



Amy Beasley Cronin
Secretary, Standards Council

14 December 2012

To: Interested Parties

Subject:

Standards Council Decision (Final):	D#12-17
Standards Council Agenda Item:	SC#12-10-12
Date of Decision:	30 October 2012
<i>NFPA 1124, Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles, 2013 edition</i>	

Dear Interested Parties:

At its meeting of October 29-30, 2012, the Standards Council considered an appeal on the above referenced matter.

Attached is the final decision of the Standards Council on this matter.

Sincerely,

A handwritten signature in black ink that reads "Amy Beasley Cronin".

Amy Beasley Cronin
Secretary, NFPA Standards Council

- c: D. Berry, M. Brodoff, L. Fuller, N. Pearce, G. Colonna, R. Coté, T. Vecchiarelli, M. Klaus, R. Solomon, G. Harrington
Members, Technical Committee on Pyrotechnics (PYR-AAA)
Members, Technical Correlating Committee on Automatic Sprinkler Systems (AUT-AAC)
Members, Technical Committee on Sprinkler System Discharge Criteria (AUT-SSD)
Members, Technical Correlating Committee on Building Code (BLD-AAC)
Members, Technical Committee on Fire Code (FCC-AAA)
Members, Technical Correlating Committee on Safety to Life (SAF-AAC)
Members, Technical Committee on Smoke Management Systems (SMO-AAA)
Members, NFPA Standards Council (AAD-AAA)
FPRF Fireworks Research Panel
Individuals Providing Appeal Commentary

*NOTE: Participants in NFPA's codes and standards making process should know that limited review of this decision may be sought from the NFPA Board of Directors. For the rules describing the available review and the method for petitioning the Board for review, please consult section 1.7 of the NFPA Regulations Governing Committee Projects and the NFPA Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council. Since this Council decision is not "related to the issuance of a document" as referenced in 1.7.2 of the Regulations Governing Committee Projects, notice of the intent to file such a petition must be submitted to the Clerk of the Board of Directors within a reasonable time period.



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At its meeting of October 29-30, 2012, the Standards Council considered an appeal from Julie Heckman and William Koffel of Koffel Associates, Inc., representing the American Pyrotechnics Association (the “APA”) regarding the consumer fireworks provisions of NFPA 1124, *Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles*, 2013 edition. The appeal seeks the modification of directions for further processing the Standards Council set forth in Standards Council Decision #12-4 (Standards Council Agenda Item #12-8-11, August 9, 2012) (the “August 2012 Decision”). As discussed herein, the Council has declined to modify the directions in the manner requested and has, therefore, denied the appeal. In addition, and in light of the information presented, the Council has issued new directions for further processing.

Background

A. 2008 Decision

In Standards Council Decision D#08-19 (Standards Council Agenda Item #08-7-28, July 24, 2008), (the “2008 Decision”) and in the August 2012 Decision, the Standards Council discussed in detail the history of NFPA standards development activities concerning the storage and retail sales of consumer fireworks. As discussed in those decisions, the NFPA has long opposed the use of fireworks by consumers and other members of the general public. Nevertheless, despite that opposition, and because the use of consumer fireworks was allowed in most states, the NFPA Board of Directors, in 1999, authorized the development of standards concerning the retail sale of consumer fireworks. This led eventually to the incorporation of consumer storage and retail sales provisions (“the consumer fireworks provisions”) into an expanded Chapter 6 and a new Chapter 7 of the 2003 edition of NFPA 1124 and, later, of a revised 2006 edition.

Throughout these standards development activities described above, the Standards Council expressed concerns about the technical substantiation for the consumer fireworks provisions, that were later confirmed in an October 2007 Fire Protection Research Foundation report. See, Jonathan Perricone, P.E., Schirmer Engineering Corp., *Fire Safety in Consumer Fireworks Storage and Retail Facilities – Hazard Assessment* (Fire Protection Research Foundation October 2007). The Council then proceeded to weigh the factors for and against the continued development of the consumer fireworks provisions. The Council cited a number of factors weighing against continued development. The Council, however, was mindful of countervailing views expressed,

most importantly, by the enforcement community. (See 2008 Decision at pp. 3-4.) Said the Council:

[The enforcement community and others] urge that the retail storage and sales provisions of NFPA 1124, even though imperfect, are essential to their enforcement activities as these provisions establish some undeniably important limits on the storage and retail sale of consumer fireworks. Indeed, this has been the argument that caused the Council and the NFPA Board to even entertain the possibility of having NFPA develop standards in this area despite the strong institutional policy against the use of consumer fireworks. (See 2008 Decision at p. 4.)

The Council stressed that it did not subscribe to the view that the development of a standard by the NFPA is invariably better than no NFPA standard. Indeed, said the Council:

It is possible that a standard set at a low level and without adequate support can, at some point, impede rather than promote progress and safety. NFPA does not wish to be associated with sustaining a weak standard, without limit, based solely on the argument that it is better than nothing. (Id.)

It concluded, however, that it might still be possible to materially improve and validate the standards. The Council, therefore, decided to allow the consumer fireworks provisions to remain in place in NFPA 1124, extending no further than the 2012 Annual Revision Cycle. In doing so, however, the Council prescribed special conditions for the processing of the consumer fireworks provisions through the next revision cycle of NFPA 1124. The prescribed conditions are set forth in detail in the 2008 Decision and will not be repeated here, but in brief, the Council identified, based primarily on the Research Foundation Report, nine subject areas of concern regarding the consumer fireworks provisions. The Council directed the Technical Committee on Pyrotechnics (the "Pyrotechnics Committee") to develop and properly substantiate relevant provisions in NFPA 1124 concerning each of those nine subject areas. For each of the nine subject areas, the Council designated an NFPA technical committee with relevant expertise to act as an "Approval Committee." It then directed the Pyrotechnics Committee to correlate with these Approval Committees during the revision cycle. By the end of the cycle, the provisions proposed for each subject area had to be formally approved by the designated Approval Committee. (See 2008 Decision at pp. 5-12.)

The Standards Council indicated that, should the processing of the next edition of NFPA 1124, including compliance with the special conditions, not be completed by the close of the 2012 Annual Revision Cycle, further NFPA standards development activities concerning the storage and retail sales of consumer fireworks would cease and, the Council would take the following actions:

- Revise the scope of the Technical Committee on Pyrotechnics so that it no longer covers the storage and retail sales of consumer fireworks, and

- Take steps to revise the scope of NFPA 1124 to exclude the storage and retail sales of consumer fireworks and delete Chapter 6 and Chapter 7 from NFPA 1124. (See 2008 Decision at p. 6.)

B. August 2012 Decision

After the completion of the Annual 2012 Revision Cycle, the proposed 2013 edition of NFPA 1124 was presented to the Standards Council at its August 2012 meeting for issuance. As set forth in the 2012 Decision, the Council first considered whether the special conditions of the 2008 Decision had been met. A review of the record revealed that the approvals process functioned as the Standards Council intended for eight of the nine subject areas. In the ninth subject area, however - the important subject of sprinkler design criteria - the processing and technical substantiation had not, in the Council's view, been adequate. In particular, although the APA and others had initiated the development of a test plan through the Fire Protection Research Foundation, and the Research Foundation issued the test plan in September of 2011 (Aon Fire Protection Engineering Corp., *Sprinkler Protection Criteria for Consumer Fireworks Storage in Retail Facilities: Concept Test Plan* [Fire Protection Research Foundation, September 2011; the "Research Foundation Test Plan"]), no testing had been performed and consequently no data generated to support the development of sprinkler design criteria. (See August 2012 Decision at pp. 3-5.) Despite the inadequacies in the processing of the sprinkler design criteria, the Council, with some reluctance, decided to issue the new edition of NFPA 1124 with the consumer fireworks provisions. As the Council explained:

The inadequacies just described form a sufficient basis for the Council to conclude, in accordance with the 2008 Decision, that the NFPA should not continue to develop standards for the storage and retail sales of consumer fireworks. These inadequacies aside, however, the Council is mindful of the efforts that have gone into the processing of the consumer fireworks provisions. These efforts have resulted in approvals in accordance with the 2008 Decision for eight of the nine subject areas. The consumer fireworks provisions of proposed new edition of NFPA 1124 clearly constitute a significant step forward. Moreover, the [NFPA 13 Technical Committee on Sprinkler Discharge Criteria, acting as the Approval Committee] regarded an engineering analysis as an acceptable interim measure for some period of time until test data was available, and [the Research Foundation Test Plan] is ready for implementation." (See August 2012 Decision at p.6.)

Because of the continued lack of the called-for test data to support sprinkler design criteria, the Council issued the new edition of NFPA 1124 with directions for further processing. Specifically, it was determined that the consumer fireworks provisions would remain in place for no longer than one year. During that year, the full scale fire tests set forth in the Research Foundation Test Plan should be completed and the results used to formulate requirements for sprinkler system design criteria and installation for both the storage and retail sales of consumer fireworks. Depending on whether or not the Research Foundation Test Plan was completed in the prescribed timeframe, the Council directed that the Pyrotechnics Committee complete one of the following two options for Council consideration no later than the Council's August 2013 meeting:

1. Process a Tentative Interim Amendment (TIA) incorporating provisions derived from data from full scale fire tests for sprinkler design criteria.
2. Process a TIA to limit the threshold of all permanent Consumer Fireworks Retail Sales (CFRS) facilities and stores to below 3000 ft² for new buildings and 7500 ft² for existing buildings (i.e., the threshold below which automatic sprinkler systems are not required in accordance with Section 7.3.6). (See August 2012 Decision at pp. 7-8.)

The August 2012 Decision went further to direct that should neither option be presented to the Standards Council by its August 2013 meeting, it was the intention of the Council to issue a TIA to revise the scope of NFPA 1124 to exclude the storage and retail sales of consumer fireworks and to delete Chapters 6 and 7 and related material throughout NFPA 1124, and to withdraw related test standards. (See August 2012 Decision at p. 8.)

Decision

A. The Appeal.

The APA, in the current appeal, now seeks modifications to the directions given in the 2012 Decision. When the appeal was initially submitted, the modification was simply to extend the deadline for completing Research Foundation Test Plan by at least 6 months beyond the mandated timeframe. At the hearing on the appeal and in a written addendum filed shortly before that hearing, the APA revised this request. In addition to an extension of time, the revised request now, for the first time, seeks to abandon the Research Foundation Test Plan and conduct testing according to another, as yet to be fully determined, “alternative test strategy.”

It has been clear since 2008 that a test program would be required in order to substantiate sprinkler design criteria for the consumer fireworks provisions of NFPA 1124. Although such a program had to be developed and completed in time for the use by the close of the 2012 Annual Revision Cycle, there was considerable delay before the industry even approached the Fire Protection Research Foundation to initiate the development of a test plan. As a consequence, it was not until September of 2011, more than three years after the 2008 Decision, that the Research Foundation Test Plan Report was released. As the close of the 2012 Annual Revision Cycle came and passed, no effort was made to even begin any testing; and when the new edition of NFPA 1124 was presented to the Council, no explanation was provided. It was against this history of delay, that the Council, in issuing the new edition of NFPA 1124, set a firm deadline of August 2013 for the completion of the Research Foundation Test Plan. Until the filing of the addendum to this appeal, no question has been raised about the Research Foundation Test Plan. The APA now seeks a further extension of time to conduct testing and, for the first time, questions the necessity, on financial grounds, of conducting the Research Foundation Test Plan. Beyond vague representations, it offers little in the way of specifics on what an alternative test plan should be, nor any independent assessment as to how such a plan would provide an adequate alternative to the Research Foundation Test Plan. The Council has found no basis on which to allow a further delay in order to open up, for a

complete reassessment, the test plan needed to support development of the sprinkler design criteria. Accordingly, the Council has voted to deny the appeal.

B. Directions for Processing.

The APA representatives have made clear that the first option given in the Council's August 2013 deadline for completion of the Research Foundation Test Plan and a corresponding TIA will not be met. There is no reason, therefore, for the Council to wait until its August 2013 meeting to consider further actions. Rather, given all of the information now available to it, the Council has voted to process a NFPA 1124 TIA for issuance at the March 2013 Standards Council meeting that (similar to option 2 of the August 2012 Decision) will limit storage and retail sales facilities to those facilities which NFPA 1124 does not now require to have automatic sprinkler systems. Specifically, the Council is, in accordance with its authority under the *Regulations Governing Committee Projects* at Section 5.11, directing the processing of a TIA as follows.

The Council directs NFPA staff to work with the Pyrotechnics Committee to develop the appropriate language for a TIA that limits all permanent Consumer Fireworks Retail Sales (CFRS) facilities and stores to the thresholds below which automatic sprinkler systems are not required. The Council notes that these thresholds relate to the size of the facility in Chapter 7 (as noted in Option 2 of the August 2012 Decision), but also to the quantity of materials in Chapter 6, and possibly other provisions. The Pyrotechnics Committee shall be balloted only on the question of whether the language of the TIA achieves the limitations on CFRS facilities and stores set forth above. The issuance of the TIA will be considered by the Council at its March 2013 meeting.

The Council has chosen this course of action because, by effectively eliminating the need for sprinkler design criteria in the consumer fireworks provisions, it addresses the reality that the Research Foundation Test Plan will not be completed and sprinkler design criteria developed and incorporated into NFPA 1124 within the timeframe required by the August 2012 Decision. It does so in a way that leaves in place the remaining consumer fireworks provisions that the Council agreed to issue in August of 2012. These provisions, as the Council stated in the August 2012 decision, were adequately processed in accordance with the 2008 Decision and clearly represented a significant step forward in the development of standards for the retail storage and sales of consumer fireworks.

This action, moreover, leaves open the opportunity to add sprinkler design criteria into the consumer fireworks provisions of NFPA 1124 in the future, once appropriate testing has been completed. The Standards Council still believes the full scale testing to determine the appropriate sprinkler design criteria for consumer fireworks facilities is an important endeavor, and the appellants or others will now have an opportunity to complete the necessary testing in a timeframe of their choosing.

The Research Foundation Test Plan is a rigorous third-party developed plan that has been anticipated by all as the approach that would be used to conduct full scale testing. Since time will no longer be of the essence, interested parties are free to challenge aspects of the Research Foundation Test Plan or explore alternatives. Those proposing any

alternative test plan, however, will bear a heavy burden of demonstrating that any such plan is a valid alternative to the Research Foundation Test Plan. In order to meet this burden, proponents should submit a report of the Research Foundation or other reputable independent third party research and testing entity. The report should provide validation that any proposed alternative test plan can provide appropriate and sufficient data to technically substantiate sprinkler design criteria, and should explicitly detail why the alternative plan offers a valid equivalent to the Research Foundation Test Plan. Should an alternative third-party validated test plan be developed, it should be submitted to the Standards Council as part of any request to recommence the development of sprinkler design criteria for CFRS facilities and stores. Prior to consideration by the Standards Council, the alternative test plan should be reviewed by the NFPA 13 Technical Committee on Sprinkler System Discharge Criteria (the “Discharge Committee”), as the Council-designated Approval Committee, and an informational ballot should be conducted soliciting the committee’s views on whether the alternative test plan has been adequately validated in the manner set forth above. Finally, should the Council permit the recommencement of standards development activities related to sprinkler design criteria - following either the completion of the Research Foundation Test Plan or an accepted alternative - these activities should comply with the special procedures outlined in the 2008 Decision, and any provisions relating to sprinkler design criteria should, in addition to processing by the Pyrotechnics Committee, be approved by the Discharge Committee, acting as the Approval Committee.

Council Member, Daniel O’Connor recused himself during the deliberation and vote on this issue.