... of severe damage to both upper and lower respiratory tract and secondary subsequent infections," Dr. Wallace notes. "Long-term diminuation of respiratory disease resistance, headaches, sleep problems, and inability to work constitute present secondary impacts of the respiratory damage....Several interviewees

experienced one or more of the following: irregular heart beat, skin problems, and visual perception impairment. Psychological effects included frequent nightmares, memory lapses, and heavy guilt characteristic of survivor syndrome."

A survey of 113 of the firefighters treated at the scene of the New York Telephone Company blaze covered the first sign of aftereffect injury and symptoms before later medical attention. "By far, the most frequent first symptoms were sore throat, irritated eyes ('burning'), dizziness, aching nostrils, and confusion. Other moderately frequent first symptoms included nausea, chest pains, chest congestion, and headache."

Nearly two-thirds of the firemen complained of persistent or permanent effects, Dr. Wallace reports. "Many men complained of being hoarse from the time of the fire to the present," she adds. "This condition became progressively worse in two men who...were found to have vocal cord lesions...The high prevalence of hoarseness indicates that the vocal cords of many of the men should be watched for growths."

Polyvinyl chloride (PVC) fumes were clearly identified in the Wallace study as the primary cause of death and injury in the two fires. She points out that in the Beverly Hills Supper Club fire, "A total of 161 people died that night without any direct involvement with the flames and long before the carbon monoxide had reached a concentration which affected the rescuers, most of whom wore no respiratory masks, and before any wood was burning in or near the...room."

During the New York Telephone Company fire, "...firefighters were collapsing or running out to the medical vans," Dr. Wallace reports. "Some men in the building depleted their airpacks and had to breathe the undiluted hot, acidic smoke. Some of the men on the outside also suffered from airpack depletion and breathed the dense downwash of smoke from the building."

Both fires have been traced to electrica. 'ein. An estimated "minimum of 4,000 and a maximum of 8,000 feet of Romex-' .ed cabling containing several PVC-insulated wires in the plenum of the Cabaret Room alone..." where most of the Beverly Hills Supper Club fatalities occurred. "Although the fire was discovered in the Zebra Room about 8:40-8:45 pm, it had been building in the wall undiscovered for abou: one-two hours. By this time, the process of thermal decomposition which is the initial stage of a polyvinyl chloride fire had already spread through the wiring to the Cabaret Room."

The New York Telephone Company fire began in the main Manhattan switching center cables entering the basement vault. The 490 cables there were clad either in polyethylene plastic or lead sheathing. "The fire remained confined to these apparently, for some time because the heat had to reach about 600° C to ignite the PVC cables leading from the vault to the upper floors," Dr. Wallace recounts. "By the time the alarm was turned on, much thermal decomposition had occurred and the PVC cables were burning.

"The initial fire was extinguished only about 3¼ hours after the alarm was sounded. However, the gases from the decomposition of the PVC cables

accumulated in the vault and burst into flames on contacting the hot wires. The second fire spread rapidly along the cables to the upper floor, and all the burning cables were of the type with each individual wire coated in PVC .... According to the New York fire department and NYS Public Service Commision inventories of what burned and was available to burn, PVC cable insulation and jacketing constituted over 80% of the fuel....No other cable insulation or jacketing was used in the building itself, and only very small quantities of wood were present on the distribution frames."

The combination of PVC electrical insulation and its ready access to combustion-supporting air thus appear to have magnified the intensity of the two fires. The Beverly Hills Supper Club wiring used reinforced plastic-jacketed wires individually insulated in PVC, and the New York Telephone Company building contained large amounts of PVC-clad wire in open distribution channels. Neither installation had the protection of metal conduit capable of both resisting high heat and blocking access of combustion air that supported the fires.

The Journal of Combustion Toxicology article notes that "by the early-to-mid 1970's, PVC had become a common electric wire insulation and cable jacket because if its electrical properties, flexibility, and high ignition temperature (600^{o} C). Combustion toxicological research of the late 1960's-early 1970's had, however, uncovered a problem with PVC and several other halogenated plastics, namely that the combustion products were extremely toxic compared to those of most natural materials.

"Further research on PVC in the early-to-mid 1970's revealed a special pattern of thermal decomposition, characterized by evolution of anhydrous hydrogen chloride and traces of benzene and toluene from the surface of the plastic at temperatures as low as 100° C. When temperatures reach 250-300° C, the reaction accelerates to the point that significant quantities of HCl are generated. Long before actual ignition temperatures are reached, long before the presence of visible fire, and long before quantities of carbon monoxide become significant, both gaseous and soot-absorbed HCl are generated in high concentrations."

The article also notes that the pattern of decomposition of PVC into HCl varies with a number of factors, including "configuration of many wires vs few; and whether the wire is in metal conduit, PVC conduit, or no conduit."

Dr. Wallace also points out that in addition to combining with water in tissue of the upper respiratory tract (to form hydrochloric acid), "another effect of PVC decomposition products is that they impair perception and behavior. The smoke is extremely dense and drastically reduces visibility, and its irritation of the eyes, skin, respiratory tract, and possibly nervous system provokes disoriented movement, blind groping and incapacitation. The potential for escape from PVC decomposition products is low compared to that of the initial stages of a fire with natural products as fuel."

She urges that "because the decreased potential for escape appears to have contributed to increasing the number of people subjected to relatively lengthy exposure to high concentrations of PVC decomposition and combustion products,

monitoring survivors of wire insulation fires for long-term health effects would be an important contribution to both the field of combustion toxicology and to the body of data on which fire safety decisions are based."

###

Allied TUBE & CONDUIT CORPORATION
16100 South Lathrop
Harvey, Illinois 60426
(312) 339-1610
NEWS

For Further Information Contact: Laurence W. Zoeller
Vice President - Public Affairs
(312) 339-1610

FIREGAS TOXICITY: THE LEGISLATIVE APPROACH

July 20, 1982, will be well remembered by advocates of greater fire and human safety. In a landmark action, New York Governor Hugh Carey signed a law appropriating $300,000 to create a system for rating the toxicity of plastics and other materials used in building construction and furnishings.

Although New York state's determination to reduce further fire tragedies is so far the most comprehensive in the nation, it is not merely an isolated occurrence. On the contrary, the apathy which once characterized the attitudes of most citizens and their elected representatives toward fire deaths is being swept aside by action.

From Maine to Oregon, there is growing recognition that America's contemptible fire death rate--8,000 a year, one every hour--is one of the worst among industrialized nations, not because of killer flames, but because of deadly gases. Smoke, not flames, kill over 80% of those who die in fires. And the plastic materials that are integral parts of modern hotel rooms and offices are being accused of increasing the toxic danger.

The expert task force appointed by Governor Carey to study the causes of the December 4, 1980, Stouffers Inn fire in Harrison, New York, reported in February, 1981: "One of the major causes of death in fire tragedies is a direct result of the hazards of petrochemical based and other synthetic construction materials and furnishings."

Recalling 287 deaths in recent tragic fires, including Stouffers, where 26 died, the Beverly Hills Supper Club near Cincinnati, MGM Grand in Las Vegas and the Westchase Hilton in Houston, California state assemblywoman Maxine Waters stated, "Strong evidence developed that decomposing plastics caused the vast majority of the fatalities. I find this intolerable--there are proven methods which can measure the toxic dangers of materials. These methods should be employed before we permit the construction of more toxic gas chambers."

Finally, the word is getting around about polyvinyl chloride, the most pervasive of the synthetic materials.

- o Congressmen Claude Pepper of Florida and Mario Biaggi of New York conducted hearings on the vulnerability of persons in nursing homes to toxic fires, a subject of direct concern to the Select Committee on Aging of the United States House of Representatives. Reportedly, legislation will soon be introduced in the United States Congress to address the danger of toxic building material in health care facilities.
- o The State of New York and the State of California have adopted landmark legislation providing for the prompt, detailed and independent study of toxic gases given off in fire situations by all materials which are now used in the construction of buildings. The New York legislation also provides for the development of performance standards for materials in a fire as a means of combatting this major hazard. Reportedly, legislation will be introduced in

the California legislature next year that will address how to limit the use of materials which are rated as hazardous under the test methods to be adopted pursuant to the California study.

- o A panel appointed by the State of New Mexico's Construction Industries Committee held hearings in April, 1982, to consider whether there was a problem posed by the use of toxic building materials. The New Mexico hearing panel found a problem existed and recommended that plastic materials currently being used in construction ought to be prohibited from use in high density occupancy structures. The full Construction Industries Committee of New Mexico is currently considering the adoption of that recommendation.
- o The City Council of Chicago, after extensive hearings, recently determined to continue its ban on the use of plastic wiring methods and plumbing materials.
- o The City of Tulsa, on the strong recommendation of its Fire Marshall, rejected an application to permit the introduction of a new flexible plastic conduit because of its toxicity in a fire situation.
- o The City of New York not only discontinued use of plastic electrical conduit in the subway system but appropriated $2,000,000 to remove such existing conduit from the system when it realized the extent of the toxicity problems.
- o The Department of Public Safety of the State of Massachusetts resolved not to permit more plastic behind the walls until a solution to this problem can be found.

Additionally, the state safety officials in such states as Colorado, Ohio, Illinois and Wisconsin are beginning to focus carefully on toxicity and how to address this problem with respect to building materials. Houston, Texas and Cincinnati, Ohio, have recently proposed severe limitations on the use of plastics behind the walls and in the ceilings of high-density occupancy buildings. Departments with safety responsibility in Peoria, Illinois; Nashville, Tennessee; Corpus Christi, Texas; Kokomo, Indiana; Modesto, California and Atlanta, Georgia have held or are considering hearings on the subject of the toxicity of commonly used building materials in a fire.

Legislators and City Councils are not the only public bodies giving consideration to how to deal with the problem of toxicity. Throughout the United States, as a result of the series of tragic deaths in fires, many courts are being asked to rule on these issues. Toxicity was a major element in the litigation which followed the Beverly Hills Supper Club fire. In Des Moines, Iowa, a $300,000,000 suit is pending against many in the plastics industry as a result of a fire there which claimed ten lives.

In a recent speech, David Miller, lawyer for many of the victims of the Stouffers Inn fire, described the suits arising out of that situation and how plastics and toxicity were a key factor.

In Las Vegas, the federal courts have been asked to rule on the liability of the manufacturers of many of the synthetic products used in the construction of the MGM Grand Hotel. One of the lawyers involved in that case has estimated the damages sought at over a half billion dollars.

At the same time, during the past year organizations such as the Foundation for Fire Safety, the National Fire Protection Association, the Society of Toxicology and the American Chemical Society have continued their studies of the problem. Similarly, the National Bureau of Standards, and various universities and other private and public institutions, have continued to refine their research designed to identify the nature of these lethal gases and to specify ways of measuring the relative toxic danger of various building materials.

Hopefully, these are just early signs of a massive national reaction against senseless fire deaths. Whether they know it or not, Americans today are literally surrounded in homes, hotels and factories by space-age plastic materials that can give off deadly gases. Indeed, modern hotel rooms are showplaces of synthetic technology, from carpets, draperies and upholstery in the rooms, to pipes, cables and ducts inside the walls.

Time was when materials were made of wood, steel and cotton which were much less toxic, but that is true no longer. Developed on a crash schedule in World War II as substitutes for national materials in short supply, plastics were cheaper and more versatile and the petroleum from which they were developed was low-cost, all-American and abundant. Soon their use proliferated, so that today, particularly in the form of polyvinyl chloride, they are present in almost every residence. Now, with vigor, fire safety and health officials are seriously questioning whether yesterday's

miracle has transformed itself into today's monstrous mistake: they are wondering whether in the name of profit and progress, human life somehow got lost.

To be sure, recognition of the lethal and hazardous properties of firegas toxicity did not just emerge overnight. Research began in the early 1970's focusing on PVC, a versatile plastic that is widely used in various types of industrial and consumer applications for airplanes, buildings and homes such as cable insulation, residential siding, electrical fittings and architectural moldings.

Research determined that when PVC decomposes (at a temperature not much hotter than that needed to bake an apple pie) it produces hydrogen chloride, which in combination with other gases, causes the intoxication syndrome and death. Reports Dr. Yves Alarie, noted toxicologist at the University of Pittsburgh:

> "The fumes from burning plastics strike victims very quickly . . . with inhalation of smoke, they lose their motor coordination, they lose their sense of perception so they really cannot escape properly. So with some of them you will find them very close to a doorway. That person did not have enough oxygen left in their blood to move."

We believe that what industrial progress did, motivated citizens and legislatures can undo. It's a large task. In recent years, a key contributor to the nation's horrible fire record has been a well-organized effort to weaken building codes, to permit greater amounts of life-threatening synthetic materials to be used in construction. Recently, the National Fire Protection Association, the nation's most prestigious building and fire safety organization, rebuffed high-pressure campaigns

designed to permit the use of more plastic conduit in its National Electrical Code. For its efforts to maintain safety oriented codes in the public interest, NFPA should be acclaimed and supported.

In the wake of recent fire tragedies, 30 states are in the process of reassessing codes. Now is the time to strengthen codes, not weaken them as some interests desire.

The proliferation of plastic materials has coincided for years with widespread inattention and apathy toward the role of building codes, standards, rules and fire fatalities. Sadly, for thousands of fire victims, many codes have not been reviewed for years, some even for several decades. Therefore, codes have fallen behind the state of the art. The state of New York is contemplating a review of the entire code structure every three years to keep pace with advancing research and technology.

In point of fact, although the National Bureau of Standards and the University of Pittsburgh each have developed sophisticated methods for determining the toxicity levels of materials, no organization or government agency responsible for the development of model building codes has yet enforced a toxicity standard. Therefore, numerous toxic products have been authorized for use in buildings, even though research reveals that synthetic materials can be from 10 to 100 times more toxic than wood. Research by the University of Pittsburgh, for example, indicates that five ounces of polyvinyl chloride can emit enough hydrogen chloride gas to kill sleeping people in ten minutes in an average sized bedroom.

Clearly, the nation needs building and fire prevention codes with easily understood minimum toxicity standards and sprinkler requirements in all new structures designed for high density occupancy. Death and serious injury by fire must not be considered inevitable.

For years we have been committed to the voluntary standards system as the best way of developing consistent, safe and technically sound codes for the nation. That system has recently come under tremendous pressure from opposing interests while attempting to come to terms with the toxicity issue. More than ever before participation from public interests are needed to keep the code-making process from being distorted by commercial interests.

Today's codes, both at the state and local level, must address the toxicity issue. Until then, Americans will live--and die--in a nation whose fire death rate is inexcusably the shame of the industrialized world.

Good codes and standards are absolutely essential to fire safety. Now is the time to strengthen codes, to protect human lives--not weaken them to protect profit margins.

####

Allied TUBE & CONDUIT CORPORATION
16100 South Lathrop
Harvey, Illinois 60426
(312) 339-1610
NEWS

.....FIRES, PLASTICS AND TOXIC GASES
SOME QUESTIONS AND ANSWERS

Q. ARE MODERN BUILDINGS FIRE SAFE?

A. The classic, non-combustible materials used in construction today--steel, concrete, glass--provide a basic structure which is fire safe. Fireproof? No. Factors other than basic construction materials enter into the problems of fire ignition, spread, containment and control.

Q. WHAT ARE SOME OF THESE FACTORS?

A. For one, the materials that are put into the walls and rooms of buildings. We fill our modern buildings with synthetic material products -- wall coverings, furniture, decoration, piping, conduit made of plastics. When plastics burn, they burn hotter and faster than traditional materials. Further, they emit toxic gases when burning. In fact, these poisonous fumes can be released when the temperature of plastic is as low as that of boiling water: it need not be in flames.

Q. WHAT IS THE EFFECT OF THESE TOXIC FUMES?

A. It is important to remember that flames are not the major killer in fires. Toxic gases are. At the MGM Grand fire in Las Vegas, 68 of the 84 people who died in that fire succumbed to toxic fumes, not flames. Furthermore, those victims of poison gases were found more than 20 floors away from the fire. Toxic gases kill. They can kill directly by poisoning the body or indirectly through a condition known as the Intoxication Syndrome.

Q. WHAT IS THE INTOXICATION SYNDROME?

A. The Intoxication Syndrome is a condition so named because some of the symptoms it produces are similar to those resulting from an overindulgence in alcoholic drinks. These

include loss of coordination, dizziness, blurred vision, diminished mental abilities, headaches, nausea and incapacitation. And in a fire situation it can prove fatal. At a time when a person needs all his senses intact to escape from a fire, the Intoxication Syndrome can rob him of the ability to perceive the situation, to see, to breathe, to understand the perils and most of all, to make the proper choices. It can even mask the fact that danger exists.

Q. SPECIFICALLY, WHAT CAUSES THE INTOXICATION SYNDROME?

A. The release of plastic-induced toxic fumes from burning or smoldering plastic. When plastics burn they produce an alarming roster of toxic gases. Hydrogen Chloride, Hydrogen Cyanide, Hydrogen Sulfide, Benzene, Nitrogen Oxides, Carbon Monoxide, and many more.

Q. ARE SOME PLASTICS MORE DANGEROUS THAN OTHERS?

A. In 1976, two medical doctors, Robert F. Dyer and Victor H. Esch, singled out polyvinylchloride as "causing the most serious problem in firefighting today," after a five-year study of firefighters exposed to the material. Polyvinyl chloride (PVC) is widely used in upholstery, wall coverings, siding, cable insulation, window frames and conduit. When PVC burns or smolders it gives off Hydrogen Chloride (HCl), which in combination with other gases, is a prime cause of the Intoxication Syndrome, incapacitating people trapped in fires. Further, when HCl combines with water such as the substances coating the eyes and tongue, it becomes hydrochloric acid, a powerful corrosive substance.

Q. WHAT CAN BE DONE ABOUT THE DANGER OF PLASTIC-INDUCED TOXIC GASES?

A. First, we need to keep building codes strong. There have been efforts recently to allow more plastics into the walls of buildings. In 1981, the National Fire Protection Association, an influential group which promulgates model building codes, defeated two pressure campaigns to permit more PVC

conduit in the walls of commercial buildings in the writing of its National Electrical Code. Many states and localities are now developing new building and fire codes. They must be kept strong, not weakened by plastics.

Second, we need definitive research on toxicity and plastic...research which would lead to the ability to rate the toxicity of building materials.

And finally, until a definitive research study is completed, no further incursion of plastics into construction should be considered.

* * * * *

City to weigh ban on plastic fire risk in future buildings

By Jon Schmitz
The Pittsburgh Press

Pittsburgh City Councilman Ben Woods tomorrow will propose an ordinance to outlaw the use of plastic building materials, which he says are "agents of death" in fires.

Woods' bill would prohibit plastic pipe, insulation and conduit in all commercial construction in the city. Existing buildings would not be affected, and the bill does not apply to residences.

Plastic materials have been blamed in a number of fatal fires, including the November 1980 fire at the MGM Grand Hotel in Las Vegas, which killed 84, and a 1977 inferno at a Kentucky supper club in which 165 perished.

Woods said scientific studies have shown plastics emit lethal quantities of toxic fumes when burned.

The most commonly used plastic building material, polyvinyl chloride, emits 77 different compounds when burned, including hydrogen chloride. When inhaled, hydrogen chloride mixes with moisture in the lungs and throat to form hydrochloric acid.

Studies at the University of Pittsburgh have shown that a few ounces of burning polyvinyl chloride can produce enough toxic fumes to kill everyone in an average-size bedroom within 10 minutes.

Woods said plastics burn faster, produce more dense smoke and fail to trigger smoke alarms until after lethal concentrations of fumes have built up.

His proposal has drawn opposition from the plastics industry, which contends it is "based on erroneous information and falsehoods."

Roy Gottesman, executive director of the Vinyl Institute, said the legislation here and elsewhere is being pushed mainly by plastic's competitors — the manufacturers of iron and steel pipe and conduit.

"Just about everything — wood, paper, cotton, you name it — gives off toxic fumes when burned. There is really no such thing as a non-toxic material," Gottesman said. Banning toxic materials would "eliminate virtually everything that can go into a building," he said.

The Vinyl Institute is a division of the Society of the Plastics Industry Inc., a New York-based trade association which represents 10 major producers of polyvinyl chloride and the raw material from which it is made.

Paul Imhoff, city superintendent of building inspection, said the current building code requires that plastic fixtures be in a fire-resistant enclosure.

Imhoff and Robert Anderson, chief of plumbing inspection for Allegheny County, said plastics were not used extensively in recently constructed skyscrapers Downtown.

> *"(Plastic is) one of the most dangerous materials ever invented in the name of modern civilization."*
>
> *— Lyle Hall*
> *L.A. fireman*

The cost of enclosing plastic fixtures in fire-resistant walls makes the use of plastic unfeasible in many larger structures, Anderson said. Plastic plumbing is common in residential construction, he said.

A PAT spokesman confirmed that some polyvinyl chloride is being used in construction of sewers for the new Downtown subway.

Spokesman Mike Scanlon described the use of plastic as "very minimal" and said the authority has stringent fire safety specifications.

At least 35 major cities, including New York, Los Angeles, Chicago, Philadelphia, Detroit, Boston, Dallas, Cleveland, St. Louis and Atlanta have enacted restrictions on plastic building materials, Woods said.

Public outcry forced New York to spend $1.5 million in 1982 to rip out newly installed plastic electrical tubing in several subway stations.

Investigators have blamed fumes from burning plastics for many of the MGM Grand fatalities. While the fire was contained on the hotel's ground level, 67 persons died between the 20th and 25th floors.

Gottesman, however, said investigators determined the fire was caused by electrical arcing along a metal conduit. Use of plastic conduit, which does not conduct electricity, would have prevented the fire, he said.

"The thing that solves the problem (of fire safety) is early detection of a fire and a quick-acting sprinkler system," Gottesman said. Firefighters, he said, must be properly equipped with self-contained breathing apparatus.

A different view came from Lyle Hall, president of the Los Angeles firefighters union, who last year called plastic "one of the most dangerous materials ever invented in the name of modern civilization."

Woods' bill will be referred to the city's Board of Code Review for a public hearing.

C-6 ★★★★

OAKLAND
TRIBUNE
EASTBAY
TODAY

Sunday, August 29, 1982

Robert C. Maynard
Editor and Publisher

Fred O. Wetton
General Manager

Roy Grimm
Managing Editor

Mark Paul
Editorial Page Editor

EDITORIALS

Fighting the new fire danger

The science of fire holds mysteries that Americans must soon solve if they want their nation dethroned as the fire-death capital of the industrialized world.

The swift passage of Assembly Concurrent Resolution 146 through the Legislature is a good sign that leaders are awaking to the inadequacies of fire protection in the U.S. The resolution, sponsored by Los Angeles Assemblywoman Maxine Waters, directs the departments of Health Services and Industrial Relations to develop a standard toxicity testing method for burning building materials.

As an Emmy-award winning NOVA show on the Public Broadcasting System recently pointed out, current fire codes are largely inadequate in addressing the danger of toxic gases from burning plastics and other new building materials.

Most fire codes are written to deal with the fire dangers of an age of steel, glass and wood. They have stressed the need to keep fires in large buildings from spreading.

But as buildings are filled with new plastic and petroleum-based materials, a new danger — toxic gases from burning materials — has come to the forefront.

Experts know the gases kill. But the codes do not reflect the latest scientific knowledge about when and how fumes become lethal.

California has been spared the tragic fires of recent years, such as the MGM Grand Hotel fire in Las Vegas, which claimed 84 lives. Most of the deaths in that fire occurred 20 floors from the flames. Strong evidence suggests that burning plastics caused many of them.

But such fires could happen here. California permits more plastic materials in construction than many experts consider safe.

Yet, for a variety of reasons, there has been little movement to revise fire codes to bring them up to date.

Writing new codes requires the latest in scientific knowledge, but for many years, the physics and chemistry of fire have been neglected. The National Bureau of Standards began focusing on materials toxicity in the late 1970s only after time revealed that regulations dealing with ignition and combustion could not cope with the dangers of plastics.

Moreover, the agencies that have combined responsibility for fire prevention were ill-equipped to meet the problems of the plastics' age.

Fire departments, already spread thin fighting fires and investigating arson, have few resources to carry out basic research into fire science.

The National Fire Protection Association, which writes and sells fire codes, is first of all a commercial organization. Critics charge that NFPA investigators have been slow to see modern fire dangers because of their interest in protecting the reputation of NFPA's existing codes.

The International Society of Builders writes the Uniform Building Code with little input from fire experts. Since none of the code books is mandatory, there is a subtle pressure to keep them from being too rigorous and thus less likely to be adopted.

Congress in 1974 created the U.S. Fire Administration as a resource bank which collected data, published reports, paid for research, and had planned to train firefighters. But the Reagan administration dissolved it.

The issue of the fire danger of modern materials is further complicated by a battle between the plastics industry and the metal industry for sales of their respective building materials. With all these factors, is it any wonder that there is little hard data on the toxicity of burning building materials?

The Legislature's overwhelming support for the study of the toxicity of burning materials is a step in the right direction. But the real struggle will come when the test results are in, standards are proposed, and attempts are made to write regulations that would make California as fire-safe as the rest of the industrialized world.

Then California will have to make the tough decision whether it would rather regu-

Concern grows over potential hazards in PVC plastic

Experts trying to set standards for material's toxicity, fire resistance

By Catherine Foster
Special to The Christian Science Monitor
Boston

It's present, to some degree, in almost every American home. Now, fire safety and health officials are increasingly questioning its use.

It's PVC, or polyvinylchloride, and it's been used for 35 years in everything from telephones to automobile bumpers to wallpaper. Inexpensive, lightweight, and versatile, in the last decade it has overtaken steel as the chief ingredient in drains, vents, and underground pipes. The use of some PVC products grew from 30 percent in 1972 to 46 percent in 1980.

But the glamour appears to be wearing off:

- Statewide public hearings were held recently in New Mexico by construction industries to determine whether to ban certain PVC products from the state's electrical code.
- The New York Transit Authority decided last month against further use of PVC electrical tubing in subway stations after health officials warned of the danger posed by burning plastic.
- The Chicago City Council decided against including PVC in the city building code as electrical conduit after testimony by toxicologists.

As PVC's use has grown so have questions about its safety. Fire-safety experts say that the large quantity of plastics, including PVC, in several major fires — the MGM Grand Hotel in Las Vegas, the Stouffer's Inn in Harrison, N.Y., and the Beverly Hills Supper Club in Southgate, Ky. — contributed to the spread of the fire and to the injuries and deaths. One toxicologist says PVC burns hotter and faster than wood, and produces smoke 20 times as toxic. PVC can smolder for hours at temperatures too low to trigger certain fire detectors, releasing toxic fumes, says Gordon Vickery, director of the Foundation for Fire Safety in Arlington, Va.

Fire-safety officials express concern at the use of PVC in places where fast exits aren't always possible: prisons, high-rises, nursing homes, airplanes, and subways.

Spokesmen for two PVC manufacturers, B. F. Goodrich and Carlon, claim that steel manufacturers have fueled the uproar over the plastic. The spokesmen say steel firms don't want to lose their once-exclusive conduit and tubing markets. A steel industry spokesman denies that steel companies advocate removing all plastics.

Plastics manufacturers assert that PVC is not the only building material that releases toxic fumes when burned. Michael O'Mara, vice-president of research and development at B. F. Goodrich, claims that "although PVC does release toxic combustion products when it burns, so do other materials. And PVC is no worse."

Several of the major fires, he says, can be attributed to fire-code violations, rather than PVC. In the MGM Grand fire, for example, there was a lack of sprinklers and fire-resistant barriers, according to the National Fire Protection Association (NFPA).

Plastics and steel manufacturers alike call for stricter adherence to fire codes and more testing. One problem: Duplicating actual fire conditions in a laboratory is difficult — there is no way of determining how different elements react with one another, says Rosalind Anderson, of Arthur D. Little Inc., a Boston research firm.

Although the plastics industry and independent labs have conducted toxicity and flammability tests on PVC for the last 10 years, a national test standard has yet to be established that would utilize this research and control the application of PVC. That is changing. The NFPA is examining the toxicity issue and plans to discuss it, for the first time, at this year's annual meeting. The National Bureau of Standards has developed a test for toxicity, which it is now in the process of approving.