

**DEPARTMENT OF CONSUMER AFFAIRS,
BUREAU OF ELECTRONIC AND APPLIANCE REPAIR,
HOME FURNISHINGS AND THERMAL INSULATION**

FINAL STATEMENT OF REASONS

Hearing Date: March 26, 2013

Subject Matter of Proposed Regulations: New Flammability Standards for Upholstered Furniture and Articles Exempt from Flammability Standards

Sections Affected: §1101, §1126, §1370, §1373.2, §1374, §1374.1, §1374.2, §1374.3 and §1383.2 of Title 4, Division 3, Articles 1, 2, 13, and 15.5 of the California Code of Regulations

Updated Information

The Initial Statement of Reasons is included in the file. The information contained therein was updated as follows:

In the Initial Statement of Reasons, the Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation (Bureau) stated within the Economic Impact Assessment that the health, welfare, and environment will benefit from the regulatory proposal as non-flame retardant materials are specified in the TB 117-2013 standard. Upon further review, the Bureau seeks to clarify that there may be a benefit to the health, welfare, and environment from the use of non-flame retardant materials. Although this may be an ancillary benefit, it does not serve as the purpose for the proposed rulemaking.

The Bureau reviewed and considered the comments received during the 45-day comment period and those received at the public hearing which was held on March 26, 2013. Thereafter, the Bureau issued a 15-Day Notice of Availability of Modified Text and Documents Added to the Rulemaking File. The 15-day comment period commenced on August 19, 2013 and concluded on September 3, 2013.

The documents added to the rulemaking file during the 15-day comment period are as follows:

1. Addendum to the Initial Statement of Reasons
2. Precision & Bias Interlaboratory Study
3. Correlation Study of Small Scale Furniture Mock-up Smoldering Tests to Full Scale Cigarette Tests, Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation, May 1987
4. Selected Bibliography: Furniture Flame Retardants, Toxicity and Health, Green Science Policy Institute, June 2013

Modifications made to the originally proposed regulatory language and noticed during the 15-day comment period are as follows:

Sections 1126(11) and (12) were modified to update the standard's reference date from January 2013 to June 2013 to reflect the new revision date.

Section 1370(a) was repealed to remove misleading and duplicative regulatory language. Sections 1373.2 and 1374(a) were modified by extending the manufacturers' mandatory compliance date from "On and after July 1, 2014" to "On and after January 1, 2015" to allow the additional time needed to deplete current supplies and effectuate the new regulatory changes; by deleting "test" and adding "fire retardant" to add clarity to the requirements of these sections; and by updating the standard's reference date from January 2013 to June 2013.

Section 1373.2 was modified to add language which would incorporate by reference the Technical Bulletin 117-2013 (TB 117-2013) into regulation.

Section 1374(a) was modified by adding language which would provide reference to specific labeling requirements.

Section 1374.2(c) was modified to delete infant mattresses and infant mattress pads from the criteria of exemption since these products flammability requirements are currently under the jurisdiction of the United States Consumer Product Safety Commission (CPSC), and not the Bureau.

Subsection (d) was added to Section 1374.2 to allow articles of upholstered furniture to be manufactured in accordance with a written prescription from certain health care professionals, or with other comparable written medical therapeutic specification, that would be exempt from having to meet flammability standards. In addition, the Bureau is defining "health care professional" to make clear who would be qualified to write a prescription that would be considered valid and acceptable.

Section 1383.2(a) was modified to delete the citation and fine provision of subsection 1370 to provide consistency with the repeal of Section 1370.

In addition, the Bureau noticed during the 15-day comment period that grammatical modifications were made throughout the TB 117-2013 standard to make the document more user friendly. The Bureau also corrected typographical errors and renumbered subsections accordingly. Additional modifications are summarized as follows:

The Test Procedure subsections 1.3.1, 2.3.1, and 3.4.1 were deleted to eliminate references to the draft enclosure from the standard so that the burn behavior of the test specimen is not affected by the restriction of airflow. This modification is also reflected with the deletion of the drawing of the draft enclosure exemplified in Figure A-1.

The Test Procedure subsections 1.3.4 and 2.3.4 were deleted for the purpose of removing the step which extends the measuring of the char length to all directions from the cigarette.

Instead, ASTM steps 11.9 and 21.9 are to be followed entirely which measures the char length in a vertical direction.

The Pass/Fail Criteria Sections 1.4, 1(b) and 2.4, 1(b) were modified to make specific that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of measuring the char length in any direction.

The Test Specimen Section 2.2 was modified within the initial instruction to delete the reference to ASTM Section 20 to allow for the modification to the measurements of the test materials.

The Test Specimen subsections 2.2.1 and 2.2.2 were modified for the purpose of specifying that the material dimensions differ from the measurements mentioned in ASTM step 20.1 and step 20.2. These modifications ensure proper assembly of the test specimen and ensure the highest degree of accuracy and precision in the test results.

A new Test Procedure subsection 2.3.1 was added to ensure that the flow of the directions is clear and easy to follow. This subsection mirrors the directions of ASTM step 21.1

A new Test Procedure subsection 2.3.2 was added for the purpose of specifying that the dimensions of the cover fabric differ from the measurements mentioned in ASTM step 21.2.

Sections 3.2 Weighing Device, 3.3 Test Specimen, Subsection 3.3.4, and 3.4 Test Procedure, Subsections 3.4.6 and 3.4.7 were deleted to remove the definition and references which relate to the weighing device and weighing of the test specimen. This modification provides consistency with the modifications made to Section 3.4 Pass/Fail Criteria which reflect that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of by weighing mass loss.

Section 3.4 Pass/Fail Criteria Subsection 1 was modified for the specific purpose of adding a time limit of 45 minutes to the test duration and to make specific that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of by weighing the mass loss.

A new Section 4 was added for the purpose of adding a decking material test method to the standard. The test method mirrors that of ASTM E1353-08a^{ε1} and measures the tendency of decking materials to smolder and contribute to fire propagation when subjected to a smoldering source. A description of the decking material tester was added to the Scope subsection 1.4.4 and exemplified in Figures C-5 and C-6. In addition, a definition of the deck was added to the Terminology subsection 3.5.

The Ignition Source (Annex B) was modified for the purpose of clarifying that the Bureau may certify other equivalent substitutes for the SRM 1196 testing cigarettes.

The Standard Polyurethane Foam Substrate (Annex B) was modified for the purpose of including additional foam specifications to the standard test material.

Laundering Procedures (Annex B) was added for the purpose of making clear the laundering procedures that should be followed for the test specimen so that the tests are performed under well-defined and standardized conditions.

The Bureau reviewed and considered the comments received during the 15-day comment period and made two nonsubstantive changes to the TB 117-2013 standard: 1) the Introductory Section of the standard was changed from having the sections numbered (1 through 8) to using alphabetical characters (A through H). This was done so that there is a clear distinction between the Introductory and Testing sections and for easier referencing; 2) the reference to the term ‘NOP’ within the Standard Polyurethane Foam Substrate section of Annex B was spelled out in its unabbreviated form which is natural oil polyol.

In addition, the reference of the Precision and Bias (P&B) study as an attachment to the standard was removed. Instead the P&B study is used as a stand-alone document. Also, a typographical error was found within the Standard Polyurethane Foam Substrate specifications. While the actual measurement of the density 1.80 +/- 0.05 lb/ft³ contains no errors a typographical error was made within the parenthesized conversion where it was incorrectly presented as “(18.0 – 29.6 kg/m³)” rather than “(28.0 – 29.6 kg/m³)”. A nonsubstantive change was made to correct the “1” to a “2” which has no effect to the standard.

Finally, while reviewing the draft order of adoption, the Bureau caught their own typographical error made within Section 1374(a) which was presented to the public during the 15-day comment period. The Bureau points out that this error was undetected by the public and no comments were received in response to this specific error during the 45-day or 15-day comment periods.

The originally proposed regulatory language of this section was presented to the public, in part, as, “On and after July 1, 2014, Aall filling materials and cover fabrics contained in any article of upholstered furniture, ~~and all filling materials added to reupholstered furniture,~~ shall meet the test requirements as set forth in...” However, during the 15-day comment period, the modified language was presented to the public, in part, as, “On and after July 1, 2014 January 1, 2015, Aall filling materials and cover fabrics contained in any article of upholstered furniture, and all filling materials added to reupholstered furniture, shall meet the ~~test~~ fire retardant requirements as set forth in...”

As made evidently clear within the 15-Day Notice of Modifications to Text of Proposed Regulations and the Addendum to the Initial Statement of Reasons, the language that the Bureau intended to modify is clearly double underlined within the regulatory language. These modifications include the change to the mandatory compliance date, the removal of the term “test” and the adding of “fire retardant”, updating the standard’s reference date, and including the reference to the labeling requirements of Section 1374.3. The removal of strikeout from the phrase “, and all filling materials added to reupholstered furniture,” was unintentional.

Local Mandate

A mandate is not imposed on local agencies or school districts.

Small Business Impact

This regulation will not have an adverse economic impact on small businesses.

Consideration of Alternatives

No reasonable alternative which was considered or that has otherwise been identified and brought to the attention of the board/bureau/commission/program would be more effective in carrying out the purpose for which it was proposed or would be as effective and less burdensome to affected private persons than the adopted regulation or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

Summary of Comments Received During the 45-Day Comment Period:

The Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation (Bureau) received 30,009 comments in support of the proposed rulemaking. In addition, two petitions were initiated expressing support for the new flammability standard. The petition initiated by Tony Stefani, a retired fire fighter, reached 68,000 signatures. The petition initiated by Caroline Cox of Center for Environmental Health reached 1 signature.

Objections or Recommendations/Responses

A. In their comment letters received between March 6-25, 2013, the Health Care Without Harm (HCWH), Earthjustice, and an industry member seeks the Bureau's clarification on the following:

Comment Summary 1: The commenters are seeking clarification as to whether manufacturers are permitted to manufacture products in accordance with TB 117-2013 prior to the proposed mandatory compliance date of July 1, 2014.

Response: The Bureau rejects this comment. The mandatory compliance date was modified from July 1, 2014 to January 1, 2015 during the 15-day comment period. The Bureau anticipates that the regulatory proposal will become effective on January 1, 2014 and manufacturers must comply by the mandatory compliance date of January 1, 2015.

Comment Summary 2: HCWH and Earthjustice are in support of the proposed changes, however; they are urging the Bureau to limit retailers to one-year after the mandatory compliance date in which they may continue to sell inventory compliant with the current TB 117 standard.

Response: The Bureau rejects this comment. As stated in the Initial Statement of Reasons (ISOR), furniture retailers may sell through their current inventory of products without the restriction of a sell by date. Any new products purchased by retailers, on and after the mandatory compliance date, must meet the requirements of the new TB 117-2013 standard. This is necessary to reduce the cost of compliance for both the manufacturers and retailers. During the 15-day comment period, the mandatory compliance date was modified from July 1, 2014 to January 1, 2015 to provide a one-year transition period.

B. Between February 11-March 25, 2013, eighteen public members submitted their comments on the following:

Comment Summary: The commenters have expressed neither support nor opposition for the proposed regulatory changes. Their concern is with the use of flame retardant chemicals in furniture which are said to be ineffective and hazardous to one's health. The commenter's statements range from seeking to significantly reduce the use of flame retardant chemicals to banning all flame retardant chemicals from the market.

Response: The Bureau rejects these comments. The Bureau does not regulate the use of flame retardant chemicals. The Bureau's flammability standards are performance standards and do not prescribe the use of any specific material, or manufacturing methods to meet the standard. Determinations on the actual fabric, filling materials, coatings or treatments, and manufacturing methods used to comply with the standard and used in upholstered furniture are made exclusively by the manufacturer. While manufacturers are predominantly using flame retardant chemicals to meet the open flame requirements of TB 117, it is the Bureau's understanding that many manufacturers who are no longer compelled to make materials open-flame resistant will no longer use flame retardant chemicals in their products.

C. In a comment received on February 23, 2013, a public member provided the following comment:

Comment Summary 1: The commenter expresses neither support nor opposition for the proposed regulatory changes. The commenter expresses concern with not knowing whether their furniture contains dangerous chemicals for which their children may have been exposed. The commenter feels that, "All likely toxic chemicals should be clearly labeled on any furniture or foam products."

Response: This Bureau rejects this comment. The flammability label provides consumers notice that the product meets California's flammability standard. The official law label identifies components of a piece of furniture. Chemical components are not identified on either the flammability or official law label as chemicals are regulated by other state agencies, not the Bureau. While not mandatory, manufacturers may attach a separate label to the product for the purpose of specifying usage and/or non-usage of flame retardants.

With that being said, the commenter may seek further information related to Proposition 65 which requires clear and reasonable warnings on products containing specifically listed chemicals. The California Environmental Protection Agency – Office of Environmental Health Hazard Assessment is the State agency responsible for overseeing this provision.

Comment Summary 2: “Fire standard should be designed so that these chemicals are not required.”

Response: The Bureau rejects this comment. The Bureau’s flammability standards are performance standards and do not prescribe the use of any specific material, or manufacturing methods to meet the standard. Determinations on the actual fabric, filling materials, coatings or treatments, and manufacturing methods used to comply with the standard and used in upholstered furniture are made exclusively by the manufacturer. While manufacturers are predominantly using flame retardant chemicals to meet the open flame requirements of TB 117, it is the Bureau’s understanding that many manufacturers who are no longer compelled to make materials open-flame resistant will no longer use flame retardant chemicals in their products.

Comment Summary 3: “Provide an affordable ways for people (especially with children) to test there homes and existing furnishings as to whether they are toxic.”

Response: The Bureau rejects this comment. The Bureau does not regulate the use of flame retardant chemicals. This comment cannot be addressed as it does not fall within the scope of the proposed regulation and does not fall within the Bureau’s rulemaking authority.

Comment Summary 4: “Immediately Ban these chemicals from ALL furnishings and clothing intended for children and babies, until evidence is provided that they are not toxic.”

Response: The Bureau rejects this comment. The Bureau does not regulate the use of flame retardant chemicals. This comment cannot be addressed as it does not fall within the scope of the proposed regulation and does not fall within the Bureau’s rulemaking authority.

D. In a comment received on March 11, 2013, a public member provided the following comment:

Comment Summary: The commenter expressed neither support nor opposition for the proposed regulatory changes. The commenter proposed that manufacturers should be required to clearly label whether their product was manufactured with flame retardants or not. If flame retardants were used, a list of those chemicals should be on the label.

Response: The Bureau rejects this comment. The flammability label provides consumers notice that the product meets California’s flammability standard. The official law label identifies components of a piece of furniture. Chemical components are not identified on either the flammability or official law label as chemicals are regulated by other state agencies, not the Bureau. While not mandatory, manufacturers may attach a separate label to the product for the purpose of specifying usage and/or non-usage of flame retardants.

With that being said, the commenter may seek further information related to Proposition 65 which requires clear and reasonable warnings on products containing specifically listed chemicals. The California Environmental Protection Agency – Office of Environmental Health Hazard Assessment is the State agency responsible for overseeing this provision.

E. In a comment received on February 9, 2013, a public member provided the following comment:

Comment Summary: The commenter expressed neither support nor opposition of the proposed regulatory changes. The commenter stated, “Please allow consumers to choose whether chemicals are in the products they buy. It seems to me that we are causing great harm to children by the use of chemicals not naturally found in our environment.”

Response: The Bureau rejects this comment. While not mandatory, manufacturers may attach a separate label to the product for the purpose of specifying usage and/or non-usage of flame retardants.

In addition, the commenter may seek further information related to Proposition 65 which requires clear and reasonable warnings on products containing specifically listed chemicals. The California Environmental Protection Agency – Office of Environmental Health Hazard Assessment is the State agency responsible for overseeing this provision.

F. In a comment letter dated March 20, 2013, the Underwriters Laboratories Inc. (UL) submitted the following comments:

Comment Summary 1: UL believes that an open flame test is a necessary addition to smoldering test requirements. During UL’s research they found that the time to flashover increased to greater than 20 minutes while using a flame barrier between the decorative fabric and fire retardant free foam.

Response: The Bureau rejects this comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and

injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the United States Consumer Products Safety Commission (CPSC) concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Also mentioned in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 2: UL is concerned that the labeling of fillings materials and cover fabrics as “fire resistant,” “flame resistant,” or “flame retardant” is misleading given the current lack of an open flame test. UL recommends not allowing the use of the terms mentioned.

Response: The Bureau rejects this comment. ‘Fire retardant’ does not necessarily mean ‘resistant to open flame.’ Rather, the abundant legislative history available indicates that the Legislature intended to give the Bureau wide latitude in defining what ‘fire retardant’ means. Please refer to the discussion set forth in the paragraph entitled “The 2001 Amendment” in the response to Comment Y within this Final Statement of Reasons. Articles that are ignition-resistant to a smoldering source are fire retardant because they resist fire that results from a smoldering source.

The Bureau does agree that the language in Section 1370 is misleading as it infers that “fire resistant,” “flame resistant,” or “flame retardant” are to appear on the flammability label. However, the labeling requirements, as specified in Section 1374.3, require that the label provide consumers notice that the product meets California’s flammability standards. It does not specify that the terminology mentioned in Section 1370 is to appear on the label. During the 15-day comment period, the Bureau noticed the repeal of Section 1370 for the purpose of removing its obsolete and misleading language.

Comment Summary 3: UL suggests that Section 1374.3 (a) and (b) should be amended to replace “flammability” with “smolder resistance” to avoid unintentionally misleading consumers.

Response: The Bureau rejects this comment. The test methods (open flame versus smoldering) are not identified on either the current or the proposed label. The label provides consumers clear notice that it meets California’s flammability standard.

G. In their comment letter dated March 26, 2013, the Bureau Veritas submitted comments on the following:

Comment Summary 1: Bureau Veritas suggests that Section 1373.2 conflicts with the statement in the standard test method which states that a filling material can fail and can still be used with a barrier material that passes if it is used between the cover fabric and the filling materials. The same logic is applicable to Section 1374.

Response: The Bureau accepts this comment. The initially proposed language of Section 1373.2 implies that the filling material must meet Section 3 Resilient Filling Materials test method with no other alternative. However, Section 3 specifies that should the filling material fail this test, a passing barrier may be used which would allow the material to meet the standard and still be used in upholstered furniture. During the 15-day comment period, the Bureau noticed the modifications made to Sections 1373.2 which removes the conflicting language (the word “test”) so that the regulation and the standard concur. The modified language seeks to clarify that resilient filling materials must be compliant with the fire retardant standards as set forth in TB 117-2013 in general, whether by passing the Resilient Filling Material test or by being coupled with a barrier that has passed the Barrier Materials test. The same modification and rationale was applied to Section 1374.

Comment Summary 2: Bureau Veritas suggests that the ASTM procedures should be listed in the standard to make it friendlier and easier to read and follow.

Response: The Bureau rejects this comment. The ASTM standard is a copyright protected document. The Bureau has obtained copyright permission to incorporate the ASTM standard in its entirety only.

Comment Summary 3: “Does the scope of the new law under the “Insulation Act” define upholstered furniture the same way as with the old law and does it include loose cushions to support the body?”

Response: Yes. TB 117-2013 will apply to any product that qualifies as upholstered seating furniture as defined in our laws and regulations including loose cushions that support the body.

Comment Summary 4: “If a manufacturer passes the cover fabric test, do they also need to pass the barrier test? In other words, a manufacturer would just have to pass the fabric test to comply with the law?”

Response: For cover fabrics that pass this section, the first layer of filling materials located below the cover fabric shall also meet the test requirements of Section 3 of this test method.

Comment Summary 5: Regarding Section 2 - “It is not clear how to test and what to do with multiple barrier (layered) materials? Are they tested together if they are different materials?”

Response: If multiple layers of barriers are present, only the upper most layer that lays directly underneath the cover fabric will have to pass Section 2. During the 15-day comment period, the Bureau added clarifying language to the TB 117-2013 standard.

Comment Summary 6: Regarding Section 3 - “For filling materials, there is no mention of cover fabric for loose fills. How is this handled in the procedure?”

Response: The cover fabric of a product containing loose fills must pass Section 1 of TB 117-2013. If the cover fabric fails Section 1, then a barrier will be needed. This barrier can be a ticking that encases the loose fills. The loose fills must also pass Section 3.

Comment Summary 7: “For filling materials, is there a specific sample preparation for loose fill? Examples feathers, pieces of shredded foam, polystyrene beads?”

Response: The TB 117-2013 notes that the ASTM Section 16, step 16.2 is to be followed which specifies the preparation of the loose fill materials which include shredded polyurethane, down, etc.

Comment Summary 8: “For materials that enclose the loose fill for structural purposes, are they part of the testing or are they considered barrier materials?”

Response: The ticking encasing the loose fill must pass Section 2 only if the cover fabric fails Section 1.

Comment Summary 9: Bureau Veritas asks the following about Section 3.1.1 - “What types of filling material are described as “other filling materials”? Does it include loose fill and feathers? Does it apply only to resilient foam materials?”

Response: Any resilient loose filling material that is used in upholstered furniture must pass Section 3 test.

Comment Summary 10: Bureau Veritas asks the following about Section 3.3 - “For thickness measurement, is there any compression or load applied to determine or verify the thickness measurement?”

Response: The thickness is measured by a ruler or similar devices without applying compression or load. During the 15-day comment period, the Bureau added a note to Section 3.2 to clarify the measuring of the thickness.

H. In a comment letter dated February 22, 2013, the Bernhardt Furniture Company provided comments on the following:

Comment Summary 1: Bernhardt Furniture fully supports the proposed new standard Technical Bulletin 117-2013 except they believe that there will be an undue inventory and financial burden if only one-year or less is given to ship the entire legacy inventory to states other than California. “However, if the cutoff date is at least

18 months from the date of signing this will give manufacturers more time to push the new standard down the entire supply chain and flush out legacy inventory.”

Response: The Bureau rejects this comment. During the 15-day comment period, the Bureau modified the mandatory compliance date to January 1, 2015. This change will provide manufacturers with a one-year transition period anticipating that the rulemaking package is implemented on January 1, 2014. The Bureau finds that this will allow manufacturers ample time to begin procuring materials that are compliant with the new standard. Further, furniture retailers may sell through their current inventory of products without the restriction of a sell by date. Any new products purchased by retailers, on and after January 1, 2015, must meet the requirements of the new TB 117-2013 standard.

Comment Summary 2: Bernhardt Furniture states that the requirements relating to Customers Own Material (COM) - Section 1126 (c)(3), (d)(4), (d)(7) and (d)(8) - are burdensome to manufacturers since they require specific language on the label including the customer’s name and address. They believe that personalizing the labels to the extent described under these sections adds a greater cost of doing business and result in shipment delays due to increased manufacturing time. “Bernhardt Furniture is asking that no label be required for COM products and if one is specified, that it be generic, non-personalized and reflects that no claims are made as to the smolder resistance of the covering fabric.”

Response: The Bureau rejects this comment. The Bureau has made no changes to this requirement in this rulemaking and as such cannot exempt COM products from existing law label requirements. Manufacturers may use indelible ink to legibly write the customer’s name and address on the label instead of customizing each label with personalized information. This lessens the time and cost of manufacturing and also fulfills the requirement of subsection (d)(8).

I. In its comment letter dated March 26, 2013, IKEA North America Services, LLC provided comments on the following:

Comment Summary 1: IKEA supports the proposed flammability standard TB 117-2013. In regards to the Section 2, Barrier Material Test, IKEA suggests that products manufactured with loose covers should be required to use a lining that passes Section 1.

Response: The Bureau rejects this comment. The standard TB 117-2013 will only require that the cover fabric meet Section 1. However, any other fabrics or ticking used in the furniture may also meet the standard at the discretion of the manufacturer.

Comment Summary 2: IKEA suggests that the label should indicate with which section that the product meets to the customer. An appropriate label should be required for both the frame lining and the loose cover. A product with non-removable

covers should also state on the label if the outer cover or if the lining the meets the standard.

Response: The Bureau rejects this comment. The Bureau only requires that the final product shall be labeled in accordance with the flammability requirements. The flammability label provides consumers notice that the product meets California's flammability standard. Any additional labeling requirements may be an undue burden to manufacturers.

Comment Summary 3: IKEA suggests that it should be noted that the density of the test specimen should be the same as the final product.

Response: The Bureau accepts this comment. The TB 117-2013 notes within ASTM Section 16, step 16.2 that the packing density of the loose padding material should be close as possible to that in the production furniture; test results can depend greatly on the packing density.

Comment Summary 4: IKEA indicated that there is an error in the Section 3.3.3 for which the correct measurement for 1/2" should be reflected as 1.27 cm, not 1.27 mm.

Response: The Bureau rejects this comment. The Bureau does agree that an error is contained in Section 3.3.3 in that the 1/2" measurement was incorrectly displayed as 1.27 mm. The Bureau corrected the error in Section 3.3.3 (which was renumbered to 3.2.3) to reflect that a 1/2 in. is to equal 12.7 mm. The Bureau made this correction during the 15-day comment period.

J. In its comment letter dated March 25, 2013, the Polyurethane Foam Association (PFA) provided comments on the following:

Comment Summary 1: The Bureau should consider adoption of the ASTM evaluation procedures that are supported by a known precision and bias statement.

Response: The Bureau accepts this comment. The Bureau conducted a precision and bias study, consistent with ASTM protocols, to validate the test methods of the TB 117-2013 standard, ensuring reliable and reproducible data. The precision and bias study found there was no bias, concluding that the testing methods are reliable and reproducible. The results from the precision and bias interlaboratory study were added to the rulemaking file.

Comment Summary 2: Use of equivalent substitutes for SRM 1196 cigarettes could provide significant cost savings and convenience during testing.

Response: The Bureau accepts this comment. During the 15-day comment period, language was added to TB 117-2013 Annex B which allows the Bureau to certify other equivalent substitutes of the SRM 1196 as it deems appropriate.

Comment Summary 3: More specificity is needed regarding preconditioning and laundering procedures.

Response: The Bureau accepts the comment. In Annex B, a section was added for the specific purpose of making clear the laundering procedures that should be followed for the test specimen. This test method is also listed as a referenced document under Section 2.3.

Comment Summary 4: The fabric dimensions may not provide adequate overlap on the jig and larger dimensions would provide useful overlap on each side. If larger fabric dimensions are used, fold and tuck assembly may be the most appropriate mock-up assembly.

Response: The Bureau rejects the comment. Wrapping the fabric all around the foam block and placing it in the mockup frame may create air pockets that can compromise the integrity of the smoldering test. The proposed fabric measurements provide for a tight fit on the mockup to ensure more consistent results.

Comment Summary 5: Clarification is needed regarding how to test and evaluate the performance of loose materials.

Response: The Bureau accepts the comments. Section 3 (Resilient Filling Materials Test) was modified to make specific that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of measuring weight loss. The Bureau added a time limit of 45 minutes to the test duration and updated the pass/fail criteria accordingly. A note was also added to clarify how to measure the thickness of the test materials.

K. In their comment letter dated February 25, 2013, The Govmark Organization, Inc. commented on the following:

Comment Summary: The commenter suggests that Section 3 of TB 117-2013 should be expanded to provide a procedure for testing loose fill materials (i.e shredded foam, loose fill materials, and feather and down) just as a procedure is indicated in TB 117. The TB 117 also provides that the shredded and loose products be encased in a flame retardant fabric.

Response: The Bureau rejects this comment. A procedure for testing loose fill materials is covered under Section 3, Resilient Filling Material Test requirements. The TB 117-2013 notes that the ASTM Section 16, step 16.2 is to be followed which specify the preparation of the loose fill materials which include shredded foam, feather and down, etc.

L. In a comment letter dated on February 28, 2013, The Govmark Organization, Inc. submitted comments on the following:

Comment Summary: The commenter suggests that Section 1.1, Paragraph 2 should be rewritten to apply to the first 2” of filling materials that pass the cover fabrics section, instead of the first layer of filling materials.

Response: The Bureau rejects this comment. As specified in the scope of Section 1 Cover Fabric Test, the first layer of filling materials located below the cover fabric shall meet the test requirements of Section 3 Resilient Filling Material Test. Section 3.3.2 (which was renumbered to 3.2.2) specifies that if the test sample material is less than two inches thick, multiple layers are to be stacked to make up the required thickness. Further Section 3.3.3 (which was renumbered to 3.2.3) specifies that if the filling materials are less than a ½ inch thick, multiple layers are to be used to make up a one inch thick specimen and is to be combined with a one inch thick removable plywood panel to construct the two inch thick test specimen.

M. In a comment letter dated on March 1, 2013, The Govmark Organization, Inc. submitted comments on the following:

Comment Summary: The commenter suggests the Cover Fabric Test Section 1.4, Item 2 should be rewritten as follows:

“The cover fabric passes the test if three initial mock-up specimens pass the test i.e., [a]cigarettes burn their full length or [b] cigarettes self-extinguish before burning their full length and [c] the mock-ups are not longer smoldering.”

Response: The Bureau rejects this comment. The Section 1.4 Pass/Fail Criteria Item 2 merely provides examples to assist with determining when the cover fabric passes the test but is not inclusive of all possible scenarios. What is more telling is that the test specimen does not meet any of the fail criteria specified; it is then safe to reach a decision that the test specimen has passed the test method. No changes to the standard were made based on this comment.

N. In a comment letter dated on March 20, 2013, The Govmark Organization, Inc. submitted comments on the following:

Comment Summary: The commenter suggests that furniture manufacturers are burdened as they are using real fabrics and filling materials and not standard fabrics or filling materials in their furniture. The commenter suggests that a composite test method be added to the standard which would consist of the actual cover material and the actual layer of filling materials directly beneath the cover fabric. The composite test would be in lieu of testing by sections 1, 2, and 3.

Response: The Bureau rejects this comment. Numerous test results, including the P&B results have demonstrated that the combination of the char length and the 45-minute time limit is sufficient to reliably determine the smoldering performance of the furniture mockups.

O. In a comment letter dated on March 25, 2013, The Govmark Organization, Inc. submitted comments on the following:

Comment Summary: The commenter states that TB 117-2013 is inadvertently pointing to the wrong sections of the ASTM standard. An example shows that TB 117-2013, Paragraph 1.2 is written as, "Prepare the test specimens as specified in ASTM E1353-08a (Section 10)." The commenter suggests that this sentence should be revised to reflect "(Section 11)" as the correct section, not "(Section 10)". The commenter states that Paragraphs 2.2, 3.3, and 3.4 contain the same error.

Response: The Bureau rejects this comment. The ASTM E1353-08a, as referenced in the TB 117-2013 standard, is seemingly an older version of the standard. The ASTM E1353-08a was updated with an editorial change which resulted with the renumbering of certain sections. The Bureau's intention was to reference this updated version of the standard which is ASTM E1353-08a^{e1}. The Bureau made this grammatical correction during the 15-day comment period.

P. In its comment letter dated March 25, 2013, the Decorative Furnishings Association (DFA) provides comments on the following:

Comment Summary 1: DFA supports the use of the cover fabric test that is included in ASTM standard.

Response: The Bureau accepts the comment. Subsection 1(b) and Section 2.4, Subsection 1(b) of TB 117-2013 were modified to make specific that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of measuring the char length in any direction. This change mirrors the ASTM standard.

Comment Summary 2: DFA requests that COM be exempted from TB 117-2013 and if not, request that the Bureau grandfather in existing patterns. Further, DFA suggests that the test standard be the same as the current UFAC standard.

Response: The Bureau rejects the comment. The Bureau has not proposed in this rulemaking file any changes to the use of COM fabrics or the labeling requirements; however, manufacturers would not need to test or re-test any materials, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria. This means that all existing fabrics that have been tested under a similar test method can be used in upholstered furniture, and are not be subject to additional testing. Manufacturers can demonstrate this by using the results from historical data and comparable testing.

Q. In its comment letter dated March 22, 2013, the Association for Contract Textiles (ACT) provides comments on the following:

Comment Summary 1: ACT recommends that the TB 117-2013 cover fabric test protocol be consistent with the ASTM standard and the NFPA 260 test method.

Response: The Bureau accepts the comment. Subsection 1(b) and Section 2.4, Subsection 1(b) of TB 117-2013 were modified to make specific that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of measuring the char length in any direction. This change mirrors the measurements of the ASTM E1353-08a^{ε1} standard and as such does not impact the NFPA 260 test method.

Comment Summary 2: ACT recommends that the Bureau acknowledge that the NFPA 260 test protocols as comparable to ASTM standard. Further, ACT recommends that the Bureau acknowledge NFPA 260 as an acceptable substitute on COM fabrics introduced to market before implementation, which would eliminate the economic burden of retesting all existing products.

Response: The Bureau rejects the comment. While compliance with the standard is mandatory, testing remains at the discretion of the manufacturers. Manufacturers would not need to test or re-test materials, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria which can be demonstrated by using the results from historical data and comparable testing. All new fabrics that are produced on and after January 1, 2015 are expected to comply with the new TB 117-2013 test requirements.

- R. **In its letter dated March 25, 2013, the Joint Industry (American Home Furnishings Alliance, California Furniture Manufacturers Association, California Retailers Association, Home Furnishings Guild of Southern California, National Home Furnishings Association, National Textile Association, Polyurethane Foam Association, Upholstered Furniture Action Council, and Western Home Furnishings Association) provided comments as follows:**

Comment Summary 1: The Bureau made several modifications to the ASTM standard and these changes may impact the standard's historical precision and bias statement.

Response: The Bureau accepts the comment. The Bureau conducted a precision and bias study, consistent with ASTM E691-12, to validate the test methods of the TB 117-2013 standard, ensuring reliable and reproducible data. The results from the precision and bias inter-laboratory study were added to the standard. The precision and bias study found there was no bias, concluding that the testing methods are reliable and reproducible. The results from the precision and bias interlaboratory study were added to the rulemaking file.

Comment Summary 2: The Bureau should reconsider the deviation from ASTM on the cover fabric test. As proposed it would have a significant burden on fabric suppliers and manufacturers and may necessitate retesting of tens of thousands of cover fabrics.

Response: The Bureau accepts the comment. Subsection 1(b) and Section 2.4, Subsection 1(b) of TB 117-2013 were modified to make specific that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of measuring the char length in any direction. This change mirrors the ASTM standard.

January 1, 2015 is the proposed mandatory compliance date for the new standard. While compliance with the standard is mandatory, testing remains at the discretion of the manufacturers. Manufacturers would not need to test or re-test materials, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria which can be demonstrated by using the results from historical data and comparable testing. All **new** fabrics that are produced **on and after** January 1, 2015 are expected to comply with the new TB 117-2013 test requirements.

Comment Summary 3: It is requested that COM be exempted from TB 117-2013.

Response: The Bureau rejects the comment. The Bureau will not exempt COM materials; however, manufacturers would not need to test or re-test any materials, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria. This means that all fabrics that have been tested under a similar test method can be used in upholstered furniture, and are not be subject to additional testing. Manufacturers can demonstrate this by using the results from historical data and comparable testing.

Comment Summary 4: The Bureau should allow qualified substitutes for the SRM 1196 cigarettes.

Response: The Bureau accepts the comment. Language was added to Annex B which allows the Bureau to certify other equivalent substitutes of the SRM 1196 as it deems appropriate.

S. In comments received between March 19-26, 2013, fourteen public members submitted the following similar comments:

Comment Summary 1: There should be a test appropriate to reduce the risk of fire for polyurethane foam.

Response: The Bureau rejects the comment. TB 117-2013 includes a test method (Section 3) for resilient filling materials (i.e., polyurethane foam). This test method is designed to measure the tendency of resilient filling materials to smolder and contribute to fire propagation. Resilient filling materials that fail the test can only be used in upholstered furniture if a passing barrier material is used between the cover fabric and the filling materials, thus reducing the risk of fire propagation.

Comment Summary 2: Organic cotton and other natural fibers should be allowed to be used without flame retardants of any kind, and should not be required to pass the

same flammability tests as polyurethane foam.

Response: The Bureau rejects the comment. The Bureau's flammability standards are performance-based and do not prescribe the use of any specific material (i.e., flame retardants) or manufacturing methods to meet the standard. Manufacturers choose the methods and means of compliance. While the Bureau does not regulate or mandate the use of flame retardant chemicals, it is the Bureau's understanding that many manufacturers will no longer use flame retardant chemicals in their products as a means to comply with the TB 117-2013 standard.

Comment Summary 3: Products should be labeled concerning flammability and flame retardant used.

Response: The Bureau rejects the comment. The Bureau does not regulate the use of flame retardant chemicals. The flammability label provides consumers notice that the product meets California's flammability standard. The official law label identifies components of a piece of furniture. Chemical components are not identified on either the flammability or official law label as chemicals are regulated by other state agencies, not the Bureau. While not mandatory, manufacturers may attach a separate label to the product for the purpose of specifying usage and/or non-usage of flame retardants.

Comment Summary 4: One of the fourteen public members urges the Bureau to "...take steps in the right direction to allow consumers to buy a mattress that is chemical-free."

Response: The Bureau rejects this comment. This comment cannot be addressed as it does not fall within the scope of this rulemaking proposal. In fact, mattresses are covered by Federal standards under the CPSC.

T. In its comment letter dated March 26, 2013, Chemtura Corporation provides comments on the following:

Comment Summary 1: Per Chemtura, "The Bureau's proposed fails to enhance, or even maintain, the current state of furniture flammability in California provided by TB 117." Chemtura also states that the Bureau fails to consider a reasonable range of alternatives.

Response: The Bureau rejects the comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin,

whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

The Bureau did review and evaluate alternatives as indicated in the ISOR. The Bureau determined that they are not viable alternatives at this time based on current manufacturing methods and/or are cost prohibitive. As stated in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method.

Comment Summary 2: “The Bureau’s proposal will reduce the level of furniture safety in California relative to the current voluntary smolder standard used today.”

Response: The Bureau, in part, accepts the comments. Chemtura raises concern specifically with eliminating the testing requirements for decking materials, interior fabrics and welt cords. The Bureau has added back in the decking materials test method. The addition of the interior fabric test method is rejected. When a compliant fabric is used the smoldering stops at the cover fabric before reaching the interior fabric. If a non-compliant fabric is used a barrier is required under the cover fabric to stop the smoldering behavior. The addition of the welt cord test is rejected as welt cords are customarily wrapped in the cover fabric and/or lie on top of the cover fabric. The cover fabric is subject to testing in the standard and as such must resist smolder. Further, if a non-compliant fabric is used a barrier must be used under the cover fabric and the welt cord to stop the smoldering behavior.

Comment Summary 3: “The Bureau overstates the value of addressing the smoldering fire hazard while understating the impact of open flame hazard.”

Response: The Bureau rejects this comment. As stated in the ISOR, the Bureau relied on available fire statistics data both nationally and for California. As stated above the predominant source of upholstered furniture fires and losses today are from smolder ignition sources which are primarily smoking materials.

The commenter also asserts that open flame test is needed to account for flaming fire hazards. As stated in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 4: “The Bureau assumes that by removing the external ignition requirement from the PU foam filling material, that flame retardant use will be minimized and possibly eliminated.”

Response: The Bureau rejects the comment. As stated in the ISOR, the Bureau develops flammability standards. They are performance-based standards and do not prescribe nor prohibit the use of any specific material or manufacturing methods to meet the standard. While many manufacturers have stated they intend not to use

flame retardant chemicals under the new standard, this decision is solely at the discretion of the manufacturer.

Comment Summary 5: “The Bureau incorrectly states that PU foams treated with flame retardants are more prone to smoldering than untreated foam.”

Response: The Bureau rejects the comment. The Bureau cited several studies (ISOR attachments #2, 3, 4 and 5). Specifically, the study conducted by the United States Department of Commerce, National Bureau of Standards, concluded that there are no significant differences between the flame retardant foams formulated to pass TB 117 and untreated foams. These findings were consistent with a study conducted by the CPSC, and another CPSC study concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials. And further research conducted by CPSC, concluded that flame retardant treated foam with a relatively low concentration of flame retardant chemicals actually increases the damage to cover fabrics from a smoldering cigarette relative to untreated foam.

Bureau research confirmed that the cover fabrics and their combination with underlying filling materials (PU foam) impact the smoldering performance of upholstered furniture. The Bureau found that heavier smolder prone fabrics when exposed to a smoldering cigarette impart more energy to the mock-up substrates, resulting in significant weight loss of the polyurethane foams. In many cases, the polyurethane foams were totally consumed in laboratory tests. When the cover fabrics were changed to less smolder prone fabrics, smoldering resistance of the mock-up assembly significantly improved and the weight losses of the underlying foam decreased substantially.

In addition, the Bureau consulted the Polyurethane Foam Association (PFA) on the foam specification. Modifications to the foam specification have been made which were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members. The foam specification is a higher density to represent a more smolder prone material. This presents a more rigorous test of the cover fabric. Lower density foams which can be used in upholstered furniture are less smolder prone and will pose less of a smoldering risk.

Comment Summary 6: The Bureau has gone beyond the charge of the Governor by attempting to reduce or eliminate the use of all flame retardants in furniture.

Response: The Bureau rejects the comment. As stated above, the Bureau develops flammability standards. They are performance-based standards and do not prescribe nor prohibit the use of any specific material or manufacturing methods to meet the standard. While many manufacturers have stated they intend not to use flame retardant chemicals under the new standard, this decision is solely at the discretion of the manufacturer.

U. In a letter dated March 13, 2013, the Business and Institutional Furniture Manufacturers Association (BIFMA) provided the following comments:

Comment Summary 1: BIFMA supports the direction of a smolder standard rather than the current open flame requirements and recommends incorporating any relevant language from ASTM into the standard.

Response: The Bureau rejects this comment. The ASTM standard is a copyright protected document. The Bureau has obtained copyright permission to incorporate the ASTM standard only in its entirety.

Comment Summary 2: BIFMA suggests that the Bureau should remove Section 3 test requirements for resilient filling materials as the intent of the proposed standard is for the smolder resistance of cover materials. “This is a significant concern from manufacturers as the filling materials may still require FR chemicals of concern to meet this requirement.”

Response: The Bureau rejects this comment. As stated in the ISOR, Bureau research confirmed that the cover fabrics and their combination with underlying filling materials impact the smoldering performance of upholstered furniture. Therefore, the Bureau will not be removing Section 3 from the standard.

Comment Summary 3: To reduce time and costs for performing the test, the Bureau should remove the 45-minute requirement. BIFMA suggests, “Change to the language in the current TB 117 that states in Section D, Part II, 3.4, “Continue test until all evidence of combustion has ceased for at least 5 minutes” and add, “to a maximum of 45 minutes.”

Response: The Bureau rejects this comment. TB 117-2013 does not require that the test to continue for 45 minutes regardless of the test condition. TB 117-2013 follows the test procedures outlined in ASTM E1353-08a^{ε1}. The pass/fail criteria are slightly different from the ASTM by imposing a 45-minute duration for continuous smoldering, after which the specimen fails the test. In TB 117-2013, if smoldering ceases at any time before 45 minutes and the maximum char length is less than 2 inches, the specimen passes the test. The test can be stopped and there is no need to continue the test up to 45 minutes. If smoldering ceases before 45 minutes but the maximum char length is more than 2 inches, the specimen fails. If smoldering continues beyond 45 minutes, the specimen fails the test regardless of the char length.

Note that ordinarily it takes approximately 30 minutes for a cigarette to burn its full length. Even if all smoldering ceases shortly after the cigarette has fully burned and test is continued for another 5 minutes (as suggested by BIFMA) more than 30 to 40 minutes elapses even for a well performing specimen before the test can be concluded. Therefore, a mockup smoldering test will ordinarily take a minimum of 35-40 minutes. Specimens that exhibit continuous smoldering will continue for 45 minutes under TB 117-2013, before they are manually extinguished.

Also, ASTM E1353-08a^{ε1} has specific instructions for those cases when cigarettes self-extinguish before they burn their full length. The 45 minute duration is a

reasonable timeframe to assess the smoldering behavior and provides greater specificity to the testing criteria.

Comment Summary 4: BIFMA suggests that the cigarette conditioning should be modified to 50% ± 10% relative humidity prior to use instead of less than 55% relative humidity to prevent over drying of the cigarettes.

Response: The Bureau rejects this comment. The use of the relative humidity proposed by the Bureau maintains consistency with other testing laboratories, industry, and government agencies. The use of this humidity range is common and well-practiced for sample conditioning and regularly used in California and federal standards. The 55% range for relative humidity is an accepted range that ensures testing of the material and products are performed where the conditions are not too dry or too moist to impact the test results either way.

Comment Summary 5: “Measure char length on the mock up versus having to remove covering materials. This will be easier and also consistent with the ASTM method.”

Response: The Bureau accepts this comment. The TB 117-2013 was modified during the 15-day comment period to remove the sections which relate to the weighing device and weighing of the test specimen. This modification provides consistency with the modifications made to Section 3.4 Pass/Fail Criteria which reflect that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of by weighing mass loss.

Comment Summary 6: BIFMA suggests allowing the use of a standard label on all fabrics and remove the COM labeling requirements as they would add unnecessary costs.

Response: The Bureau rejects this comment. The Bureau has not proposed in this rulemaking file any changes to the use of COM fabrics or the COM labeling requirements. Manufacturers are to follow current practices as the requirements remain unchanged.

Comment Summary 7: BIFMA states that the Bureau should allow either the TB 117 or the TB 117-2013 label for a transition of 18 months after the new standard becomes effective.

Response: The Bureau rejects this comment. The ISOR specified the mandatory compliance date as July 1, 2014 which would have provided a six to nine-month transition period. Since then, the Bureau modified the mandatory compliance date to January 1, 2015. This change will provide manufacturers with a one-year transition period anticipating that the rulemaking package is implemented on January 1, 2014. All new products that are produced on and after January 1, 2015 are expected to comply with the new TB 117-2013 test. The products must be labeled according to the standard it complies with.

Comment Summary 8: BIFMA suggests that the Bureau should formally obsolete TB 117 after 18 months past the effective date of TB 117-2013. This would let the market know that any reference to TB 117 or TB 117-2013 is for the new standard only.

Response: The Bureau accepts this comment. TB 117-2013 replaces the TB 117 and is repealed the regulatory language proposed as of December 31, 2014.

V. In its comment letter dated March 26, 2013, Albemarle, provided comments on the following:

Comment Summary: The steps to address the hazards represented by smoldering cigarettes are important, however, the Bureau does not address small flame ignition or other heat sources in TB 117-2013. The Bureau should seek protection from small flame ignition.

Response: The Bureau rejects this comment. Based on the present evaluation of current statistics, related studies, and currently available technologies, the Bureau is addressing the predominant source of upholstered furniture fire deaths which are smoldering materials. However, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

W. In its comment letter dated February 28, 2013, the Fresno Fire Department, provided comments on the following:

Comment Summary 1: The tests should not be used in place of current requirements; rather it should be added to the current standard.

Response: The Bureau rejects the comments. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. The Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 2: The changes lessen the protection of the public by increasing the flammability of products.

Response: The Bureau rejects the comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-

2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials.

Comment Summary 3: A regulation including a cover fabric test and the current TB 117 test would be more appropriate.

Response: The Bureau rejects the comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the United States Consumer Products Safety Commission (CPSC) concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Also mentioned in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 4: The Bureau did not cite any studies that the use of flame retardant chemicals actually harms Californians.

Response: The Bureau rejects this comment. As stated above, the Bureau clarifies its statement made in the ISOR in that there may be a benefit to the health, welfare, and environment. The Bureau has added a selected bibliography on furniture flame retardants, toxicity and health during the 15-day comment period. These documents have been added to explain why it is the Bureau's understanding that fewer flame retardant chemicals in upholstered furniture may have added benefits to consumers however it does not serve as the purpose for the proposed rulemaking.

The bibliography was added to the rulemaking file and made public in the 15-day notice, issued on August 19, 2013, and complies with the notice requirements as set forth in Government Code section 11347.1.

X. Between March 19-25, 2013, Barry Cik and 3 public members provided comments on the following:

Comment Summary 1: TB 117-2013 may not reduce flame-retardant chemicals in foam filling as much as presumed, may increase usage in fabrics and the new standard will increase the amount of flame-retardant chemicals being used in organic products.

Response: The Bureau rejects this comment. The Bureau’s flammability standards are performance-based and do not prescribe the use of any specific material (i.e., flame retardants) or manufacturing methods to meet the standard. Manufacturers choose the methods and means of compliance. While the Bureau does not regulate or mandate the use of flame retardant chemicals, it is the Bureau’s understanding that many manufacturers will no longer use flame retardant chemicals in their products as a means to comply with the TB 117-2013 standard.

Comment Summary 2: Barry Cik also recommended allowing household furniture products to comply with either the old or new standard and to focus on consumer disclosure.

Response: The Bureau rejects the comments. While the Bureau could continue to enforce Technical Bulletin 117 or offer it as an alternative; it does not adequately test fabric which is the first item to ignite and does not test the interactions of components of upholstery furniture (e.g., fabric, batting and interior foam) which is more indicative of a real world fire scenario.

The flammability label provides consumers notice that the product meets California’s flammability standard. The official law label identifies components of a piece of furniture. Chemical components are not identified on either the flammability or official law label as chemicals are regulated by other state agencies, not the Bureau. While not mandatory, manufacturers may attach a separate label to the product for the purpose of specifying usage and/or non-usage of flame retardants.

Y. In a letter dated March 26, 2013, The American Chemistry Council’s North American Flame Retardant Alliance (NAFRA) provided the following comments:

Comment Summary 1: NAFRA believes that the proposed TB 117-2013 should not be implemented because the proposed regulation “will result in a higher fire risk from upholstered furniture in California.” They point to a Southwest Research Institute (SwRI) study to support maintaining the small open flame testing.

NAFRA also states concern with eliminating the testing requirements for decking materials, interior fabrics, welt cords, and with reducing the cover fabric dimensions. The new standard is stated to ignore the variability in cover fabric materials and requires use of high density foams ignoring the variability in foam densities.

Response: The Bureau rejects these comments, in part. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin,

whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

The Bureau consulted with a well know fire scientist, Dr. Vyto Babrauskas. Dr. Babrauskas is an author of the only book on the topic related to the present matter, Fire Behavior of Upholstered Furniture and Mattresses. For a number of years, he headed up the furniture flammability research project at NIST. In that capacity he developed the Cone Calorimeter and the furniture calorimeter, which are now standard fire tests by which furniture heat release rates are measured. He also is a principal consultant to the European Combustion Behaviour of Upholstered Furniture research project.

In summary, Dr. Babrauskas finding are as follows:

The SwRI results claimed to show that “TB117 foams” led to a slightly lower HRR in cotton-fabric upholstered furniture when the furniture size was small, i.e., a single-seat chair. However, the study was deeply flawed since:

- (1) SwRI used a foam as “TB117 foam” which is unrepresentative of actual TB117 foams normally found in retail furniture since it had a loading of fire retardant chemicals about twice as high as normally found.*
- (2) They failed to recognize the fact that the heat release rate (HRR) of foams increases with foam density and tried to compare the (incorrectly selected) TB117 foam against non-FR foams, one of which was roughly twice the density as the comparison foam.*
- (3) Failed to recognize that upholstered furniture with HRR below about 1000 kW does not lead to room flashover and therefore does not comprise a serious fire hazard.*
- (4) Focused on the behavior of single-person upholstered chairs, yet their data showed that there was no benefit at all from the “TB117 foam” when larger furniture pieces (3-seat sofas) were tested. There are very few homes in America which do not have a 3-seat sofa, and most have more than one.*
- (5) Used only cotton upholstery fabrics (which produce a relatively low burning hazard) and omitted including thermoplastic fabrics, e.g., polyolefin, which produce high fire hazard. This may be because they understood that normal TB117 foams and even their “TB117 foam,” which was excessively fire-retardant loaded, would not have any detectable benefit in fires which are serious. Their own tests on used furniture showed that peak HRR of retail furniture is generally 900 kW – 2500 kW, yet they designed test specimens which gave results in the range of 100 kW – 700 kW.*

These SwRI results are also in disagreement with the recent CPSC study which found (a) peak HRR values of 900 kW – 1800 kW, and (b) no significant effect of TB117 foam for single-seat chair specimens. Unlike for the SwRI tests, it appears that the TB117 foam used by CPSC was more representative of retail market TB117 foams.

The Bureau rejects the comments related to concerns with eliminating the interior fabric and welt cord test methods. When a compliant fabric is used the smoldering stops at the cover fabric before reaching the interior fabric. If a non-compliant fabric is used, a barrier is required under the cover fabric to stop the smoldering behavior. The addition of the welt cord test is rejected as welt cords are customarily wrapped in the cover fabric and/or lie on top of the cover fabric. The cover fabric is subject to testing in the standard and as such must resist smolder. Further, if a non-compliant fabric is used a barrier must be used under the cover fabric and the welt cord to stop the smoldering behavior.

The Bureau also rejects the comment related to concerns with the cover fabric dimensions being reduced in the new standard. Since the standard Test Fabric (Type I) is rather thick and heavy, wrapping it all around the foam block and placing it in the mockup frame will be difficult and may create air pockets that can compromise the integrity of the smoldering test. These new fabric dimensions provide a tighter fit in the mockup and better contact of the cover material and substrate. The variability of cover fabrics has been addressed in the ISOR as under the new standard all cover fabric materials are subject to testing.

The Bureau accepts the comment related to the decking material testing requirements. As stated in the ISOR, the likelihood of a cigarette falling through the seat/back or the seat/arm crevice and reaching the decking area is very small. However, to err on the side of caution, the decking material test method was added to the standard for instances where the seat cushions are not in proper position and the decking material become exposed.

The Bureau consulted the Polyurethane Foam Association (PFA) on the foam specification. Modifications to the foam specification have been made which were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members. As stated in the ISOR, the foam specification is a higher density to represent a more smolder prone material. This presents a more rigorous test of the cover fabric. Lower density foams which can be used in upholstered furniture are less smolder prone and will pose less of a smoldering risk.

In conclusion, the decking materials test method was added into the standard. The polyurethane foam specification was modified based on consultation and recommendations by the PFA. All other comments and recommendations were rejected.

Comment Summary 2: NAFRA states that the proposed regulations “overstate smoldering hazard and understate open flame hazard.” The proposed regulation fails to recognize that smoldering fires rarely cause injuries or fatalities and cites a NIST study conducted by Dr. Vyto Babrauskas as contradictory evidence. NAFRA also states that an open flame test is needed to account for key flaming fire hazards.

Response: This comment is rejected. As stated in the ISOR, the Bureau relied on available fire statistics data both nationally and for California. As stated above, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources which are primarily smoking materials.

The Bureau consulted with the author of the study, Dr. Vyto Barbrauskas, and found the study is not a true comparison to upholstered furniture sold for consumer use today. Dr. Barbrauskas provided the following response:

- (1) *The test items procured for the large-scale NIST tests were **not** chosen to represent products sold for consumer use. Instead, the project was formulated to examine FR treatments for various product categories that are commercially available, but are of the highest FR performance. For example, upholstery cushions were loaded with an organic chlorinated phosphate FR, an organic brominated FR, and alumina trihydrate. The loading of the FR chemicals was so high that the foam reached a density of 64 kg m^{-3} . By contrast, residential grade upholstered furniture foams generally have a density in the range of $16 - 29 \text{ kg m}^{-3}$. Foams of 64 kg m^{-3} are used in certain institutional and governmental applications, but do not represent products that consumers purchase.*
- (2) *The 'FR room' consisted 100% of fully FR-treated products; the non-FR room consisted, of course, of normal products without FR treatments. Creating a test room where 100% of the fuel load was FR-treated allowed some interesting observations to be made about the behavior of such environments, and was intended as an updated revisitation of the 1973 Hillenbrand study. It should be noted that the Hillenbrand study was conducted for NASA, and was intended to examine how NASA-quality materials would perform when an entire room was constructed of such materials. The NIST tests confirmed what Hillenbrand had found in 1973—that if only NASA-quality materials are used in a room, there is no possibility for a fire to develop there. However, while this may be important to NASA, it does not have an applicability to domestic or even commercial occupancy environments. In the latter, even if some FR combustibles are present, fire will have the potential to burn due to the inevitable presence of non-FR goods which burn well, and such combustibles include even ordinary paper, books, and clothing.*

To make this all this very clear, the factually supportable conclusions are the following:

- (a) *Use of FR chemicals can provide major improvements to fire behavior of plastics. However, the loadings need to be high, and while this is found in in certain military, government, industrial, and other classes of products, it is not what is provided when FR chemicals are added to consumer goods.*
- (b) *The effectiveness of halogenated FR chemicals depends both on the loading of the chemical and the volume of fire confronted. Plastics with modest FR loadings can perform well in some small-flame tests, but do not show a similar behavior when large flames are involved.*

(c) Room-fire type tests configured with all-FR products can reflect certain environments in NASA and other specialized applications, but results from such tests cannot legitimately be applied to normal buildings or homes.”

As stated in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 3: NAFRA asserts that the plain language of the Home Furnishings and Thermal Insulation Act requires upholstered furniture to meet a particular standard for resistance to open-flame testing. The proposed regulations “are invalid because they conflict with the Home Furnishings and Thermal Insulation Act (ACT) and are not reasonably necessary to effectuate the purpose of the ACT.” More specifically, the commenter asserts that the definition for ‘fire retardant’ found in Business and Professions Code (BPC) section 19161(a) (“...a product that meets the standards for resistance to open-flame test adopted by the United States Consumer Product Safety Commission and set forth in Section 1633 and following of Title 16 of the Code of Federal Regulations”) is the standard that the Bureau must also use to establish fire retardancy of the seating furniture products in subdivision (c). The reason the commenter provides for this interpretation is that BPC 19161(a) defines ‘flame retardant’ “as used in this section,” which would mean BPC section 19161 in its entirety. As such, NAFRA asserts that the Bureau is obligated to use the 16 C.F.R. 1633 test for seating furniture and lacks authority to promulgate the different, smolder-only standard that the Bureau pursues in the present rulemaking.

Response: The Bureau rejects this comment.

The Statute

Business and Professions Code section 19161 states:

(a) All mattresses and mattress sets manufactured for sale in this state shall be fire retardant. "Fire retardant," as used in this section, means a product that meets the standards for resistance to open-flame test adopted by the United States Consumer Product Safety Commission and set forth in Section 1633 and following of Title 16 of the Code of Federal Regulations. The bureau may adopt regulations it deems necessary to implement those standards.

(b) All other bedding products that the bureau determines contribute to mattress bedding fires shall comply with regulations adopted by the bureau specifying that those products be resistant to open-flame ignition.

(c) All seating furniture sold or offered for sale by an importer, manufacturer, or wholesaler for use in this state, including any seating furniture sold to or offered for sale for use in a hotel, motel, or other place of public accommodation in this state, and reupholstered furniture to which filling materials are added, shall be fire retardant and shall be labeled in a manner specified by the bureau. This does not include furniture used exclusively for

the purpose of physical fitness and exercise.

(d) Regulations adopted by the bureau for other bedding products shall not apply to any hotel, motel, bed and breakfast, inn, or similar transient lodging establishment that has an automatic fire extinguishing system that conforms to the specifications established in Section 904.1 of Title 24 of the California Code of Regulations.

(e) This section shall become operative on July 1, 2007.

NAFRA is correct that the plain meaning of the phrase "this section" would seem to suggest "Section 19161." This, in turn, would seem to suggest that the definition of 'fire retardant' in subdivision (a) applies to subdivision (c)'s requirement that seating furniture be 'fire retardant' as well. The problem with this interpretation, however, is that it results in an absurd application of the law.

16 C.F.R. 1633 Cannot be Applied to Objects Other Than Mattresses

16 C.F.R. 1633 *et seq.* is a federal flammability test promulgated by the Consumer Products Safety Commission. It is a test unique to mattresses, and cannot be used to test upholstered seating furniture.

The test specifically states that its purpose is to establish flammability requirements for mattress sets. The apparatus tests "...the size of the fire generated by a mattress set during a thirty minute test." (16 CFR 1633.1(a)). The test defines 'mattress set' as "...either a mattress and foundation labeled by the manufacturer for sale as a set, or a mattress labeled by the manufacturer for sale without any foundation." (16 CFR 1633.1(c)). The test's definition of mattress *specifically excludes* "upholstered furniture which does not contain a mattress." (16 CFR 1633.2(a)(2)).

The test parameters presuppose that the test specimen is flat with four vertical sides (FN 9). Detailed instructions on proper burner placement depend on this. The instructions on burner placement are so particular, in fact, that special instructions exist for burner placement for mattresses with convex sides. (FN 5) Specimens must also be tested atop a bed frame. 16 CFR 1633.7 (a)(4)).

Such high degree of detail is included to achieve maximum uniformity among tests. To suggest that this testing apparatus be used to test upholstered seating furniture would result in countless interpretations of how to properly adapt this test to specimens of varying shapes and sizes for which this test was not designed. The suggested application would not yield standardized results, rendering a 'pass' or 'fail' outcome meaningless. It is bad science. As the attached diagrams indicate, 16 CFR 1633 *et seq.* *only* tests the open-flame flammability of mattress sets. [Appendix A – 16 CFR 1633]

Legislative Intent Must be Consulted When a Statutory Interpretation is Absurd

The starting point in statutory interpretation is the plain meaning of the statute. If no ambiguity in statutory language exists, the plain meaning of the statute controls and

no further construction is necessary. (See generally, *Leroy T. v. Workmen's Comp. appeals Bd.* (1974) 12 Cal.3d 434, 438). But legislative history may nevertheless aid in statutory construction when the ostensibly plain meaning of a statute would lead to an absurd result: "The literal meaning of the words of a statute may be disregarded to avoid absurd results or to give effect to manifest purposes that, in the light of the statute's legislative history, appear from its provisions considered as a whole." *Silver v. Brown* (1966) 63 Cal.2d 841, 845; *County of Sacramento v. Hickman* (1967) 66 Cal.2d 841, 849, fn. 6.

"The courts resist blind obedience to the putative 'plain meaning' of a statutory phrase where literal interpretation would defeat the Legislature's central objective." *Kramer v. Intuit Inc.* (2004) 121 Cal.App.4th 574, 579, quoting *Leslie Salt Co. v. San Francisco Bay Conservation* (1984) 153 Cal.App.3d 605, 614. Thus, for example, situations exist where "may" can mean "must." *Plumbing Employers Council v. Quillin* (1976) 64 Cal.App.3d 215, 224-25.

A literal reading of BPC 19161 would make upholstered furniture subject to the 16 CFR 1633 et seq. open-flame flammability test for mattress sets. The test itself, however, specifically excludes upholstered furniture that does not contain a mattress from its application. Subjecting upholstered furniture to a mattress-only test would void the upholstered furniture tests from any type of standard application and would make reliable, consistent results impossible. This outcome defeats the entire purpose of a state-mandated standardized flammability test for upholstered furniture, and would lead to an absurdity. As a result, the statute's legislative history must be consulted.

Legislative History Supports the Interpretation That The Open-Flame Test of 16 C.F.R. Only Be Applied to the Mattress and Box Spring Products in BPC 19161(a)

Background

BPC 19161 was added to the Business and Professions Code in 1970. It gave a new function to the Bureau – namely, to ensure that mattresses sold in California were flame-retardant. It originally read:

"One year after adoption of standards by the Bureau of Furniture and Bedding Inspection, but not later than January 1, 1973, all mattresses sold or offered for sale in this state shall be made from flame-retardant material. 'Flame retardant,' as used in this section means a product that meets the standards adopted by the Bureau of Furniture and Bedding Inspection.

This section is applicable, but is not limited in its application, to any mattress sold or offered for sale for use in a hotel, motel, or other place of public accommodation."

In this way, the original iteration of BPC 19161 only dealt with mattresses. Upholstered furniture was not addressed.

The first mention of upholstered furniture in BPC 19161 appears in the 1972 amendment to that section [AB 2165 (Burton)]. What the 1972 amendment did, among other things, is to add upholstered furniture to the Bureau's jurisdiction. The Enrolled Bill Report for AB 2165 states that "The purposes [of the bill] are to expand public protection by making the fire retardant¹ requirements of the Act applicable to upholstered furniture as well as mattresses..." In other words, upholstered furniture in California would now join the ranks of mattresses as being flame-retardant.

As stated in a background paper from the Chairman of the Assembly Committee on Commerce and Public Utilities², "The most important change proposed by this bill is to apply the standards which the bureau will have spent approximately two-and-a-half years developing to all upholstered furniture in addition to all mattresses." The Committee recognized that the Bureau had already dedicated resources to creating its own standards for mattress flame-retardance from scratch, and its scope would be expanded to do the same for upholstered furniture. But to infer from that general statement an imperative that upholstered furniture and mattresses be held to the exact same flame-retardance standard is overly simplistic and presumptuous. In fact, use of the plural "standards" suggests otherwise.

The 2001 Amendment

BPC 19161 has been amended several times since 1972³, and recent amendments provide more relevant insight into its meaning. The first mention of "open-flame" testing was made in the 2001 amendment to BPC 19161 [AB 603 (Dutra)], whereby the Legislature specified that mattresses, box springs, and any bedding that the Bureau finds leads to mattress fires shall be subject to an open-flame test. The Legislative findings in Section 1 of the bill make abundantly clear that open flame testing requirement applies specifically to mattresses, box springs, and bedding only [Appendix B].

Furthermore, Governor Davis issued the following signing message regarding AB 603:

"To the Members of the California Legislature:

"I am signing AB 603 **which would make changes that strengthen flammability and labeling standards** of the Bureau of Home Furnishings and Thermal Insulation **for mattresses, box springs and other bedding products**.

¹ The 1972 amendment also changed the term 'flame retardant' to 'fire retardant,' although these terms are interchangeable. ("The word 'flame-retardant' would be changed to 'fire retardant' throughout the law. There is no legal distinction; either word will mean whatever the standards developed by the bureau make it mean. The bureau prefers 'fire retardant.'" Background paper, Assembly Committee on Commerce and Public Utilities.)

² Walter Powers, Chairman of the Assembly Committee on Commerce and Public Utilities in 1972, was the author of AB 1522. AB 1522 was another 1972 bill that had language regarding BPC 19161 identical to AB 2165 (Burton).

³ Stats 1974 ch. 663 sec. 1, ch. 1118 sec. 1; Stats 1984 ch. 369 sec. 6, ch. 983 sec. 2; Stats 1993 ch. 1264 sec. 85 (SB 574); Stats 1996 ch. 1137 sec. 49 (SB 1077); Stats 2001 ch. 199 sec. 3 (AB 603); Stats 2006 ch. 760 sec. 13 (SB 1849).

“This bill also authorizes a fee increase from \$540 to \$750 for specified furniture importer and manufacturer licensees. However, prior to implementing AB 603, and because there has not been a fee increase since 1993, I am directing the Department of Consumer Affairs to adopt the regulations that shall set the licensing fee at \$650 rather than \$750.

“Sincerely,
“GRAY DAVIS” (emphasis added).

At the time Governor Davis signed this bill, BPC 19161 already included a provision addressing the fire-retardancy of seating furniture. Yet AB 603 did not subject seating furniture to an open-flame standard as it did for mattresses, box springs and other bedding products. As the Governor’s signing message states, the changes made by AB 603 were only meant to apply to *mattresses, box springs, and other bedding products*. Rather, seating furniture remained subject to the more general ‘fire retardant’ requirement which, as set forth in subdivision (d) of the bill, simply meant “...a product that meets the regulations adopted by the bureau.” In the words of the Assembly Committee on Commerce and Public Utilities Chair, ‘fire retardant’ “...will mean whatever the standards developed by the bureau make it mean.” FN 1, above.

The 2006 Amendment

The 2006 amendment [SB 1849 (Figueroa)] simply replaced one mattress and box spring open-flame test with another. Specifically, the 2001 version of BPC 19161 required that the Bureau adopt regulations specifying an open-flame mattress test that uses a pass or fail performance criteria based on (1) a test method developed by the Bureau or (2) that is based on ASTM E 1590, a consensus standard promulgated by the American Society for Testing and Materials. SB 1849, however, switched out these two options in favor of the federal open-flame mattress test promulgated by the United States Consumer Product Safety Commission.⁴

As Section (7) of the Chaptered Legislative Counsel Digest states, SB 1849 was intended to “...change the criteria for fire retardant **mattresses** and **mattress sets** to the standards for resistance to open-flame test adopted by the United States Consumer Product Safety Commission. The bill would require that other bedding products that the bureau determines contribute to mattress fires comply with regulations adopted by it” (emphasis added) [Appendix C]. As the extensive legislative history behind BPC 19161 indicates, the federal mattress open-flame test was in *no way* intended to apply to seating furniture.

As such, the mandate to use the federal open-flame mattress test in BPC 19161(a) can only be interpreted as applying to that subdivision dealing with mattresses and mattress sets. The statutory language used in BPC 19161(a) however, states that the open-flame mattress standard defines fire retardancy for “this section” (all of BPC) and is an unfortunate misnomer. BPC 19161 has not been amended since 2006, and

⁴ The amendment also substituted the term “mattress sets” for “box springs” wherever it occurred in the statute.

the Legislature has not revisited the language of the statute since then.

In conclusion, by its own terms, 16 C.F.R. 1633 cannot be applied to objects other than mattresses and box springs. Further, Legislative history supports the interpretation that the open-flame test of 16 C.F.R. only be applied to the mattress and box spring products in BPC 19161(a). The Bureau is not bound by the federal open-flame flammability test in developing fire retardancy standards for upholstered seating furniture, and thus has the authority to promulgate the smolder test it now proposes under BPC 19161(c).

As such, the Bureau also rejects the commenters' assertion that the proposed regulation is not reasonably necessary to effectuate the purpose of the Act. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. Also stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Comment Summary 4: "Represent an attempt to implement a chemical management regulation without proper authority or expertise." The commenter also stated that the proposed regulation impedes fire safety innovation.

Response: This comment is rejected. As stated in the ISOR the Bureau develops flammability standards. They are performance-based standards and do not prescribe nor prohibit the use of any specific material or manufacturing methods to meet the standard. While many manufacturers have stated they intend not to use flame retardant chemicals under the new standard, this decision is solely at the discretion of the manufacturer.

As stated in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 5: "Would confuse consumers about the fire safety of upholstered furniture."

Response: The Bureau rejects this comment. The test methods (open flame versus smoldering) are not identified on either the current or the proposed label. The label provides consumers clear notice that it meets California's flammability standard.

Comment Summary 6: “Fails to consider a reasonable range of alternatives.” The commenter states alternatives to be TB 117 “Plus”, Great Britain BS 5852, CPSC and studies by NIST.

Response: The Bureau rejects this comment. The Bureau did review alternatives as specified in the ISOR. The Bureau determined that they are not viable alternatives at this time based on current manufacturing methods and/or are cost prohibitive. As stated in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method to furthermore protect California consumers.

Z. In a letter dated March 25, 2013, SP Technical Research Institute of Sweden, Damant & Associates, Marchica & Deppa LLC, Hartford Environmental Research, and Stantex Consultants submitted comments on the following:

Comment Summary 1: The commenters suggest that fire data collection systems depict inaccurate information related to the number of fires ignited by open-flame sources. Thus, the data analyses performed by the Bureau underestimate the significance of open-flame ignitions of upholstered furniture.

Response: The Bureau rejects this comment. As stated in the ISOR, the Bureau relied on available fire statistics data both nationally and for California. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Comment Summary 2: Given that upholstered furniture represents the major fuel load in most homes, preventing or delaying the full involvement of upholstered furniture will save a significant number of lives currently lost in residential fire – from both smoldering and open flame ignitions.

Limiting attention to only smolder resistant cover fabrics without a concurrent requirement to protect the furniture against open flame ignitions could result in more frequent and more severe open flame fires than currently are recorded. Although smoldering ignition rates have been expected to decrease further, there are no current trends that are expected to cause a decrease in the number of open flame ignitions of upholstered furniture.

Response: The Bureau rejects this comment. As stated in the ISOR, the Bureau relied on available fire statistics data both nationally and for California. The United States Department of Homeland Security, U.S. Fire Administration found that the

fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Comment Summary 3: Placing requirements on the design and fire performance of upholstered furniture would prevent many, if not most, of the hundreds of deaths in the U.S. each year. As barriers would make upholstered furniture much safer, barriers may need to be specified as a design requirement to avoid assumptions that performance requirements may be met with flame retardants. Barriers are economically feasible at \$10-12 per piece of furniture. The fire science community and the upholstered furniture industry have known how to make fire-resistant furniture but have no incentive to use these methods absent a requirement to do so.

The commenters point to the direction being considered by the staff of the CPSC with regard to the 2008 Notice of Proposed Rulemaking on Upholstered Furniture Flammability “CPSC’s testing indicates significant promise for barriers as a means to address the flammability risk posed by upholstered furniture.”

Response: The Bureau rejects this comment. The Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods to keep abreast of any new information that would assist the Bureau in further protecting California consumers.

AA. In a letter dated March 25, 2013, the Fire Cause Analysis provided the following comments:

Comment Summary 1: The commenter opposes the adoption of TB 117-2013 as it addresses a single ignition scenario, associated fire risk and hazard profile while completely ignoring the importance of ignitions scenarios, as well as heat release properties of effected furniture after sustained (flaming) ignition occurs.

Response: This comment is rejected. As stated in the ISOR, the Bureau relied on available fire statistics data both nationally and for California. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling

materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Comment Summary 2: The commenter suggests that the Bureau has not considered available, economical alternatives to the proposed smoldering standard. The commenter suggested the following alternatives:

- a. A review of available FR technology for which the NAS panel found environmentally acceptable fire retardant materials on the market.
- b. Use of construction features to mitigate both flaming and smoldering ignitions which have been used in the UK for years and have reduced fire incidence and associated damage from fires measurably.
- c. The fire performance ignition criteria set forth in 16 CFR 1633.

Response: This comment is rejected. The Bureau did review alternatives as indicated in the ISOR. The Bureau determined that they are not viable alternatives at this time based on current manufacturing methods and/or are cost prohibitive. As stated in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and testing that would assist the Bureau in further protecting California consumers.

AB. In its comment letter dated March 25, 2013, GBH International, provided comments on the following:

Comment Summary 1: The steps to address the hazards represented by smoldering cigarettes are important in as much as they lead to open flame fire. The Bureau should reconsider completely eliminating open flame testing.

Response: The Bureau rejects this comment. Based on the present evaluation of current statistics, related studies, and currently available technologies, the Bureau is addressing the predominant source of upholstered furniture fire deaths which are smoldering materials. However, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 2: The proposed labeling language is misleading. The average consumer will not read the details of the regulation and will believe that the standard protects against both ignition sources.

Response: The Bureau rejects this comment. The test methods (open flame versus smoldering) are not identified on either the current or the proposed label. The label provides consumers clear notice that it meets California's flammability standard.

Comment Summary 3: The commenter does not believe that workers, the public, and the environment will benefit from the elimination of the use of flame retardant chemicals.

Response: The Bureau rejects this comment. As stated above, the Bureau clarifies its statement made in the ISOR in that there may be a benefit to the health, welfare, and environment. The Bureau has added a selected bibliography on furniture flame retardants, toxicity and health during the 15-day comment period. These documents have been added to explain why it is the Bureau's understanding that fewer flame retardant chemicals in upholstered furniture may have added benefits to consumers however it does not serve as the purpose for the proposed rulemaking.

The bibliography was added to the rulemaking file and made public in the 15-day notice, issued on August 19, 2013, and complies with the notice requirements as set forth in Government Code section 11347.1.

Comment Summary 4: The Bureau overestimates the fire safety importance of smoldering flame sources and underestimates the importance of open flame sources.

Response: The Bureau rejects this comment. As stated in the ISOR, the Bureau relied on available fire statistics data both nationally and for California. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Comment Summary 5: The proposed TB 117-2013 will reduce fire safety and lead to increasing numbers of injuries and deaths from upholstered furniture fires. TB 117-2013 will also lead to expanded use of synthetic fabrics which pass smoldering tests easily but cause severe flaming fires.

Response: The Bureau rejects this comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics

play a more important role in fire behavior performance than filling materials. With that being said, all synthetic materials are expected to comply with the new TB 117-2013 test requirements on and after January 1, 2015.

Also mentioned in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 6: The commenter recommends that the draft 2002 version of TB 117 be used to improve fire safety of upholstered furniture in terms of the problem of open flame ignition.

Response: The Bureau rejects this comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the United States Consumer Products Safety Commission (CPSC) concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Also mentioned in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

AC. In its comment letter dated March 25, 2013, Robert Mohr, provided comments on the following:

Comment Summary: To abandon the open flame test is ill-advised and short-sighted. The question was also posed as to how manufacturers will relieve themselves of the financial burden from liability lawsuits under these changes?

Response: The Bureau rejects the comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the

flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials. California remains the only state with an upholstered furniture flammability standard. Litigation risk exists, and will continue to exist under all likely future scenarios, regardless of whether TB 117 is amended. It has been demonstrated by CPSC that the open flame requirements of TB 117 do not provide substantial additional fire safety benefits when compared with other conventional construction methods. TB 117-2013 as proposed will address the primary cause of upholstered furniture fire related deaths and injuries without sacrificing safety benefits.

AD. In its comment letter dated March 20, 2013, Kelvin Shen, Ph.D. provided comments on the following:

Comment Summary 1: The commenter objects to the change from the current TB 117 and states that it is well known that non-flame retardant foam has a high fuel load and is highly flammable.

Response: The Bureau rejects this comment. As stated in the ISOR, a study was conducted by the United States Department of Commerce, National Bureau of Standards which concluded that there are no significant differences between the flame retardant foams formulated to pass TB 117 and untreated foams. These findings were consistent with another study conducted by the CPSC. CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials. Further research conducted by CPSC, concluded that flame retardant treated foam with a relatively low concentration of flame retardant chemicals actually increases the damage to cover fabrics from a smoldering cigarette relative to untreated foam.

AE. In its comment letter dated March 6, 2013, the California Conference of Arson Investigators (CCAI) provided comments on the following:

Comment Summary 1: Polyurethane foam is resistive to smoldering ignition but ignites easily and will burn vigorously when ignited with an open flame.

Response: The Bureau rejects this comment. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the CPSC concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Comment Summary 2: The test methods documenting the weight loss of the polyurethane foam when supported by a smoldering fabric are essentially meaningless because the polyurethane foam contribution is endothermic. Without

the exothermic support of a smoldering component, polyurethane foam would self-extinguish.

Response: The Bureau rejects this comment. The TB 117-2013 was modified during the 15-day comment period to remove the sections which relate to the weighing device and weighing of the test specimen. This modification provides consistency with the modifications made to Section 3.4 Pass/Fail Criteria which reflect that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of by weighing mass loss. Requiring that the mass loss be measured is redundant with the requirement that the test specimen is to meet the 45 minute test duration.

Comment Summary 3: CCAI states that the elimination of the open flame ignition test is a significant step backward. CCAI suggests that the data used in developing the proposed regulations are only estimates and should not be taken at face value. They suggest that the Bureau and the State Fire Marshal should implement a data collection plan since it would be more beneficial than the statistical data that was used.

Response: The Bureau rejects this comment. The collection of California fire data is not under the purview of the Bureau, but that of the State Fire Marshal. While the Bureau understands that fire statistics collected nationally are estimates, it is the available data that exists today. The Bureau relied on the available California and National Fire Statistics in formulating this rulemaking file.

Comment Summary 4: CCAI suggest that the current TB 117 should remain in effect until all proposed revisions are based on real-world data and not statistical estimates. A realistic time period to gather the needed factual data would mean that revisions could not occur before August 2015.

Response: The Bureau rejects this comment. In an actual fire, upholstery cover fabric is the first item to ignite and in turn exposes the foam to a much larger flame than the current small open flame testing method. Once the upholstery cover fabric burns, the foam quickly ignites. The Bureau has determined that the current standard does not adequately address the flammability performance of the upholstery cover fabric and its interactions with underlying filling materials upon ignition whether by an open flame or a smoldering source. Furthermore, flame retardant foam can actually increase smolder propensity.

Specifically, a study conducted by the United States Department of Commerce, National Bureau of Standards, concluded that there are no significant differences between the flame retardant foams formulated to pass TB 117 and untreated foams. These findings were consistent with another study conducted by the CPSC. CPSC also concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials. Further research conducted by CPSC, concluded that flame retardant treated foam with a relatively low concentration of flame retardant chemicals actually increases the damage to cover fabrics from a

smoldering cigarette relative to untreated foam.

AF. In its comment letter dated March 21, 2013, the Clariant Corporation and Green Urethanes Limited provided comments on the following:

Comment Summary: By use of Green polyurethane technology and the appropriate reactive flame retardant, it is possible to maintain fire safety by being able to continue building in resistance to cigarette and match ignition while protecting human health and the environment. The current criteria for TB 117 performance of polyurethane foams and furniture can be met with existing and available technology.

Response: The Bureau rejects this comment. In an actual fire, upholstery cover fabric is the first item to ignite and in turn exposes the foam to a much larger flame than the current small open flame testing method. Once the upholstery cover fabric burns, the foam quickly ignites. The Bureau has determined that the current standard does not adequately address the flammability performance of the upholstery cover fabric and its interactions with underlying filling materials upon ignition whether by an open flame or a smoldering source. Furthermore, flame retardant foam can actually increase smolder propensity.

Based on the present evaluation of current statistics, related studies, and currently available technologies, the Bureau is addressing the predominant source of upholstered furniture fire deaths which are smoldering materials. However, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

AG. In its comment letter dated March 20, 2013, the Alliance for Consumer Fire Safety in Europe (ACFSE) provided comments on the following:

Comment Summary: ACFSE states, "Regulating to prevent that very small proportion of fatal fires attributed to cigarette ignition, which from US data, at the most, is between 5%-10%, can only have a very limited impact on the problem, assuming that it was to be successful. If, as pointed out in NBS Monograph 173 (Babrauskas & Krasny) good cigarette resistance can mean poor small flame resistance, then it might indeed make a bad problem worse."

ACFSE suggests that TB 117 addresses the real fire problem faced by society and updating the standard would be more progressive than replacing it.

Response: The Bureau rejects this comment. A recent national study conducted by the United States Department of Homeland Security, U.S. Fire Administration, found that smoking materials are the leading cause and the greatest risk factor of upholstered furniture fires and losses today. This study determined that the fatality rate was more than seven times greater in smoking-related residential fires than non-smoking-related residential fires; the injury rate is triple that of non-smoking related fires.

In addition, the study conducted by the United States Department of Commerce, National Bureau of Standards, concluded that there are no significant differences between the flame retardant foams formulated to pass TB 117 and untreated foams. These findings were consistent with another study conducted by the CPSC. Further research conducted by CPSC, concluded that flame retardant treated foam with a relatively low concentration of flame retardant chemicals actually increases the damage to cover fabrics from a smoldering cigarette relative to untreated foam.

Bureau research confirmed that the cover fabrics and their combination with underlying filling materials impact the smoldering performance of upholstered furniture. The Bureau found that heavier smolder prone fabrics when exposed to a smoldering cigarette impart more energy to the mock-up substrates, resulting in significant weight loss of the polyurethane foams. In many cases, the polyurethane foams were totally consumed in laboratory tests. When the cover fabrics were changed to less smolder prone fabrics, smoldering resistance of the mock-up assembly significantly improved and the weight losses of the underlying foam decreased substantially. These results were consistent with the observations made by CPSC.

Lastly, the Bureau consulted the Polyurethane Foam Association (PFA) on the foam specification. Modifications to the foam specification have been made which were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members. The foam specification is a higher density to represent a more smolder prone material. This presents a more rigorous test of the cover fabric. Lower density foams which can be used in upholstered furniture are less smolder prone and will pose less of a smoldering risk.

AH. In its comment letter dated March 15, 2013, SGS is seeking clarification on the following:

Comment Summary: In regards to the filling material test, if there are several layers and different filling materials behind the cover fabric, how are the filling materials tested? Would the filling material be tested separately, as an assembly, or would only the top layer be tested?

Response: As specified in the scope of Section 1 Cover Fabric Test, the first layer of filling materials located below the cover fabric shall meet the test requirements of Section 3 Resilient Filling Material Test. Section 3.3.2 (which was renumbered to 3.2.2) specifies that if the test sample material is less than two inches thick, multiple layers are to be stacked to make up the required thickness. Further Section 3.3.3 (which was renumbered to 3.2.3) specifies that if the filling materials are less than a ½ inch thick, multiple layers are to be used to make up a one inch thick specimen and is to be combined with a one inch thick removable plywood panel to construct the two inch thick test specimen.

AI. In its comment letter dated February 28, 2013, University of California San Francisco-Office of Sustainability made comments and posed environmental questions to the Bureau. The comments submitted are as follows:

Comment Summary 1: New flammability standards should contain a prohibition on “the use of any fire retardants coating the surface of upholstery fabrics or interliners” that would apply to both manufacturers already complying with the smolder standard and those that will change their products to comply.

Response: The Bureau rejects this comment. As stated above, the Bureau does not regulate or mandate the use of flame retardant chemicals. The Bureau is charged with establishing a performance-based rather than a prescriptive standard for the flammability of upholstered furniture.

Comment Summary 2: Does the Bureau anticipate that smolder-resistant cover fabrics and/or interliners will be made of, or coated with, some chemical that will raise the same chemical concern as FRs?

Response: The Bureau rejects this comment. The Bureau’s flammability standards are performance standards and do not prescribe the use of any specific material or manufacturing methods to meet the standard. Only the performance of the material is determined as passing or failing; manufacturers determine if, and how, a material will be used in the upholstered furniture based on the materials performance. Determinations on the actual fabric, filling materials, coatings or treatments, and manufacturing methods used to comply with the standard and used in upholstered furniture are made exclusively by the manufacturer. While the Bureau does not regulate or mandate the use of flame retardant chemicals, manufacturers are predominantly using flame retardant chemicals to meet the open flame requirements of TB 117. It is the Bureau’s understanding that many manufacturers, who are no longer compelled to make materials open-flame resistant, will no longer use flame retardant chemicals in their products.

Comment Summary 3: In creating the new flammability standard, was a full risk assessment performed to identify the health impacts due to exposure to fire retardant chemicals in children versus the risk of death by fire?

Response: The Bureau rejects this comment. As described throughout the rulemaking documents, TB 117 is not now believed to have conferred a substantial fire safety benefit. A significant number of peer reviewed scientific studies have been conducted on furniture flame retardants, toxicity and health impacts. The Bureau did not perform a comparative risk assessment of the type described, however, non-flame retardant materials are specified in the TB 117-2013 standard and it is the Bureau’s understanding that many manufacturers will no longer use flame retardant chemicals in their products.

AJ. In its comment letter dated February 26, 2013, Greg Hinson, provided comments on the following:

Comment Summary: The commenter requested the Bureau consider exempting cover fabrics made from 100% synthetic materials such as polyester or polyolefin (polypropylene) and acrylic fibers.

Response: The Bureau rejects this comment. All synthetic materials are expected to comply with the new TB 117-2013 test requirements on and after January 1, 2015. While compliance with the standard is mandatory, testing remains at the discretion of the manufacturers. Manufacturers would not need to test or re-test materials, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria which can be demonstrated by using the results from historical data and comparable testing.

AK. A comment letter, dated March 20, 2013, was received from Gordon Nelson, Ph.D.. The Bureau notes that it appears the comment letter was received with one page missing. The following comments were provided:

Comment Summary 1: The commenter commended the Bureau for exempting the additional baby and infant products under Section 1374.2. The commenter further states the new standard focuses only on 27% of upholstered furniture fires, which is unacceptable.

Response: The Bureau rejects this comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. TB 117-2013 addresses the predominant source of upholstered furniture fire deaths and injuries which are smoldering materials. Further, TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR the United States Consumer Products Safety Commission concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Comment Summary 2: The commenter states that other more productive approaches exist, referring to the UK BS 5852 standard.

Response: The Bureau rejects this comment. The Bureau reviewed the UK BS 5852 standard. The Bureau determined that it is not viable alternative at this time based on current manufacturing methods and/or is cost prohibitive. As stated in the ISOR, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau believes this alternative may be both cost effective and conducive to future manufacturing methods.

Comment Summary 3: The commenter states that the Bureau need not abandon the current standard if a few currently used chemicals are at issue.

Response: The Bureau rejects this comment. TB 117-2013 addresses the flammability performance of the upholstery cover fabric which is where fires begin, whereas the current standard predominantly focuses on open flame testing of filling materials. As stated in the ISOR, the United States Consumer Products Safety Commission concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials.

Further, the Bureau develops performance-based standards and does not prescribe nor prohibit the use of any specific material or manufacturing methods to meet the standard. While many manufacturers have stated they intend not to use flame retardant chemicals under the new standard, this decision is solely at the discretion of the manufacturer.

Comment Summary 4: The commenter states that the replacement of FR foams with untested foams will result in increased peak heat release rates, resulting in hotter and faster fires.

Response: The Bureau rejects the comment. The Bureau cited several studies in the ISOR. Specifically, a study conducted by the United States Department of Commerce, National Bureau of Standards, concluded that there are no significant differences between the flame retardant foams formulated to pass TB 117 and untreated foams. Further research conducted by CPSC, concluded that flame retardant treated foam with a relatively low concentration of flame retardant chemicals actually increases the damage to cover fabrics from a smoldering cigarette relative to untreated foam.

Bureau research confirmed that the cover fabrics and their combination with underlying filling materials (PU foam) impact the smoldering performance of upholstered furniture. The Bureau found that heavier smolder prone fabrics when exposed to a smoldering cigarette impart more energy to the mock-up substrates, resulting in significant weight loss of the polyurethane foams. In many cases, the polyurethane foams were totally consumed in laboratory tests. When the cover fabrics were changed to less smolder prone fabrics, smoldering resistance of the mock-up assembly significantly improved and the weight losses of the underlying foam decreased substantially.

Comment Summary 5: The commenter states upholstered furniture has a 20-30 year lifetime and suggests the Bureau complete its planned study of barriers with the clear goal of bringing a rule forward in two-year's time.

Response: The Bureau rejects the comment. While the Bureau believes the study of barriers with an open flame testing method for inclusion in a future flammability standard may be both cost effective and conducive to future manufacturing methods; future regulatory action will be dependent on the outcome of the study.

Comment Summary 6: The Bureau should work with the ASTM E-5 Committee to modify the existing ASTM standard, thus allowing the Bureau to simply refer to it in the rule in lieu of partial adoption.

Response: The Bureau rejects this comment. Modifying the ASTM is not at the discretion of the Bureau. The ASTM standard is a copyright protected document. The Bureau has obtained copyright permission to incorporate the ASTM standard only in its entirety.

AL. On March 22, 2013, the Office of Environmental Health Hazard Assessment (OEHHA) submitted their comment as follows:

Comment Summary: OEHHA expressed neither support nor opposition to the Bureau's regulatory proposal. OEHHA provided a copy of a report relating to flame retardants to inform the Bureau's efforts to update the upholstered furniture flammability standard. The report addresses the continuing exposure to PBDEs and provides information on past and ongoing Cal/EPA and DHS activities related to PBDEs.

Response: The Bureau will accept this as information only. As the Bureau does not regulate the use of flame retardant chemicals, this comment will not be addressed as it does not fall within the scope of the proposed regulation and does not fall within the Bureau's rulemaking authority.

AM. In forty-one form letters received during February 14-March 25, 2013, comments were received by various IPEN members as follows:

Comment Summary: The commenters expressed support for the new standard but recommends that since TB 117-2013 will not prohibit flame retardant chemicals, it is important that a public statement discouraging the continued use of flame retardants in products that already meet the new standard be issued.

Response: The Bureau rejects the comment. The Bureau's flammability standards are performance-based and do not prescribe nor prohibit the use of any specific material or manufacturing methods to meet the standard. Manufacturers chose the methods and means of compliance. While the Bureau does not regulate or mandate the use of flame retardant chemicals, it is the Bureau's understanding that many manufacturers will no longer use flame retardant chemicals in their products as a means to comply with the TB 117-2013 standard.

The flammability label provides consumers notice that the product meets California's flammability standard. The official law label identifies components of a piece of furniture. Chemical components are not identified on either the flammability or official law label as chemicals are regulated by other state agencies, not the Bureau. While not mandatory, manufacturers may attach a separate label to the product for the purpose of specifying usage and/or non-usage of flame retardants.

AN. In their comment letter received March 26, 2013, the American Cancer Society Cancer Action Network (ACS CAN) provided comments as follows:

Comment Summary: ACS CAN state that they strongly support the new flammability standard however; they contend that the regulatory package would be strengthened if the Initial Statement of Reasons included scientific studies regarding the harmful effects of PBDE's. These studies would provide the foundational public health and safety rationale for the proposal. ACS CAN provided a list of suggested references to include in the ISOR.

Response: The Bureau rejects this comment. However, the Bureau added a selected bibliography on furniture flame retardants, toxicity and health as a result of a comment received during the 45-day comment period (see Comment W). This bibliography was added to the rulemaking file and made public in the 15-day notice, issued on August 19, 2013. The bibliography supports the Bureau's understanding that there may be an ancillary added benefit however it does not serve as the purpose for the proposed rulemaking. The specific purpose and rationale for the proposed rulemaking and the material relied upon is detailed within the ISOR.

AO. In their comment letter received on March 26, 2013, a public member provided comments as follows:

Comment Summary: The commenter suggests that the ISOR should explain that the rationale for the proposal is to benefit individuals who purchase furniture that no longer introduces persistent toxic chemicals to their home environments. These benefits would include reduced health impacts and reduced remediation costs incurred as a result of having to rid these chemicals from their homes. The commenter believes that the state is likely to assist in the removal of such substances as a result of the implementation of the current standard.

Response: The Bureau rejects this comment. While the Bureau understands that the non-FR treated furniture may serve as an ancillary benefit, the specific purpose for the regulatory proposal and the material relied upon is explained within the ISOR.

In addition, the Bureau's flammability standards are performance-based standards and do not prescribe nor prohibit the use of any specific material or manufacturing methods to meet the standard. While many manufacturers have stated they intend not to use flame retardant chemicals under the new standard, this decision is solely at the discretion of the manufacturer.

Objections or Recommendations received during the Public Hearing on March 26, 2013:

AP. The National Fire Protection Association provided oral and written comments on the following:

Comment Summary 1: NFPA feels strongly that a fully comprehensive fire safety regulation of upholstered furniture must address the full spectrum of major fire scenarios, including the open flame scenarios. They also state that the test method results must reflect full scale furniture behavior in these scenarios. Research by NIST and CPSC suggest that a component smoldering test alone does not adequately reflect this behavior.

Response: The Bureau rejects this comment. Based on the present evaluation of current statistics, related studies, and currently available technologies, the Bureau is addressing the predominant source of upholstered furniture fire deaths which are smoldering materials. However, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 2: The work at CPSC also strongly suggests that open flame ignition resistance can be provided using fire-barrier system rather than flame retardants; further work at the Environmental Protection Agency and NIST is underway to identify a next generation of environmentally acceptable flame retardants.

Response: The Bureau accepts this comment. The Bureau will continue to evaluate these and other appropriate technologies and test methods while conducting a two-year study on emerging fire barrier technologies that can be used with an open flame test method.

AQ. Mr. John McCormack provided oral and written comments on the following:

Comment Summary 1: Any standard adopted by the State of California for addressing the fire hazards of upholstered furniture must include both smoldering tests addressing the hazards of cigarettes and other smoking materials (TB 117-2013) and a small-flame test addressing the potential for ignition by accidental or intentional adult behavior or child's play, from candles, matches, lighters and other sources emitting an open flame.

Response: The Bureau rejects this comment. As stated in the ISOR, the predominant source of upholstered furniture fires and losses today are from smolder ignition sources, primarily smoking materials. The United States Department of Homeland Security, U.S. Fire Administration found that the fatality rate was more than seven times greater in a smoking related fire than non-smoking related residential fires; the injury rate is triple that of a non-smoking related fires. In an actual fire, upholstery cover fabric is the first item to ignite and in turn exposes the foam to a much larger flame than the current small open flame testing method. Once the upholstery cover fabric burns, the foam quickly ignites.

Based on the present evaluation of current statistics, related studies, and currently available technologies, the Bureau is addressing the predominant source of

upholstered furniture fire deaths which are smoldering materials. However, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

Comment Summary 2: In addition, the open-flame standard must be improved over the current TB 117 to provide further reduction in average fire growth and a longer window of escape time for occupants involved in a furniture fire. Without a comprehensive set of flaming and smoldering standards, California and American consumers will not be adequately protected from furniture fires and Governor Brown's mandate will not be achieved.

Response: The Bureau accepts this comment. As stated in the ISOR, the Bureau understands that fire-barrier technology is still evolving and that fire data, trends and studies of residential fires continue to emerge. In view of that, the Bureau will continue its ongoing efforts to evaluate and re-evaluate its flammability standards through research, testing and keeping abreast of new technologies that would assist the Bureau in further protecting California consumers. As part of this ongoing effort, the Bureau will commence a two-year study on available and emerging fire barrier materials and other relevant technologies to examine their open flame fire resistant properties, to monitor and evaluate cost effectiveness, and determine their applicability in open flame testing of upholstered furniture. These efforts will be in-conjunction with other governmental agencies and interested stakeholders.

As materials become more conducive to upholstered furniture manufacturing processes and they become more cost effective and readily available on the market, the Bureau will consider these and other methods for future regulatory changes if they benefit consumer protection.

Comment Summary 3: The CPSC plans a two-year study on available and emerging fire barrier materials for furniture. Given recent information (27)(28)(29) from CPSC and NIST, as well as historical research by the Bureau and third party technical organizations, regarding the efficacy of a test approach including fire-protective barrier technology, the Bureau should follow CPSC's standards development process and evaluate the most recent testing data and information on open-flame resistance technologies involving barriers, before adopting changes to the current standard.

Response: The Bureau accepts this comment. As stated in the ISOR, the Bureau understands that fire-barrier technology is still evolving and that fire data, trends and studies of residential fires continue to emerge. In view of that, the Bureau will continue its ongoing efforts to evaluate and re-evaluate its flammability standards through research, testing and keeping abreast of new technologies that would assist the Bureau in further protecting California consumers. As part of this ongoing effort, the Bureau will commence a two-year study on available and emerging fire barrier materials and other relevant technologies to examine their open flame fire resistant properties, to monitor and evaluate cost effectiveness, and determine their

applicability in open flame testing of upholstered furniture. These efforts will be in-conjunction with other governmental agencies and interested stakeholders.

As materials become more conducive to upholstered furniture manufacturing processes and they become more cost effective and readily available on the market, the Bureau will consider these and other methods for future regulatory changes if they benefit consumer protection.

Comment Summary 4: In addition to monitoring the evolution of new barrier technologies for reducing furniture fires, California should continue to monitor and study the development and implementation of current and emerging fire retardant technologies applicable to the furniture market, which are safe, effective and sustainable. These dual strategies would help to ensure that fire safety is not compromised while the Bureau considers more effective approaches to protect upholstered furniture from the hazards of open-flame and smoldering ignition sources. Adoption of a more effective open-flame test would be a major accomplishment, rather than the simple adoption of a 1990 cigarette smoldering test alone.

Response: The Bureau rejects this comment. Based on the present evaluation of current statistics, related studies, and currently available technologies, the Bureau is addressing the predominant source of upholstered furniture fire deaths which are smoldering materials. However, the Bureau will conduct a two-year study on emerging fire barrier technologies that can be used in upholstered furniture with an open flame test method. The Bureau will continue to evaluate these and other appropriate technologies and test methods.

AR. The National Textile Association (NTA) provided oral and written comments on the following:

Comment Summary 1: NTA recommends that the TB 117-2013 cover fabric test char length measurements be done as specified in the ASTM E1353-08a standard. Further that changing the char length measurements as currently proposed will have an adverse impact relative to the National Fire Protection Associations (NFPA) 260 test method.

Response: The Bureau accepts this comment. Subsection 1(b) and Section 2.4, Subsection 1(b) of TB 117-2013 were modified to make specific that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of measuring the char length in any direction. This change mirrors the ASTM standard and as such does not impact the NFPA 260 test method.

Comment Summary 2: NTA comments on the testing costs and that the main concern is that California will require all cover fabric styles sold after the effective date of implementation to be re-tested using a fabric test other than ASTM E1353-08a. NTA recommends that all COM be made exempt from TB 117-2013 and if not, suggest that all existing styles of COM cover fabrics produced on or after the effective

date be covered by ASTM E1353-08a or UFAC until that style is no longer produced; further that new styles manufactured on or after the effective date shall comply with TB 117-2013.

Response: The Bureau rejects this comment. The Bureau has not proposed in this rulemaking file any changes to the use of COM fabrics or the COM labeling requirements. As stated in the Initial Statement of Reasons manufacturers would not need to test or re-test materials, including COM fabrics, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria which can be demonstrated by using the results from historical data and comparable testing.

January 1, 2015 is the proposed mandatory compliance date for the new standard. While compliance with the standard is mandatory, testing remains at the discretion of the manufacturers. Manufacturers would not need to test or re-test materials, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria which can be demonstrated by using the results from historical data and comparable testing. All **new** fabrics that are produced **on and after** January 1, 2015 are expected to comply with the new TB 117-2013 test requirements.

Comment Summary 3: NTA recommends the Relative Humidity (RH) prior to testing be 65% RH or less.

Response: The Bureau rejects the comment. As stated in the ISOR, it is important that all tests be performed under well-defined and standardized conditions, which includes the RH. This ensures that the external parameters do not impact the test results. The proposed RH was used in the precision and bias study which validated the test methods and testing conditions to produce reliable and reproducible results.

Comment Summary 4: NTA believes the 24 hour conditioning time required is excessive and recommends that it be reduced to 4-6 hours.

Response: The Bureau rejects this comment. The 24 hour conditioning time is specified to ensure all sorts of component materials reach the equilibrium conditions prior to testing. While thinner materials may reach temperature and humidity equilibrium conditions in a few hours, thicker materials will need more time to reach the equilibrium conditions. This is especially more prevalent for moisture content of moisture absorbing-desorbing materials such as cotton and other natural fibers. In addition, ASTM E1353-08a^{e1} also requires 24 hours of conditioning time.

AS. The U.S. Consumer Product Safety Commission (CPSC) provided oral and written comments on the following:

Comment Summary 1: CPSC recommends removing the option to use the draft enclosure since it limits the available oxygen for the test materials to burn, which artificially lessens the severity of the test for smolder-prone materials.

Response: The Bureau accepts this comment. The Bureau agrees that the draft enclosure restricts airflow to the test specimen which may affect the burning behavior of the test specimen. In addition, allowing the draft enclosure to be used optionally adds variations to the test results. During the 15-day comment period, the Bureau modified the TB 117-2013 to remove the references to draft enclosure from the standard.

Comment Summary 2: CPSC states that the vertical char length measurement is inappropriate since smoldering can progress in any direction. The mass loss performance measure as used in the Resilient Filling Materials Test should be applied to the Cover Fabric and Material Test as well.

Response: The Bureau rejects this comment. Although in theory a weight loss criteria may be the best indicative of fire performance of a test specimen, in practice most smoldering specimens do not register measurable weight losses within the time frame of the test unless and until all charred materials are removed. However, if a smoldering specimen is manually extinguished (e.g. with water) accurate measurement of the weight loss can be impractical even after long periods of drying. Samples with weight loss ($\geq 20\%$) will also fail one or both of char length and 45-minute smoldering criteria. During the 15-day comment period, the Bureau noticed that Section 3 pass/fail criteria was modified to reflect that the pass or fail of a test specimen would be determined by measuring the vertical char length instead of by weighing the mass loss.

Comment Summary 3: Evaluating smoldering ignition risk of resilient filling material by covering it with a smolder-resistant fabric will not adequately assess the smoldering resistance of a resilient filling material. A standard test fabric that exhibits a high smoldering potential will provide a better indication of the smolder propensity of the resilient filling material.

Response: The Bureau rejects this comment. This test is designed to disqualify the most smolder prone filling materials that fail even with a smolder resistant cover. No modifications were made based on this comment.

Comment Summary 4: CPSC believes that the Standard Polyurethane Substrate needs additional specifications.

Response: The Bureau accepts this comment. The Bureau consulted the PFA on the foam specification. During the 15-day comment period, modifications to the foam specification were made which were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members. As stated in the ISOR, the foam specification is a higher density to represent a more smolder prone material. This presents a more rigorous test of the cover fabric. Lower density foams which can be used in upholstered furniture are less smolder prone and will pose less of a smoldering risk.

Comment Summary 5: The results of the validation testing performed by CPSC demonstrated that bench-scale testing was not an adequate predictor of real furniture flammability performance in the smoldering ignition tests.

Response: The Bureau rejects this comment. We understand that decades of bench-scale and full-scale furniture flammability testing (both open flame and smoldering tests) has demonstrated that the full-scale tests are the best predictor of real life fire performance of furniture. However, it is also well accepted that, except in certain niche areas such as high risk occupancies, full-scale tests are not economically and practically feasible. It is true that bench-scale tests may never fully predict the real life flammability performances of upholstered furniture, but they provide an effective tool to screen out the worst performers. In all areas of flammability testing the materials that exhibit border-line performances cause more than usual uncertainties in the test results. That is due to the nature of the materials and/or products not the fault of a test method. With borderline performing materials it is always advisable to practice caution and use barriers that improve the fire performance of the end products. A comprehensive study conducted by the Bureau, entitled Correlation Study of Small Scale Furniture Mock-up Smoldering Tests to Full Scale Cigarette Tests, demonstrates the performance of these tests and was added to the rulemaking file and made public in the 15-day notice, issued on August 19, 2013. This study provides further evidence of similar testing results for small scale and full scale testing.

AT. The Natural Resources Defense Council (NRDC) provided oral and written comments. A written comment was also submitted conjointly with Environment California, Planning and Conservation League, Sierra Club California, Communications Workers of America, Action Now, Coalition for Clean Air, Just Transition Alliance, Silicon Valley Toxics Coalition, California Professional Firefighters, Worksafe, IDEPSCA, California NOW, California Communities against Toxics, Californians for a Healthy and Green Economy, Health Officers Association of CA, CA Healthy Nail Salon Collaborative, Bayview Hunters Point Community Advocates on as follows:

Comment Summary: The commenters urge the Bureau to prohibit the sale of TB 117 compliant furniture within one year after the new standard goes into effect.

Response: The Bureau rejects this comment. As stated in the ISOR, furniture retailers may sell through their current inventory of products without the restriction of a sell by date. Any new products purchased by retailers, on and after the mandatory compliance date, must meet the requirements of the new TB 117-2013 standard. This is necessary to reduce the cost of compliance for both the manufacturers and retailers. During the 15-day comment period, the mandatory compliance date was modified from July 1, 2014 to January 1, 2015 to provide a one-year transition period.

AU. The Center for Environmental Health (CEH) provided oral and written comments on the following:

Comment Summary 1: CEH is seeking clarification as to whether manufacturers are permitted to manufacture products in accordance with TB 117-2013 prior to the proposed mandatory compliance date of July 1, 2014.

Response: The Bureau accepts this comment. The Bureau anticipates that the regulatory proposal will become effective on January 1, 2104. Once effective, manufacturers may begin manufacturing furniture products in accordance with TB 117-2013. Manufacturers that are in need of time to effectuate the new flammability requirements must comply by the mandatory compliance date. This date was modified from July 1, 2014 to January 1, 2015 during the 15-day comment period.

Comment Summary 2: CEH is urging the Bureau to limit retailers to one-year after the mandatory compliance date in which they may continue to sell inventory compliant with the TB 117 standard.

Response: The Bureau rejects this comment. As stated in the ISOR, furniture retailers may sell through their current inventory of products without the restriction of a sell by date. Any new products purchased by retailers, on and after the mandatory compliance date, must meet the requirements of the new TB 117-2013 standard. This is necessary to reduce the cost of compliance for both the manufacturers and retailers. During the 15-day comment period, the mandatory compliance date was modified from July 1, 2014 to January 1, 2015 to provide a one-year transition period.

AV. Lawrence Berkeley National Laboratory provided oral and written comments on the following:

Comment Summary 1: The Bureau should perform a full review before considering a barrier standard which is to consider the cost-benefit analysis, examination if the new standard would prevent the use of toxic fire retardants, scaling issues. The Bureau should also engage with other California agencies and legislative bodies to consider new laws and regulations regarding toxic flame retardants and flammability standards.

Response: The Bureau accepts this comment. As stated in the ISOR, the Bureau understands that fire-barrier technology is still evolving and that fire data, trends and studies of residential fires continue to emerge. In view of that, the Bureau will continue its ongoing efforts to evaluate and re-evaluate its flammability standards through research, testing and keeping abreast of new technologies. As part of this ongoing effort, the Bureau will commence a two-year study on available and emerging fire barrier materials and other relevant technologies to examine their open flame fire resistant properties, to monitor and evaluate cost effectiveness, and determine their applicability in open flame testing of upholstered furniture. These efforts will be in-conjunction with other governmental agencies and interested stakeholders.

As materials become more conducive to upholstered furniture manufacturing processes and they become more cost effective and readily available on the market,

the Bureau will consider these and other methods for future regulatory changes if they benefit consumer protection.

AW. In oral comments on March 26, 2013, Walt Bader, provided the following comment:

Comment Summary: The Bureau should add language which allows for medical exemption for consumers to purchase furniture without the application of any type of chemical retardant; a similar exemption to what the CPSC has done for mattresses.

Response: The Bureau accepts the comment. Section 1374.2(d) was added for the specific purpose of establishing the criteria that an article of upholstered furniture is to meet so that it may be considered exempt from flammability standards. This addition is necessary to allow articles of furniture to be manufactured in accordance with a health care professional's written prescription, or with other comparable written medical therapeutic specification, that would be exempt from having to meet flammability standards. This is intended to ensure that the flammability requirements are not the cause of hindering or compromising recovery from a medical condition. This addition also defines the term "health care professional" to make clear who would be qualified to write a prescription that would be considered valid and acceptable under this section.

Summary of Comments Received During the 15-Day Comment Period:

The Bureau received 17 comments during the 15-day comment period. Of those comments, 5 expressed support for the modifications made to the regulatory proposal.

Objections or Recommendations/Responses

AX. In a comment letter dated September 3, 2013, the Natural Resources Defense Council (NRDC) provided comments on the following:

Comment Summary: The NRDC has expressed that they strongly support the implementation of TB 117-2013. As the modifications made to the regulatory proposal have extended the mandatory compliance date to January 1, 2015, they are urging the Bureau to make it unambiguously clear that manufacturers may voluntarily comply with TB 117-2013 before January 1, 2015.

Response: The Bureau rejects this comment. The mandatory compliance date was modified from July 1, 2014 to January 1, 2015 during the 15-day comment period. The Bureau anticipates that the regulatory proposal will become effective on January 1, 2014 and manufacturers must comply by the mandatory compliance date of January 1, 2015.

AY. In a comment letter dated August 30, 2013, BIFMA provided comments. The comments that are repetitive to those submitted during the 45-day comment

period were responded to above in the 45-day comment section of the Final Statement of Reasons (see Comment U). The comments specific to the 15-day notice are as follows:

Comment Summary 1: “What is considered ‘decking materials’? Is it limited to fabric webbing? What about wire mesh products?”

Response: Decking material and the applicability for testing was specified in TB 117-2013 under Section 1 Scope (sub-section 1.4.4) and under Section 3 Terminology (sub-section 3.5). As noted, the decking material test applies only to resilient decking materials. Fabric webbing is considered a resilient material; wire mesh products are not considered resilient materials.

Comment Summary 2: The standard polyurethane foam substrate appears to be too tightly defined and a recommendation to modify the foam specification was made.

Response: The Bureau rejects the comment. The Bureau consulted the Polyurethane Foam Association (PFA) on the foam specification. Modifications to the foam specification have been made which were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members. As stated in the ISOR, the foam specification is a higher density to represent a more smolder prone material. This presents a more rigorous test of the cover fabric. Lower density foams which can be used in upholstered furniture are less smolder prone and will pose less of a smoldering risk.

AZ. In its comment letter received on September 3, 2013, the CCAI make the following comments:

Comment Summary 1: CCAI comments on the public comments made at the April 2013 Advisory Council meeting. Specifically that the Bureau and State Fire Marshal should implement a fire data collection plan on July 1, 2013 and for a period of two years.

Response: The Bureau rejects the comment. This comment is repetitive and was responded to in the above 45-day comment section of the Final Statement of Reasons. See Comment AE.

Comment Summary 2: CCAI comments that the latest modified text and document have omitted mention of the two year barrier study.

Response: The Bureau rejects this comment and provides the following clarification. Only modifications to the regulatory package are noted in the 15-day notice documents. The two-year barrier study was not modified in anyway. The reference to the two-year barrier study is part of the Final Statement of Reasons.

BA. In its comment letter dated August 29, 2013, Judith and Walter Robinson provided the following comments:

Comment Summary: The regulation should not be delayed and should be put into effect no later than July 1, 2014.

Response: The Bureau rejects this comment. The Bureau modified the date of mandatory compliance from July 1, 2014 to January 1, 2015 to provide sufficient time for compliance. However, manufacturers may begin manufacturing furniture products in accordance with TB 117-2013 once the regulation is adopted, which is anticipated to be in January 1, 2014.

BB. In its comment letter submitted August 29, 2013, the GBH provided comments. The comments that are repetitive to those submitted during the 45-day comment period were responded to above in the 45-day comment section of the Final Statement of Reasons (see Comment AB). The comments specific to the 15-day notice are as follows:

Comment Summary 1: Cutting off testing after only 45 minutes will lower the probability of identifying the fire hazard associated with some slow burning smoldering materials.

Response: The Bureau rejects this comment. As stated in the addendum to the ISOR, the proposed pass/fail criteria consist of a vertical char length and a 45-minute continuous smoldering duration. Numerous laboratory tests on specimen mockups have demonstrated that the combination of these two criteria adequately evaluates the smoldering resistance of the mockup. The test results have demonstrated that if the char depth in other directions, including inside the filling substrate and down to the crevice, exceeds the limit, the smoldering will have continued beyond the 45 minute time duration that constitutes a failure. Therefore, in such a case, even if the vertical char length does not exceed the pass/fail limit, the continued smoldering time will.

BC. In its comment letter dated August 30, 2013, Gordon Nelson, Ph.D. provided comments. The comments that are repetitive to those submitted during the 45-day comment period were responded to above in the 45-day comment section of the Final Statement of Reasons (see Comment AK). The comments specific to the 15-day notice are as follows:

Comment Summary 1: The commenter claims that the requirements constitute “fire retardant requirements” are false and misleading given that the standard is a cigarette smolder resistance test only and not a comprehensive flammability assessment.

Response: The Bureau rejects this comment. “Fire retardant” was added to this section as it provides consistency with the provisions of Business and Professions Code Section 19161(c) which states that all seating furniture sold or offered for sale by an importer, manufacturer, or wholesaler for use in this state, including any seating furniture sold to or offered for sale for use in a hotel, motel, or other place of public accommodation in this state, and reupholstered furniture to which filling materials are

added, shall be fire retardant and shall be labeled in a manner specified by the bureau.

In addition, the test methods (open flame versus smoldering) are not identified on either the current or the proposed label. The label provides consumers clear notice that it meets California's flammability standard.

Comment Summary 2: The new Standard Polyurethane Foam substrate is a common upholstery foam. From a test standpoint a foam of higher smolder propensity might be in order to test more against worse case.

Response: The Bureau rejects this comment. The Bureau consulted the PFA on the foam specification. Modifications to the foam specification have been made which were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members. The foam specification is a higher density to represent a more smolder prone material. This presents a more rigorous test of the cover fabric. Lower density foams which can be used in upholstered furniture are less smolder prone and will pose less of a smoldering risk.

BD. In a comment letter dated September 3, 2013, Kurt A. Reimann provided comments. The comments specific to the 15-day notice are as follows:

Comment Summary 1: It would be better not to reference the ASTM standard at all, but rather write out the entire procedure as the Bureau feels it should be written into TB 117-2013.

Response: The Bureau rejects this comment. The ASTM standard is a copyright protected document. The Bureau has obtained copyright permission to incorporate the ASTM standard only in its entirety.

Comment Summary 2: Replacing "test requirements" with "fire retardant requirements" in Section 1373.2 and Section 1374(a) gives the impression that there are specific requirements for fire retardant materials, e.g., flame retardants. The word "test" should be used to be more specific and less confusing.

Response: The Bureau rejects this comment. The changes made to this section resulted from a comment (see Commenter G) received during the 45-day comment period stating that the regulatory language conflicted with the language within the standard. The modification made to these sections merely removes the conflicting language (the word "test") so that the regulation and the standard concur. The modified language seeks to clarify that resilient filling materials must be compliant with the fire retardant standards as set forth in TB 117-2013 in general, whether by passing the Resilient Filling Material test or by being coupled with a barrier that has passed the Barrier Materials test.

'Fire retardant' does not necessarily mean 'resistant to open flame.' Rather, the abundant legislative history available indicates that the Legislature intended to give

the Bureau wide latitude in defining what 'fire retardant' means. Please refer to the discussion set forth in the paragraph entitled "The 2001 Amendment" in the response to Comment Y within this Final Statement of Reasons. Articles that are ignition-resistant to a smoldering source are fire retardant because they resist fire that results from a smoldering source.

Also, 'fire retardant' was added to these sections as it provides consistency with the provisions of Business and Professions Code Section 19161(c) which states that all seating furniture sold or offered for sale by an importer, manufacturer, or wholesaler for use in this state, including any seating furniture sold to or offered for sale for use in a hotel, motel, or other place of public accommodation in this state, and reupholstered furniture to which filling materials are added, shall be fire retardant and shall be labeled in a manner specified by the bureau.

Comment Summary 3: In regard to subsections 2.3.1 and 2.3.2, the use of 2 in. of polyurethane foam substrates for this barrier material test should work well with thin, sheet type barriers but when used with high loft barriers assembling the mock up will be a challenge. Consider an alternate test method like the small open flame test of barrier materials on a flat surface with PU foam above the barrier as had been considered in the past by the Bureau. an alternative test method should be considered like the small open flame test of barrier materials on a flat surface with PU foam above the barrier as had been considered in the past by the Bureau.

Response: The Bureau rejects this comment. The Bureau used two polyester batting barriers ½" and 1" thick in the P&B round robin tests. Constructing the samples was not a problem at all. Even for thicker high loft barriers, the mockup test specimen can be constructed the same way. In such a case, if the seat/back cushions of the mock up "bulge out" and are not straight and flat, that will be due to the nature of the test materials as it will be in an actual furniture. In any case, the mock up resembles the form and shape of the layering in the actual furniture.

Comment Summary 4: In regard to Sections 3.3 and 3.4, the elimination of mass loss as a pass/fail criterion in favor of a vertical char length criterion is a major mistake.

Response: The Bureau rejects this comment. The Bureau is well aware that in principle, mass loss is a better representation of fire performance of a test specimen. However, mass loss measurement in smoldering tests is often not practical for several reasons: (1) Mass loss is often very low and hard to record in most smoldering tests. Often, by the time the mass loss is noticeable and measureable, the specimen has already failed the test due to excessive and growing smoldering; (2) Post-test measurement of the mass loss, i.e. after terminating a test and removing the charred materials, requires use of an extinguishing agent such as water. This significantly disturbs the test specimen and will require extended period of time (more than one day) for the specimen to dry out and the mass loss can be measured and recoded, still with little certainty; and (3) Numerous test results, including the P&B results have demonstrated that the combination of the char length and the 45-minute

time limit is sufficient to reliably determine the smoldering performance of the furniture mockups.

Comment Summary 5: By definition decking material is on the underside of cushions or chair assemblies. Testing the cigarette smoldering resistance of decking by putting a cigarette on top of the decking does not make sense and should be rethought.

Response: The Bureau rejects this comment. The Bureau added the decking material test since cigarettes may fall through the gap between the seat cushion and its surrounding vertical surfaces and, at least in part, land on the decking material. In addition, loose cushions tend to be moved around and even sometimes be removed from chairs and/or sofas. Since the decking materials are often different from the chairs filling materials, we determined that it was necessary to ensure that the decking area can also resist smoldering ignition.

Comment Summary 6: NIST intends to conduct a round of tests of a number of cigarettes against a cigarette evaluation test procedure; it is premature to specify other than the NIST SRM cigarette until this work has been complete.

Response: The Bureau rejects this comment. In the absence of Pall Mall cigarettes, the NIST SRM 1196 appears to be the only viable cigarette that is available for smoldering tests at this time. However, the Bureau did not intend to lock the standard into one single brand of standard cigarette and will allow use of other standard cigarettes should they become available in the future.

Comment Summary 7: The standard Polyurethane Foam Substrate characterization is a significant improvement over that presented in earlier versions of TB 117. A definition of “NOP content” needs to be added.

Response: The Bureau accepts this comment. As the foam specifications were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members, the term ‘NOP’ was deemed as a recognized term used by industry. However, to ensure that the specifications are clear, the Bureau has made the editorial change to show its meaning in its unabbreviated form which is Natural Oil Polyols.

Comment Summary 8: It is confusing to have struck the words “Flame Retardance” from 1373.2 while still using the old TB 116 title with the words “Flame Retardance”. Changing the TB 116 title in 1374(b) would be less confusing.

Response: The Bureau rejects this comment. This comment is not specifically related to the modifications made during the 15-day notice and therefore will not be addressed.

BE. In a comment letter dated September 3, 2013, NAFRA provided comments. The comments that are repetitive to those submitted during the 45-day comment

period were responded to above in the 45-day comment section of the Final Statement of Reasons. The comments specific to the 15-day notice are as follows:

Comment Summary 1: “Without a description or identity of NOP, the regulated entities would be unable to determine whether their “Standard Polyurethane Foam Substrate” complies with the requirements.”

Response: The Bureau accepts this comment. As the foam specifications were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members, the term ‘NOP’ was deemed as a recognized term used by industry. However, to ensure that the specifications are clear, the Bureau has made the editorial change to show its meaning in its unabbreviated form which is Natural Oil Polyols.

Comment Summary 2: A modification that broadens the scope of the regulation as with the modification of Section 1373.2, which deleted the term “test” and adds “fire retardant”, is beyond the scope of the original regulation. Accordingly, under the APA, the modified proposal is not eligible for 15-day notice.

Response: The Bureau rejects this comment. A 15-day notice is appropriate for the proposed modified language because it complies with Government Code section 11346.8(c) in that it is sufficiently related to the original text that the public was adequately placed on notice that the change could result from the originally proposed regulatory action. The fire retardant standard⁵ that is the subject of this rulemaking file, TB 117-2013, is made up of several different tests: the Cover Fabric test (Section 1), the Barrier Materials test (Section 2), the Resilient Filling Material test (Section 3), and the Decking Material test (Section 4).

Section 3.1 (“Scope”) of the Resilient Filling Material test states, in part: “Resilient filling materials that fail the test described in this section can be used in upholstered furniture if a barrier (interliner) material that passes Section 2 of this test method is used between the cover fabric and the filling materials.” *So by the Resilient Filling Material test’s own terms*, a resilient filling material that fails the Resilient Filling Material test could still be used with a barrier that has passed the Barrier Materials test and the resulting piece of upholstered furniture would be considered TB 117-2013 compliant. This provision was part of the originally noticed language and remains unchanged.

Section 1373.2 (“Flammability; Flexible Polyurethane Foam”) is one of the regulatory sections within this rulemaking file that incorporates TB 117-2013 by reference. The

⁵ ‘Fire retardant’ does not necessarily mean ‘resistant to open flame. Rather, the abundant legislative history available indicates that the Legislature intended to give the Bureau wide latitude in defining what ‘fire retardant’ means. Please refer to the discussion set forth in the paragraph entitled “The 2001 Amendment” in the response to Comment Y within this Final Statement of Reasons. Articles that are ignition-resistant to a smoldering source are fire retardant because they resist fire that results from a smoldering source.

originally-noticed version of Section 1373.2 essentially states that resilient materials must pass the Resilient Materials test. As pointed out above, this is not necessarily true. The modified language seeks to clarify that resilient filling materials must be compliant with the fire retardant standards as set forth in TB 117-2013 in general, whether by passing the Resilient Filling Material test or by being coupled with a barrier that has passed the Barrier Materials test. In the Amended ISOR, this was characterized as a broadening of scope. A better characterization of this modification would be that it is intended to make clear to its reader the broader scope of acceptable results that has existed within TB 117-2013 since originally noticed. Because the proposed modification serves to better reflect the content of TB 117-2013, and because the portion of the standard at issue within TB 117-2013 remains unchanged, the modification is sufficiently related to the original text and could reasonably result from it. As such, a 15-day notice is appropriate.

Comment Summary 3: The Bureau failed to establish if, or how, the extensive additional reference materials (specifically the bibliography and the correlation study) included in the modification are sufficiently related and has not explained how the Bureau may rely on these additional materials. Therefore, a 15-day notice is not appropriate under the APA.

Response: The Bureau rejects this comment. Both the bibliography and the correlation study are most properly addressed within the FSOR as they were added as a result of a comment received during the 45-day comment period (see Comments W and AS). The bibliography supports the Bureau's understanding that there may be an ancillary added benefit; the correlation study provides further evidence of similar testing results for small scale and full scale testing. The documents added to the rulemaking file during the 15-day comment period do not serve as the purpose for the proposed rulemaking. The specific purpose and rationale for the proposed rulemaking and the material relied upon is detailed within the ISOR and presented during the 45-day comment period. Therefore both documents were duly noticed pursuant to Government Code section 11347.1.

Comment Summary 4: Although the Bureau recognizes that materials other than flexible polyurethane foam can be used as resilient filling material, the record fails to demonstrate that the specified foam is actually superior in creating a smoldering condition for a given cover fabric versus the myriad of other fill materials a furniture manufacturer may use.

Response: The Bureau rejects this comment. The Bureau consulted the PFA on the foam specification. Modifications to the foam specification have been made which were developed by the PFA Executive Committee and peer reviewed by PFA manufacturing and supplier members. The foam specification is a higher density to represent a more smolder prone material. This presents a more rigorous test of the cover fabric. Lower density foams which can be used in upholstered furniture are less smolder prone and will pose less of a smoldering risk.

Comment Summary 5: In regards to Annex A, it is questionable how one could conduct a test when the air flow is both “zero” and between 4-40 ft/min at the same time at the same location.

Response: The Bureau rejects this comment. The air flow at the test location must be such that it does not disturb (enhance) the smoldering combustion of the test specimen. Even without any external air movement, the smoldering process by itself creates a natural convective vertical flow upwards at very low velocity that increases as burning intensifies. “Zero” air velocity at the test specimen, as defined in Note 2, is indicated by an undisturbed vertical smoke plume of 6 inches, moving upwards. Air velocity in other directions must be practically zero or at the lowest range of the air flow measurement devices. The lower range of the specified airflow rate (0.02 m/s) is a near zero airflow rate condition. Also note that the condition described in Note 2 is “recommended” not required.

Comment Summary 6: NAFRA states that the proposed regulation considerably expands the number of items that are exempt from flammability requirements and expands those that are exposed to a greater fire risk. The potentially cumulatively considerable impact must be analyzed as required by CEQA.

Response: The Bureau rejects this comment. Although the proposed regulations do expand the number of items that are exempt from flammability requirements, the Bureau does not agree that there would be a greater fire risk. As stated in the ISOR, the Bureau has found that the infant and baby items contain a much lesser fuel load content and are subject to flammability standards unnecessarily as they are not inclined to pose a serious fire hazard. This is also likely with the articles of furniture that would become exempt with a written prescription. The most commonly used material that would be used in this instance would be natural materials such as leather and wool. These materials are inherently smolder resistant and do not pose a serious fire hazard. In addition, the Bureau anticipates that the request for exemption from flammability standards based on a consumer’s medical need would be minimal.

BF. In a comment letter dated September 3, 2013, the Joint Industry provided comments. The comments that are repetitive to those submitted during the 45-day comment period were responded to above in the 45-day comment section of the Final Statement of Reasons. The comments specific to the 15-day notice are as follows:

Comment Summary 1: The Joint Industry applauds the Bureau’s initiative to undertake and establish a robust and acceptable precision and bias statement for the proposed however, the report does not include the Bureau’s interpretation of the precision and bias study and the implications of the results are not discussed in the regulation or supporting documents.

Response: The Bureau accepts this comment. The results from the P&B study fully support the proposed standard and the latest modifications to it.

Comment Summary 2: While reviewing the P&B study related to the filling material test, “We ask the Bureau to clarify for the record the details and reasoning of this testing design. We request the Bureau provide additional testing of non-FR treated foam under TB 117-2013.”

Response: The Bureau accepts this comment. The material that was used in Section 3 of the P&B study happened to be a fire resistant (rayon based) batting barrier material that is typically used in mattresses that pass 16 CFR 1633 and can be used in furniture as well. This material is rather smolder prone. That is why in the P&B Section 3 tests (filling + Standard Type I cover fabric) this material performed in a border-line fashion; some specimens failed, some specimens passed as expected. The percentage of pass or fail was not indicative of the test method but due to the nature of this material. If this happened in the real world, all it entails would be that it is best to use a barrier under the cover fabric when this material is used as a fill. The barrier will only have to pass Section 2 of TB 117-2013. Bureau research has shown that a variety of commonly used filling materials (especially foams and certainly non-FR foams) clearly pass the Section 3 fill test. Reminder that the Section 3 test, in which a smolder-resistant cover fabric Type I is used, was designed to disqualify the highly smolder prone fills to be used without a barrier.

In addition, to demonstrate the consistency of the test, we have recently ran triplicate tests on a number of filling materials including a latex foam fill under Section 3. The three test results ran on all filling materials were nearly identical. They all failed or passed the test very similarly. Non-FR foams when tested all passed the Section 3 test very easily. These results demonstrate that filling materials that have a clear performance (pass or fail) will perform quite convincingly and with a certain and clear outcome, as opposed to the rare borderline performing materials.

Comment Summary 3: Joint Industry requests that the Bureau conduct a similar round robin study to establish a robust precision and bias statement to qualify the decking material test prescribed in TB 117-2013.

Response: The Bureau rejects this comment. Although the pass/fail criteria was added to the test method, the testing of the decking material remains identical to the ASTM’s corresponding decking material test therefore the Bureau did not include it as part of the P&B study.

Comment Summary 4: Joint Industry recommends that the Bureau strike the second paragraph of Section 4.1 which states that the materials located beneath the decking material would require additional testing.

Response: The Bureau rejects this comment. This is not a duplicative test requirement. This merely references that if there are any layers of filling material below the decking material, it is subject to Section 3 testing. The filling material must also be tested as specified in Section 3.

Comment Summary 5: The ASTM test method has been referenced as the referee method for testing purposes. Therefore, to state that TB 117-2013 can also be accepted as a referee method is inherently conflicting.

Response: The Bureau accepts this comment. The Bureau consulted with the statistician that conducted the P&B study. The statement made within the P&B study was a typographical error in that it should state that the methods for testing of the TB 117-2013 study are based on the referee method of ASTM E1353-08, not that the TB 117-2013 is in fact a referee method.

Comment Summary 6: Joint Industry recommends that the Bureau strike the term “fire retardant” and harmonize with the other test methods stated in 1374. By removing this reference, the focus is on what is being tested, removing the implication that FR chemistry would be required to demonstrate compliance to the proposed test method.

Response: The Bureau rejects this comment. The changes made to this section resulted from a comment (see Commenter G) received during the 45-day comment period stating that the regulatory language conflicted with the language within the standard. The modifications made to Sections 1373.2 and 1374 merely removes the conflicting language (the word “test”) so that the regulation and the standard concur.

‘Fire retardant’ does not necessarily mean ‘resistant to open flame’. Rather, the abundant legislative history available indicates that the Legislature intended to give the Bureau wide latitude in defining what ‘fire retardant’ means. Please refer to the discussion set forth in the paragraph entitled “The 2001 Amendment” in the response to Comment Y within this Final Statement of Reasons. Articles that are ignition-resistant to a smoldering source are fire retardant because they resist fire that results from a smoldering source.

Also, ‘fire retardant’ was added to these sections as it provides consistency with the provisions of Business and Professions Code Section 19161(c) which states that all seating furniture sold or offered for sale by an importer, manufacturer, or wholesaler for use in this state, including any seating furniture sold to or offered for sale for use in a hotel, motel, or other place of public accommodation in this state, and reupholstered furniture to which filling materials are added, shall be fire retardant and shall be labeled in a manner specified by the bureau.

Comment Summary 7: Both the ‘Introductory Section’ and the ‘Test Method Sections’ of the proposed standard are numbered independently resulting in multiple sections of the same standard with the same section number.

Response: The Bureau accepts this comment. To clear any confusion, the Bureau has made the nonsubstantive change of renumbering the Introductory Section with alphabetical characters so that the two sections are easier to identify and reference.

Comment Summary 8: In regards to Section 4.3.2, “Is there a perceived expectation that all three samples will run each for a maximum of 45 minutes? This would require three separate timers. Or, should a single timer be started after the third sample has been exposed to the ignition source?”

Response: One timer is to be used to record the testing time of each test specimen and a separate timer is not required for the placement of each individual cigarette.

Comment Summary 9: It is critical to establish a better understanding of why specimens failed during the round robin study. There are human factors that can affect measurements. The test method should emphasize the need for care and scrutiny in measuring char length to achieve acceptable repeatability of the test method and application of related pass/fail criteria.

Response: The Bureau rejects this comment. The TB 117-2013 points to the language within the ASTM standard procedures which describe in detail the method used to determine the char length measurement. As long as this method is followed for each test section, acceptable repeatability of the char length measurement can be achieved.

Comment Summary 10: TB 117-2013 has different requirements for materials (specifically, the ignition source, standard polyurethane foam, sheeting material and laundering) than the ASTM. It is recommended that the Bureau reference Annex B in the test methods directing the reader to use the reference materials for TB 117-2013.

Response: The Bureau rejects this comment. The Apparatus and Standard Test Material Section and the Conditioning Section (found on page 2 of the standard) points the user to annexes B and C and describe the conditioning requirements of the test specimen prior to their use. Providing a reference in the test methods would be redundant and unnecessary.

Comment Summary 11: Neither figure C-1 or C-4 specify a removable ‘horizontal panel’ in the construction of the mini-mock-up test apparatus. It is recommended that this is added to the diagrams detailing the test apparatus.

Response: The Bureau rejects this comment. The horizontal panel is to be 8 in. by 5 in. The thickness of the horizontal panel may vary and is dependent on the thickness of the test sample and what is needed to make up the 2” as required by the test method.

BG. In its comment letter dated August 26, 2013, the National Fire Protection Association (NFPA) provided comments. The comments are repetitive to those submitted during the 45-day comment period and have been responded to above in the 45-day comment section of the Final Statement of Reasons. No comments specific to the changes outlined in the 15-day notice were received.

- BH.** In its comment letter dated September 3, 2013, UL provided comments. The comments are repetitive to those submitted during the 45-day comment period and have been responded to above in the 45-day comment section of the Final Statement of Reasons. No comments specific to the changes outlined in the 15-day notice were received other than expressing stating that the adding of the decking material test was a positive addition.
- BI.** In its comment letter submitted September 3, 2013, SP Technical Research Institute of Sweden, Damant & Associates, Marchica & Deppa LLC, Hartford Environmental Research, and Stantex Consultants provided comments. The comments are repetitive to those submitted during the 45-day comment period and have been responded to above in the 45-day comment section of the Final Statement of Reasons. No comments specific to the changes outlined in the 15-day notice were received.
- BJ.** In its comment letter dated September 3, 2013, the Organic Trade Association and the Global Organic Textile Standard International Working Group provided general comments. The comments are repetitive to those submitted during the 45-day comment period and have been responded to above in the 45-day comment section of the Final Statement of Reasons. No comments specific to the changes outlined in the 15-day notice were received.
- BK.** In its comment letter dated September 3, 2013, Mr. John McCormack, Matt Blais, Ph.D., Fire-Ex Forensics, Inc., Jaime Grunlan, Ph.D., Department of Chemistry and Fire Retardant Research Facility, Dr. A Richard Horrocks, GBH International, State Key Laboratory of Fire Science, and Gnosys Global, Ltd. UK provided comments. The comments are repetitive to those submitted during the 45-day comment period and have been responded to above in the 45-day comment section of the Final Statement of Reasons. No comments specific to the changes outlined in the 15-day notice were received.

CEQA Related Comments Received

In accordance with the California Environmental Quality Act (CEQA), an Initial Study/Negative Declaration (IS/ND) was prepared and noticed to those potentially affected by this regulatory proposal. The comment period for the IS/ND began February 19, 2013 and ended on March 22, 2013. The comments received and the Bureau's responses are as follows:

- BL.** On March 22, 2013, Chemtura Corporation provided comments on the following:

Comment Summary 1: The Initial Study and Negative Declaration rest upon the "unproven premise" that there will be no increase in the rate and/or severity of fires related to upholstered furniture when the existing open-flame standard is replaced with a smolder standard. If fire rate and/or severity increase, there could be an

increase in release of various environmental pollutants associated with residential furniture fires.

Response: There is insubstantial record evidence that there will be an increase in the rate or severity of residential fires with the implementation of TB 117-2013. There is instead substantial record evidence that the existing TB 117 standard has not in any meaningful way decreased the rate and severity of fires. It appears that the commenter utilized several studies to draw conclusions that were not factually supported by the texts cited. Specifically, one study examines the relationship of automatic fire sprinkler technology to environmental sustainability which is not relevant to the question at issue. Another study focuses on human exposure to flame retardants. The Bureau's flammability standards are performance standards and do not prescribe the use of any specific material or manufacturing methods to meet the standard. Only the performance of the material is determined as passing or failing; manufacturers determine if, and how, a material will be used in the upholstered furniture based on the materials performance. Determinations on the actual fabric, filling materials, coatings or treatments, and manufacturing methods used to comply with the standard and used in upholstered furniture are made exclusively by the manufacturer. While the Bureau does not regulate or mandate the use of flame retardant chemicals, manufacturers are predominantly using flame retardant chemicals to meet the open flame requirements of TB 117. It is the Bureau's understanding that many manufacturers, who are no longer compelled to make materials open-flame resistant, will no longer use flame retardant chemicals in their products. Another was a study on flammability of non-flame retardant treated sofa with a flame retardant treated sofa which conformed to the United Kingdom (UK) fire safety standard. This study is not relevant to the current or proposed California flammability standard nor demonstrates fire performance of furniture produced in the United States. The final study focused on fire emissions and toxicity. There is evidence to conclude that a smolder standard would reduce fire rates and the severity of fires, thus reducing the toxicity of air emissions associated with those residential fires.

Comment Summary 2: The Bureau's proposed two-year study of technologies capable of resisting open flame ignition sources constitutes "substantial evidence that the proposed project could have significant effect on the environment and thus calls into question the Bureau's compliance with CEQA requirements by issuing a negative declaration."

Response: The Bureau has stated its intention to pursue a future study that aims only to evaluate whether a flammability standard supplemental to TB 117-2013 could confer additional fire-safety benefits. The study is not an evaluation of comparative environmental impacts among TB-117, proposed TB 117-2013, and any possible future standard. Therefore, the proposed study is not "evidence" of the existence of environmental impacts from this project.

BM. On March 18, 2013, Gordon Nelson, Ph.D., provided comments on the following:

Comment Summary 1: The Initial Study and Negative Declaration do not adequately address the potential for premature disposal of unwanted furniture as a result of the availability of new furniture with “fewer chemicals and/or better fire performance.” According to the commenter, “a professional poll is essential to ascertain potential consumer behavior relative to the discard of upholstered furniture items,” and the Bureau “is required” to conduct one to evaluate this potential impact.

Response: The Bureau has made reasonable assumptions based on record evidence regarding the expressed intention of certain consumers regarding furniture replacement. On this basis, it has concluded that few consumers will prematurely discard their furniture. The commenter dismisses the data provided in Appendix A to the Initial Study/Proposed Declaration because it is written “by proposal advocates,” i.e., a group that seeks to eliminate the use of additive chemical flame retardants in furniture upholstery (Green Science Policy Institute). By definition, however, the individuals who have affirmatively contacted this group out of concern regarding flame-retardant containing furniture represent the extremes of consumer awareness and motivation to replace furniture on the basis of toxicity concerns, and would therefore be expected to considerably over-represent the group of individuals who would discard furniture prematurely because of the adoption of TB 117-2013. Furthermore, the commenter has discounted the informed views of a major home furnishings trade association regarding anticipated minimal effects of this rulemaking on furniture purchasing, based on both its historical experience with bans of particular flame retardants in furniture, and its present experience of limited consumer inquiries regarding this rulemaking matter.

The commenter has not offered any factual evidence to support the commenter’s supposition that a substantial number of consumers may discard their upholstered items prematurely as a result of this project. Further, the commenter cites no legal authority, nor is the Bureau aware of one, that requires the Bureau to conduct a professional poll on this matter. Finally, the commenter has not offered any evidence to contradict the materials contained in the administrative record.

Comment Summary 2: The Bureau has not evaluated the impact on ground water of existing, flame-retarded furniture going to sanitary landfills.

Response: All furniture will ultimately be disposed in sanitary landfills with or without this rulemaking. Such furniture may lawfully be disposed of as municipal solid waste, and has been and will be disposed of in sanitary landfills absent any regulatory change by agencies with waste-disposal jurisdiction. Nothing about this rulemaking changes the toxicity characteristics of existing furniture that will be disposed nor the characteristics of receiving landfills. As such, there is no impact to analyze.

Comment Summary 3: The Bureau has not examined the relative burning characteristics of replacement upholstered furniture. There will be greater risk of

release of PAHs, and formation of dioxins and furans, from non-fire-retardant furniture, because (in the commenter's view) such furniture would be "expected to be involved in more and larger fires, [and] fires are highly toxic."

Response: For the reasons stated in response to Chemtura's comments above, the Bureau disagrees that there will be "more and larger fires" involving furniture as a result of this rulemaking. The ostensible evidence provided by the commenter does not establish otherwise. Since the Bureau's prior policy position in 2008, several studies have been released regarding furniture flammability. The Bureau's current proposal is based on current data and studies. These studies clearly support the Bureau's proposal to move to a smolder only standard at this time.

In addition, it is well established that once furniture is involved in a fire, there is significantly greater formation of dioxins and other toxic chemicals if the furniture upholstery has been impregnated with additive chemical flame retardants.

The University of California San Francisco-Office of Sustainability made comments and posed environmental questions to the Bureau. The comments were submitted during the 45-day comment period and have been responded to above in the 45-day comment section of the Final Statement of Reasons (see Comment AI).

Incorporation by Reference

This rulemaking incorporates by reference the Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation Technical Bulletin Number 117-2013, entitled "Requirements, Test Procedure and Apparatus for Testing the Smolder Resistance of Materials Used in Upholstered Furniture," dated June 2013.

- The Technical Bulletin 117-2013 is incorporated by reference because it would be cumbersome and otherwise impractical to publish the incorporated document in the California Code of Regulations (CCR) since there are 14 pages. If the Technical Bulletin 117-2013 were incorporated into the CCR, it would increase the size of Division 3 and may cause confusion to the user.
- During the public comment period, the Technical Bulletin 117-2013 was made available directly from the Bureau upon request and was posted to the Bureau's website.