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National Association of State Fire Marshals

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January 4, 1994

Mr. Dale Ray
Consumer Product Safety Commission
4330 East-West Highway
Bethesda, Maryland 20814-4408

Dear Mr. Ray:

Late last year, you asked that we submit additional information in support of our petition requesting the Commission to set federal upholstered furniture flammability standards.

Our response is enclosed. Please do not hesitate to call if you have additional questions.

Sincerely,

Francis A. McGarry
President

UNITED STATES OF AMERICA
CONSUMER PRODUCT SAFETY COMMISSION

IN RE: PETITION FP 93-1 FOR PROMULGATION OF UPHOLSTERED FURNITURE FABRIC FLAMMABILITY REGULATIONS UNDER THE FLAMMABLE FABRICS ACT, 15 U.S.C. §§ 1191 *et seq*.	)

SUPPLEMENTAL SUBMISSION OF THE NATIONAL ASSOCIATION OF STATE FIRE MARSHALS

National Association of
State Fire Marshals
925 Madison Street
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January 3, 1994

The National Association of State Fire Marshals is pleased to submit the following supplemental comments in support of Petition FP 93-1 and in response to the September 24, 1993 letter request of the CPSC Staff for additional information.

As the CPSC Staff has previously pointed out, "upholstered furniture remains the consumer product associated with more deaths than any other product within the Commission's jurisdiction" (NASFM March 31, 1993 Submission, Attachment 1.) The record before the CPSC confirms that a direct and highly effective solution of proven economic feasibility is readily available and that federal upholstered flammability standards based on the State of California program should be adopted without delay. The need for the CPSC to take action is confirmed by the numerous comments in support of the petition submitted by senior fire and public safety officials and consumer safety organizations.

Perhaps most tellingly, the submissions of the furniture and textile industries themselves acknowledge the need for regulatory action. The submissions of the Upholstered Furniture Action Council/American Furniture Manufacturers' Association and the American Textile Manufacturers' Institute/ National Cotton Council endorse California Bureau of Home Furnishings Technical Bulletin 133 as a regulatory standard -- but argue with no supporting data that it should be confined to furniture in "high risk" public facilities. If nothing else, the furniture and textile industries thus acknowledge that regulatory

action is necessary -- the only real issue before the Commission is how far that action should extend.*/

Those issues are properly the subject of the detailed examination of the cost/benefit and other considerations to be conducted as part of the rule-making proceeding requested by the NASFM petition. For purposes of the issue before the Commission at this stage -- whether to initiate such a proceeding -- the acknowledgement by the textile and furniture industries themselves that they support Technical Bulletin 133 demonstrates compellingly that Petition FP 93-1 should be granted. NASFM respectfully submits that its Petition, the supporting comments submitted by a wide range of public safety officials, fire services and consumer organizations -- combined with the submissions of the furniture and textile industries themselves -- require the Commission to initiate a rule-making proceeding.

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*/ The furniture industry submission makes an illogical argument that the CPSC should not adopt Technical Bulletin 133 "[b]ecause UFAC and AFMA encourage states to adopt" it. (See, e.g., (UFAC/AFMA Comments, p. 3.) In the Flammable Fabrics Act, 15 U.S.C. § 1191 et seq., Congress gave to the CPSC the authority and the statutory duty to develop and enforce regulations to protect the public from unreasonable furniture fire hazards on a nationwide basis. As the comments submitted in support of the petition by over 30 state officials demonstrate, action at the federal level is necessary to create uniform standards. Deferral of federal action to the states can only delay the implementation of effective, nationwide standards.

I. The Statistical Data Confirm The Need For Regulatory Action.

Under the Flammable Fabrics Act, the CPSC has been given specific responsibility to protect the public against the "unreasonable risk of the occurrence of fire leading to death or personal injury, or significant property damage" from upholstered furniture and other home furnishings (15 U.S.C. § 1193(a)). The data before the Commission demonstrate beyond doubt that an unreasonable risk of fire deaths and injuries is presented by unregulated furniture sold outside the State of California and that the California BHF program is technologically and economically feasible and has been proven to be highly effective. Despite the efforts of the textile and fabric industry comments to put a favorable gloss on the statistics, the facts remain that:

- Over the last three years for which nationwide data are available (1989-1991), upholstered furniture fires were responsible for 2480 deaths in the United States.
- The severity of upholstered furniture fires in California, as measured by deaths per 100 fires, has declined by 67% since 1982 (Comments of Gordon Damant, p. 9); in contrast, the number of deaths per 100 upholstered furniture fires across the country has increased by 35%. (Miller, A.L., Where There's Smoking There's Fire, NFPA Journal, 86-93, January, 1991.)
- Over the 1980-1989 period for which comprehensive national data are available, there was a 25%

differential reduction in California upholstered furniture fire deaths and injuries per capita as compared to the rest of the nation. (NASFM March 31, 1993 submission).

- The California death and injury rate due to furniture fires from all sources of ignition (smoking materials, open flame and other) is at least 80% lower than the rest of the nation on a per capita basis. (NASFM March 31, 1993 submission; UFAC/AFMA Comments, Table 3.)
- If the California fatality rate were brought about for the nation as a whole, upholstered furniture fire deaths can be expected to fall to slightly above 100 per year. Injury rates can be expected to fall in parallel.

To divert attention from the clear significance of these statistics, the UFAC/AFMA submission contains a lengthy analysis that nowhere addresses the dramatic differences in deaths and injuries between California and the rest of the nation. Having labored to find any basis on which the California data can be made to resemble the rest of the states, UFAC/AFMA ultimately argue only that the number of deaths in upholstered furniture fires per million people changed from 1980 to 1989 at a slightly lower rate in California than elsewhere. (UFAC/AFMA Comments, pp. 6-12). The UFAC/AFMA argument is meaningless. As NASFM noted in its March 31, 1993 submission, the dramatic 1980-89 reduction in California fire deaths both in absolute numbers

of fatalities and in percentage terms is particularly impressive in light of the fact that by 1980 California already had an upholstered furniture death rate that was 80% lower than the rest of the nation (See UFAC/AFMA Table 3: 1980 California deaths of 1.14 per million versus 5.54 for the United States).

In view of the fact that California entered the 1980-1989 period with a dramatically lower base rate, the California "rate of change" -- when measured on a deaths per million basis -- was necessarily lower than the rest of the nation.**/ Moreover, California legislation requiring fire resistant furniture was enacted in 1972, following which Technical Bulletins 116 and 117 were developed in consultation with industry and took effect on October 1, 1975. The 1980 California statistics thus reflect at least an 8 year period in which the furniture industry was on notice of California law, five years of mandatory compliance with Technical Bulletin 117, and five years of voluntary compliance with Technical Bulletin 116. Over the 1974-1980 period that spans implementation of the California program, California upholstered furniture fires of all types thus declined from approximately 2500 per year to approximately 1750 per year, a 30% decrease. (Comments of G. Damant, Table 3.)

**/ The absurdity of the UFAC/AFMA argument is made clear by their own data, presented in UFAC/AFMA Table 3. California entered the 1980-1989 period with a death rate of 1.14 per million (which declined to 0.41 per million by 1989.) In order to achieve a rate of change of greater than 1.14 per million over the decade, the California program would have had to eliminate all upholstered furniture fire deaths and somehow create new lives.

That California was able to continue to outperform the rest of the nation from 1980 to 1989, despite having entered the period with an 80% lower base rate, is itself a testimonial to the effectiveness of the BHF program. The responsibility of the CPSC and the goal of this petition is the saving of lives. No amount of statistical "rate of change" games can change the fact that the California death rate is more than 80% lower than the rest of the nation.

In fact, UFAC/AFMA's own statistics show that from 1980 through 1989 California fire deaths improved relative to the rest of the nation in furniture fire deaths involving smoking materials, furniture fire deaths involving ignitions from other sources and total deaths. According to the UFAC/AFMA statistics, for example, furniture fire deaths due to other sources of ignition decreased from 1980 through 1989 by 40% in California, while they increased by 210% in the rest of the nation. (UFAC/AFMA Comments, Tables 6 and 7.) The only category in which California fire deaths did not decline by a greater percentage than the rest of the country is deaths caused by open flame ignitions -- where the California death rate remained at a minuscule 3 per year in 1980 and in 1989, versus 127 such deaths outside California in 1989 alone. (UFAC/AFMA Comments, Tables 6 and 7.) The UFAC/AFMA statistics thus show clearly that California had a dramatically lower death rate and vast improvement over the rest of the nation in every category. Moreover, the UFAC/AFMA statistics -- which themselves show the

widening differential between California and the rest of the nation -- understate the magnitude of California's improvement by failing to take into account the fact that the California population grew from 1980 to 1989 by 14% more than the rest of the nation. (See UFAC/AFMA Comments, Tables 4, 5, 6 and 7.)***/

The significance of these statistics is further highlighted by an important observation provided by Mr. Gordon Damant, the architect and Director of the BHF program. As noted in his comments, one of the principal features of Technical Bulletin 117 is that it provides additional time for detection, suppression, and most important, escape from a furniture fire. (Comments of Gordon Damant, p. 3.) It may well be that furniture acceptable to the public cannot be designed to be invulnerable to all possible open flame ignition sources, but the saving of lives is the paramount objective. Here again, the UFAC/AFMA data themselves provide compelling proof of the effectiveness of

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***/ Additionally, the UFAC/AFMA argument overlooks the obvious reality that the effectiveness of the BHF program has been impaired by the movement into California of unregulated furniture from other states. The magnitude of this problem is driven home by California's 14% population increase relative to the rest of the nation. A large portion of this increase represents the movement of households into California that inevitably brought with them unsafe furniture purchased outside the state.

Likewise, a substantial portion of the smaller decline in upholstered furniture fires outside California can be attributed not to UFAC, but rather to the movement of furniture from California to other states and to the unknown percentage of furniture manufacturers who appropriately elect not to use a double standard in the safety of their California versus non-California products.

Technical Bulletin 117's design philosophy. Including all sources of ignition (smoking materials, open flame and other), there were 869 furniture fire deaths in the United States excluding California in 1989, as compared to only 21 California furniture fire deaths. On a per million basis, there were thus 0.41 fatalities per million in California as compared to 3.02 per million outside California.

The CPSC Staff has requested that NASFM comment on how the data demonstrate a link between the California program and reduction in fire deaths and injuries. NASFM submits that the logical and appropriate means of demonstrating this link is to compare the California upholstered furniture fire death rate to the prevailing rate for the United States excluding California, as NASFM has done. As noted above, that difference is a dramatic 87.5%. These figures are compelling in themselves. No explanation other than the effectiveness of the California program is known to NASFM or has been identified in the extensive comments submitted to the Commission.****/

****/ The September 24, 1993 letter by the CPSC Staff makes reference to an assumption that Technical Bulletin 117 applies only to furniture sold for private residential use. NASFM therefore wishes to note that Technical Bulletin 117 is a minimum standard applicable to filling materials used in all furniture, whether sold for private use or for public occupancy facilities. (See Section 1374(a) of the California legislation, previously submitted to the CPSC). Technical Bulletin 116 also is applicable to all finished furniture, regardless of its end use. (Id. Section 1374(b)). The benefits of Technical Bulletin 133, which was developed to provide added protection for public occupancy furniture and has been in force since March 1, 1992, are not yet reflected in the available NFIRS data. However, the (continued...)

The effectiveness of the BHF program also is demonstrated by a comparison of the California upholstered furniture fire death rate to the overall California fire death rate. From 1980 through 1989, total California fire deaths (including upholstered furniture fire deaths) declined by approximately 25%, as contrasted with a 47.5% decline in upholstered furniture fire deaths. Most significantly, since 1989, California fire deaths have moved upward dramatically (increasing from 253 in 1989 to 388 in 1991), while upholstered furniture fire deaths have continued to decline (from 21 in 1989 to 17 in 1991).

The Staff letter also requested that NASFM comment on the extent to which a mandatory federal standard might reduce the risk of fire-related death and injury to consumers generally. NASFM respectfully submits that an 80% reduction over time in furniture fire deaths and injuries is a reasonable estimate based on the real-world data.

II. Technological and Economic Feasibility Is Indisputable

In view of the clear effectiveness of the BHF program, the only remaining consideration is whether compliance might somehow be technologically or economically beyond the reach of the furniture industry. It is therefore equally significant that

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****/(...continued)
support expressed by the furniture and textile industries for the states to adopt Technical Bulletin 133 should lay to rest any question as to its merits.

the furniture industry makes no claim that a comparable program cannot be put in place to protect the nation. In fact, the furniture industry makes no claim that compliance with Technical Bulletins 116 and 117 would impose any technical or economic burden of any kind.

Conspicuously absent from the comments submitted to the Commission is any claim that manufacturers of furniture which comply with the California program have suffered any cost disadvantage vis-a-vis their competitors. Nor is there any claim that the California program has affected in any way the availability to California purchasers of the same wide range of furniture styles that is available in the rest of the nation.

As noted earlier, Technical Bulletin 117 has been in force since 1975 and the furniture industry thus has had ample time to bring its manufacturing practices and materials into compliance. Even though it currently is a voluntary standard, Technical Bulletin 116 has also been a fact of life since 1975 and the random compliance monitoring program conducted by the Bureau of Home Furnishings has found a remarkable current compliance rate of 95% (Comments of Mr. Gordon Damant, p.4). Thus, Technical Bulletin 116 clearly presents no technical or economic problem either.

As to Technical Bulletin 133, which has been in force since 1992, the furniture industry likewise makes no claim that it has been unable to comply or even that compliance imposed any economic burden. In light of the fact that the California market

represents 15% of the United States population, NASFM submits that the technical and economic feasibility of the BHF program thus has been established beyond question.*****/ In fact, given California's substantial share of the U.S. furniture market, NASFM submits that the only technological or economic consideration at issue is the magnitude of the savings that would result from a uniform, nationwide standard -- as compared to the increased costs of complying with conflicting state and local standards.

Instead of offering any data which even suggests that compliance with Technical Bulletin 116, 117 or 133 would present any difficulty, the UFAC/AFMA comments contain a lengthy self-serving tribute to the UFAC program. NASFM agrees that -- as to the limited number of manufacturers who have elected to participate -- the UFAC program has addressed some of the unsafe practices of the furniture industry. The facts remain, however, that a majority of all furniture manufacturers do not participate even in UFAC and that, despite the enactment of the Flammable

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*****/ The only question concerning the burden of complying with the regulatory action proposed by NASFM consists of an assertion by UFAC/AFMA that "Technical Bulletin-133 complying furniture would be cost prohibitive for a residential consumer" (UFAC/AFMA Comments, p. 6). However, the UFAC/AFMA Comments provide no supporting data of any kind for this implausible claim. NASFM is particularly disturbed by the related UFAC/AFMA statement that "virtually no research and testing, specifically for Technical Bulletin 133 have been performed on upholstered furniture made for residential occupancies." (UFAC/AFMA Comments, p. 6). NASFM cannot understand how an industry which concedes that Technical Bulletin 133 is an effective measure -- and claims to support its use in public occupancy furniture -- has done no research on providing comparable safety for consumers.

Fabrics Act more than thirty years ago, there is nothing outside California to prevent manufacturers from putting hazardous furniture on the market. The UFAC/AFMA claim that the UFAC program is more effective than the BHF program is clearly refuted by the continuing, unacceptable death toll outside California discussed above.******/

The UFAC/AFMA and ATMI/NCC submissions also offer elaborate arguments on peripheral issues to which NASFM feels compelled to respond. The first is the claim that NASFM has somehow misled the Commission by noting that cellulosic fibers, the most flammable component of upholstered furniture fabrics, have increased their market share dramatically since 1985. Both UFAC/AFMA and ATMI/NCC make elaborate arguments concerning the fact that fabrics often contain blends of fibers and are not all 100% cotton. (UFAC/AFMA Comments pp. 16-18; ATMI/NCC Comments, pp. 3-4.) Their comments, however, take no issue with the fact that increased cellulosic content in fabrics leads to increased ignitability. Neither do they dispute that cellulosic fibers have increased their market share dramatically. In fact, ATMI itself reports that 100% cotton upholstery fabrics increased more

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******/ NASFM also is disturbed by the UFAC/AFMA claim that UFAC's merit is established by its "international recognition" by the furniture industry outside the United States (UFAC/AFMA Comments, pp. 25-26). As the Commission is aware, the United Kingdom has enacted mandatory furniture flammability standards and the European Economic Community has under consideration a Directive to mandate similar Europe-wide standards. The "international recognition" accorded UFAC thus appears to be a continuation of the furniture industry strategy to proffer half-measures to stave off more effective safety standards.

than four-fold (from 7% to 31%) from 1972 to 1992. (ATMI/NCC Comments, p. 4).

Illustrative of the unreliability of the ATMI/NCC comments is its misrepresentation that the UFAC program is superior to the BHF program because "Technical Bulletin 117 only requires fabrics to resist ignition by a one second exposure to an open flame" (ATMI/NCC Comments, p. 3). In fact, Technical Bulletin 117 specifies exposure times for filler materials that range from a minimum of five seconds to a maximum of 15 seconds, depending on the material, and a smoldering cigarette test for resilient cellular materials.

Another technical non-issue, raised by the ATMI/NCC comments, concerns the presence in furniture fabrics of ion contaminants that are well known promotors of smoldering ignition. The ATMI/NCC comments make much of a survey in which only 33% of a group of textile mills selected by ATMI/NCC that responded to a questionnaire had less than 250 parts per million of sodium or potassium ions in their water supplies. (ATMI/NCC Comments, p. 5). Based on this limited and self-serving data (involving in any event a minority of the respondents), ATMI/NCC apparently seek to create the impression that rinsing fabrics to remove smolder promoting contaminants will be ineffective.

What ATMI/NCC neglect to mention is that the literature cited in their own submission consistently reports that ion levels of 1000 to 4000 parts per million have been commonly found in raw cotton and finished fabrics -- far above 250 parts per

million -- and to cause cellulosic fabrics to be a major fire hazard. (See e.g., ATMI/NCC attachment; Krasny, J.F., "A Simple Method For Reducing Cigarette-Caused Upholstering Fires" Textile Chemist and Colorist, Vol. 24, p. 12, 1992; McCarter, R.J., "Smoldering Combustion of Cotton and Rayon," Journal of Consumer Flammability, Vol. 4, 1977, p. 346, Ihrig, A.M. et al., "Factors Involved In The Ignition of Upholstery Fabrics by Cigarettes," Journal of Fire Science, Vol. 4, 1980, p. 237; Ohlemiller, T.J. et al., Test Methods For Quantifying The Propensity of Cigarettes to Ignite Soft Furnishings, NIST Special Publication 851, 1993 (contaminants of 4000-7000 ppm. present in cotton fabric and 2000 ppm. identified as a threshold level for fabric ignitability.) The literature cited in ATMI/NCC's own submission also reports that a simple water rinse of raw cotton or finished fabrics (regardless of whether the water contains 250 ppm. of sodium or potassium) will reduce those dangerous levels and the resulting fire hazard. In short, the ATMI/NCC submission serves only to confirm that some industry members are unwilling to spend a penny on reducing a clear and present danger presented by their members' products.*******/

*******/ ATMI/NCC also argues that ions from perspiration can accumulate on furniture fabric and may "possibly cause smoldering promotion" (ATMI/NCC Comments, p. 6). ATMI/NCC similarly speculate that "possible contamination" from foods or cleaning agents may have the same effect. As with their other comments, the most striking feature of this speculative argument is the absence of any supporting research. It is obvious in any event that few, if any, furniture fires begin on armrests, the only furniture surface that might normally be exposed to perspiration.

(continued...)

III. The Safety Standards Requested By NASFM

In its September 24 letter, the Commission Staff requested that NASFM reconfirm the specific measures that it believes should be taken. To assist the Staff in formulating its recommendations to the Commission, NASFM is pleased to summarize below its position on each of the California Bureau Home Furnishings Technical Bulletins and on the United Kingdom furniture flammability standards.

Technical Bulletin 116

Although ignitions by open flame and other sources constitute an increasing portion of the flammable furniture hazard, ignitions caused by careless smoking continue to be the most common fire scenario. Technical Bulletin 116 is a direct test of finished furniture (or a mock-up containing the fabric and filler that is actually used) for resistance to cigarette ignition. As noted above, even though Technical Bulletin 116 is currently not mandatory, the BHF testing program has found a remarkable 95% compliance rate by California furniture suppliers. In view of the clear feasibility demonstrated by this compliance

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*******/(...continued)

Equally unfortunate is ATMI/NCC's representation that "[i]ndividuals can perspire up to 14 liters per day" containing 1725 ppm. of sodium (ATMI/NCC Comments, p. 6). The same paragraph in the reference ATMI/NCC cites cautions that these figures are extremes for "persons new to an environment that is hot and humid . . . Acclimated individuals, however, produce smaller volumes with lower salt concentration." White, A., et al., Principles of Biochemistry, McGraw-Hill, Sixth Ed., 1978, p. 1046.

rate and the contributory role Technical Bulletin 116 has played in reducing the number and severity of fires in California, NASFM believes that Technical Bulletin 116 should be adopted as a mandatory uniform standard for all upholstered furniture.

Technical Bulletin 117

Technical Bulletin 117 established an open flame test (and supplemental cigarette resistance test) of resilient filling fabric mockups that applies to all upholstered furniture whether sold for private or public use. For the reasons described above, NASFM believes that Technical Bulletins 116 and 117 have succeeded in providing the critical time necessary for fire detection, suppression and escape and have played the critical role in California's exemplary record with respect to smoking materials, open flame and "other" furniture fire deaths and injuries. Compliance with Technical Bulletin 117 has also been shown to be technically and economically feasible. NASFM therefore requests that CPSC adopt Technical Bulletin 117 as a mandatory minimum standard for all upholstered furniture.********/

********/ NASFM notes that constructive comments have been submitted by Mr. E.L. Briggs and Mr. Gordon Damant concerning areas in which Technical Bulletin 117 might be improved based on the experience that has been gained since their enactment and advances in fire test technology. One prominent example in the desirability of including a fabric performance test in any updated reworking of Technical Bulletin 117 (See Comments of G. Damant, p. 5.) NASFM recognizes that the rulemaking proceeding requested by this petition may well identify significant improvements that can be made in each of the Technical Bulletins. NASFM wishes to stress that it would welcome any modifications to Technical Bulletins 116, 117 or 133 that arise from the rulemaking process and that would facilitate compliance or improve their effectiveness.

Technical Bulletin 133

Technical Bulletin 133 is an open flame test of finished furniture that uses a more prolonged combustion period and more rigorous pass/fail criteria than Technical Bulletin 117. Technical Bulletin 133 was developed to test furniture under conditions that are representative of arson or incendiary fires. (See Technical Bulletin 133, Section I, ¶ C). Technical Bulletin 133 currently is limited in application to furniture in "public occupancies," as defined by Section 1374(d) of the California legislation. NASFM submits that adoption of Technical Bulletin 133 at minimum as a federal standard for public occupancy furniture is necessary and appropriate in view of its proven feasibility.

By this petition, NASFM requests, however, that CPSC adopt Technical Bulletin 133 for furniture sold for private use as well. The need for consideration of this broader approach is demonstrated by the 600-800 fatalities in arson-related fires that occur each year and more than 90% of which are in residences. NASFM recognizes that application of Technical Bulletin 133 to private residential furniture exceeds its current scope. Although the furniture industry opposes such action, its own submission confesses that it has done nothing under its voluntary UFAC program to determine whether there is any reason why the protection afforded by Technical Bulletin 133 cannot be made available to consumers. NASFM submits that acceptance of its petition is the only available means of forcing research in

this critical area and determining why consumers should not be protected against the fastest-growing fire hazard to the same degree as occupants of public structures.

United Kingdom Regulations

The CPSC Staff also has requested that NASFM comment on whether the United Kingdom furniture flammability regulations are a viable alternative to the California regulations. NASFM notes that the United Kingdom regulations involve open flame and cigarette testing of filling materials. NASFM also understands, however, that the United Kingdom regulations do not include a cigarette test of fabric/filler assemblies, and thus do not appear to be a substitute for Technical Bulletin 116. The United Kingdom regulations may also not be as rigorous as Technical Bulletin 133. NASFM believes that the United Kingdom regulations should be considered as a viable alternative to Technical Bulletin 117 if Technical Bulletin 117 is not adopted for any reason or if it is found that the UK regulations provide superior protection, reduced testing costs or a combination of both.*********/

* * *

*********/ NASFM also notes, however, that the United Kingdom regulations apply to sales of used as well as new furniture and thus are broader in their reach than the BHF program. NASFM to date has not requested that the federal standards it proposes apply to used furniture sales, but believes that this aspect of the United Kingdom program should be given careful consideration.

For all of the foregoing reasons, NASFM urges that the CPSC grant Petition FP 93-1 and move forward without delay to badly needed federal furniture flammability standards.

Respectfully submitted,

NATIONAL ASSOCIATION
OF STATE FIRE MARSHALS

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October 5, 1993

Mr. Dale R. Ray
Project Manager, Petition FP 93-1
Directorate for Economic Analysis, Room 656
U.S. Consumer Product Safety Commission
Washington, DC 20207

Dear Mr. Ray:

Thank you for your letter of September 24, 1993. I am pleased to provide the following in response to your requests for additional information:

1. Nature and scope of requested action.

The answer to your first question is "yes". The Commission previously asked us to clarify our "intended remedy", and we believe we have done so orally and in writing. However, we will restate it here again so that there is no question.

We are asking the Commission to adopt California Technical Bulletins 117 and 133 on a mandatory basis for all new furniture or more rigorous standards intended to reduce the number of smoldering and open flame ignitions of upholstered furniture.

As we have said before, we are well aware that Cal 133 does not apply to residential furniture, but we believe that federal standards must do so if we hope to address this nation's fire problem.

We regard the UK program as worth serious consideration. However, unlike the California effort, the UK program has been put in place recently and its benefits may not yet be fully reflected in fire statistics. NASFM is in the process of consulting with officials in that country to determine if an objective analysis has been conducted. We will share it with you if and when it is obtained.

Regulatory programs generally don't come pre-tested. As you may know, however, the UK program was adopted after careful study of the hazard and of cost-effective solutions. The UK program appears to be stronger than the California effort and would be entirely acceptable to NASFM;

2. <u>Data supporting the request</u>

NASFM had planned to make a final submission to the docket regarding many of these questions. It is attached and, with this letter, should be included in the docket.

You raise some interesting questions about open flame ignitions. We will respond as soon as possible, but cannot by the October 8 deadline. We trust that you will accept this response after that time.

While we are pleased to respond to your inquiries, the Commission itself is an excellent source of information and analysis on these issues. Indeed, some of our information comes from CPSC sources. The Commission's own documents paint a crystal clear picture of the hazard posed by upholstered furniture fires. The only question, at this point, should be which mandatory program will deal with the problem best. We hope to work with you to make that choice.

Please let me know if you require additional information. We look forward to working with you on this vital issue.

Sincerely,

Francis A. McGarry
President

FAM:cb
cc: Linda Smith
Attachment

UPHOLSTERED FURNITURE FIRES: CALIFORNIA VS. THE U.S.

Philip Schaenman, TriData
and
Ed Seits, California State Fire Marshal's Office

The National Association of State Fire Marshals has submitted a petition to the Consumer Product Safety Commission that requests CPSC to consider standards for upholstered furniture that are as good or better than the existing California residential upholstered furniture standards. California is the only state to our knowledge that has flammability standards applicable to residential furniture, and it is in residences that the vast majority of fire deaths occur.

This paper summarizes the sources and methodology used to provide the information that was presented to the Consumer Product Safety Commission in the NASFM petition. The key numbers quoted in the petition are shown in Exhibits 1 and 2. This paper also updates the information provided in the petition with additional data that have become available since the petition was submitted. The additional data further confirm the effectiveness of the California standards, and show a statistical robustness (or lack of being sensitive) to some of the assumptions made in the comparisons between the U.S. and California.

Sources of Data

All of the data used in this analysis comes from standard sources - the National Fire Incident Reporting System (NFIRS), the California Incident Reporting System (CFIRS) and the United States Census Department. No special data collections were undertaken. CPSC and others have used the NFIRS data for many policy decisions, and the CFIRS data alone accounts for almost a fifth of the NFIRS data.

EXHIBIT 1

CHANGE IN FIRE DEATH RATES
(1980 TO 1989)
CALIFORNIA VS REST OF UNITED STATES

Upholstered Furniture Ignition by Cigarettes
in Residential Structures

DEATHS (per million population)

	1980	*1989*	*Percent Change*
* United States (except California)	4.97	3.04	-39%
** California	1.14	.41	-64%

* Source: National Fire Incident Reporting System

** Source: California Fire Incident Reporting System

EXHIBIT 2

CHANGE IN FIRE INJURY RATES
(1980 TO 1989)
CALIFORNIA VS REST OF UNITED STATES

Upholstered Furniture Ignition by Cigarettes
in Residential Structures

INJURIES (per million population)

	1980	*1989*	*Percent Change*
* United States (except California)	9.04	4.75	-47%
** California	3.72	1.03	-72%

* Source: National Fire Incident Reporting System

** Source: California Fire Incident Reporting System

The numbers used to compute the data in Exhibits 1 and 2 are shown in Exhibits 3a and 3b. As is standard practice, the NFIRS data for the United States were scaled up to national estimates by the National Fire Protection Association using NFPA's total estimates of fires. This data was taken from the NFPA report, *The U.S. Smoking-Material Fire Problem through 1989*, by Alison Miller, October 1991. See Exhibits 4a and 4b.

CFIRS data was the source for all California information. The data may differ somewhat from the California CFIRS submitted to the Fire Administration (and available to CPSC) because it includes additional data and corrections made after California submits its annual report to NFIRS. For example, data from some fire departments that did not submit data in the late 1980s and early 1990s has since been provided to CFIRS and therefore was included in this report. As a result, the California data used in this report is more complete than the NFIRS tape possessed by CPSC. This makes the analysis here more conservative, since it includes more fires than would be found in the USFA's NFIRS tapes for California. The California data was initially provided for 1982-1991, as shown in Exhibit 5. Data for 1980 and 1981 subsequently were provided by the California State Fire Marshals Office after we decided to use the period 1980-1989 rather than 1982-1991 in order to match up with the time period used by the NFPA published data.

Since the table shown in Exhibit 5 was first prepared early in 1993, the California State Fire Marshal's Office has obtained more data from 1990 and 1991. While the data for these two years is still not quite as complete as for the previous years, there has been no increase in the numbers of cigarette/upholstered furniture deaths shown in Exhibit 5 (9 in 1990 and 7 in 1991). Since the Fire Marshal's Office would have been aware of any multiple fatality incidents, it is thought that these numbers will not increase by more than 1 or 2 if at all, and that there indeed was a continued decrease in the problem to a level below or at an average 10 deaths per year in the early 1990s.

Population estimates for the state of California and the U.S. came from the U.S. Census Bureau.

EXHIBIT 3a

UPHOLSTERED FURNITURE FIRES STARTED BY SMOKING MATERIALS IGNITION - U.S. TOTAL		
	1980	1989
Fires	21,800	8,900
Deaths	1,035	676
Injuries	1,923	1,066
Population of U.S.	226.546M	247.342M

Source: Fire Data - NFPA
Population - Census

EXHIBIT 3b

UPHOLSTERED FURNITURE FIRES STARTED BY CIGARETTE IGNITION - CALIFORNIA		
	1980	1989
Fires	1,024	409
Deaths	27	12
Injuries	88	30
Population of California	23.668M	29.063M

Source: Fire Data - CFIRS
Population - Census

EXHIBIT 4a

Table 6. Trend in Leading Materials First Ignited, 1980-1989
Smoking-Material Fires in Structures

Fires

	Residential Structures			Non-Residential Structures		
	Mattresses and Bedding	Upholstered Furniture	Trash	Mattresses and Bedding	Upholstered Furniture	Trash
1980	27,100	21,800	12,300	3,900	2,300	9,200
1981	24,900	20,600	11,500	4,000	2,000	8,300
1982	19,700	16,000	8,900	3,200	1,900	7,400
1983	17,700	13,200	7,800	2,800	1,300	6,300
1984	17,100	13,200	8,000	2,600	1,300	5,900
1985	17,000	12,200	7,700	2,600	1,300	6,200
1986	15,800	11,500	7,300	2,200	1,200	5,600
1987	14,300	10,600	6,900	2,000	1,000	5,700
1988	13,300	10,100	7,000	1,600	800	4,900
1989	12,200	8,900	6,000	1,400	800	4,300

Civilian Deaths

	Residential Structures			Non-Residential Structures		
	Mattresses and Bedding	Upholstered Furniture	Trash	Mattresses and Bedding	Upholstered Furniture	Trash
1980	559	1,035	13	25	3	3
1981	617	1,128	106	23	19	0
1982	473	932	48	5	5	0
1983	479	708	81	3	3	0
1984	393	856	17	23	12	0
1985	531	730	80	16	10	2
1986	375	725	37	30	6	0
1987	378	639	37	9	6	0
1988	451	400	61	16	16	0
1989	365	676	24	6	12	0

Source: 1980-1989 NFIRS, NFPA Survey
Numbers of fires are expressed to the nearest hundred, civilian deaths and injuries to the nearest one, and direct property damage to the nearest million dollars.
Totals may not equal sums due to rounding error.

From *The U.S. Smoking Material Fire Problem Through 1989*, NFPA, 1991.

EXHIBIT 4b

Table 6. Trend in Leading Materials First Ignited, 1980-1989
Smoking-Material Fires in Structures (Continued)

Civilian Injuries

	Residential Structures			Non-Residential Structures		
	Mattresses and Bedding	Upholstered Furniture	Trash	Mattresses and Bedding	Upholstered Furniture	Trash
1980	1,615	1,923	233	214	58	110
1981	1,571	1,914	232	407	100	32
1982	1,394	1,698	269	128	105	82
1983	1,553	1,666	313	164	28	25
1984	1,344	1,422	201	80	54	22
1985	1,296	1,404	205	76	41	43
1986	1,209	1,250	222	122	9	63
1987	1,293	1,279	199	80	19	17
1988	1,370	1,376	233	145	76	50
1989	1,138	1,066	217	83	7	29

Direct Property Damage (in Millions)

	Residential Structures			Non-Residential Structures		
	Mattresses and Bedding	Upholstered Furniture	Trash	Mattresses and Bedding	Upholstered Furniture	Trash
1980	$91	$126	$28	$7	$12	$24
1981	$92	$131	$36	$5	$10	$23
1982	$79	$185	$28	$1	$11	$19
1983	$86	$104	$28	$7	$7	$18
1984	$85	$119	$30	$5	$16	$13
1985	$106	$117	$36	$5	$9	$29
1986	$94	$114	$31	$7	$9	$22
1987	$76	$99	$32	$5	$5	$18
1988	$95	$107	$30	$7	$7	$25
1989	$93	$107	$30	$2	$2	$129

Source: 1980-1989 NFIRS, NFPA Survey
Numbers of fires are expressed to the nearest hundred, civilian deaths and injuries to the nearest one, and direct property damage to the nearest million dollars.
Totals may not equal sums because of rounding error.

EXHIBIT 5

FACT SHEET

CALIFORNIA STATE FIRE MARSHAL
CALIFORNIA FIRE INCIDENT REPORTING SYSTEM (CFIRS)

UPHOLSTERED FURNITURE STRUCTURE FIRES WHERE FORM OF HEAT IS CIGARETTE

CODES SELECTED: TYPE OF INCIDENT 11 (STRUCTURE) & 18 (MOBILE HOME) FORM OF MATERIAL FIRST IGNITED 21 (UPHOLSTERED SOFA/CHAIR) FORM OF HEAT 31 (CIGARETTE)

"DOLLAR LOSS AS ESTIMATED BY FIRE DEPARTMENT"
(NOTE: NOT ALL FIRE INCIDENT REPORTS CONTAIN A DOLLAR LOSS)

YEAR	TOTAL FIRE INCIDENTS	PROPERTY LOSS	CONTENT LOSS	FIRE FIGHTERS INJURED	FIRE FIGHTER DEATHS	CIVILIANS INJURED	CIVILIAN DEATHS
1982	873	$26,210,676	$2,141,266	22	0	105	45
1983	723	4,647,866	1,573,413	9	0	95	23
1984	706	5,100,864	1,878,566	12	0	72	26
1985	635	4,453,474	1,530,184	16	0	58	27
1986	626	4,674,659	1,635,316	11	0	72	14
1987	550	5,862,675	2,216,441	8	0	74	23
1988	513	4,332,655	1,645,564	16	0	63	23
1989	409	5,020,369	1,730,063	5	0	30	12
1990	397	6,397,668	1,707,367	20	0	44	9
*1991	288	3,891,337	1,150,531	3	0	46	7

*NOTE: 1991 DATA INCOMPLETE

Analysis Methodology

The basic comparison here is between California and the rest of the U.S. in terms of fire deaths and fire injuries per capita. The "rest of the U.S." was the total U.S. fire data minus the California fire data, divided by the total U.S. population minus the California population. Because the California population increased by 23 percent from 1980 through 1989, while the U.S. population increased by only 9 percent, the population figures are crucial in making per capita comparisons of the trends.

The focus here was on fires started by smoldering ignitions (cigarettes), which is the prime target of the California standard, and is by far the most common fatal fire scenario involving upholstered furniture over the past decade.

The CFIRS data is obtained from fire departments covering over 90 percent of the California population, but the exact percentage is not known. This percentage has varied by only a few percent from year to year to the best knowledge of the California State Fire Marshal's Office. Because the exact percentage of the population represented was not available, we could not scale the California data up to a higher number, so the California rates per capita may be low by about 10 percent. But the California fire death rate was only one third of the U.S. total fire death rate per capita, so a small adjustment in the California data (by 10 percent) would not significantly alter the comparison of the magnitude of the California problem to that of the U.S. minus California. Also, and more importantly, the key analysis here is the trend in fire death rates over a decade. If the California data is about 90 percent of the total population, and there is little variation in the percent of the population represented from year to year, then the overall trend is comparing apples to apples, and should be approximately right.

At the time the NASFM petition was submitted to CPSC, the California data that was provided to NASFM was for cigarette ignitions, while the NFPA data was for all smoking materials. Subsequent to the submission by NASFM to CPSC, the California State

Fire Marshal's Office generated from CFIRS the numbers for upholstered furniture fires ignited by all smoking materials, and also the number of upholstered furniture fires with forms of ignition that were "other" or "undetermined." (Exhibit 6.) There were only a few more deaths each year in the broader category of "smoking materials" than for cigarettes alone, and the number of "unknowns" in form of heat of ignition also was small. Exhibit 7 shows the change in the California fire death rates from 1980 to 1989 if we spread the "undetermined" sources of heat of ignition in proportion to the fatalities with determined sources, and use "smoking materials" rather than just "cigarettes" data.

EXHIBIT 7

California Data for Smoking Materials with Adjustments for Unknowns			
	1980	*1989*	*Percent Change*
No. of fire deaths	35	18	
Rate per million pop.	1.48	.62	-58%

These adjustments make the dramatic decline shown in Exhibit 1 (-63 percent) only slightly lower (-58 percent). The rates for the United States without California do not change at all with these corrections because they are below the roundoff error for the U.S. minus California computation.

Also note that if the trend in California were computed starting with 1981 instead of 1980, the decline would be much larger, and the difference between the decline for California vs. the U.S. would be even greater.

This analysis shows that the results quoted in the petition are not highly sensitive to starting points and data scaling methodology.

CALIFORNIA

UPHOLSTERED FURNITURE RESIDENTIAL STRUCTURE FIRES

	SMOKING MATERIALS FORM OF HEAT: 30 SERIES					UNDETERMINED FORM OF HEAT: 00					ALL OTHER FORMS OF HEAT				
		INJURIES		DEATHS			INJURIES		DEATHS			INJURIES		DEATHS	
YEAR	TOTAL FIRES	FIRE FIGHTERS	CIVILIANS	FIRE FIGHTERS	CIVILIANS	TOTAL FIRES	FIRE FIGHTERS	CIVILIANS	FIRE FIGHTERS	CIVILIANS	TOTAL FIRES	FIRE FIGHTERS	CIVILIANS	FIRE FIGHTERS	CIVILIANS
1980	1,155	42	99	0	29	241	16	26	0	7	638	48	50	0	4
1981	1,025	34	89	0	40	208	9	8	0	10	582	23	29	0	5
1982	941	27	102	0	50	155	8	9	0	2	484	10	27	0	4
1983	781	10	96	0	25	112	3	5	0	5	468	5	30	0	2
1984	750	12	77	0	28	126	3	10	0	1	496	8	29	0	10
1985	687	16	62	0	30	125	6	5	0	2	534	9	38	0	2
1986	668	31	74	0	16	141	3	11	0	6	474	22	32	0	9
1987	592	8	80	0	24	106	3	12	0	3	489	15	27	0	8
1988	550	16	65	0	24	113	8	10	0	5	446	13	30	0	2
1989	450	7	34	0	17	122	4	6	0	1	428	19	42	0	3
1990	436	23	48	0	14	91	3	5	0	4	391	11	28	0	8

Source: California State Fire Marshal's Office

FFC: FUPHFUR4WK1 10-Apr-93

Findings

The above series of figures and tables show that California indeed had a much sharper decrease in deaths and injuries per capita over the 1980s than the rest of the United States for fires in which upholstered furniture was the item first ignited, and the ignition was by smoking materials.

This is all the more dramatic since California started at one fourth the upholstered furniture fire death rate per capita of the rest of the nation at the beginning of the 80s. Since it is much more difficult to achieve further reductions when you start from a lower baseline, the fact that the California death rate decreased further is quite remarkable. Also, the number of fire deaths caused by upholstered furniture fires ignited by cigarettes dropped below 10 in 1990 and 1991. Had the rest of the nation been as successful as California, there would be approximately 100 deaths a year from smoldering ignition of upholstered furniture instead of 600.

Conclusion

California has had a much sharper drop in fire deaths and injuries associated with smoldering ignition of upholstered furniture than the rest of the nation. The California upholstered furniture standards applicable to residential dwellings is the one relevant factor known to vary significantly between California and the rest of the country over this period. The need for implementation of federal furniture flammability standards is compellingly confirmed by the data.

U.S. CONSUMER PRODUCT SAFETY COMMISSION

WASHINGTON, D.C. 20207

September 24, 1993

Mr. Francis A. McGarry, President
National Association of State Fire Marshals
c/o New York State Office of Fire Prevention & Control
162 Washington Avenue
Albany, NY 12231

Dear Mr. McGarry,

The staff of the Consumer Product Safety Commission (CPSC) is evaluating NASFM's request (docketed as Petition FP 93-1) to initiate a proceeding to develop a flammability standard for upholstered furniture. As we discussed on the phone, some additional information would be helpful to the CPSC staff in formulating its recommendations to the Commission.

There are two basic areas in which additional information is needed: the nature and scope of the requested regulatory action, and the data supporting the request.

1. Nature and scope of requested action

The petition was unclear about the intended remedy to address hazards associated with furniture flammability. While references are made to reducing risks of cigarette ignited fires, much of California Technical Bulletins 117 and 133--the suggested regulatory approach--deals with open flame ignition resistance. The CPSC staff assumes the petition is intended to cover both smoldering and open flame ignitions.

As restated in your letter to Mr. Stephen Lemberg of September 10, 1993, the petition requests issuance of a flammability standard for all furniture to be based on the California regulations. As you know, California TB 133 does not apply to residential furniture--only to items used in "public occupancies." **Is it the petition's intent to request that all upholstered furniture, including residential and public occupancy, be required to meet a large scale, open flame test such as that in TB 133?** Such a requirement would, of course, be broader in scope than those now in effect in California.

The petition also renews a request to adopt the United Kingdom's flammability regulations pertaining to untreated polyurethane foam as an alternative if the California regulations were not adopted. While the CPSC staff will consider the potential merit of this alternative, the principal action requested by the petition will be considered to be the adoption of the California regulations. **Does NASFM consider the UK scheme a viable alternative? Is there any additional information available to support this alternative?**

2. Data supporting the request

In order to grant any petition for rulemaking on a consumer product under the Flammable Fabrics Act (FFA), the Commission should have reasonable grounds for a preliminarily finding that the product may pose an "unreasonable risk of the occurrence of fire leading to death or personal injury, or significant property damage." The Commission would also need a reasonable basis for believing that a technologically and economically feasible remedy might reduce or eliminate the unreasonable risk.

The summary statistics supplied with the petition on the relative death rates in California and the rest of the nation are presented without backup data. This raises a number of questions:

a. On what raw data are the conclusions based? How are these data broken down among cigarette ignited fires and open-flame ignited fires?

b. What is the basis for the statements about reductions in non-fatal injuries in California?

c. What national numbers were used in the comparisons?

d. Are similar comparisons available for residential structural fires (another reliable hazard indicator)?

e. What identifying codes were used to retrieve California data for the comparisons?

f. Are there any data for years other than 1980 and 1989 (either interim or subsequent)?

g. How do the data demonstrate a link between the production and sale of "California standard" furniture since 1980 and reductions in deaths and injuries associated with residential furniture subject to TB 117 and public occupancy furniture subject to TB 133? To what extent might a mandatory Federal standard reduce the risk of fire-related death and injury to consumers generally?

Commission staff considers these issues important to the evaluation of the petition. Please provide whatever information you can in response to the above questions. Correspondence may be addressed to:

Dale R. Ray
U.S. Consumer Product Safety Commission
Directorate for Economic Analysis, Rm. 656
Washington, DC 20207

Please feel free to contact me directly with any questions or concerns at (301) 504-0962. My fax number is (301) 504-0124.

Sincerely,

Dale R. Ray
Project Manager, Petition FP 93-1
Directorate for Economic Analysis

FP 93-1

National Association of State Fire Marshals

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Executive Director

Peter G. Sparber
Legislative Representative

Tena Smith
Executive Assistant

May 20, 1993

Mr. Stephen Lemberg
Assistant General Counsel
Office of the General Counsel
U.S. Consumer Product Safety Commission
Washington, DC 20207

Dear Mr. Lemberg:

I am writing in response to your letter dated April 27, 1993, requesting clarification from the National Association of State Fire Marshals ("NASFM") about three statements made in the enclosure to NASFM's letter dated April 14, 1993. This enclosure renewed NASFM's request that the Consumer Product Safety Commission issue a Federal flammability standard for upholstered furniture.

NASFM requests that the Commission adopt California Technical Bulletin 133 (open flame ignition) and Technical Bulletin 117 (smoldering ignition).

<u>Substance of Proposed Rule</u>

CPSC Request: Please provide a citation to each California regulation, or the text of each such regulation, containing the requirements which are requested for inclusion in a Federal flammability standard for upholstered furniture.

NASFM Response: Enclosed is a Flammability Information Package (Jan. 1992) and a Technical Bulletin 133 Information Package (Jan. 1992) supplied by the California Bureau of Home Furnishings and Thermal Insulation ("BHF"). The information packages contain the law, regulations, BHF technical bulletins and other documents for inclusion in the Federal flammability standard for upholstered furniture. An index to each package is attached to this letter as Attachment A.

Additional information on California's furniture flammability standards and program may be obtained from Gordon Damant, Chief, Bureau of Home Furnishings and Thermal Insulation, 3485 Orange Grove Avenue, North Highlands, CA 95660, telephone 916/574-2040.

California Fire Incident Data

CPSC Request: Page 3 of the enclosure to your letter of April 14, 1993, states that the Office of the California Fire Marshal provided NASFM with official California Fire Incident Reporting System reports of smoking-related fires involving upholstered furniture for the years 1980 through 1989. Are these reports the California input to National Fire Incident Reporting System for the years 1980 through 1989? If not, please explain how they differ.

NASFM Response: CFIRS data are reported annually as input to the National Fire Incident Reporting System. Please be advised, however, that the CFIRS data we have provided are more complete than the reported NFIRS data for California. As you may know, CFIRS are provided to NFIRS annually. It is not uncommon in California and elsewhere for local fire departments to fail to meet the deadline for inclusion of their data in the annual report to NFIRS. To maintain as complete data base as possible, CFIRS data are updated to include delayed reports as they are received. The CFIRS data we have provided therefore may be more comprehensive than the annual NFIRS reports for California.

Table 1 to Enclosure

CPSC Request: Finally, page 4 of the enclosure makes reference to "Table 1." However, the enclosure does not include or attach a "Table 1." Please provide that table.

NASFM Response: Table 1 of the enclosure to NASFM's letter dated April 14, 1993 is enclosed.

Please contact me if you require anything further and the National Association of State Fire Marshals looks forward to the Commission's favorable evaluation of our submission.

Respectfully submitted,

Francis A. McGarry
President

attachment

CHANGE IN FIRE DEATH RATES
(1980 TO 1989)
CALIFORNIA VS. REST OF UNITED STATES

Upholstered Furniture Ignition by Cigarettes
in Residential Structures

	DEATHS (per million population)		
	1980	1989	Percent Change
* United States (except California)	4.97	3.04	-39%
** California	1.14	.41	-64%

* Source: National Fire Incident Reporting System

** Source: California Fire Incident Reporting System

Table 1

STATE OF CALIFORNIA
DEPARTMENT OF CONSUMER AFFAIRS
BUREAU OF HOME FURNISHINGS AND THERMAL INSULATION
3485 ORANGE GROVE AVENUE
NORTH HIGHLANDS, CALIFORNIA 95660-5595

FLAMMABILITY INFORMATION PACKAGE

Contains Technical Bulletins 116, 117, 121, 106 and 26 *

* Technical Bulletin 133 is available in a separate Technical Bulletin 133 Information Package.

INDEX

Page 1	- FLAMMABILITY LAW (California Business and Professions Code)
Page 1 - 2	- FLAMMABILITY REGULATIONS (Title 4, Chapter 3)
Page 3	- PENAL INSTITUTION MATTRESSES (Title 15, Section 1272)
Page 3	- LICENSEE RESPONSIBILITY
Page 4	- FLAMMABILITY LABELING Upholstered Furniture
Page 5 - 7	- FLAMMABILITY QUESTIONS AND ANSWERS
Page 8 - 9	- TECHNICAL BULLETIN 116 Cigarette Test of Upholstered Furniture
Page 10 - 16	- TECHNICAL BULLETIN 117 Flame and Smolder Resistance Test of Furniture Components
Page 17 - 18	- TECHNICAL BULLETIN 121 Flammability Test For Mattresses For Use In High Risk Occupancies
Page 19 - 23	- TECHNICAL BULLETIN 106 - Cigarette Test of Mattresses and Mattress Pads
Page 24	- MATTRESS FLAMMABILITY LABELING
Page 25 - 31	- TECHNICAL BULLETIN 26 - Mattress Test/Record Keeping, Prototype Testing and Questions and Answers

JANUARY 1992

Attachment A

STATE OF CALIFORNIA
DEPARTMENT OF CONSUMER AFFAIRS
BUREAU OF HOME FURNISHINGS AND THERMAL INSULATION
3485 ORANGE GROVE AVENUE
NORTH HIGHLANDS, CALIFORNIA 95660-5595

TECHNICAL BULLETIN 133
INFORMATION PACKAGE

INDEX

Page 1 - FLAMMABILITY LAW
(California Business and Professions Code)

Page 1 - 2 - FLAMMABILITY REGULATIONS
(California Code of Regulations, Title 4, Chapter 3)

Page 3 - FLAMMABILITY LABELING

Page 4 - TECHNICAL BULLETIN 133 SEATING PRODUCT DESCRIPTION FORM

Page 5 - TECHNICAL BULLETIN 133
(Flammability test for Seating Furniture For Use in High Risk Occupancies)

Attached - QUESTIONS AND ANSWERS
California Technical Bulletin 133, A Fire Test for Seating Furniture in Public Buildings

JANUARY 1992

U.S. CONSUMER PRODUCT SAFETY COMMISSION

WASHINGTON, D.C. 20207

OFFICE OF THE
GENERAL COUNSEL

April 27, 1993

Francis A. McGarry
President,
National Association of State
Fire Marshals
925 Madison Street
Jefferson City, Missouri 65101

Dear Mr. McGarry:

This is in response to your letter to Chairman Jones-Smith dated April 14, 1993, and enclosure requesting issuance of a Federal flammability standard for upholstered furniture.

The Office of the General Counsel is reviewing your submission to determine if it meets the requirements of the Commission's procedural regulations (16 C.F.R. § 1051.5(a)) for consideration as a petition for rulemaking. A copy of those regulations is enclosed.

I am writing to request clarification about three statements in the enclosure to your letter of April 14, 1993.

Section 1051.5(a)(5) of the Commission's regulations requires that a petition must contain an explicit request for rulemaking and "a brief description of the substance of the proposed rule." Pages 2 and 3 of the enclosure to your letter contain the statement that the National Association of State Fire Marshals renews its request that the Commission initiate a proceeding for issuance of a Federal flammability standard for upholstered furniture "identical or similar to the California Bureau of Home Furnishings mandatory upholstered furniture regulations."

Please provide a citation to each California regulation, or the text of each such regulation, containing the requirements which are requested for inclusion in a Federal flammability standard for upholstered furniture.

Page 3 of the enclosure to your letter of April 14, 1993, states that the Office of the California Fire Marshal provided NASFM with official California Fire Incident Reporting System reports of smoking-related fires involving upholstered furniture for the years 1980 through 1989. Are these reports the California input to National Fire Incident Reporting System for the years 1980 through 1989? If not, please explain how they differ.

Finally, page 4 of the enclosure makes reference to "Table 1." However, the enclosure does not include or attach a "Table 1." Please provide that table.

Your assistance with this request is appreciated and will facilitate the evaluation of your submission.

Sincerely yours,

Stephen Lemberg
Assistant General Counsel

Enclosure

National Association of State Fire Marshals

Francis A. McGarry, NY
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Fax: (202) 393-4385

April 14, 1993

Honorable Jacqueline Jones-Smith, Chairperson
United States Consumer Product Safety Commission
5401 Westbard Avenue
Bethesda, MD 20816

Dear Ms. Jones-Smith:

The attached petition respectfully requests the Commission to establish a nationwide furniture flammability standard. We believe this document provides information new to the Commission, cites persuasive reports from the Commission itself, and clearly establishes the need for prompt Commission action.

We look forward to working with you and providing additional information as the Commission proceeds with rule-making.

Sincerely,

Francis A. McGarry
President

FAM:cb
Enclosure

UNITED STATES OF AMERICA
CONSUMER PRODUCT SAFETY COMMISSION

IN RE: PETITION FOR PROMULGATION OF UPHOLSTERED FURNITURE FABRIC FLAMMABILITY REGULATIONS UNDER THE FLAMMABLE FABRICS ACT, 15 U.S.C. §§ 1191 et seq.	)

Submitted by:

NATIONAL ASSOCIATION OF
STATE FIRE MARSHALS
925 Madison Street
Jefferson City, MO 65101
314/636-4317
FAX 314/636-5262

Washington Office
1325 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
202/737-1226
FAX 202/383-4385

March 31, 1993

Pursuant to 16 CFR § 105.11(b), the National Association of State Fire Marshals ("NASFM") hereby refiles its Petition calling for the Consumer Product Safety Commission ("CPSC") to implement federal furniture flammability standards.[1] NASFM is a not-for-profit organization comprised of state fire marshals (or an equivalent designation) for the States and United States Territories. NASFM's membership encompasses the chief officials with direct responsibility for fire safety across the United States.

By letter of October 22, 1992, NASFM was notified by the CPSC Office of the General Counsel that it had decided to classify NASFM's July 28, 1992 petition seeking CPSC action based on California Bureau of Home Furnishings ("BHF") Regulations as a request for reconsideration of Petitions FP 77-2 and FP 80-2, which were filed by other organizations 15 and 12 years ago, respectively. The CPSC notification requested that NASFM provide information indicating "new or changed circumstances" since the previous petitions before the CPSC would consider taking action with respect to fire-prone upholstered furniture.

Frankly, NASFM was a bit astounded by this response from CPSC, especially since you acknowledged that 890 people died and 2160 were injured in 1989 alone in upholstered furniture fires. Residential fire loss estimates for 1990, recently prepared by the CPSC staff, confirm the severity of the problem, reporting that upholstered furniture was the first material to ignite in 16,700 fires that resulted in 890 deaths.

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[1] NASFM also incorporates by reference its initial July 28, 1992 Petition.

In addition, CPSC documents provided with the response to NASFM acknowledge the significant flaws found by the CPSC staff in its own review of the Upholstered Furniture Action Council("UFAC") program, a purely voluntary program established by a very limited segment of the furniture industry as an alternative to the BHF regulations. Nevertheless, the CPSC response requested data on the incidence of upholstered furniture fire fatalities or injuries in California as compared to the rest of the nation, as information that would demonstrate whether "new or changed circumstances" exist to support federal adoption of the Bureau of Home Furnishings upholstered furniture flammability standards.

NASFM respectfully submits that its July 30, 1992 petition itself contained ample evidence of "new or changed circumstances" since the filing of petitions by other organizations more than a decade ago. That evidence demonstrates that there is a critical need for federal action in this area. Pursuant to the request of the CPSC Office of General Counsel and with the assistance of the California Fire Marshal, NASFM also has assembled the data requested by CPSC. That data, discussed below, demonstrates compellingly that under the BHF regulations California has in fact achieved a dramatic reduction in the number of deaths and injuries due to upholstered furniture fires as compared to the rest of the nation.

Therefore, the National Association of State Fire Marshals renews its request that the CPSC initiate rulemaking proceedings and adopt federal regulations

identical or similar to the California Bureau of Home Furnishings mandatory upholstered furniture flammability regulations.

I. California Fire Statistics Demonstrate the Urgent Need for Mandatory Federal Upholstered Furniture Fabric Flammability Regulations

Immediately on receipt of the CPSC response to the NASFM petition, the NASFM Board voted to assemble the additional data requested by CPSC and to resubmit the petition if that data confirmed, as anticipated, that the BHF regulations have led to improved fire safety. The Office of the California Fire Marshal provided official California Fire Incident Reporting System reports of smoking-related upholstered furniture fire deaths and injuries for the years 1980 through 1989, which then were compared to NFIRS data for the same years for the United States excluding California.[2] In contrast to previous analyses, which typically have reported the gross number of injuries and fatalities at the state and national level and analyze any increases or decreases in percentage terms, NASFM recognized that any comparative analysis of California fires versus the rest of the nation must include adjustment for

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[2] The data presented hereafter focus on upholstered furniture fires attributed to careless smoking because careless smoking is well known to be the most common heat source in such fires and because BHF Technical Bulletin 116, which tests the resistance of upholstered furniture to smoldering ignition, has been proven to be a feasible and effective regulatory model. Data from 1980 through 1989 are presented because that period provides a full decade of fire statistics since the BHF regulations took effect. Statistics compiled beginning in 1980 also include a three year grace period after the 1977 implementation of the BHF regulations for complying furniture to move into use and for the effectiveness of the regulations to begin to be reflected in real world fatality and injury rates. 1990 and 1991 CFIRS data are not included because they are less complete than 1980-89 data.

the expansion of the California population over the last decade. According to U.S. census reports, the population of California increased by 23% from 1980 to 1989, while the population of the rest of the United States increased by 9%, a significant 14% difference.

The critical measure is thus whether and to what extent California fire fatalities and injuries, measured on a per capita basis, differ from the rest of the nation.

As demonstrated below, over the decade there in fact has been a dramatic reduction in both fatalities and injuries in California as compared to the rest of the United States. As shown by Table 1, upholstered furniture fire deaths in California per one million people dropped from 1.14 in 1980 to .41 in 1989, a 64% drop. Over the same period, upholstered furniture fire deaths for the rest of the nation have dropped from 4.97 in 1980 to 3.04 per million people in 1989, a 39% decrease. Thus, there has been a 25% per capita differential reduction in California upholstered furniture deaths as compared to the rest of the nation, a differential that is significant beyond question.

Several observations highlight the significance of these statistics. First, deaths due to smoking-related upholstered furniture fires in California have been nearly eliminated. During 1989, for example, only 12 fatalities due to upholstered furniture fires were reported in California, as compared to 27 deaths in 1980. Moreover, 1990 and 1991 CFIRS data, which are not yet complete, suggest that the

number of California deaths now has dropped below 10 per year.[3] If California fatality rates were brought about for the rest of the nation -- by acceptance of this petition and prompt regulatory action by the CPSC -- the California data suggest that nationwide smoking-related upholstery furniture fire fatalities can be expected to fall over time to 100 per year or less, versus the more than 600 at present.

Second, the dramatic improvement in California upholstered furniture fatalities from 1980 to 1989 must be viewed against a background in which California entered the decade with a substantially lower per capita fatality rate than the rest of the nation. In 1980, California's upholstered furniture fire death rate, 1.14 per million people, was less than one fourth that of the rest of the nation; 4.97 per million. The fact that California has been able to effect such a major improvement, beginning from a lower base, is compelling evidence of the major improvement in fire safety attributable to the BHF regulations.

Third, the significance of the sharp decline in California fire fatalities is confirmed by a parallel decline in California upholstered furniture fire injuries. In fact, California upholstered furniture fire injuries fell by a remarkable 72% from 1980 through 1989 (versus 47% for the rest of the nation) and ended the decade with the same relative improvement of 25% on a per capita basis as compared to the rest of

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[3] The significance of the decline also is illustrated by three year averages. During the first three years of the decade (1980-1982) when the BHF regulations had recently taken effect and before there had been widespread turnover in upholstered furniture, California fatalities averaged 34 per year. During 1989, 1990 and 1991, California fatalities averaged approximately 10 per year, despite the significant increase in the California population.

the nation, even though California also entered the decade with substantially lower injury rates than the rest of the nation (3.72 versus 9.04 injuries per million in 1980, respectively).

In short, upholstered furniture fire fatality and injury data confirm that during the first full decade since the filing of Petitions FP 77-2 and FP 80-2, there in fact has been a significantly lower rate of fatalities and injuries resulting from upholstered furniture fires in California as compared to the United States outside of California. The fact that both fatalities and injuries in California have not only dropped by two thirds or more but also have moved downward dramatically faster than the rest of the nation is a testament to the effectiveness of the BHF regulations and a model for what prompt action by CPSC can be expected to achieve.[4]

II. CPSC Data and Recent Fabric Research Confirm the Need For Action

Information supplied by CPSC in response to the NASFM petition confirms the important issues raised by the petition and highlight the need for action. To cite one telling example, the document entitled "Information Considered by the Consumer Product Safety Commission In the Evaluation of Petitions Requesting A Flammability Standard for Upholstered Furniture", provided to NASFM as part of

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[4] It also should be noted that the effectiveness of the California regulations inevitably has been impaired by the movement of non-complying new and used furniture into the state. The fact that California has achieved such a significant reduction in deaths and injuries over the same period that there has been an influx of population into the state suggests that California deaths and injuries might well have been even lower if the BHF regulations had been in place nationally.

CPSC's response, indicates that as of 1987 only 396 out of an estimated 2000 domestic furniture manufacturers were participating in the Upholstered Furniture Action Council ("UFAC"). Participation in UFAC thus is less than 20%, far below the 60% level NASFM understood to be the case when it filed its petition.

NASFM is deeply disturbed to learn that 80% of the domestic upholstered furniture makers do not participate even in a voluntary program which, in any event, involves only the placement of a tag on furniture claimed to have passed the UFAC test. Unless CPSC takes action, there is no legal requirement outside California to deter domestic furniture manufacturers from placing on the market upholstered furniture that is highly ignition-prone.

The "Final Report on Upholstered Furniture Flammability," prepared by CPSC staff and provided to NASFM by the CPSC Office of General Counsel with its October 1992 response to the NASFM petition, further confirms the need for mandatory action. The report notes, for example, that CPSC terminated its involvement with the UFAC program in 1987 even though "important and valuable work remains to be done to further improve the ignition resistance of upholstered furniture." (CPSC Staff Report, p.8). Yet, one of the bases on which the CPSC rejected petitions FP 77-2 and FP 80-2 was that CPSC intended to remain closely involved in the UFAC program and to pursue fire safety improvements by voluntary action through UFAC. The 1987 staff report shows that CPSC terminated its

involvement with UFAC at precisely the time the staff explicitly acknowledged important and valuable work remained to be done.

As noted in the initial NASFM Petition, tests of UFAC furniture conducted by CPSC in 1984, shortly before it abandoned its involvement in the program, provide no encouragement. In fact, 66% (33 of 50) of the pieces of furniture that were labelled as Class I (fire resistant) furniture failed CPSC smoldering ignition tests. One hundred percent of the UFAC Class II furniture tested was found to ignite. Thus, the results of CPSC's own testing program, conducted after the denial of Petitions FP 77-2 and FP 80-2, constitute evidence of "new and changed circumstances" indicating that regulatory action is needed.

Recent fabric usage data also confirms the CPSC Staff's 1987 findings that further action is needed. As noted by the 1987 CPSC Staff Report and as pointed out in the initial NASFM petition, fabrics with high cellulosic content (cotton and rayon) are known to be the most prone to ignition. In fact, one of the staff recommendations was that "[a]ttention should be given to improving the cigarette ignition resistance of furniture covered with high cellulosic content fabric..." (p. 8).

Upholstered furniture fabric usage data indicate that there has been a dramatic increase over the last six years in usage of cellulosic fabrics, demonstrating that the Staff's concern was well-founded. Industry-wide data published in Fiber Organon reports an 11% increase, from 41% to 52%, in the market share of cellulosic

fabrics from 1985 through 1991. This pronounced upward trend in the popularity of the fabrics that are most prone to ignition raises serious consumer product safety concerns and confirms that the hazard presented by unregulated furniture is increasing.

Recent literature also has confirmed research, noted by NASFM in its initial petition, showing that a major source of the fire hazard for cellulosic fabrics is a result of the failure of producers or sellers of upholstered furniture fabrics to remove unnecessary contaminants by steps as simple as rinsing fabrics. See Krasny, "A Simple Method For Reducing Cigarette Caused Upholstery Fires," Textile Chemist and Colorist, November 1992. The production of furniture that complies with the BHF regulations thus appears likely to involve minimal costs, as is also evidenced by the fact that manufacturers have had fifteen years to familiarize themselves with the BHF regulations and already have put in place whatever measures are necessary to produce fire safe furniture for sale in California.[5]

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[5] In the event that CPSC were to conclude for any reason that the BHF regulations should not be adopted, or are not sufficiently stringent, NASFM renews its alternative request that CPSC take action based on the United Kingdom legislation and regulations discussed in NASFM's initial petition.

Recommendations and Summary

As the CPSC staff has pointed out, "upholstered furniture remains the consumer product associated with more deaths than any other product within the Commission's jurisdiction." (CPSC Staff "Final Report, Upholstered Furniture Flammability", Attachment 1). The data presented here demonstrate that action by the CPSC, based on established and proven California Bureau of Home Furnishings regulations, will in fact save hundreds of lives and prevent thousands of injuries. NASFM urges that CPSC move without delay.

Respectfully submitted,

NATIONAL ASSOCIATION OF
STATE FIRE MARSHALS

March 31, 1993

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Part 1640

Upholstered Furniture; Advance Notice of Proposed Rulemaking; Request for Comments and Information

AGENCY: Consumer Product Safety Commission.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: Based on currently available information, the Commission finds that a new flammability standard or other regulation may be needed for products of upholstered furniture and for fabrics and related materials used in, or intended for use in, upholstered furniture, to protect the public against the unreasonable risk of fire leading to death, personal injury, or significant property damage. The specific risk of fire is from the ignition of upholstered furniture from small open-flame sources.

This advance notice of proposed rulemaking ("ANPR") initiates a rulemaking proceeding under the authority of the Flammable Fabrics Act ("FFA"). One result of the proceeding could be the promulgation of a standard or other regulation mandating performance and/or labeling requirements for these products. Another possible outcome could be a voluntary standard that adequately addresses the identified risk of injury.

The Commission solicits written comments from interested persons concerning the risk of injury and death associated with the ignition of upholstered furniture from small open flames, data on small open-flame testing of upholstered furniture, the regulatory alternatives discussed in this notice, other possible means to address these risks, and the economic impacts of the various regulatory alternatives. The Commission also invites interested persons to submit an existing standard, or a statement of intent to modify or develop a voluntary standard, to address the risk of injury described in this notice.

DATES: Written comments and submissions in response to this notice must be received by the Commission by August 15, 1994.

ADDRESSES: Comments should be mailed, preferably in five (5) copies, to the Office of the Secretary, Consumer Product Safety Commission, Washington, DC 20207–0001, or delivered to the Office of the Secretary, Consumer Product Safety Commission, room 502, 4330 East West Highway, Bethesda, Maryland 20814; telephone (301) 504–0800.

FOR FURTHER INFORMATION CONTACT: Dale R. Ray, Directorate for Economic Analysis, Consumer Product Safety Commission, Washington, DC 20207; telephone (301) 504–0962, ext. 1323.

SUPPLEMENTARY INFORMATION:

A. Background

1. *The Petition.* In 1993, the National Association of State Fire Marshals ("NASFM") petitioned the Commission (Petition FP 93–1) to issue a flammability standard for upholstered furniture incorporating the requirements of three standards now in effect in the State of California. Specifically, the petition urged the Commission to issue a flammability standard incorporating the requirements of Technical Bulletins 116, 117, and 133, issued by the Bureau of Home Furnishings and Thermal Insulation of the State of California.

These standards specify tests to measure the (a) resistance of components of upholstered furniture to ignition by small open-flame sources and cigarettes; (b) resistance of finished items of upholstered furniture to ignition by cigarettes; and (c) resistance of finished items of furniture to ignition from large open-flame sources. The California standards also contain labeling requirements.

In support of the petition, NASFM provided information about deaths and injuries from fires involving upholstered furniture in California and in the rest of the United States. The petition asserted that although deaths and injuries from fires involving upholstered furniture in the United States declined appreciably from 1980 through 1989, during the same period the numbers of deaths and injuries from upholstered furniture fires declined at a much faster rate in California.

The petitioner provided data showing that the rate of fire deaths associated with upholstered furniture in the United States, excluding California, decreased from 4.97 per million people in 1980 to 3.04 per million in 1989, a decline of 39 percent. By comparison, in 1980 the rate of fire deaths associated with upholstered furniture in California was 1.14 per million people and in 1989 it was 0.41 per million, a decline of 64 percent.

The Commission published a notice in the Federal Register on August 9, 1993 (58 FR 42301), announcing that the submission from NASFM had been docketed as a petition and soliciting written comments on the petition from all interested parties. Seventy-two comments were received in response to that notice. The Commission staff prepared a briefing package on the petition discussing information relevant to the decision to grant or deny the petition. The briefing package, dated April 8, 1994, contains a discussion of the comments received and other relevant information. It is available upon request from the Office of the Secretary of the Commission. The staff presented an oral briefing to the Commission on the petition on May 3, 1994.

2. *Commission Action.* At a decision meeting on May 12, 1994, the Commission voted 2–1 to grant that part of the petition requesting development of a flammability standard to address risks of death, injury, and property damage from small open-flame ignition of upholstered furniture.[1] The Commission also voted (unanimously) (i) to defer action on that part of the

[1] Commissioner Gall dissented from this vote.

petition requesting development of a flammability standard addressing risks of death, injury, and property damage from cigarette ignition of upholstered furniture, and (ii) to direct the staff to conduct an additional, limited investigation of the cigarette ignition issue. Finally, the Commission voted 2–1 to deny that portion of the petition requesting development of a flammability standard to address risks of death, injury, and property damage from large open-flame ignition of upholstered furniture.[2]

The information presently available to the Commission demonstrates that in 1991 approximately 150 deaths, 580 injuries, and $66 million in property losses resulted from the ignition of upholstered furniture by small open flames. Although the upholstered furniture industry has implemented a voluntary program to improve the resistance of upholstered furniture to ignition by cigarettes, that program has no provisions to address risks of small open-flame ignition.

The State of California enforces mandatory requirements for upholstered furniture components. These requirements are intended to improve resistance of upholstered furniture to ignition by small open-flame sources. Information available to the Commission indicates that almost all of the furniture produced for sale in California meets that State's mandatory requirements to address risks of small open-flame ignition of upholstered furniture. This information suggests that a Federal standard to address those risks may be effective and technologically and economically practicable.

As noted, the Commission unanimously voted to defer a decision on the part of the petition dealing with cigarette ignition of upholstered furniture. Despite a significant number of reported incidents, since 1980, deaths associated with upholstered furniture fires ignited by cigarettes have declined by almost 60 per cent. As noted above, the upholstered furniture industry has implemented a voluntary plan to improve resistance of upholstered furniture to cigarette ignition. However, the Commission has not assessed the resistance of currently-produced upholstered furniture to cigarette ignition or determined the extent to which upholstered furniture conforms to the industry voluntary program.

If most currently manufactured upholstered furniture resists cigarette ignition, the benefits to be derived from issuing mandatory requirements to address that risk may be small. However, if a large proportion of currently manufactured upholstered furniture can be ignited by a smoldering cigarette, a mandatory standard to address that risk may be needed.

For these reasons, the Commission decided to defer a decision on that portion of the petition requesting development of a mandatory standard to address risks of death, injury, and property damage associated with upholstered furniture ignited by cigarettes until the staff obtains certain additional information. This may include the extent to which currently manufactured upholstered furniture resists cigarette ignition and conforms to the industry's voluntary plan.

After examining all available information about deaths, injuries, and property losses associated with fires resulting from ignition of upholstered furniture, the Commission voted to deny that portion of the petition requesting development of a flammability standard to address risks of death, injury, and property damage associated with ignition of upholstered furniture by large open-flame sources. The State of California enforces a flammability standard to address risks of large open-flame ignition of upholstered furniture used in public occupancies without automatic sprinkler systems. However, that standard does not apply to furniture intended for residential use. Therefore, the Commission has no specific information about the extent to which a Federal flammability standard similar to the California large open-flame requirements could be expected to reduce deaths, injuries, or property damage from residential fires originating with ignition of upholstered furniture by a large open-flame source.

The Commission also considered information indicating that if the California requirements intended to address large open-flame ignition of upholstered furniture were applicable to all residential furniture sold in the United States, the total annual cost of compliance could exceed $2 billion, and could add an estimated $75 to the average price of items of upholstered furniture.

In view of the absence of information indicating the likelihood of a substantial reduction in deaths, injury, and property damage from large open-flame ignition of upholstered furniture, and estimates of substantial costs resulting from the imposition of requirements to address risks from upholstered furniture fires ignited by large open-flame sources, the Commission decided to deny that portion of the petition requesting issuance of a standard to address those risks.

B. Statutory Authority

This proceeding is conducted under provisions of the FFA, 15 U.S.C. 1191–1204. An item of upholstered furniture is a "product" of "interior furnishing" as those terms are defined in sections 2(e) and (h) of the FFA. 15 U.S.C. 1191(e) and (h). The Commission has authority under section 4(a) of the FFA to issue a "flammability standard or other regulation, including labeling," for a product of interior furnishing if the Commission determines that such a standard "is needed to adequately protect the public against unreasonable risk of the occurrence of fire leading to death or personal injury, or significant property damage." 15 U.S.C. 1193(a).

A proceeding to promulgate a regulation establishing a flammability standard for upholstered furniture begins by publication of this advance notice of proposed rulemaking as provided in section 4(g) of the FFA. 15 U.S.C 1193(g). If the Commission decides to continue the rulemaking proceeding after considering responses to the ANPR, the Commission must publish the text of the proposed rule, along with a preliminary regulatory analysis, in accordance with section 4(i) of the FFA. 15 U.S.C. 1193(i).

If the Commission then wishes to issue a final rule, it must publish the text of the final rule and a final regulatory analysis that includes the elements stated in section 4(j)(1) of the FFA. 15 U.S.C. 1193(j)(1). Before the Commission may issue a final regulation, it must make findings concerning voluntary standards, the relationship of the costs and benefits of the rule, and the burden imposed by the regulation. FFA section 4(j)(2), 15 U.S.C. 1193(j)(2).

C. The Product

The items within the scope of this ANPR include: (1) Products of interior furnishing that are used in homes, offices, and other places of assembly and public accommodation that consist in whole or in part of resilient materials (such as polyurethane foam, cotton batting, or related materials) enclosed within a covering consisting of fabric or related materials, and (2) fabric or related materials used or intended for use in the production of upholstered furniture.

D. The Upholstered Furniture Industry

The Commission estimates that there are over 1,000 manufacturers, and a small number of importers, of upholstered furniture in the United States, accounting for an estimated 25–30 million pieces shipped annually.

[2] Chairman Brown dissented from this vote.

Shipments are concentrated among the major producers; the 50 largest firms reportedly account for over half of all upholstered furniture sales. Most of the remaining manufacturers are small firms, none of which accounts for a significant proportion of sales.

E. Risks of Injury and Death

In 1991, about 16,600 residential fires involving ignition of upholstered furniture resulted in 700 deaths, over 2,000 injuries and nearly $300 million in property damage in the United States. Two-thirds (470) of the deaths and more than half (1,160) of the injuries resulted from smoldering-ignition smoking fires; about one-fifth (150) of the deaths and one-fourth (580) of the injuries resulted from open-flame-ignition fires (often identified as involving matches and lighters). Nearly half ($137 million) of the property damage was from smoking fires; about one-fifth ($66 million) was from open-flame fires. The total annual societal cost of upholstered furniture fire losses is estimated at about $2 billion, including about $1.25 billion from smoking fires and nearly $0.5 billion from open-flame fires.

Since 1980, total furniture fire deaths in the United States declined by slightly over half. Smoking fire deaths declined by 59 percent, while open-flame fire deaths declined by 25 percent. Injuries and property damage also declined by 34 and 28 percent, respectively.

A number of factors probably contributed to the decrease in furniture fire losses over time. These factors may include the use of more ignition-resistant fabrics and filling materials (due in part to or accelerated by the adoption of voluntary and mandatory safety standards); reductions in smoking, and accompanying reductions in the use of small open-flame sources (e.g., lighters and matches); improvements in fire fighting methods, response times, and equipment; and increases in the use of smoke detectors and sprinklers.

The above data indicate that the injury, death, and property losses attributable to both cigarette-ignition and open-flame-ignition of upholstered furniture remain very large. Although significant reductions in fire losses associated with ignition of upholstered furniture have occurred in recent years, particularly in the area of cigarette-ignition, the opportunity to achieve substantial, further reductions remains. While this proceeding is limited to risks from open-flame ignitions, the Commission can reassess the scope of its inquiry if it determines that further action may be warranted.

F. Existing Standards

The Commission is aware of some existing standards that may be relevant to this proceeding. These standards are described below.

1. *California standards.* The Bureau of Home Furnishings & Thermal Insulation in California's Department of Consumer Affairs began developing upholstered furniture and mattress flammability standards in the early 1970's, at approximately the same time as federal government efforts were initiated. Three standards—Technical Bulletins 116, 117, and 133—apply to upholstered furniture offered for sale in California. These standards contain labeling requirements and performance tests to measure the resistance to cigarette and open-flame ignition of components (TB–117) and finished items (TB–116 for cigarettes and TB–133 for open flames). TB–117 is mandatory for all upholstered furniture offered for sale in California; TB–116 is a voluntary standard routinely used for compliance screening tests; and TB–133 is mandatory only for items of upholstered furniture intended for use in public occupancies (excluding residences) not protected by automatic sprinklers.

This proceeding is limited to small open-flame ignitions. Thus, it does not cover TB–116 or TB–133, which apply respectively to cigarette ignition and large open flames. The standard relevant to this proceeding, TB–117, measures flammability performance by char length, flame spread, or weight loss, when a lit cigarette or a small open flame is applied to test surfaces of filling components. Under TB–117, upholstery fabrics must also meet the flaming ignition requirements of the CPSC's general wearing apparel regulations, which are codified at 16 CFR part 1610. (Virtually all upholstery materials comply with this provision.) Fire retardant-treated foam—so-called "California Foam"—is used to meet TB–117. There is no California standard for small open flames incorporating a composite test for finished items or full-scale mockups.

2. *Other Standards.* The Upholstered Furniture Action Council ("UFAC") adopted, in 1978, a Voluntary Action Program and voluntary test method, which incorporates cigarette ignition tests for furniture components. In addition, ASTM, Inc.—formerly the American Society for Testing & Materials—and the National Fire Protection Association ("NFPA") have adopted elements of a previously-developed draft CPSC standard and the UFAC cigarette ignition test methods. Neither organization, however, has adopted standards for small open-flame ignitions, the subject of this ANPR.

Other existing standards include those promulgated in 1988 by the British government, known as the "Furniture and Furnishings (Fire) (Safety) Regulations 1988 (Amended 1989)." These regulations supplemented a 1980 cigarette ignition regulation by adding a series of open-flame performance requirements. In addition, the regulations essentially banned all polyurethane foams—other than highly ignition-resistant "combustion-modified" foams—for use as filling materials in residential upholstered furniture. The regulations apply to most used upholstered furniture manufactured after 1950 as well as to new items.

G. Regulatory Alternatives Under Consideration

The Commission will consider the following alternatives to reduce the number of injuries and deaths and the amount of property damage from fires associated with small open-flame ignition of upholstered furniture.

1. *Flammability Standard.* If the Commission finds that a standard is needed to adequately protect the public against an unreasonable risk of the occurrence of fire leading to death, injury, or significant property damage, it may promulgate a flammability standard. Any such standard would be stated in objective terms that are reasonable, technologically practicable, and appropriate. It would also be limited to such fabrics, related materials, or products which have been determined to present the unreasonable risk found to exist.

2. *Labeling Regulation.* Either separately or as part of a flammability standard, the Commission may consider issuance of a labeling regulation as part of this proceeding.

3. *Voluntary standards.* The Commission could terminate this proceeding and rely upon a voluntary standard submitted in response to this notice if the standard would likely result in the elimination or adequate reduction of the risk of injury identified in the notice, and if there would likely be substantial compliance with such standard.

H. Solicitation of Information and Comments

Based on information currently available to the Commission from investigations, research, and other sources, the Commission, in accordance with section 4(a) of the FFA, 15 U.S.C. 1193(a), finds that a new flammability standard, or other regulation, may be

needed for products of upholstered furniture made from fabrics and related materials, and for fabrics and related materials used in, or intended for use in upholstered furniture, to protect the public against the unreasonable risk of the occurrence of fire leading to death, personal injury, or significant property damage. The specific risk of the occurrence of fire is from the ignition of upholstered furniture from small open-flame sources.

This ANPR is the first step of a proceeding which could result in a mandatory flammability standard and/or labeling regulation, or a voluntary standard, for upholstered furniture that presents an unreasonable risk of the occurrence of fire leading to death or personal injury or significant property damage. To assist the Commission in reaching an informed decision in this matter, the Commission invites all interested persons to submit to the Commission their comments on any aspect of the alternatives discussed above. Specifically, in accordance with section 4(g) of the FPA, the Commission solicits:

(1) Written comments with respect to the risk of injury identified by the Commission, the regulatory alternatives being considered (including the potential effectiveness and economic impacts of such alternatives) and other possible alternatives for addressing the risk.

(2) Any existing standard or portion of a standard which could be issued as a proposed regulation.

(3) A statement of intention to modify or develop a voluntary standard to address the risk of injury discussed in this notice, along with a description of a plan to do so.

In addition, the Commission would like to receive from interested parties data on open-flame ignition tests of upholstered furniture.

Comments should be mailed, preferably in five (5) copies, to the Office of the Secretary, Consumer Product Safety Commission, Washington, D.C. 20207–0001, or delivered to the Office of the Secretary, Consumer Product Safety Commission, Room 502, 4330 East West Highway, Bethesda, Maryland 20814–4408; telephone (301) 504–0800. All comments and submissions should be received no later than August 15, 1994.

Dated: June 9, 1994.

Sadye E. Dunn,

Secretary, Consumer Product Safety Commission.

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