Mr. Michael Beaton  
Vice-President, Whittier Operations  
ICC-Evaluation Service  
5360 Workman Mill Road  
Whittier, California 90601

May 19, 2009

Subject: SPFA Comments on Proposed Modification to ICC AC-377 dated April 30, 2009

Dear Mr. Beaton:

On behalf of the Spray Polyurethane Foam Alliance, I am submitting the attached document containing SPFA’s public comments on ICC-ES proposed changes to AC-377, posted on April 30, 2009.

This document suggests 16 itemized revisions, along with supporting rationale for each change. In addition, it provides two updated figures to better define the foam surface profile and thickness measurement for the test module.

SPFA would also like to re-iterate its opposition to any delay of implementation and its support of the removal of Appendix B as planned by ICC-ES. After January 1, 2010, ICC-ES should no longer accept tests using the Appendix A comparative attic test and that after June 1, 2010 reports must be based upon Appendix A, Section A1.1 or the new attic test procedure described in Appendix X.

If you have any questions on the above, please contact me to discuss.

Sincerely,

Richard S. Duncan, Ph.D., P.E.
Technical Director, SPFA

cc: Si Farvardan, ICC-ES
SPFA Comments to AC 377

The following are SPFA’s comments to ICC-ES’ proposed revisions to AC 377, dated April 30, 2009.

Item 1

Comment – Revise Notice to read: Requirements of Section A1.0 A1.2.2 will be effective until June January 1, 2010. After that date, compliance with Section A1.0, A2.0 or Appendix X will be required.

Reason – SPFA feels that this date is more appropriate and that it fits in with ICC-ES plans from June 2008 to ensure compliance with Appendix A by January 1, 2010. The ICC-ES plan required any additional testing be completed and data be submitted to ICC-ES by June 1, 2009. Originally, SPFA recommended that the date to eliminate the “generic comparative attic test” be immediate, however, SPFA is willing to accept some extension of time to January 1, 2010 as this was the date set by ICC-ES to revise these evaluation reports. Also, need to retain Section A1.0. See comments on Item 3 below.

Item 2

Comment – Section A1.1 through A1.2.1.1 should remain.

Reason - This section describes testing using the standard Code allowed manner of qualifying foam plastics for use without a thermal barrier or ignition barrier. This needs to remain as one type of test to qualify foam plastic or an assembly of foam plastic and a covering to be used.

Item 3

Comment – Section A1.2.1 - Title should read: “For use on Walls or Floors of Attics or the Underside of Roof Decks of Attics.”

Reason – Clarifies the use of this section.

Item 4

Comment – Section A1.2.1.1 d. – Revise to read: The installed coverage rate or thickness of coatings or coverings, if part of the insulation system, shall be equal to or greater than that which was tested.
Reason: The procedure in Appendix A is not specific to coatings. The proposed language makes these sections more inclusive and clear.

Item 5

Comment – Section A1.2.2 – Revise to read:

A1.2.2 For Use on Walls or Floors of Attics or the Underside of the Roof Deck of Attics:
Comparative room corner fire tests shall be conducted in accordance with the test procedures of UBC Standard 26-3 or UL 1715 or NFPA 286. The foam plastic insulation shall be applied in the manner, thickness and density for which recognition is sought. During the installation of the SPF, care shall be taken to provide as smooth a surface as possible especially in the wall areas adjacent to, as well as, above the flame source. For testing on walls, the maximum deviations of the distance between the flame source and the foam surface are described in Appendix X, Figure 3. If approval is sought for underside of roof deck only, approval will be granted only for use on horizontal surfaces at heights equal to or greater than ceiling height as tested. If a covering is used over the foam, it shall be applied at the same thickness or minimum coverage rate to all foam surfaces. The interior face of the control assembly shall consist of nominal 1/4-inch-thick, A-C or B-C plywood applied to the interior face of wood wall framing (plywood is permitted by UBC Section 2602.4, Exception 4, IBC Section 2603.4.1.6 and IRC Section R314.5.3 as a protective material for foam plastic located in attics.) The exterior face shall be covered with 3/8-inch thick exterior plywood. The second test assembly shall be identical, but without plywood on the interior face of the wall. Conditions of acceptance shall consider the time-to-failure of the control test assembly, as evidenced by flashover, which is flame exiting the door opening. The second test assembly with exposed foam plastic shall be tested for at least the same length of time. A successful comparison is based on no flashover of the second assembly within the time-to-failure of the control test assembly.

Reason – Revisions address testing issues noted in the development of Appendix X. Also, provides clarification of use of the test.

Item 6

Comment – Section A1.2.2.1g – Revise to read: The installed coverage rate or thickness of coatings or coverings, if part of the insulation system, shall be equal to or greater than that which was tested.

Reason – See Item 5 above.

Item 7

Comment – Section A2.2.1.1 d – Revise to read: The installed coverage rate or thickness of coatings or coverings, if part of the insulation system, shall be equal to or greater than that which was tested.
Reason – See Item 5 above.

**Item 8**

Comment – Revise Section A2.2.2 to read: For use on ......approved ignition barrier. The interior face of the control assembly shall consist of nominal ¼-inch-thick A-C or B-C plywood applied to the interior face of wood wall framing and over the foam plastic insulation (plywood……..plywood.

Reason – Clarifies that the plywood is installed over the foam plastic insulation and not an empty cavity or other substrate.

**Item 9**

Comment – Section A2.2.2.1 d – Revise to read: The installed coverage rate or thickness of coatings or coverings, if part of the insulation system, shall be equal to or greater than that which was tested.

Reason – See Item 5 above.

**Item 10**

Comment - Section X2.2.1 g – Revise to read: The installed coverage rate or thickness of coatings or coverings, if part of the insulation system, shall be equal to or greater than that which was tested.

Reason – See Item 5 above.

**Item 11**

Comment - Section X2.2.2 g – Revise to read: The installed coverage rate or thickness of coatings or coverings, if part of the insulation system, shall be equal to or greater than that which was tested.

Reason – See Item 5 above.

**Item 12**

Comment – Appendix X – use revised Figures 1 and 2 that are attached.
Reason – Clarifies actual dimension of lumber.

**Item 13**

Comment – Appendix C, Section C4.0, 2 – Revise to read:
The following two criteria shall be measured and reported:
1. Time to flames emerging from the front of the crawl space.
2. Time to burn-through of the floor/deck system. If this criterion is not reached prior to laboratory personnel ending the test, the time at which the test was ended and reason for ending the test shall be reported.

**Item 14**

In Section A1.2.1 add new sentences at the end of the paragraph to read: "During the installation of the SPF, care shall be taken to provide as smooth a surface as possible especially in the wall areas adjacent to, as well as, above the flame source. For testing on walls, the maximum deviations of the distance between the flame source and the foam surface are described in Appendix X, Figure 3. If a covering is used over the foam, it shall be applied at the same thickness or minimum coverage rate to all foam surfaces."

Reason – See Item 5 above.

**Item 15**

Revise 1st sentence in Section A1.2.3 to read: "The maximum thickness of foam plastic applied on either the walls or the ceiling for the test methods..."

Reason – See Item 5 above.

**Item 16**

Revise 1st sentence of Section X2.3 as: "The maximum thickness of foam plastic applied to either the walls or the ceiling for the test outlined ..."

Reason – See Item 5 above.
To simulate actual field applications, foam is permitted over interior stud faces, subject to the restrictions of Figure 3 on corner cavities adjacent to burner. Interior of wall.

spray polyurethane foam at nominal thickness to be tested.

1.5” x D” studs @ 24” O.C.
(D = nominal foam thickness to be tested)

Figure 1 (revised 5-11-09)
Figure 2 (revised 5-11-09)

- **1.5" x D" joists @ 24" O.C.**
  - (D = nominal foam thickness to be tested)

- **gypsum wallboard**

- **1.5" x D" top plate**

- **exterior of room**

- **interior of room**

- **spray polyurethane foam**
  - At nominal thickness to be tested.

To simulate actual field applications, foam is permitted over interior stud faces, subject to the restrictions of Figure 3 on corner cavities adjacent to burner: interior of wall.