UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
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BETHESDA, MD 20814

This document has been electronically approved and signed.

DATE: November 29, 2017

BALLOT VOTE SHEET

TO: The Commission
Alberta E. Mills, Acting Secretary

THROUGH: Patricia M. Hanz, General Counsel
Patricia H. Adkins, Executive Director

FROM: Patricia M. Pollitzer, Assistant General Counsel
Hyun S. Kim, Attorney, OGC

SUBJECT: Final Rule: Safety Standard for Children's Folding Chairs and Stools

BALLOT VOTE DUE: Tuesday, December 5, 2017

Staff is forwarding to the Commission a briefing package recommending that the Commission publish the attached draft final rule for publication in the *Federal Register*. Pursuant to section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA), the draft final rule would incorporate by reference the voluntary standard, ASTM F2613-17a, *Standard Consumer Safety Specification for Children's Chairs and Stools*, as the mandatory federal safety standard, but limits the scope of the standard to children's folding chairs and stools. Additionally, the draft final rule amends the Commission's regulation regarding third party conformity assessment bodies to include the mandatory standard for children's folding chairs and stools in the list of notices of requirements issued by the Commission. The final rule also amends the product registration rule to identify children's folding stools as a durable infant or toddler product for purposes of consumer product registration requirements. The Office of the General Counsel is providing for Commission consideration the attached draft final rule.

Please indicate your vote on the following options:

I. Approve publication of the attached document in the *Federal Register,* as drafted.

_____ _____
(Signature) (Date)

II. Approve publication of the attached document in the *Federal Register,* with changes. (Please specify.)

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(Signature) (Date)

III. Do not approve publication of the attached document in the *Federal Register*.

_____ _____

(Signature) (Date)

IV. Take other action. (Please specify.)

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_____ _____

(Signature) (Date)

Attachment: Draft *Federal Register* Notice: Final Rule to Establish a Safety Standard for Children's Folding Chairs and Stools

Billing Code 6355-01-P

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Parts 1112, 1130, and 1232

[Docket No. CPSC-2015-0029]

Safety Standard for Children's Folding Chairs and Stools

AGENCY: Consumer Product Safety Commission.

ACTION: Final rule.

SUMMARY: The Danny Keysar Child Product Safety Notification Act, section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA), requires the United States Consumer Product Safety Commission (Commission or CPSC) to promulgate consumer product safety standards for durable infant or toddler products. These standards are to be "substantially the same as" applicable voluntary standards, or more stringent than the voluntary standard if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the product. The Commission is issuing a safety standard for children's folding chairs and stools in response to the direction under Section 104(b) of the CPSIA. In addition, the Commission is amending its regulations regarding third party conformity assessment bodies to include the safety standard for children's folding chairs and stools in the list of Notices of Requirements (NORs) issued by the Commission. Finally, the Commission is amending its regulations establishing requirements for consumer registration of durable infant or toddler products to identify children's folding stools as a durable infant or toddler product.

DATES: This rule will become effective [**INSERT DATE 6 MONTHS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. The incorporation by reference of the publication listed in this rule is approved by the Director of the Federal Register as of

[**INSTERT DATE 6 MONTHS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

FOR FURTHER INFORMATION CONTACT: Keysha Walker, Office of Compliance and Field Operations, U.S. Consumer Product Safety Commission; 4330 East West Highway, Bethesda, MD 20814; email: kwalker@cpsc.gov; telephone: (301) 504-6820.

SUPPLEMENTARY INFORMATION:

I. Background and Statutory Authority

The CPSIA was enacted on August 14, 2008. Section 104(b) of the CPSIA, part of the Danny Keysar Child Product Safety Notification Act, requires the Commission to: (1) examine and assess the effectiveness of voluntary consumer product safety standards for durable infant or toddler products, in consultation with representatives of consumer groups, juvenile product manufacturers, and independent child product engineers and experts; and (2) promulgate consumer product safety standards for durable infant or toddler products. Standards issued under section 104 are to be "substantially the same as" the applicable voluntary standards or more stringent than the voluntary standard if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the product.

On October 19, 2015, the Commission issued a notice of proposed rulemaking (NPR) for children's folding chairs and stools. 80 FR 63155. The NPR proposed to incorporate by reference the voluntary standard that was in effect at that time, ASTM F2613-14, *Standard Consumer Safety Specification for Children's Chairs and Stools*. ASTM F2613-14 contained testing and performance requirements for any chair or stool used by a single child who can get in and get out of the product unassisted and with a seat height 15 inches or less with or without a rocking base. The NPR proposed to limit the scope of the mandatory standard to folding chairs and stools

because the hazards presented by folding chairs and stools are different from non-folding chairs and stools. In addition, the NPR proposed to change the stability test method to add a new performance requirement and test method to address sideways stability incidents in addition to rearwards stability incidents, and to revise the marking and labeling sections. Since the NPR was issued, ASTM has revised ASTM F2613-14 several times, as discussed in section V of this preamble. The current version of the standard is ASTM F2613-17a.

In this document, the Commission is issuing a mandatory safety standard that incorporates by reference the most recent voluntary standard, developed by ASTM International, ASTM F2613-17a, for children's folding chairs and stools. The mandatory standard does not include non-folding chairs and stools. The Commission is not making any other modifications to the ASTM standard. As required by section 104(b)(1)(A), the Commission consulted with manufacturers, retailers, trade organizations, laboratories, consumer advocacy groups, consultants, and the public to develop the standard, largely through the ASTM process. In addition, as required by section 14 of the Consumer Product Safety Act (CPSA), the final rule amends the list of NORs issued by the Commission in 16 CFR part 1112 to include the standard for children's folding chairs and stools. The final rule also amends the product registration rule in 16 CFR part 1130 to identify children's folding stools, in addition to children's folding chairs, as a durable infant or toddler product for purposes of consumer product registration requirements.

II. Product Description

The current voluntary standard, ASTM F2613-17a, describes a children's folding chair or stool as seating furniture with a seat height of 15 inches or less with a rigid frame that is intended to be used as a support for the body, limbs, or feet of a child when sitting or resting in an upright or reclining position, can be folded for transport or storage, and may include a

rocking base. The product is intended to be used by a single child who can get out of the chair unassisted.

ASTM F26132-17a also includes a definition for "chairs with side containment" to describe "a children's chair or folding chair with armrests or otherwise designed in a shape which provides barriers in the vertical direction above the seating surface to the occupant's left and right which can act like arms or other side structures." Other definitions remain unchanged from ASTMF2613-14. A "children's chair" is defined as "seating furniture with a rigid frame that is intended to be used as a support for the body, limbs, or feet of a child when sitting or resting in an upright or reclining position." A "children's stool" is defined as a "children's chair without back, or armrest." A "folding chair" and "folding stool" is defined as "a children's chair or stool which can be folded for transport or storage." In the NPR, the Commission proposed to limit the scope of the mandatory standard to folding chairs and stools because the hazards presented by folding chairs and folding stools are different from non-folding chairs and stools. In this document, the Commission incorporates by reference ASTM F2613-17a, but continues to limit the scope of the mandatory standard to folding chairs and stools.

III. Market Description

CPSC staff's review of the market shows that there are currently 13 domestic firms, rather than 14 domestic firms identified in the NPR, supplying children's folding chairs and/or folding stools to the U.S. market. Three firms are large and ten firms are considered small according to the Small Business Administration (SBA) criteria.[1] The Juvenile Products Manufacturers Association (JPMA) maintains a certification program for children's folding chairs and folding stools, and there is one active participant at this time. Other than this

[1] The Small Business Administration categorizes manufacturers as "small" if they have fewer than 500 employees and importers or wholesalers as small if they have fewer than 100 employees.

certification program, compliance with the ASTM standard is self-reported. Two additional children's folding chair suppliers claim compliance with the voluntary standard.

IV. Incident Data

The preamble to the NPR summarized the incident data covering the period from January 2003 through December 31, 2014. CPSC staff identified a total of 98 incidents, including 45 nonfatal injuries, related to children's folding chairs or stools that were reported to have occurred. Since the publication of the NPR, CPSC staff has received ten new reports of incidents. Two of the incidents occurred in July and December of 2014, but were not fully investigated or reported until 2015. Of the other eight incidents, two occurred in 2015, three in 2016, and three in 2017. All ten incidents involved folding chairs intended for children under age 5. They were reported under CPSC's Consumer Product Safety Risk Management System (CPSRMS). Seven indicated some form of injury, including amputation or fracture of a finger, bruising (petechiae) of an arm, and head injuries due to falls.

Additionally, since December 31, 2014, CPSC staff's review of the National Electronic Injury Surveillance System (NEISS) included several reports of folding chair incidents, but there was insufficient information to determine which, if any, of the NEISS cases involved folding chairs intended for children under the age of 5. Most of the hazards identified in the new incidents are consistent with the hazard patterns identified among the incidents presented in the NPR briefing package, with pinch/shear hazards the most common hazard category.

V. Overview of ASTM F2613

The voluntary standard , ASTM F2613, *Standard Consumer Safety Specification for Children's Chairs and Stools*, was first approved and published in 2007. The scope of products covered by the original version, F2613-07, was limited to "children's folding chairs" with a seat

height of 15 inches or less. Significant revisions were made in 2013, in ASTM F2613-13, that were designed to expand the scope of the voluntary standard to all children's chairs and stools. On October 19, 2015, the Commission proposed to incorporate by reference ASTM F2613-14, with modifications. 80 FR 63155. Since the publication of the NPR, the standard has been revised four additional times, as discussed below. The current voluntary standard for children's chairs and stools is ASTM F2613-17a.

A. *ASTM F2613-16*

ASTM F2613-16 was published in May 2016. The changes adopted in ASTM F2613-16 included the following revisions:

- Added a definition for *chairs with side containment* (a children's chair or folding chair with armrests or otherwise designed in a shape which provides barriers in the vertical direction above the seating surface to the occupant's left and right, which can act like arms or side structures);
- Added a test requirement and test method for sideways stability for chairs with side containment;
- Added a diagram for measuring seat surface height;
- Added a diagram for side stability test.

B. *ASTM F2613-16$^{\varepsilon 1}$*

ASTM F2613-16$^{\varepsilon 1}$ was published in June 2016. ASTM published an editorial revision, which corrected a printing error which had distorted the diagram in Figure 4, and a typographical error in paragraph 6.8.1.1, revising the test surface angle tolerance from +/- 5 degree to +/- 0.5 degree.

C. *ASTM F2613-17*

ASTM F2613-17 was published in August 2017 with the following revisions:

- Modifications to the marking and labeling section of ASTM F2613-16$^{\varepsilon 1}$ to address the changes proposed in the NPR.
- Modifications to the stability test performed on chairs with non-rigid seats to clarify the placement of the test cylinder during the stability test.
- Modifications to the folding mechanisms and hinges section of F2613-16 $^{\varepsilon 1}$ to clarify that chairs that fold are required to either have a locking mechanism to prevent folding of the chair by the child, or have adequate hinge-line clearance to prevent pinching and lacerations during folding.
- Modification of the standard's scope to exempt children's potties.

D. *ASTM F2613-17a*

The current version, ASTM F2613-17a, was published in October 2017. The revision makes minor editorial changes including the removal of side stability testing for stools because chairs and stools without side containment are exempt from side stability testing, and stools, by definition, do not have side containment. In addition, an incorrect reference to Fig.1 (Tension test Adaptor/Clamp) is removed.

ASTM F2613-17a addresses the issues raised in the NPR by strengthening the provisions of the voluntary standard. The current standard clarifies in section 5.8 (Products that Fold) that chairs that fold are required to either have a latching or locking mechanism to prevent folding of the chair by the child, or have adequate hinge-line clearance to prevent pinching and lacerations during folding. These requirements are intended to eliminate possible crushing, laceration, or pinching hazards that might occur in folding latching or locking mechanisms and hinges. In addition, the current standard now includes, under section 6.8 (Stability Test Method), a

sideways stability test, in addition to a rearward stability test. The standard also clarifies proper cylinder positioning for chairs and stools for stability testing. The addition of the sideways stability test, in addition to the rearwards stability test will help address incidents that involve children's chairs with side containment tipping sideways or rearwards.

ASTM F2613-17a also incorporates the recommendations developed by the ASTM Ad Hoc Committee on Standardized Wording for Juvenile Product Standards (ASTM Ad Hoc Task Group), and the proposed language in the NPR. The current standard specifies that each folding chair and folding stool that does not meet the hinge line clearance requirements must have a warning label that contains statements consistent with the proposed language in the NPR. Specifically, the warning label shall contain the words "Amputation Hazard" and address the following:

- Chair can fold or collapse if lock not fully engaged. Moving parts can amputate child's fingers.
- Keep fingers away from moving parts.
- Completely unfold chair and fully engage locks before allowing child to sit in a chair.
- Never allow child to fold or unfold chair.

The Commission believes that ASTM F2613-17a provides clarifications to the standard and addresses the issues raised in the NPR for children's folding chairs and stools by adopting more stringent requirements than those in the ASTM version referenced in the NPR. Accordingly, the Commission incorporates ASTM F2613-17a, by reference, in the final rule for the CPSC's safety standard for children's folding chairs and stools.

VI. Response to Comments

The Commission received nine comments in response to the NPR. A summary of each comment and a response is provided below.

A. Scope of the Rule

Comment: One commenter stated that the scope of the mandatory standard should not be limited to just folding chairs and stools, and that the CPSC should include all non-folding chairs and stools in the standard.

Response: As we stated in the NPR, CPSC staff conducted a preliminary review of the incident data involving all children's chairs and stools. Some hazards are common among both folding and non-folding products such as tip overs, falling out of the chair, loose parts, staples or, other protruding objects with the potential for lacerations requiring sutures. However, the staff's review showed that the hazard associated with the folding mechanism in folding chairs and stools could result in the most serious injury, including pinching/scissoring, finger amputations, degloving or compound fracture, which could be addressed in a mandatory standard. Due to the variety of non-folding children's chair products in the market, including certain infant chairs/seats, the Commission concludes that additional study and testing regarding any potential hazards associated with non-folding chairs/stools will need to be conducted before the CPSC could propose performance requirements in a standard. To that end, CPSC staff will continue to evaluate incident data regarding non-folding chairs and stools and will make a recommendation to the Commission, if further action is required.

Comment: One commenter requested that the Commission clarify that the mandatory standard excludes toy seats.

Response: ASTM F963-17, Standard Consumer Safety Specification for Toy Safety (which is a CPSC mandatory standard, 16 CFR part 1250) specifically covers toy seats that have

play features. Section 3.1.93 of ASTM F963-17 provides that a "toy seat" is a stationary toy product with a seat where the amusement of the child is a primary function of the product and the play pattern intends that the child be in a seated position. Section 3.1.93.1 further explains that play features may include, but are not limited to, sliding or rotating features, learning toys, manually actuated music, with which the seated child may interact. Children's furniture products without any interactive play features such as stools, chairs, patio sets, rocking chairs, picnic tables, storage units, are not considered toy seats. In addition, section 3.1.93.1 provides that juvenile products such as bouncers, infant seats, and stationary activity centers are not considered toy seats. Accordingly, toy seats are adequately addressed in ASTM F963-17, and the Commission does not believe that further clarification is necessary.

B. Stability Test Method

Comment: One commenter noted that the original stability test requirement in ASTM F2613-14, for chairs with soft seating surfaces, specified that the test cylinder should be replaced with a weighted bag filled with steel shot. However, the commenter questioned why the provision for soft seating surfaces was deleted.

Response: During the development of the proposed modification to address sideways stability incidents, CPSC staff determined that all chairs should be tested with the same test cylinder for consistency and the option for testing with a weighted bag was removed. After publication of the NPR, ASTM balloted and approved a modification which is consistent with proposed NPR. ASTM F2613-16 included a sideways stability test and removed the option to conduct stability testing with a weighted bag. This stability requirement has not been changed in the current version, ASTM F2613-17a. Accordingly, this issue has been adequately addressed.

Comment: Two commenters stated that during development of requirements for sideways stability, a review of CPSC incident data indicated that side stability issues were limited to chairs with side containment, such as arms, and did not support a requirement for sideways stability testing for chairs without side containment.

Response: Since the NPR was issued, ASTM balloted and approved a modification, first incorporated into ASTM F2613-16, and retained in the current version, ASTM F2613-17a, which excludes chairs without side containment from the sideways stability testing. Although CPSC's rule does not apply to non-folding chairs, the ASTM standard applies to both folding and non-folding chairs. Because incident data does not show problems with the sideways stability of chairs without arms, the Commission agrees that folding chairs and stools without side containment also should be excluded from the sideways stability testing requirement.

Comment: One commenter stated that the proposed requirement for rearward stability is flawed because it specifies that the test cylinder be allowed to "come to rest," but then requires further adjustment to its position to complete the testing.

Response: Since the publication of the NPR, ASTM balloted and approved a modification, first incorporated into ASTM F2613-16, and retained in the current version, ASTM F2613-17a, which revised the test language to delete the words "come to rest." The Commission agrees that the revised language, specified in ASTM F1613-17a removes inconsistent language regarding the rearward and side stability requirement. Accordingly, the Commission accepts the stability testing requirements as set forth in ASTM F2613-17a.

C. Warning Label

Comment: A number of commenters requested that the Commission delay publishing final warning requirements for children's folding chairs and stools until the ASTM Ad Hoc Task Group's recommendations are developed, balloted, and then incorporated into ASTM F2613.

Response: After publication of the NPR, the ASTM Ad Hoc Task Group made its recommendations for warning label formatting across juvenile products. Accordingly, formatting issues including fonts, markings, and colors in signal word panels addressed by the Ad Hoc Task Group were incorporated in ASTM F2613-17, and retained in ASTM F2613-17a. Therefore, the final rule incorporates by reference ASTMF2613-17a without any modification to the ASTM provisions on warning label format.

Comment: One commenter stated that the proposed requirement for the warning label on stools is not clear. The commenter stated that the proposed requirement to place the label in a "visible location" is not defined. The commenter also stated that the proposal requiring that the label not "wrap around the legs" is unclear. Another commenter expressed concern that the requirement to "contain sufficient white space" is unclear and can be potentially misconstrued by laboratories evaluating compliance of a product.

Response: Since the publication of the NPR, the labeling requirement was revised in ASTM F2613-17 and retained in the current version, ASTM F2613-17a, to require that all warnings shall be conspicuous and permanent. In addition, for products with limited space, the language "contain sufficient white space" was eliminated and warnings may be placed in two separate locations. Accordingly, this issue has been adequately addressed.

Comment: Several commenters recommended that CPSC add pictograms to the warnings to convey the hazard more effectively and avoid language barriers that minimize comprehension of these warnings.

Response: Although pictograms can help to convey the hazard that is presented, especially for users with limited or no English literacy, CPSC staff believes that designing effective pictograms for warning labels can present many challenges. The labeling section revised in ASTM F2613-17, and retained in the current version, ASTM F2613-17a, requires that the warnings shall be easy to read and understand and be in the English language at a minimum. Thus, the standard does not preclude the addition of other languages to address those groups who do not read English. However, CPSC staff will continue to review incidents and consider whether additional warning symbols are needed to further reduce the risk of injury associated with these products.

D. *Effective Date*

Comment: Comment: One commenter stated that small firms should have more time to comply with the rule.

Response: The Commission intended that the proposed 6-month effective date would give all firms 6 months to produce, or find suppliers to produce, compliant products. The Commission believes that most firms should be able to comply within the 6-month time frame and allow ample time for manufacturers and importers to arrange for third party testing, consistent with the timeframe adopted in a number of other section 104 rules. The commenter did not provide any justification to support a longer effective date. Moreover, the Commission did not receive comments from any affected suppliers (manufacturer or importer) that suggested the proposed effective date was too short. Therefore, the Commission requires a 6-month effective date in the final rule.

E. *Cost Considerations*

Comment: One commenter stated that the Commission should have considered additional costs for importers, such as negotiation costs with foreign suppliers. The commenter also stated that the Commission should have considered the rule's potential effect on retail prices and the impact of higher prices on consumers.

Response: CPSC staff conducted a regulatory flexibility analysis on the impact of the rule on small firms, including manufacturers, suppliers, and importers, as well as test laboratories, affected by the rulemaking. Staff's review showed that the rule will not have a significant economic impact on a substantial number of small entities. The Commission recognizes that an increase in costs for children's folding chair and stool suppliers could increase the retail price of these products; however, the Commission is required to promulgate consumer product safety standards on durable infant or toddler products, including on children's folding chairs and stools.

VII. Description of the Final Rule

A. Final Rule for Part 1232 and Incorporation by Reference

Section 1232.2(a) of the final rule provides that folding chairs and stools must comply with the applicable sections of ASTM F2613-17a.

The Office of the Federal Register (OFR) has regulations concerning incorporation by reference. 1 CFR part 51. These regulations require that, for a final rule, agencies must discuss in the preamble of the rule the way in which the materials the agency incorporates by reference are reasonably available to interested persons and how interested parties can obtain the materials. In addition, the preamble of the rule must summarize the material. 1 CFR 51.5(b).

In accordance with the OFR's requirements, the discussion in this section summarizes the provisions of ASTM F2613-17a. Interested persons may purchase a copy of ASTM F2613-17a from ASTM, either through ASTM's website or by mail at the address provided in the rule. A

copy of the standard may also be inspected at the CPSC's Office of the Secretary, U.S. Consumer Product Safety Commission. We note that the Commission and ASTM arranged for commenters to have "read only" access to ASTM F2613-14 during the NPR's comment period.

ASTM F2613-17a contains requirements covering children's folding chairs and stools covering:

- Sharp points;
- Small parts;
- Lead in paint;
- Wood parts;
- Latching and locking mechanisms;
- Scissoring, shearing, and pinching
- Hinge line clearance;
- Circular holes in rigid materials;
- Labeling;
- Protective components;
- Strength requirements; and
- Stability

The standard additionally contains test methods that must be used to assess conformity with these requirements.

B. *Amendment to 16 CFR Part 1112 to Include NOR for Children's Folding Chairs and Stools Standard*

The final rule amends part 1112 to add a new section 1112.15(b)(43) that lists 16 CFR part 1232, *Safety Consumer Safety Specification for Children's Folding Chairs and Stools*, as a

children's product safety rule for which the Commission has issued an NOR. Section XIII of the preamble provides additional background information regarding certification of children's folding chairs and stools and issuance of an NOR.

C. *Amendment to 16 CFR Part 1130 to Include Children's Folding Chairs and Stools*

The statutory definition of "durable infant or toddler product" in section 104(f) of the CPSIA identified certain product categories as examples of products included under that definition. The Commission identified additional products as "durable infant or toddler products" when the Commission issued its rule requiring that manufacturers of durable infant or toddler products establish a program for consumer registration of those products. 16 CFR part 1130. Among the products the Commission added is "children's folding chairs." *Id.* 1130.2(a)(13). As explained in the NPR, based on ASTM's definitions, the Commission considers folding stools to be a subset of folding chairs. The configuration of children's folding chairs and folding stools are similar. The same potential hazards are presented in the folding mechanisms. The Commission is amending the definition section in the registration rule to make clear that both children's folding chairs and children's folding stools are considered durable infant or toddler products. Thus, the final rule amends part 1130, *Requirements for Consumer Registration of Durable Infant or Toddler Products,* by revising section 1130.2(a)(13) to add "stools" to the definition of children's folding chairs.

VIII. Effective Date

The Administrative Procedure Act (APA) generally requires that the effective date of a rule be at least 30 days after publication of the final rule. 5 U.S.C. 553(d). The safety standard for folding chairs and stools and the corresponding changes to part 1112, regarding requirements for third party conformity assessment bodies, and part 1130, regarding requirements for

consumer registration of durable infant or toddler products, will become effective 6 months after publication of the final rule in the *Federal Register*.

Without evidence to the contrary, CPSC generally considers 6 months to be sufficient time for suppliers to come into compliance with a new standard, and a 6-month effective date is typical for other CPSIA section 104 rules. Six months is also the period that JPMA typically allows for products in the JPMA certification program to transition to a new standard once that standard is published. The Commission proposed a 6-month effective date in the NPR for children's folding chairs and stools and we addressed the comment on the proposed effective date. Accordingly, the final rule for children's folding chairs and stools, as well as the amendments to parts 1112 and 1130, have a 6-month effective date.

IX. Regulatory Flexibility Act

A. *Introduction*

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601-612, requires that agencies review a proposed rule and a final rule for the rule's potential economic impact on small entities, including small businesses. Section 604 of the RFA generally requires that agencies prepare a final regulatory flexibility analysis (FRFA) when promulgating final rules, unless the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

B. *Impact on Small Businesses*

Based on the analysis summarized below, the Commission certifies that the rule will not have a significant economic impact on a substantial number of small entities.

CPSC staff's review of the market shows that there are currently 13 domestic firms, rather than the 14 domestic firms identified in the NPR, supplying children's folding chairs

and/or folding stools to the U.S. market. Of these, ten firms are considered small. Four of the small firms are manufacturers, five are importers or wholesalers, and the supply source for one firm could not be identified. Most firms only supply one model of chair, but one firm supplies four models and another firm supplies five models. Of the four small manufacturers of children's folding chairs and folding stools, one claims that its products comply with the voluntary standard and participates in the ASTM process. The compliance of the other three firms could not be determined. Of the five small importers/wholesalers, only one claims that its products comply with the ASTM standard. Staff could not determine the compliance status for the other four firms. For the firms currently in compliance with the voluntary standard, there should be minimal burden associated with compliance.

The children's folding chairs from the three small manufacturers whose products that do not meet the voluntary standard may require redesign to comply with the voluntary standard. One manufacturer estimates the cost to completely redesign a chair to be $10,000, including nine to twelve months of research and development time. It does not appear that the economic impact would be significant for any of the small manufacturers (*i.e.,* the cost would be less that 1 percent of annual revenue). In addition, although staff could not rule out a significant economic impact on one small importer of noncompliant folding chairs, staff does not expect the rule to have a significant economic impact on the three other non-compliant importers.

Under section 14 of the CPSA, once new children's folding chairs and folding stools requirements become effective, all manufacturers will be subject to the third party testing and certification requirements. Third party testing will include any physical and mechanical test requirements specified in the final children's folding chairs and folding stools rule. One firm estimated that chemical and structural testing of one unit of a children's folding chair costs

around $1,000 annually. Estimates provided by suppliers for other section 104 rulemakings indicate that around 40 to 50 percent of testing costs can be attributed to structural requirements, with the remaining 50 to 60 percent resulting from chemical testing (e.g., lead testing, to which they are already subject). If these percentages are applied to folding stools and chairs, the testing to structural components of the ASTM voluntary standard could cost about $400 to $500 per sample tested ($1,000 x .4 to $1,000 x .5), and are consistent with testing cost estimates for products with standards of similar complexity. Based on an examination of each small firm's revenues, staff did not find that testing, in addition to costs of redesign, would be economically significant for the majority of the small firms. For these reasons, the Commission certifies that the rule will not have a significant economic impact on a substantial number of small entities.

X. Environmental Considerations

The Commission's regulations address whether the agency is required to prepare an environmental assessment or an environmental impact statement. Under these regulations, a rule that has "little or no potential for affecting the human environment," is categorically exempt from this requirement. 16 CFR 1021.5(c)(1). The final rule falls within the categorical exemption.

XI. Paperwork Reduction Act

This rule contains information collection requirements that are subject to public comment and review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3521). The preamble to the proposed rule discussed the information collection burden of the proposed rule. Section 7 of ASTM F2613-17a contains requirements for marking and labeling, that are disclosure requirements, thus falling within the definition of "collections of information" as defined in 44 U.S.C. 3502(3). OMB has assigned

control number 3041-0172 to this information collection. The Commission did not receive any comments regarding the information collection burden of this proposal.

Since the publication of the NPR, staff has determined that there are 13 known firms, rather than 14 firms supplying children's folding chairs to the U.S. market. All firms are assumed to use labels on both their products and their packaging already, but they might need to make some modifications to their existing labels. The estimated time required to make these modifications is about 1 hour per model. Each of these firms supplies an average of 1.5 different models of children's folding chairs; therefore, the estimated burden hours associated with labels is 1 hour x 13 firms x 1.5 models per firm = 19.5 annual hours.

XII. Preemption

Section 26(a) of the CPSA, 15 U.S.C. 2075(a), provides that when a consumer product safety standard is in effect and applies to a product, no state or political subdivision of a state may either establish or continue in effect a requirement dealing with the same risk of injury unless the state requirement is identical to the federal standard. Section 26(c) of the CPSA also provides that states or political subdivisions of states may apply to the Commission for an exemption from this preemption under certain circumstances. Section 104(b) of the CPSIA refers to the rules to be issued under that section as "consumer product safety rules." Therefore, the preemption provision of section 26(a) of the CPSA would apply to a rule issued under section 104.

XIII. Amendment to 16 CFR Part 1112 to Include Notice of Requirements (NOR) for Children's Folding Chairs and Stools Standard

Section 14(a) of the CPSA imposes the requirement that products subject to a consumer product safety rule under the CPSA, or to a similar rule, ban, standard, or regulation under any

other Act enforced by the Commission, must be certified as complying with all applicable CPSC-enforced requirements. 15 U.S.C. 2063(a). Section 14(a)(2) of the CPSA requires that certification of children's products subject to a children's product safety rule be based on testing conducted by a CPSC-accepted, third party conformity assessment body. Section 14(a)(3) of the CPSA requires the Commission to publish a NOR for the accreditation of third party conformity assessment bodies (or laboratories) to assess conformity with a children's product safety rule to which a children's product is subject. The *Standard Consumer Safety Specification for Children's Folding Chairs and Stools*, to be codified at 16 CFR 1232, is a children's product safety rule that requires the issuance of an NOR.

The Commission published a final rule, *Requirements Pertaining to Third-Party Conformity Assessment Bodies,* 78 FR 15836 (March 12, 2013), which is codified at 16 CFR part 1112 (referred to here as part 1112). This rule became effective on June 10, 2013. Part 1112 establishes requirements for accreditation of third-party conformity assessment bodies (or laboratories) to test for conformance with a children's product safety rule in accordance with section 14(a)(2) of the CPSA. Part 1112 also codifies a list of all of the NORs that the CPSC had published at the time part 1112 was issued. All NORs issued after the Commission published part 1112, such as the standard for children's folding chairs and stools, require the Commission to amend part 1112. Accordingly, the Commission is now amending part 1112 to include the standard for children's folding chairs and stools in the list of other children's product safety rules for which the CPSC has issued NORs.

Laboratories applying for acceptance as a CPSC-accepted third-party conformity assessment body to test to the new standard for children's folding chairs and stools would be required to meet the third-party conformity assessment body accreditation requirements in 16

CFR part 1112, *Requirements Pertaining to Third-Party Conformity Assessment Bodies*. When a laboratory meets the requirements as a CPSC-accepted third-party conformity assessment body, the laboratory can apply to the CPSC to have 16 CFR part 1232, *Standard Consumer Safety Specification for Children's Folding Chairs and Stools,* included in its scope of accreditation of CPSC safety rules listed for the laboratory on the CPSC Web site at: www.cpsc.gov/labsearch.

As required by the RFA, staff conducted a FRFA when the Commission issued the part 1112 rule (78 FR 15836, 15855-58). Briefly, the FRFA concluded that the accreditation requirements would not have a significant adverse impact on a substantial number of small test laboratories because no requirements were imposed on test laboratories that did not intend to provide third-party testing services. The only test laboratories that were expected to provide such services were those that anticipated receiving sufficient revenue from the mandated testing to justify accepting the requirements as a business decision. Moreover, a test laboratory would only choose to provide such services if it anticipated receiving revenues sufficient to cover the costs of the requirements.

Based on similar reasoning, amending 16 CFR part 1112 to include the NOR for the folding chairs and stools standard will not have a significant adverse impact on small test laboratories. Moreover, based upon the number of test laboratories in the United States that have applied for CPSC acceptance of accreditation to test for conformance to other mandatory juvenile product standards, we expect that only a few test laboratories will seek CPSC acceptance of their accreditation to test for conformance with the children's folding chairs and stools standard. Most of these test laboratories will have already been accredited to test for conformity to other mandatory juvenile product standards, and the only costs to them would be

the cost of adding the chidren's folding chairs and stools standard to their scope of accreditation. For these reasons, the Commission certifies that the NOR amending 16 CFR part 1112 to include the children's folding chairs and stools standard will not have a significant economic impact on a substantial number of small entities.

List of Subjects

16 CFR Part 1112

Administrative practice and procedure, Audit, Consumer protection, Reporting and recordkeeping requirements, Third-party conformity assessment body.

16 CFR Part 1130

Administrative practice and procedure, Business and industry, Consumer protection, Reporting and recordkeeping requirements.

16 CFR Part 1232

Consumer protection, Imports, Incorporation by reference, Infants and children, Labeling, Law enforcement, and Toys

For the reasons discussed in the preamble, the Commission amends 16 CFR Chapter II, as follows:

PART 1112—REQUIREMENTS PERTAINING TO THIRD PARTY CONFORMITY ASSESSMENT BODIES

1. The authority citation for part 1112 continues to read as follows:

Authority: Pub. L. 110-314, section 3, 122 Stat. 3016, 3017 (2008); 15 U.S.C. 2063.

2. Amend § 1112.15 by adding paragraph (b)(43) to read as follows:

§ 1112.15 When can a third party conformity assessment body apply for CPSC acceptance for a particular CPSC rule and/or test method?

* * * * *

(b) * * *

(43) 16 CFR part 1232, Safety Standard for Children's Folding Chairs and Stools.

* * * * *

3. Amend § 1130.2 by revising paragraph (a)(13) to read as follows:

PART 1130 – REQUIREMENTS FOR CONSUMER REGISTRATION OF DURABLE INFANT OR TODDLER PRODUCTS

§ 1130.2 Definitions.

* * * * *

(a) * * *

(13) Children's folding chairs and stools;

* * * * *

4. Add part 1232 to read as follows:

PART 1232—SAFETY STANDARD FOR CHILDREN'S FOLDING CHAIRS AND STOOLS

Sec.

1232.1 Scope.

1232.2 Requirements for children's folding chairs and stools.

Authority: Sec. 104, Pub. L. 110-314, 122 Stat. 3016 (August 14, 2008); Pub. L. 112-28, 125 Stat. 273 (August 12, 2011).

§ 1232.1 Scope.

This part establishes a consumer product safety standard for children's folding chairs and stools.

§ 1232.2 Requirements for children's folding chairs and stools.

(a) Each children's folding chair and stool shall comply with all applicable provisions of ASTM F2613-17a, *Standard Consumer Safety Specification for Children's Chairs and Stools*, approved on October 1, 2017. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from ASTM International, 100 Bar Harbor Drive, P.O. Box 0700, West Conshohocken, PA 19428; http://www.astm.org. You may inspect a copy at the Office of the Secretary, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone 301-504-7923, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

(b) [Reserved]

Dated: _____

_____
Alberta E. Mills,
Acting Secretary,
Consumer Product Safety Commission

Staff Briefing Package

Children's Folding Chairs and Stools
Section 104 of the Consumer Product Safety Improvement Act of 2008, Draft Final Rule

November 29, 2017

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Briefing Memorandum

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MARYLAND 20814

This document has been electronically approved and signed.

Memorandum

November 29, 2017

TO: The Commission
Alberta E. Mills, Acting Secretary

THROUGH: Patricia M. Hanz, General Counsel
Patricia H. Adkins, Executive Director
DeWane Ray, Deputy Executive Director for Safety Operations

FROM: George A. Borlase, Assistant Executive Director
Office of Hazard Identification and Reduction

Vince Amodeo, Project Manager
Office of Hazard Identification and Reduction

SUBJECT: Children's Folding Chairs and Stools, Section 104 of the Consumer Product Safety Improvement Act of 2008, Final Rule

I. INTRODUCTION

Section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA) is the Danny Keysar Child Product Safety Notification Act. This Act requires the U.S. Consumer Product Safety Commission (CPSC or Commission) to: (1) examine and assess voluntary safety standards for certain infant or toddler products, and (2) promulgate mandatory consumer product safety standards that are substantially the same as the voluntary standards or more stringent than the voluntary standards if the Commission determines that more stringent standards would further reduce the risk of injury associated with these products. Although the list of products in section 104 does not include children's folding chairs, the Commission specifically identified children's folding chairs as a "durable infant or toddler product" in the Commission's product registration card rule under section 104(d).[1] In the notice of proposed rulemaking (NPR) published on October 19, 2015,[2] the Commission proposed to incorporate by reference the applicable voluntary standard, ASTM F2613-14, *Standard Consumer Safety Specification for Children's Chairs and Stools*, with certain modifications. The ASTM standard covers all children's chairs and stools, not just those that fold. In the 2015 NPR, the Commission proposed to add folding stools within the scope of the CPSC standard and to amend the product registration card rule so that the rule would clearly identify children's folding stools, as well as children's folding chairs, as durable infant or toddler products

[1] 74 Fed. Reg. 68668 (December 29, 2009) (16 C.F.R. § 1130.2(a)(13).

[2] 80 Fed. Reg. 63155.

for purposes of registration card requirements.

This briefing package provides staff's responses to comments received in response to the NPR. This package also assesses the current voluntary standard; discusses the potential impact on small business; and provides staff's recommendations for a draft final rule to address potential hazards associated with these products. Since publication of the NPR, ASTM has made several changes to ASTM F2613, including changes that address the NPR comments. Staff recommends that the Commission issue a final rule that incorporates by reference the most recent standard, ASTM F2613-17a, and covers children's folding chairs and stools.

II. BACKGROUND

A. Product Review

The current voluntary standard, ASTM F2613-17a, *Standard Consumer Safety Specification for Children's Chairs and Stools,* defines a children's "folding chair or stool" as seating furniture with a seat height of 15 inches or less with a rigid frame that is intended to be used as a support for the body, limbs, or feet of a child when sitting or resting in an upright or reclining position, can be folded for transport or storage, and may include a rocking base. The product is intended to be used by a single child who can get out of the chair unassisted.

Representative examples of children's folding chairs and folding stools can be seen in Figures 1 through 3 below. There are two primary designs associated with children's folding chairs: straight tube versions that contact the surface in three or more capped-tube legs (the first two chairs shown in Figure 1), and bent tube versions that contact the ground along a substantial portion of the tubular frame (the last two chairs shown in Figure 1). There are also other designs that tend to be variants, as shown in Figure 2.

Figure 1: Examples of Typical Children's Folding Chairs

Figure 2: Other Examples of Children's Folding Chairs

Children's folding stools also have a variety of designs. Figure 3 shows metal or plastic X-frame stools with fabric seats.

Figure 3: Examples of Children's Folding Stools

B. Notice of Proposed Rulemaking (NPR)

The Commission issued an NPR for children's folding chairs and stools (80 FR 63155, published on October 19, 2015) that proposed to incorporate by reference the voluntary standard, ASTM F2613-14, *Standard Consumer Safety Specification for Children's Chairs and Stools,* with modifications. When the initial version of ASTM F2613 was published in 2007, the scope of the standard only covered children's folding chairs. In the 2013 revision, ASTM expanded the scope to include all children's chairs and stools. CPSC staff preliminarily reviewed the incident data involving non-folding children's chairs and stools. Staff concluded that the hazards presented by folding chairs and folding stools are different from non-folding chairs and stools and that additional study and testing regarding any potential hazards associated with non-folding chairs/stools would need to be conducted before the Commission could propose performance requirements in a standard. Accordingly, the NPR proposed to limit the scope of the rule to children's folding chairs and folding stools. In addition, the NPR proposed to change the stability test method to add a performance requirement and test method to address sideways stability

incidents, in addition to rearwards stability incidents, and to revise the marking and labeling sections. The Commission received nine comments on the NPR. Staff's responses to these comments are discussed in the attached memos (Tab A through Tab D).

C. ASTM Voluntary Standard Overview

ASTM F2613, *Standard Consumer Safety Specification for Children's Chairs and Stools*, the voluntary standard that addresses the identified hazard patterns associated with the use of children's folding chairs and stools, was first approved and published in 2007, as ASTM F2613-07. Since 2007, ASTM has revised the voluntary standard several times. The Commission proposed to incorporate by reference, with modifications, ASTM F2613-14 in the NPR. After the NPR was published on October 19, 2015, ASTM published additional revisions to the voluntary standard. These revisions are briefly described below and explained in greater detail in Tab A.

A. ASTM F2613-16

ASTM F2613-16 was published in May 2016. The changes adopted in ASTM F2613-16 included the following:

- Added a definition for *chairs with side containment* (a children's chair or folding chair with armrests or otherwise designed in a shape which provides barriers in the vertical direction above the seating surface to the occupant's left and right, which can act like arms or side structures);
- Added a test requirement and test method for sideways stability for chairs with side containment;
- Added a diagram for measuring seat surface height;
- Added a diagram for side stability test.

When ASTM F2613-16 published, ASTM was still working on revisions to the marking and labeling section of the standard to address changes proposed in the NPR.

B. ASTM F2613-16$^{\varepsilon 1}$

ASTM F2613-16$^{\varepsilon 1}$ was published in June 2016. ASTM published (without ballot) an editorial revision, which corrected a printing error that had distorted the diagram in Figure 4, and a typographical error in paragraph 6.8.1.1, revising the test surface angle tolerance from +/- 5 degree to +/- 0.5 degree.

C. ASTM F2613-17

ASTM F2613-17 was published in August 2017. The revision included:

- Modifications to the marking and labeling section of ASTM F2613-16$^{\varepsilon 1}$ to address the changes proposed in the NPR. The changes are discussed in the Human Factors staff Memorandum in Tab C.
- Modifications to the stability test performed on chairs with non-rigid seats to clarify the placement of the test cylinder during the stability test.
- Modifications to the folding mechanisms and hinges section of F2613-16 $^{\varepsilon 1}$ to clarify that chairs that fold are required to either have a locking mechanism to prevent folding of the chair by the child, or have adequate hinge-line clearance to prevent pinching and lacerations during folding.
- Modification of the standard's scope to exempt children's potties.

D. ASTM F2613-17a

ASTM F2613-17a was published in October 2017. The revision makes minor editorial changes, including removing side stability testing for stools because chairs and stools without side containment are exempt from side stability testing, and "stools," by definition, do not have side containment. In addition, an incorrect reference to Fig.1 (Tension test Adaptor/Clamp) is removed.

III. DISCUSSION

A. Overview of New Incident Data[3] (Tab B)

In the NPR briefing package, CPSC staff identified a total of 98 incidents, including 45 nonfatal injuries related to children's folding chairs and stools that reportedly occurred between January 1, 2003 and December 31, 2014. Since the extraction of data presented in the NPR briefing package, CPSC staff has received reports of 10 new incidents, reported to CPSC from January 1, 2015 through August 31, 2017. Staff determined that these incidents involved folding chairs that are intended for children under age 5. Two of the incidents occurred in July and December 2014, but they were not fully investigated or reported until 2015. Regarding the other eight incidents, two occurred in 2015, three in 2016, and three in 2017.

[3] CPSC staff searched the NEISS and the CPSRMS. CPSRMS includes data that would have been previously stored separately in the In-Depth Investigation (INDP) file, the Injury or Potential Injury Incident (IPII) file, and the Death Certificate (DTHS) databases. Staff extracted new incident reported to CPSC staff for children's folding chairs and folding stools from January 1, 2015 through August 31, 2017. The reported incidents are not a complete count of all that occurred during this period. However, they do provide an estimate of the number of deaths and incidents occurring during this period and illustrate the circumstances involved in the incidents related to children's folding chairs.

All 10 new incidents involved folding chairs intended for children under age 5. They were reported under CPSC's Consumer Product Safety Risk Management System (CPSRMS). Seven indicated some form of injury, including amputation or fracture of a finger, bruising (petechiae) of an arm, and head injuries from falls.

Additionally, since December 31, 2014, CPSC's NEISS included several reports of folding chair incidents, but CPSC did not have sufficient information from the NEISS to determine which, if any, of the NEISS cases involved folding chairs intended for children under the age of 5.

B. Overview of ASTM F2613-17a

The NPR proposed to incorporate by reference ASTM F2613-14, with certain modifications to strengthen the standard. The modifications proposed to:

1. Limit the scope of the rule to children's folding chairs and folding stools;
2. Add a requirement in section 5.13 (Stability), to specify that all products shall not tip over backwards or sideways when tested in accordance with the stability test methods. Tip over occurs when the product moves past equilibrium and begins to overturn;
3. Add a test method in Section 6.8 (Stability Test Method) for sideways stability testing, in addition to the existing rearward stability testing, including specifications during the test for the product orientation, the application of the load, and the test cylinder positioning on the chair or stool; and
4. Revise the marking and labeling section in section 7.2, to include requirements for content and format of warnings.

ASTM F2613-17a addresses the issues raised in the NPR, by strengthening the provisions of the voluntary standard. The current standard clarifies in section 5.8 (Products that Fold) that chairs that fold are required to have either a latching or locking mechanism to prevent folding of the chair by the child, or have adequate hinge-line clearance to prevent pinching and lacerations during folding. These requirements are intended to eliminate possible crushing, laceration, or pinching hazards that might occur in the folding, latching, or locking mechanisms and hinges. In addition to the existing rearward stability test, the current standard now includes, under section 6.8 (Stability Test Method), a sideways stability test. The standard also clarifies proper cylinder positioning for chairs and stools for stability testing. The addition of the sideways stability test will help address incidents that involve children's chairs with side containment that tip sideways.

ASTM F2613-17a has revised section 7 (Marking and Labeling), based on wording developed by the ASTM Ad Hoc Committee on Standardized Wording for Juvenile Product Standards and proposed language in the NPR for Children's Folding Chairs and Stools. The current standard specifies that each folding chair and folding stool that does not meet the hinge-line clearance requirements must have a warning label that contains statements consistent with the proposed

language in the NPR. Specifically, the warning label shall contain the words "Amputation Hazard" and address the following:

- Chair can fold or collapse if lock not fully engaged. Moving parts can amputate child's fingers.
- Keep fingers away from moving parts.
- Completely unfold chair and fully engage locks before allowing child to sit in a chair.
- Never allow child to fold or unfold chair.

Staff believes the revisions published in ASTM F2613-17a clarify the standard and address the concerns the Commission raised in the NPR for children's folding chairs and stools. Accordingly, staff now recommends that ASTM-F2613-17a be incorporated by reference into the final rule for the CPSC's safety standard for children's folding chairs and stools, with one modification to limit the scope to children's folding chairs and folding stools.

C. Staff Responses to NPR Comments

CPSC received input on the NPR from nine commenters associated with industry, consumer groups, trade associations, and consumers. Staff's detailed responses to comments can be found in the attached memos (Tab A through Tab D).

D. Impact on Small Business

Staff identified 13 firms supplying children's folding chairs and stools to the U.S. market. Based on U.S. Small Business Administration guidelines, 10 of the 13 firms are small domestic businesses, including four manufacturers, five importers/wholesalers, and one firm with an unknown supply source.

As described at Tab D, staff concludes that the draft final rule will not have a significant economic impact on a substantial number of small entities, and that the Commission could so certify.

E. Paperwork Reduction Act

The draft final rule would require each children's folding chair or folding stool to comply with ASTM F2613-17a. Section 7.1 of ASTM F2613-17a contains requirements for marking and labeling, that are disclosure requirements, thus falling within the definition of "collections of information" at 5 C.F.R. § 1320.3(c). Since publication of the NPR, staff has determined that there are 13 known firms, rather than 14 firms, supplying children's folding chairs to the U.S. market. All firms are assumed to use labels on both their products and their packaging already, but they might need to make some modifications to their existing labels. The estimated time required to

make these modifications is about 1 hour per model. Each of these firms supplies an average of 1.5 different models of children's folding chairs; therefore, the estimated burden hours associated with labels is 1 hour x 13 firms x 1.5 models per firm = 19.5 annual hours.

F. Effective Date of Final Rule

In the NPR, the Commission proposed a 6-month effective date. Because staff's recommendation for the final rule is essentially the same as what was proposed in the NPR, CPSC staff believes that the Commission should set an effective date of 6 months after publication of the final rule for products manufactured or imported on or after that date. A 6-month effective date is typical of most other rules that the Commission has issued under section 104 of the CPSIA. The NPR requested comments on the effective date, but did not receive any from any affected suppliers (manufacturer or importer) to indicate that the proposed effective date was too short.

IV. STAFF RECOMMENDATION

CPSC staff recommends that the Commission issue a final rule that would incorporate by reference the voluntary standard, ASTM F2613-17a, with modifications to limit the scope to folding chairs and folding stools.

Staff also recommends and an effective date of 6 months after publication of the final rule in the *Federal Register*.

Staff also recommends that the Commission amend 16 C.F.R. part 1112, which would establish the NOR for testing laboratories that want to test children's folding chairs and stools for compliance with the children's folding chair and folding stool final rule, and 16 C.F.R. part 1130, *Requirements for Consumer Registration of Durable Infant or Toddler Products*, by revising section 1130.2(a)(13) to add "stools" to the definition of "children's folding chairs."

TAB A: Engineering Update and Response to Technical Comments: Children's Folding Chairs and Stools Final Rule Briefing Package

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MARYLAND 20814

Memorandum

Date: September 1, 2017

TO: Children's Folding Chairs and Stools Rulemaking File
Directorate for Engineering Sciences

THROUGH: Joel R. Recht, Ph.D.
Associate Executive Director
Directorate for Engineering Sciences

Mark E. Kumagai, P.E.
Director, Division of Mechanical and Combustion Engineering
Directorate for Engineering Sciences

FROM: Vincent J. Amodeo
Mechanical Engineer
Directorate for Engineering Sciences

SUBJECT: Engineering Update and Response to Technical Comments: Children's Folding Chairs and Stools Final Rule Briefing Package

I. Introduction

On October 19, 2015, the U.S. Consumer Product Safety Commission (CPSC or Commission) published a notice of proposed rulemaking (NPR) in the *Federal Register* (80 FR 63155), pursuant to the Danny Keysar Child Product Safety Notification Act, section 104(b) of the Consumer Product Safety Improvement Act of 2008 (CPSIA). The NPR proposed to incorporate by reference the voluntary ASTM International (ASTM) standard, F2613-14 *Standard Consumer Safety Specification for Children's Chairs and Stools,* with modifications.

This memorandum provides a summary of the technical comments received in response to the NPR, staff's responses to those comments, an overview of the ASTM Children's Chairs and Stools subcommittee, F15.59, activities since the NPR was published, and a summary of staff's recommendations for a draft final rule on Children's Folding Chairs and Stools (CFCS).

II. Public Comments and Staff's Responses

CPSC received nine comments on the NPR from industry, consumer groups, trade associations, and consumers. Only two comments were technical in nature and concerned the CPSC's proposed modification to add a new performance requirement to address sideways stability incidents.

Stability Test Method

Comment: One commenter noted that the original stability test requirement in ASTM F2613-14 for chairs with soft seating surfaces specified the test cylinder to be replaced with a weighted bag filled with steel shot, but in the proposed requirements for stability testing, the provision for soft seating surfaces was deleted.

Response: During development of the proposed modification to address sideways stability incidents, staff tested the stability of several exemplar CFCS. Staff determined that the difference in the center of gravity (CG) of the 12.0-inch high x 6-inch diameter test cylinder (6-inch high CG) and the 6- to 8-inch diameter weighted bag filled with steel shot (3-inch high CG) affected whether the chair passed or failed the stability test. Therefore, staff recommended that all chairs be tested with the same test cylinder for consistency and that the option for testing with a weighted bag be removed.

After publication of the NPR, ASTM balloted and approved a modification that aligns with the Commission's proposal. ASTM F2613-16 incorporated a modification that includes a sideways stability test and removed the option to conduct stability testing with a weighted bag. The requirement was unchanged in ASTM F2613-17a. Staff agrees with the revision to the stability requirement, as specified in ASTM F2613-17a.

Comment: Two commenters supported the proposed rule, but stated that during development of requirements for sideways stability, the proposed testing failed certain chairs commonly found in the children's chair market, namely, straight-back, non-folding wooden chairs. A review of CPSC incident data indicated that side stability issues were limited to chairs with side containment, such as arms.

Response: Since publication of the NPR, ASTM balloted and approved a modification, first incorporated into F2613-16, which excludes from the sideways stability testing chairs without side containment. The modification was unchanged in ASTM F2613-17a. Although the rule proposed in the NPR was applicable to folding chairs only, the ASTM standard applies to both folding and non-folding chairs. Because incident data do not show a sideways stability issue for chairs without arms, staff agrees with excluding them from the sideways stability requirement.

Staff agrees with the revisions to the sideways stability requirement specified in ASTM F2613-17a and believes that the revisions address the commenter's concerns.

Comment: One commenter stated that the proposed NPR language for rearward stability is flawed because it specifies that the test cylinder "come to rest," but then requires further adjustment to its position to complete the testing.

Response: Since publication of the NPR, ASTM balloted and approved a modification, first incorporated into ASTM F2613-16, which revised the test language to delete the words "come to rest." The modification was unchanged in ASTM F2613-17a. Staff agrees with the revision to the rearward stability requirement specified in ASTM F1613-17a and believes that the revision addresses the commenter's concerns.

III. ASTM Voluntary Standard Activity

ASTM F2613, *Standard Consumer Safety Specification for Children's Chairs and Stools*, the voluntary standard that addresses the identified hazard patterns associated with the use of children's folding chairs and stools, was first approved and published in 2007, as ASTM F2613-07. Since 2007, ASTM has revised the voluntary standard several times. The Commission proposed to incorporate by reference, with modifications, ASTM F2613-14 in the NPR. Since the NPR was published on October 19, 2015, ASTM has published additional revisions to the voluntary standard. The ASTM balloted revisions are shown in Appendices A, B, C, D and E of Tab A.

ASTM F2613-16

At the October 2015 subcommittee meeting, the ASTM F15.59 subcommittee reviewed negative votes and comments received on the July 24, 2014, ballot. Discussion involved revising the scope of the proposed sideways stability test to address the negative votes. The subcommittee chairman submitted proposed revisions to ASTM F2613-14 for concurrent ASTM Main Committee F15 and Subcommittee F15.59 ballot on December 11, 2015. The proposed revision was similar to the language that the Commission proposed in the NPR as a modification to ASTM F2613-14, except for adding a definition for "chairs with side containment" and clarifying that only chairs with side containment require sideways stability testing.

The December ballot received two negative votes, which were discussed at a subcommittee meeting held on January 13, 2016. The subcommittee determined that the negatives were persuasive. The negatives regarded the stability test method, including the test surface used, the placement of the test cylinder during the test, and clarification of the stability test figures. The

subcommittee chairman submitted a proposed revision to ASTM F2613-14 for concurrent ASTM Main Committee F15 and Subcommittee F15.59 ballot on March 16, 2016. The ballot received no negative votes, and ASTM approved a new version of the standard, ASTM F2613-16, on May 1, 2016.

ASTM F2613-16 included the following revisions:

- Added a definition for *chairs with side containment* (a children's chair or folding chair with armrests or otherwise designed in a shape which provides barriers in the vertical direction above the seating surface to the occupant's left and right which can act like arms or side structures);
- Added a test requirement and test method for sideways stability for chairs with side containment;
- Added a diagram for measuring seat surface height;
- Added a diagram for side stability test.

At the time of the ASTM F2613-16 publication, ASTM was still working on revisions to the marking and labeling section of the standard to address changes proposed in the NPR.

ASTM F2613-16$^{\varepsilon 1}$

ASTM published (without ballot) an editorial revision, ASTM F2613-16$^{\varepsilon 1}$, in June 2016, which corrected a printing error that had distorted the diagram in Figure 4, and corrected a typographical error in paragraph 6.8.1.1, revising the test surface angle tolerance from +/- 5 degree to +/- 0.5 degree.

ASTM F2613-17

ASTM balloted a revision to the warning label section of ASTM F2613-16$^{\varepsilon 1}$ on July 13, 2016 (Ballot F15 (16-07)). The ballot received one negative, which was reviewed at the subsequent subcommittee meeting on September 27, 2016. Proposed warning label changes were re-balloted on December 1, 2016 (Ballot (F15 (16-11)) and again on February 28, 2017 (Ballot F15 (17-02)). The warning label changes were approved at the F15.59 subcommittee meeting on April 4, 2017 and subsequently published in ASTM F2613-17 in August 2017. The warning label changes are discussed in the Human Factors Staff Memorandum in Tab C.

At the January 18, 2017, subcommittee meeting, the ASTM F15.59 subcommittee chairman raised an issue with how the stability test specified in ASTM F2613-16$^{\varepsilon 1}$ is performed on chairs with non-rigid seats. The subcommittee determined that clarification on placement of the test cylinder was needed. A task group was formed to develop a proposal.

At the January 18, 2017, subcommittee meeting, the ASTM F15.59 subcommittee also determined that a modification to the folding mechanisms and hinges section of F2613-16$^{\varepsilon 1}$ was needed to clarify that chairs that fold are required to have either a locking mechanism to prevent folding of the chair by the child, or have adequate hinge-line clearance to prevent pinching and lacerations during folding. The subcommittee chairman submitted a proposed revision to ASTM F2613-16$^{\varepsilon 1}$ for concurrent ASTM Main Committee F15 and Subcommittee F15.59 ballot on February 28, 2017 (Ballot (F15 (17-02)), with a 1-month comment period. The ballot received negative votes, which were discussed at the April 4, 2017, F15.59 subcommittee meeting. The negatives were determined to be substantial, and modifications were made for a new ballot. Additionally, revised wording for clarification on placement of the test cylinder during the stability test and modification of the standard's scope to exempt children's potties were discussed.

The subcommittee chairman submitted proposed revisions to ASTM F2613-16$^{\varepsilon 1}$ for concurrent ASTM Main Committee F15 and Subcommittee F15.59 ballots on April 21, 2017 (F15 (17-04)), with a 1-month comment period, for clarifications to the folding mechanisms and hinges requirements (Appendix B of this memo), clarification on placement of the test cylinder during the stability test (Appendix C of this memo), and modification of the scope to exempt children's potties (Appendix D of this memo). All three ballots passed, with minor comments suggesting editorial changes that were recommended at the June 27, 2017 ASTM F15.59 subcommittee meeting. The revisions were later incorporated into ASTM F2613-17 in August 2017.

ASTM F2613-17a

At the June 27, 2017, subcommittee meeting, the ASTM F15.59 subcommittee noted the approved ballot language pertaining to stability testing should not have included a new paragraph for side stability testing for stools because chairs and stools without side containment are exempt from side stability testing, and "stools," by definition, do not have side containment. Therefore, the subcommittee chairman determined that it was appropriate to remove the paragraph regarding side stability testing for stools. The subcommittee chairman submitted a proposed revision to ASTM F2613-16$^{\varepsilon 1}$ for concurrent ASTM Main Committee F15 and Subcommittee F15.59 ballot on July 24, 2017 (Ballot (F15 (17-06)) to remove the side stability testing for stools (Appendix E of this memo). The ballot received no negative votes, and ASTM approved a new version of the standard, ASTM F2613-17a, in October 2017.

IV. Staff Recommendations

Since the NPR was published, ASTM has approved a balloted revision to the children's chairs and stools voluntary standard, ASTM F2613-16, as well as a revised version of ASTM F2613-16$^{\varepsilon 1}$. ASTM F2613-16 and ASTM F2613-16$^{\varepsilon 1}$ incorporated changes to the standard, which add

side stability test requirements, as outlined above. ASTM approved two additional balloted revisions to the standard to clarify the requirements for folding chair locking mechanisms, for stability testing, and for the standard's scope, as outlined above, which were published in ASTM F2613-17 and ASTM F2613-17a.

Staff believes that the current standard adequately addresses the comments received on the NPR and the published revisions clarify the testing requirements that apply to CFCS. Staff recommends that the Commission incorporate by reference ASTM F2613-17a for the final rule, with a modification to limit the scope to children's folding chairs and folding stools.

Appendix A

ASTM Balloted Revision of F2613-14, Standard Consumer Safety Standard for Children's Chairs and Stools to address stability testing (Ballot F15 (16-03))

3.1.9 *Chairs with Side Containment:* A Children's Chair or Folding Chair with armrests or otherwise designed in a shape which provides barriers in the vertical direction above the seating surface to the Occupant's left and right which can act like arms or other side structures.

5.13 *Stability*: All products shall not tip over backwards when tested in accordance with 6.8.1 and 6.8.2. Chairs with side containment shall not tip over sideways when tested in accordance with 6.8.1 and 6.8.3. Tip over occurs when the product moves past equilibrium and begins to overturn.

6.8 *Stability Test Method*

6.8.1 *Test Equipment and Preparation*

6.8.1.1 *Test surface* – any smooth surface inclined at an angle of 10° (+/- 0.5°) to the horizontal plane.

6.8.1.2 *50 lb. test cylinder* – cylinder weighing 50.0 +/- 0.5 lbs. (22.7 +/- 0.2 kg) that is 12.0 +/- 0.1 in. (305 +/- 2 mm) high with a diameter of 6.0 +/- 0.1 in. (152 +/- 2 mm) and a center of gravity of 6.0 +/- 0.1 in. (152 +/- 2 mm) from either face (see Fig. 5). This cylinder shall be applied to a product seating surface whose height is 10 in. (254 mm) or less from the floor.

6.8.1.3 *100 lb. test cylinder* – cylinder weighing 100.0 +/- 0.5 lbs. (45.4 +/- 0.2 kg) that is 12.0 +/- 0.1 in. (305 +/- 2 mm) high with a diameter of 6.0 +/- 0.1 in. (152 +/- 2 mm) and a center of gravity of 6.0 +/- 0.1 in. (152 +/- 2 mm) from either face (see Fig. 5). This cylinder shall be applied to a product's seating surface whose height is greater than 10 in. (254 mm) above the floor.

6.8.1.4 *Measurement of the product seating surface height* – This height shall be measured from the floor to the midpoint on the upper surface of the front edge of the seating surface, when a 2 lb. (0.9 kg) load is applied vertically downward using a ½" (13 mm) diameter disk onto the midpoint on the upper surface of the front edge of the seat (see Fig X).

Note X – Use of stops to prevent sliding: If necessary to prevent the product from sliding down the incline, either by its own weight when initially placed on the incline or during the conduct of the test in the following sections, stops can be placed against the product's legs. Stops shall be the minimum height required to prevent sliding and shall not inhibit overturning.

6.8.2 *Rearward stability*

6.8.2.1 *Product orientation:* Place the product on the test surface with the front of the product facing the upward slope.

6.8.2.2 *Application of the load*: Place the applicable test cylinder so that it is centered side to side on the product seating surface, oriented perpendicular to the plane of this surface.

6.8.2.3 *Cylinder Positioning For Chairs*: Place the cylinder as far back or downslope on the seating surface as permitted by the seat back or chair frame (see Fig. 4).

6.8.2.4 *Cylinder Positioning For Stools*: Place the cylinder as far back or downslope as permitted by the seating surface without allowing any part of the cylinder to extend beyond the rearmost or downslope edge of the stool.

6.8.3 *Sideways stability*

6.8.3.1 *Product orientat*ion: Place the product on the test surface in the most unfavorable position with a side of the product facing the upward slope.

6.8.3.2 *Application of the load*: Place the applicable test cylinder so that it is centered front to back on the product seating surface, oriented perpendicular to the plane of this surface.

6.8.3.3 *Cylinder Positioning for Chairs*: Place the cylinder as far back or downslope on the seating surface as permitted by the chair frame or arms (see Fig. Y).

6.8.3.4 *Cylinder Positioning for Stools*: Place the cylinder as far back or downslope as permitted by the seating surface without allowing for any part of the cylinder to extend beyond the rearmost or downslope edge of the stool.

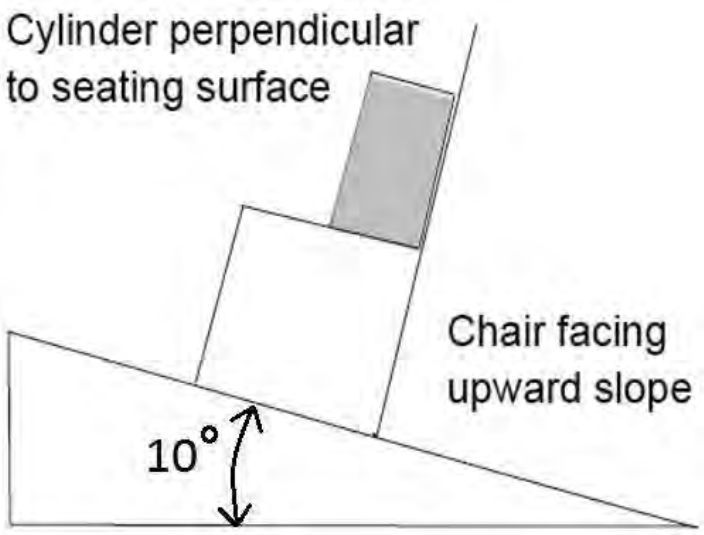

Figure 4. Stability Test Showing Orientation of Chair and Test Cylinder

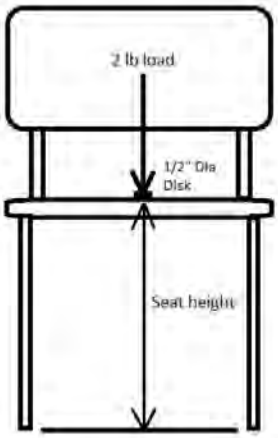

Figure X. Seating Surface Height Measurement

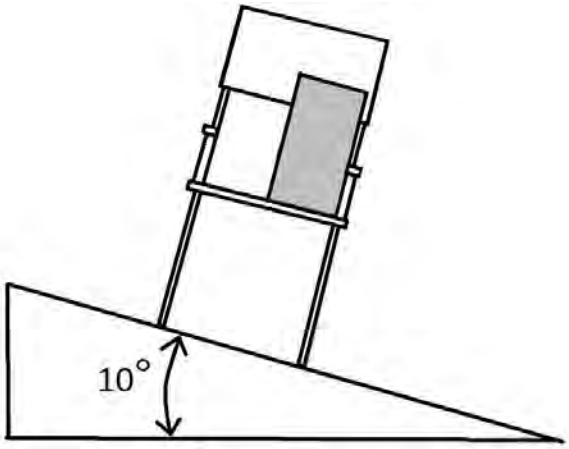

Figure Y. Sideways Stability Test Showing Orientation of Chair and Test Cylinder

Rationale: The current version of the standard only tests for rearward stability. Field data shows that there have been incidents of children's chairs with side containment tipping sideways. The addition of a stability test in the sideward direction addresses these incidents. Figure Y was added to clarify the method for measuring seat height.
Use of a stop for the testing: Testing showed that the use of an angle iron as a stop sometimes gave a false positive result. It was proposed to only use the stops in cases when a chair could slide down the slope.

The use of a shot bag in lieu of the test cylinder was deleted. Testing showed that the shot bag's lower center of gravity gave an unfair advantage in the test. Since testing with the cylinder is possible for seats with soft surfaces the shot bag option was eliminated.
The 2 lb. weight was selected through testing soft seats on the market. The application of the 2 lb. weight was enough force to be able to compress soft cushions or even out fabric seats.

Appendix B

ASTM Balloted Revision of F2613-16$^{\varepsilon 1}$, Standard Consumer Safety Standard for Children's Chairs and Stools to Address Stability Testing (Ballot F15 (17-04) Item 7)
(Double-click to view ballot)

Item 5

TO: Members of Main Committee F15 and Subcommittee

FROM: Brian Grochal – F15.59 Subcommittee Chairman on Children's Chairs and Stools

SUBJECT: Proposed Revision of ASTM F2613 Consumer Safety Specification for Children's Chairs and Stools Folding Mechanisms

The following are revisions to the Folding Mechanisms and Hinges section of the Standard Consumer Safety Specification for Children's Chairs and Stools, ASTM F2613-16. These changes are intended to improve the clarity around applicable requirements and better align with typical ASTM requirement structure.

For comparison, the current wording found in the standard is in the left column below. The wording being balloted is in the center column. A rationale for the change can be found in the column on the right. Changes since the previous ballot are highlighted in yellow.

Appendix C

ASTM Balloted Revision of F2613-16$^{\varepsilon 1}$, Standard Consumer Safety Standard for Children's Chairs and Stools to Address Stability Testing (Ballot F15 (17-04) Item 7)
(Double-click to view ballot)

Item 7

TO: Members of Main Committee F15 and Subcommittee

FROM: Brian Grochal – F15.59 Subcommittee Chairman on Children's Chairs and Stools

SUBJECT: Proposed Revision of ASTM F2613 Consumer Safety Specification for Children's Chairs and Stools Stability Test

The following are revisions to the Stability Test section of the Standard Consumer Safety Specification for Children's Chairs and Stools, ASTM F2613-16. These changes are intended to improve the clarity of how the test cylinder should be placed during the test, particularly for products with non-rigid, contoured seating surfaces (e.g. camping chairs).

Additionally, there are some products where the seat back or arms are further outward from the edge of the seat bottom. In accordance with the current verbiage, a cylinder might be hanging off of the edge of the seat during these stability tests. The task groups believes that the cylinder be allowed to hang over the seating surface during the rearward stability test to simulate the most onerous realistic scenario. The task groups believes that the cylinder should remain on the seating surface, perpendicular to the test surface, during sideways stability testing to ensure the most onerous realistic scenario. Further clarification is being added to define the seating surface during the sideways stability test.

For comparison, the current wording found in the standard is in the left column below. The wording being balloted is in the center column. A rationale for the change can be found in the column on the right.

Appendix D

ASTM Balloted Revision of F2613-16$^{\varepsilon 1}$, Standard Consumer Safety Standard for Children's Chairs and Stools to Address Scope (Ballot F15 (17-04) Item 6)
(Double-click to view ballot)

Item 6

TO: Members of Main Committee F15 and Subcommittee

FROM: Brian Grochal – F15.59 Subcommittee Chairman on Children's Chairs and Stools

SUBJECT: Proposed Revision of ASTM F2613 Consumer Safety Specification for Children's Chairs and Stools Scope

The following are revisions to the Scope section of the Standard Consumer Safety Specification for Children's Chairs and Stools, ASTM F2613-16. These changes are intended to clarify that children's potties are not included in the scope of this standard.

For comparison, the current wording found in the standard is in the left column below. The wording being balloted is in the center column. A rationale for the change can be found in the column on the right.

ASTM F2613-16 Current Wording	*Wording being balloted*	*Rationale*
1. Scope	1. Scope	No change from the current standard.
1.1 This consumer safety specification establishes testing requirements for structural integrity and performance requirements for children's chairs and stools. It also provides requirements for labeling. The standard does not apply to products used in a commercial setting or to products that do not have a rigid frame such as bean bag chairs or foam chairs. This standard does not apply to seats with restraint systems. The term unit or product will refer to a child's chair or stool.	1.1 This consumer safety specification establishes testing requirements for structural integrity and performance requirements for children's chairs and stools. It also provides requirements for labeling. The standard does not apply to products used in a commercial setting or to products that do not have a rigid frame such as bean bag chairs or foam chairs. This standard does not apply to seats with restraint systems or children's potties. The term unit or product will refer to a child's chair or stool.	Clarification added to confirm that children's potties are not included in the scope of this standard.
1.2 This specification covers a chair or stool intended to be used by a single child who can get in and get out of the product unassisted and with a seat height 15 in. or less, with or without a rocking base.	1.2 This specification covers a chair or stool intended to be used by a single child who can get in and get out of the product unassisted and with a seat height 15 in. or less, with or without a rocking base.	No change from the current standard.

Appendix E

ASTM Balloted Revision of F2613-16$^{\varepsilon 1}$, Standard Consumer Safety Standard for Children's Chairs and Stools to Address Scope (Ballot F15 (17-06) Item 31)
(Double-click to view ballot)

TO: Members of Main Committee F15 and Subcommittee

FROM: Brian Grochal – F15.59 Subcommittee Chairman on Children's Chairs and Stools

SUBJECT: Proposed Revision of ASTM F2613 Consumer Safety Specification for Children's Chairs and Stools - Sideways Stability Test for Stools

The following are revisions to the Stability Test section of the Standard Consumer Safety Specification for Children's Chairs and Stools, ASTM F2613-16e1. These changes are intended to remove the sideways stability cylinder positioning section for stools. During the ASTM meeting on Tuesday, June 27th, it was discussed that the sideways stability test was never intended to be applied to stools and this section creates confusion. The current standard incorrectly includes Cylinder Positioning for Stools in section 6.8.3.4.

It should be noted that a separate ballot F15 (17-04) Item 007 closed on May 22, 2017. F15 (17-04) Item 007 has been approved with editorial changes and is being held by an administrative negative. The current ballot is only related to the removal of the Cylinder Positioning for Stools.

For comparison, the current wording found in the standard is in the left column below. The wording being balloted is in the center column. A rationale for the change can be found in the column on the right.

TAB B: Children's Folding Chair and Folding Stool-Related Injuries and Potential Injuries Reported Between January 1, 2015 and August 31, 2017

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
BETHESDA, MD 20814

MEMORANDUM

Date: September 25, 2017

TO : Vince Amodeo
Project Manager, Children's Folding Chairs and Stools
Division of Mechanical Engineering
Directorate for Engineering Sciences

THROUGH: Stephen Hanway
Division Director, Division of Hazard Analysis
Directorate for Epidemiology

FROM : John Topping
Division of Hazard Analysis
Directorate for Epidemiology

SUBJECT : Children's Folding Chair and Folding Stool-Related Injuries and Potential Injuries Reported Between January 1, 2015, and August 31, 2017[4]

I. Introduction

This memorandum updates the data in the Children's Folding Chairs and Folding Stools notice of proposed rulemaking (NPR) briefing package presented to the Commission on September 30, 2015. The time frame covered in the previous data extraction was January 1, 2003-December 31, 2014. For the NPR, staff reported 98 injuries, 45 non-injury incidents, and 39 recall-related complaints associated with children's folding chairs or stools in the CPSRMS.

For the NPR, CPSC staff also evaluated data reported through the NEISS, which gathers summary injury data from hospital emergency departments selected as a probability sample of all the U.S. hospitals with emergency departments, from January 2003 to December 2014. However, that data did not contain sufficient specificity to determine or estimate which injuries involved chairs specially designed for children under age 5. This memorandum updates the incident data reported to CPSC staff for children's folding chairs and folding stools from January 1, 2015 through August 31, 2017.[5] Staff also evaluated the NEISS data for 2015 and 2016, as well as in-progress data collection for 2017. However, staff continued to find that the NEISS data did not provide sufficient specificity to determine which injuries involved chairs specially designed for children under age 5.

[4] This analysis was prepared by CPSC staff. It has not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.
[5] Not all of these incidents are addressable by an action the CPSC could take. The purpose of this memorandum is limited to quantifying the number of fatalities and injuries reported to CPSC staff and to provide, when feasible, estimates of emergency department-treated injuries.

"Children's folding chairs" or "stools" are defined as "a chair or stool intended to be used by a single child who can get in and get out of the product unassisted and with a seat height 15 in. or less, with or without a rocking base." Folding chairs are generally categorized within CPSC data using the product code 4016 (*Beach chairs or folding chairs*). This product code also includes chairs designed for a variety of age groups and non-folding beach chairs, some beyond outside the scope of this review. CPSC staff also searched reports categorized under other product codes for indications that the chair may actually have been a folding chair.

II. Incident Data[6]

In the NPR briefing package, CPSC staff identified a total of 98 incidents, including 45 nonfatal injuries, related to children's folding chairs and stools that were reported to have occurred from January 2003 through December 31, 2014. Since the extraction of data presented in the NPR briefing package, CPSC staff has received reports of 10 new incidents. Staff determined that these incident chairs are intended for children under age 5. Two of these incidents occurred in July and December of 2014, but were not fully investigated or reported until 2015. Of the other eight incidents, two occurred in 2015, three in 2016, and three in 2017.

All 10 newly identified incident reports were collected by CPSC's Consumer Product Safety Risk Management System (CPSRMS). Seven indicated injury, although two were reported without specifying body parts or diagnosis, beyond simply stating that the child either "sustained injuries" or was "seriously injured." Of the five specifying body parts and other injury details, two involved fingers (one amputation, and one fracture with lacerations). Another involved bruising (petechiae) from the middle arm to the wrist after the child's elbow and middle arm were caught in a mesh cup-holder. The remaining two incidents involved injuries of the head from falls. One child fell from a chair face first, which may have resulted in concussion. Another child, a 22-month-old boy, fell against a sharp locking mechanism pin resulting in a laceration of the back of his head.

CPSC's NEISS indicated various reports of folding chairs, some involving victims under age 5. However none had sufficient specificity to determine which incidents, if any, involved chairs with a seat height appropriate for children under the age of 5. In contrast, the 10 newly identified CPSRMS incidents were deemed to involve chairs with a seat height small enough for children under age 5.

III. Hazard Pattern Identification

[6] The CPSC staff searched the NEISS and CPSRMS. CPSRMS includes data that would have been previously stored separately in the In-Depth Investigation (INDP) file, the Injury or Potential Injury Incident (IPII) file, and the Death Certificate (DTHS) databases. The date of extraction data was 8/31/2017. The reported incidents are not a complete count of all that occurred during this period. However, they do provide an estimate of the number of deaths and incidents occurring during this period and illustrate the circumstances involved in the incidents related to children's folding chairs.

Most of the newly reported incidents conform to hazards already identified in the NPR. Two of the new incidents, however, best classified under "miscellaneous," demonstrate somewhat unique hazards not entirely consistent with the hazards previously analyzed in the NPR. In the incidents analyzed for the NPR, staff did not observe any hazard involving body parts getting caught in the mesh (of a cup holder), similar to the new incident of bruising (petechiae) from the middle arm to the wrist of one child. Although many incidents analyzed for the NPR pertained to the locking mechanism or locking pins, those incidents generally involved the hazard of pinching or shearing. One new locking pin-related incident, however, appears unrelated to the hazard of the chair pinching or shearing, and is instead, a consequence of a fall against an exposed sharp and jagged edge. Thus, the locking pin lacerated a boy's head when he fell against it. Although the data for the NPR included five other incidents involving exposed sharp points under the category "miscellaneous," those sharp points were generally only exposed due to the seat back coming off. In contrast, in this particular instance, the sharp point was part of one of the locking pins within the locking mechanism.

The remaining incidents appear entirely consistent with hazards already observed from the NPR data. One newly reported incident describes sharp metal pointing out from the seat cushion, similar to the five already identified in the NPR. "Pinch/shear hazards" were the most common hazard category identified in the previous NPR analysis, and that same hazard is exhibited by at least three incidents, including the two finger injuries and one report (not necessarily involving injury) vaguely describing that the chair "folds up with the kids still in it." The finger amputation incident is one of the three that demonstrate pinch/shear hazards, but this incident appears to have been preceded by tipping of the chair, which is consistent with the combination of hazards already discussed in the NPR. At least three other new incidents exhibit tip-over hazards similar to what was already seen in the NPR data. One incident vaguely described a child who "fell down face first out of a folding chair, possibly resulting in concussion." It is unclear precisely what combination of factors was involved. However, whatever happened in that instance could have resulted from hazards already identified.

TAB C: Response to Comments on the Notice of Proposed Rulemaking (NPR) Related to Labeling Requirements for Children's Folding Chairs and Stools

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
BETHESDA, MD 20814

Date: September 1, 2017

TO : Vincent Amodeo, Project Manager,
Children's Folding Chairs and Stools
Rulemaking under Section 104 of the CPSIA

THROUGH: Rana Balci-Sinha, Ph.D., Director,
Division of Human Factors,
Directorate for Engineering Sciences

FROM : Sharon R. White, Engineering Psychologist

SUBJECT : Response to Comments on the Notice of Proposed Rulemaking (NPR) Related to Labeling Requirements for Children's Folding Chairs and Stools

I. BACKGROUND

The voluntary standard, ASTM F2613, *Standard Consumer Safety Specification for Children's Chairs and Stools*, establishes performance requirements, labeling requirements, and other requirements to promote the safe use of children's chairs and stools. Children's folding chairs and stools are a subset of products covered under this standard. This standard was approved originally in 2007. The notice of proposed rulemaking (NPR) proposed to incorporate by reference the voluntary standard, ASTM F 2613-14, *Standard Consumer Safety Specification for Children's Chairs and Stools,* with modifications. Since publication of the NPR, ASTM has published four new versions of the standard. They are F2613-16, F2613-16$^{\varepsilon 1}$, F2613-17, and the most recent, F2613-17a.

ASTM developed this voluntary standard in response to incident data provided by U.S. Consumer Product Safety Commission's (CPSC or Commission) staff. The standard was developed to address injuries, including, but not limited to, lacerations, fractures, pinches, and amputations of children's fingers in folding mechanisms. Section 7 of the standard specifies the marking and labeling requirements, developed primarily to address crushing and amputation of fingers. This memorandum also responds to comments on the NPR, which assesses the adequacy of the warning label requirements for children's folding chairs and folding stools.

II. DISCUSSION

A. Response to Public Comments

Staff's responses to human factors-related comments are below:

Non-condensed sans serif type

Comment:

One commenter suggested that non-condensed *sans serif* type is not a recognized standard font, could be subject to confusion and misinterpretation, and therefore, the term, non-condensed should not be used to describe the *sans serif* type. The commenter suggests, however, that *sans serif* font is a recognized font, has been used in standards for juvenile products for a very long time with no issues, and should continue to be acceptable.

Response:

Staff disagrees that non-condensed *sans serif* typeface is not a recognized standard font. Basic word processing programs contain many different fonts, from which warning label designers may select, including fonts commonly identified as "condensed" or "compressed." Therefore, staff believes that warning label designers would recognize *non*-condensed fonts because there are many examples of fonts labeled condensed or compressed to which designers are exposed. Consequently, staff does not believe that non-condensed typefaces would be subject to confusion and misinterpretation. Furthermore, after publication of the NPR, ASTM balloted and approved a requirement to include non-condensed *sans serif* typeface in a Note section of the ad hoc labeling requirements. The requirement is specified in *Ad Hoc Approved Wording Revision B – August 8, 2017*. The final version of the Ad Hoc requirements was published in the "Committee Documents" section of the Committee F15 ASTM website on August 8, 2017.[7]

This font may increase the likelihood that consumers will read the warning messages because condensed *sans serif* typeface is a font that is narrow and compressed and is difficult to read. Because CPSC staff finds the Ad Hoc TG's provision for non-condensed *sans serif* typeface to be sufficient, ASTM made this change in ASTM F2613-17a, and staff recommends that CPSC adopt this standard. The changes in the requirements are presented in the Note section of 7.2 in Appendix A of this memo (deletions are shown with strikethrough and additions with underline).

[7] See https://myastm.astm.org/KEY_DOCUMENTS/PDF_FILES/f150000adhocword1.pdf. This link is accessible to Committee F15 members only.

Since publication of the NPR, ASTM F2613-17 was published in August 2017. It includes provisions for non-condensed *sans serif* typeface. Staff agrees with the provision, which was retained in the current version, ASTM F2613-17a.

Warning Label on Stools

Comment:

One commenter stated that the requirement for the warning label on stools is not clear, and for compliance purposes, is open to interpretation. The commenter stated that the requirement to place the label in a "visible location" is not defined, but should be. The commenter stated that the proposed requirement to place the label in a "visible location" is not defined, but should be. The commenter also noted that the proposed requirement suggesting that an acceptable visible location for the label should be on the stool's legs so that the label does not "wrap around the legs" is very confusing. The commenter questioned whether this requirement means that a label cannot wrap around one of the stool's legs, and that if that is the case, then placing a label on a stool's leg would most likely be impossible.

Response:

Staff agrees that the requirement to place the label in a "visible location" is not defined, but should be defined, and that the requirement for placement of a warning label on a stool should be expressed more clearly.

Since publication of the NPR, ASTM F2613-17 was published in August 2017, including a definition for "conspicuous" and a provision for the placement of the warnings to be conspicuous. Staff agrees with the provision for placement of the warning, which was in ASTM F2613-17, and is also in the current version, ASTM F2613-17a. The changes in the requirements are presented in the Appendix A of this memo at 7.2.3 (deletions are shown with strikethrough and additions with underline).

Instructions

Comment:

One commenter remarked that the NPR's proposal regarding instructions in section 7.2.4 of ASTM F2613 -14 is inappropriate because this entire section of the standard is related to warnings, not instructions.

Response:

The commenter is correct that this entire section of the standard is related to warnings and not to instructions. That is the reason for this provision, to ensure that any instructions, written or otherwise, do not contradict or confuse the meaning of the required warning label. However, since publication of the NPR, the ASTM Ad Hoc TG has balloted and approved recommended wording in the ad hoc requirements that staff believes addresses written instructions. The Ad Hoc TG recommended wording referred to in the case of this comment as "markings."

Accordingly, staff agrees with the Ad Hoc TG's recommended wording in ASTM F2613-17 that addresses the written instructions, and is also used in the current version, ASTM F2613-17a. The changes in the warning requirements are presented in Appendix A of this memo at 7.2.4 (deletions are shown with strikethrough and additions with an underline)

Color Requirement for Signal Word Panel

Comment:

A commenter noted that the requirement for an orange signal word panel, with a note to allow for either red or yellow color is contrary to other recent NPRs and final rules that have been published. The commenter stated that the other NPRs/final rules have specified an option of an orange, red, or yellow signal word panel, whichever provides the best contrast to the background of the product. The commenter also stated that this NPR should not differ from previous NPRs/final rules regarding the specification of the color of the signal word panel.

Response:

Staff disagrees. The NPR does not differ from previous NPRs/final rules regarding the color of the signal word panel. CPSC staff relied on ANSI Z535.4, *American National Standard for Product Safety Signs and Labels,* when designing warning labels. ANSI Z535.4 is the primary U.S. voluntary consensus standard for the design of on-product warning labels. In this case, the appropriate color for the signal word panel is orange because the signal word WARNING is used, and orange is the appropriate color for the signal word. ANSI does not specify a yellow or red panel for a WARNING signal word. However, because industry expressed concern that an orange signal word panel may not provide the best contrast on an orange background, staff agreed to allow the option of choosing yellow or red, whichever provides the best contrast.

However, since publication of the NPR, the ASTM Ad Hoc TG has balloted and approved recommended wording in the ad hoc requirements that addresses more effectively the commenter's concern about consistency in color for the signal word panel. The recommended wording is the requirement from the Ad Hoc TG to follow the guidance in ANSI Z535.4 on the color of the signal word panel.

ASTM F2613-17 was published in August 2017. Staff agrees with the provisions that address the requirements for color of the signal word panel. Staff also agrees with the provision in the current version, ASTM F2613-17a. The changes in the warning label requirements are presented in Appendix A of this memo at 7.2.2 (deletions are shown with strikethrough and additions with an underline):

White Space

Comment:

A commenter stated that the requirement to "contain sufficient white space" is not definitive and can potentially be misconstrued by laboratories evaluating compliance of a product. The commenter stated that this requirement should be defined more specifically, or else deleted.

Response:

The commenter is correct. The requirement does not define operationally the amount of white space that is acceptable or not acceptable, so there are no criteria to assess how to meet the requirement. Neither test labs, nor manufacturers, would have any way to assess compliance with the white space requirement. Nevertheless, manufacturers are not prohibited from including white space to attract consumers' attention to the label and make the warning language easier to read.

Since publication of the NPR, ASTM F2613-17 was published in August 2017. Staff agrees with the provision to remove the requirement for "sufficient white space" in ASTM F2613-17, which was retained in the current version, ASTM F2613-17a. The changes in the warning requirements are presented in Appendix A of this memo (deletions are shown with strikethrough). Figures 1 and 2 in Appendix B in the final rule are examples of warnings that have sufficient "white space."

Graphics

Comment:

A commenter recommended that CPSC add pictograms to the warnings to convey more effectively the hazard and avoid language barriers that minimize comprehension of these warnings.

Response:

Staff acknowledges that pictograms can be used to convey the hazard more effectively, especially for users with limited or no English literacy. Designing pictograms for warning labels should be based on the test procedures for comprehension in ANSI Z535.3, *American National Standard Criteria for Safety Symbols* (2011), and be well-tested on the target audience. However, designing

effective pictograms can present many challenges. Currently, staff has recommended that the standard contain a requirement that the warning label be presented, at a minimum, in the English language. The inclusion of the phrase "at a minimum" provides some means to address groups who do not read English. However, staff could recommend that the Commission take action in the future, if staff believes that warning symbols are needed to further reduce the risk of injury associated with these products.

Delaying publication of the Final Rule

Comment:

A number of commenters have requested delaying publication of the final rule for any and all warning requirements for children's folding chairs and stools until the warnings format and content revisions proposed in the NPR can be properly reviewed, relative to the ASTM Ad Hoc TG wording that is being developed, balloted, and ultimately incorporated into F2613.

Response:

Since publication of the NPR, the Ad Hoc TG has published its recommended requirements for warning format, and ASTM F2613-17a has revised its warning provisions to reflect these recommendations. Staff agrees with these new provisions.

The new warning provisions addressing content and format rely upon ANSI Z535.4- 2011 as a baseline, in conjunction with relevant warning literature, and other factors that need to be considered when designing a label to be noticed, read and understood, and followed.

B. ASTM Voluntary Standard Recent Activity

Following the NPR comment period, the ASTM F15.59 Children's Chairs and Stools subcommittee held a teleconference on May 18, 2016, where the Ad Hoc TG compared the ASTM 2613-14 warning requirements, the Ad Hoc Subcommittee's recommendations, and CPSC staff's labeling recommendations. CPSC staff discussed revisions to the labeling requirements that could align better with the ad hoc labeling requirements. However, CPSC staff expressed concern about the Ad Hoc TG's provision for use of paragraph format because paragraph format is more difficult to read, compared to outline, bullet format.

The TG did not discuss placement (conspicuousness) of the warning and the abbreviated warning. Therefore, on May 20, 2016, the Subcommittee Chairman requested that the TG submit comments to address these topics by May 27, 2016, to go to ballot. CPSC staff proposed a definition for "conspicuousness" and an abbreviated warning that staff could consider. The Chairman received comments on staff's recommendations from the subcommittee members. Subsequently, the

Chairman considered these comments and recommendations from the May 18, 2016, teleconference and issued a ballot on July 13, 2016 [Ballot F-15 (16-07)].

The ballot closed on August 12, 2016, and received one negative and several comments. The negative regarded the definition of "conspicuousness." A committee member who voted negative proposed a definition that permitted placement of the label on the product in a less visible location. This conflicted with staff's proposed definition, which precludes placement of the label in a less visible location but will simultaneously provide flexibility to locate warnings in instances where space is limited. CPSC staff indicated that the balloted wording incorporated ESHF staff's recommendations that align with the Ad Hoc TG's. However, the ballot did not include all of ESHF staff's recommendations and it also included variations of staff's recommendations.

On September 27, 2016, the ballot results were discussed at a subcommittee meeting. The Chairman deemed the results substantial and recommended re-balloting the wording. The ballot was issued on December 1, 2016 [Ballot F15 (16-11)], and closed on January 2, 2017. The ballot received one abstention with comment, several labeling negatives, and an affirmative with comments. The abstention with comment, which CPSC staff submitted, indicated that staff deemed the balloted wording acceptable. However, one labeling negative related to warning conspicuousness. The other labeling negatives related to whether labeling should be required on chairs that do not present an amputation hazard.

On January 18, 2017, the ballot results were discussed at a subcommittee meeting. The labeling negatives related to whether labeling should be required on chairs that do not present a hazard (*i.e.*, chairs that meet the hinge line requirement) were found persuasive. A task group subsequently formed discussed this issue during a conference call on February 13, 2017. CPSC staff agreed that chairs that do not present an amputation hazard do not need a warning label and that warning labels should be reserved for those products for which the hazard has not been designed out (*i.e.*, chairs that do not meet the hinge line requirement). The Chairman issued a ballot on February 28 and the ballot closed on March 31, 2017[Ballot F15 (17-02)]. The ballot received negatives that were discussed, and changes were approved at the F15.59 subcommittee meeting on April 4, 2017, meeting.

The final approved balloted wording is in accord with CPSC staff's recommendations and the ASTM ad Hoc Wording TG's recommendations dated August 8, 2017. See Appendix A. Therefore, CPSC staff recommends adopting the voluntary standard, ASTM F2613-17a for Children's Chairs and Stools, as a mandatory standard, with modifications to limit the scope to folding chairs and folding stools.

Appendix A

Table 1. F2613-17a Label Language and Recommended Revisions		
Current Language	NPR Recommended Language	Final Rule Recommended Language
7.2 Warning Statements—Folding chairs and folding stools shall have warning statements:	7.2 *Warning Statement*: Each ~~F~~folding chair~~s~~ and folding stool~~s~~ shall have warning statements~~:~~.	7.2 Each ~~F~~folding chair~~s~~ and folding stool~~s~~ that does not meet the hinge line clearance requirement in 5.8.2 shall have warning statements as follows.
7.2.1 General Warnings Requirements:		
7.2.1.1 The warnings shall be easy to read and understand. The warning statements shall be in contrasting color(s), permanent, and applied, so they are visible in their entirety when the product is in the manufacturer's recommended use position.	7.2.1 The warnings shall be easy to read and understand and be in the English language at a minimum.	7.2.1 The warnings shall be easy to read and understand and be in the English language at a minimum.
	7.2.2 The warning statements shall be conspicuous in highly contrasting color(s) (*e.g.*, black text on white background), in non-condensed sans serif type, permanent and applied so they are in a prominent location, visible to the caregiver when the product is in the manufacturer's use position.	7.2.2 The warnings shall be conspicuous and permanent. Conspicuous, adj.- Visible to a person standing near the unit at any one position around the unit but not necessarily visible from all positions, when the unit is in a manufacturer's recommended use position with an occupant seated. The warnings shall conform to ANSI Z535.4 – 2011, American National Standard for Product Safety Signs and Labels, sections 6.1-6.4, 7.2-7.6.3, and 8.1, with the following changes. In sections 6.2.2, 7.3, 7.5, and 8.1.2, replace "should" with "shall." In section 7.6.3, replace "should (when feasible)" with "shall." Strike the word "safety" when used immediately before a color (*e.g.*, replace "safety white" with "white"). NOTE: For improved warning readability, typefaces with large height-to-width ratios, which are commonly identified as "condensed," "compressed," "narrow," or similar should be avoided.

Table 1. F2613-17a Label Language and Recommended Revisions		
Current Language	NPR Recommended Language	Final Rule Recommended Language
	7.2.3 The specified warnings shall be separate and distinct from any other written material on the product and surrounded by a black border. Note: Separate and distinct, for example, on the back of the chair's back rest away from warnings on the underside of the chair so that it is clearly visible to a consumer approaching the chair from the back.	
	For stools, where possible, the label shall be placed in a visible location such as on the legs in such a way that the label does not wrap around the legs.	

Table 1. F2613-17a Label Language and Recommended Revisions		
Current Language	NPR Recommended Language	Final Rule Recommended Language
		7.2.3 Products with limited space: For products where available space to locate all the warnings conspicuously is prohibitive, warnings may be placed in two locations. The first location must be conspicuous, and provide a statement that identifies where additional warnings are located. Warnings in the second location must be visible in their entirety. The first location must include the safety alert symbol ⚠ followed by the signal word "WARNING", the words "AMPUTATION HAZARD," and an indication of where to find the second location. See Figure 2 in Appendix B:
	7.2.4 Any labels or written instructions provided in addition to those required by this section shall not contradict or confuse the meaning of the required information or be otherwise misleading to the consumer.	7.2.4 Any marking or labeling provided in addition to those required by this section shall not contradict or confuse the meaning of the required information or be otherwise misleading to the consumer.
7.2.1.2 The text shall be sans serif type. The safety alert symbol "⚠" and the word "WARNING" shall not be less than 0.2-in. (5-mm) high and the remainder of the text shall be in characters whose upper case shall be at least 0.1-in. (2.5-mm) high except as specified.	7.2.5 The safety alert symbol "⚠ "~~and,~~ the signal word WARNING", and the words "AMPUTATION HAZARD" shall precede the warning statements.	7.2.5 The safety alert symbol "⚠ "~~and,~~ the signal word WARNING", and the words "AMPUTATION HAZARD" shall precede the warning statements.

Table 1. F2613-17a Label Language and Recommended Revisions		
Current Language	NPR Recommended Language	Final Rule Recommended Language
	7.2.6 The safety alert symbol "⚠ " and the signal word "WARNING" shall not be less than 0.2 in. (5-mm) high and the remainder of the text shall be in characters whose upper case is at least 0.1 in. (2.5-mm) high except as specified.	7.2.6 The safety alert symbol "⚠ " and the signal word "WARNING" shall be at least 0.2 in. (5-mm) high. ~~and~~ ~~t~~The remainder of the text shall be in characters whose upper case shall be ~~is~~ at least 0.1 in. (2.5 mm) high, except where otherwise ~~as~~ specified.
	7.2.7 The signal word WARNING shall be in black letters on an orange panel surrounded by a black border.	
	Note 1- When special circumstances preclude the use of the color orange, yellow or red may be used, whichever contrasts best against the product background.	
	7.2.8 The solid triangle portion of the safety alert symbol shall be the same color as the signal word lettering, and the exclamation mark shall be the same color as the signal word panel	

Table 1. F2613-17a Label Language and Recommended Revisions		
Current Language	NPR Recommended Language	Final Rule Recommended Language
	7.2.9 The words "AMPUTATION HAZARD" shall be in bold black letters.	7.2.~~9~~7 The words "AMPUTATION HAZARD" shall be in bold black letters.
	7.2.10 The precautionary statements shall be indented from the hazard statements, preceded by bullet points, and appear as shown in example Figs. 3 and 4.	
	7.2.11 The warning label shall contain sufficient white space as shown in Figs. 3and 4.	
	7.2.12 Overall height and width of the label may be modified as necessary to fit on the product, but still meet requirements for conspicuousness. An example warning label format described in this section is shown in Figs.3 and 4.	
		7.2.8 The text shall be left aligned, ragged right for all but one-line text messages, which can be left aligned or centered. Note: Left aligned means that the text is aligned along the left margin, and, in the case of multiple columns of text, along the left side of each individual column.

Table 1. F2613-17a Label Language and Recommended Revisions		
Current Language	NPR Recommended Language	Final Rule Recommended Language
		The text in each column should be arranged in list or outline format, with precautionary (hazard avoidance) statements preceded by bullet points. Multiple precautionary statements shall be separated by bullet points if paragraph formatting is used.
7.2.1.3 For folding chairs and folding stools with latches, warnings shall address the following:	7.2.13 For *folding chairs and folding stools* with latch(es), warnings shall address the following:	7.2.9 The warnings shall address the following:
(1) Prevent crushed or amputated fingers. (2) Make sure latch is secure.	7.2.13.1 Amputation hazard: 1. Hazard and Consequence Statement a. AMPUTATION HAZARD b. Chair can fold or collapse if lock not fully engaged. Moving parts can amputate child's fingers. 2. Precautionary Statements: a. Keep fingers away from moving parts. b. Completely unfold chair and fully engage locks before allowing child to sit in chair. c. Never allow child to fold or unfold chair.	7.2.9.1 (1).Chair can fold or collapse if lock not fully engaged. Moving parts can amputate child's fingers. (2). Keep fingers away from moving parts. (3) Completely unfold chair and fully engage locks before allowing child to sit in chair. (4) Never allow child to fold or unfold chair. 7.2.10 An example warning in the format described in this section is shown in Figure1.
7.2.1.4 For folding chairs and folding stools without latches, warnings shall address the following:	7..2.14 For *folding chairs and folding stools* without latch(es), warnings shall address the following:	

Table 1. F2613-17a Label Language and Recommended Revisions		
Current Language	NPR Recommended Language	Final Rule Recommended Language
(1) Prevent crushed or amputated fingers. (2) Unfold chair completely before use. (3) Keep fingers away from hinges.	7.2.14.1 Amputation hazard: 1. Hazard and Consequence Statement a. AMPUTATION HAZARD b. Moving parts can amputate child's fingers if chair folds or collapses. 2. Precautionary Statements: a. Keep fingers away from moving parts b. Completely unfold chair before allowing child to sit in chair. c. Never allow child to fold or unfold chair.	

Appendix B

Figure 1. Example of Amputation Hazard Warning for Chairs and Stools

Figure 2. Example of Abbreviated Warning for Chairs and Stools

TAB D: Small Business Impacts of the Staff-Recommended Final Rule for Children's Folding Chairs and Stools

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
BETHESDA, MD 20814

Memorandum

Date: September 1, 2017

TO : Vince Amodeo
Project Manager, Children's Folding Chairs and Stools
Division of Mechanical and Combustion Engineering
Directorate for Engineering Sciences

THROUGH: Gregory B. Rodgers, Ph.D.
Associate Executive Director
Directorate for Economic Analysis

Robert L. Franklin
Senior Staff Coordinator
Directorate for Economic Analysis

FROM : Jill L. Jenkins, Ph.D.
Economist
Directorate for Economic Analysis

SUBJECT : Small Business Impacts of the Staff-Recommended Final Rule for Children's Folding Chairs and Stools

I. Introduction

On October 19, 2015, the U.S. Consumer Product Safety Commission (CPSC or Commission) published a notice of proposed rulemaking (NPR) in the *Federal Register* (FR) (80 FR 63155). The proposed rule incorporated by reference the then-current voluntary ASTM International (ASTM) standard for children's chairs and stools (F2613-14), with a narrower scope, modifications to the on-product warning labels, and an additional test for side stability. Since the NPR, ASTM has published four new versions of the standard, F2613-16, F2613-16$^{\varepsilon 1}$, F2613-17, and F2613-17a. Consequently, ASTM F2613 now includes the side stability test proposed by the Commission, as well as modifications to the warning labels, consistent with revisions proposed as part of the NPR. Staff now recommends that the Commission adopt ASTM F2613-17a, with no modifications other than the narrower scope.

This memorandum evaluates the potential economic impact on small entities, including small businesses, of the staff-recommended final rule for children's folding chairs and stools, as required by the Regulatory Flexibility Act (RFA).[8] Section 604 of the RFA requires that agencies prepare a

[8] 5 U.S.C. §§ 601-612.

final regulatory flexibility analysis (FRFA) when the Commission promulgates a final rule, unless the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. As described below, staff concludes that the draft final rule will not have a significant economic impact on a substantial number of small firms. The evidence to support this determination is presented below.

II. The Product

ASTM F2613-17a, *Standard Consumer Safety Specification for Children's Chairs and Stools*, defines a "children's chair" as "seating furniture with a rigid frame that is intended to be used as a support for the body, limbs, or feet of a child when sitting or resting in an upright or reclining position." A "folding chair or stool" is defined as "a children's chair or stool which can be folded for transport or storage." A "children's stool" is defined as a "children's chair without back or armrests." The standard's specifications apply to chairs or stools with a seat height of 15 inches or less, with or without a rocking base, and that are intended to be used by a single child who can get out of the product unassisted. These products tend to be relatively inexpensive and typically cost about $10 to $40.

Certain product types have been excluded from the ASTM standard. These include: products used in a commercial setting, products without a rigid frame (*e.g.,* bean bag or foam chairs), and seats with restraint systems. Stepstools and other products intended for adults have also been excluded. Additionally, ASTM F2613-17a now includes an explicit exemption for children's potties.

CPSC's rule would have a more limited scope than the ASTM F2613-17a standard. The staff-recommended final rule includes only children's folding chairs and folding stools that are intended or reasonably expected to be used by children under 5 years old. The ASTM voluntary standard also includes children's chairs and stools that do not fold.

III. The Market for Children's Folding Chairs and Folding Stools

There are currently 13 domestic firms supplying children's folding chairs and/or folding stools to the U.S. market. Of these, 10 are considered small, according to U.S. Small Business Administration criteria.[9] Four of the small firms are manufacturers, five are importers or wholesalers, and the supply source for one firm could not be identified. Most firms only supply one

[9] The U.S. Small Business Administration categorizes manufacturers as "small" if they have fewer than 500 employees and importers or wholesalers as small if they have fewer than 100 employees.

model of chair, but one supplies four models, and another supplies five distinct models. (See Table 1 below)

Table 1. Firms in the U.S. Children's Folding Chair and Stool Market

Category	Number of firms
Total Firms	**13**
Domestic	13
Small	**10**
Manufacturers	**4**
Compliant with ASTM Voluntary Standard	1
Not Compliant with ASTM Voluntary Standard	3
Importers or Wholesalers	**5**
Compliant with ASTM Voluntary Standard	1
Not Compliant with ASTM Voluntary Standard	4
Unknown	**1**
Compliant with ASTM Voluntary Standard	0
Not Compliant with ASTM Voluntary Standard	1
Large	**3**
Foreign	0
Highlighted categories are the focus of this analysis.	

The Juvenile Products Manufacturers Association (JPMA) maintains a certification program for children's folding chairs and folding stools with one active participant at this time. Other than this formal certification program, compliance with the ASTM standard is self-reported. Two additional children's folding chair suppliers claim compliance with the voluntary standard.

IV. Issues Raised by Public Comments on the IRFA

CPSC received several public comments in response to the NPR for children's folding chairs and stools. Two comments addressed issues raised in the IRFA, including alternatives to reduce the

impact on small firms, such as a longer effective date. The first commenter, who did not identify any affiliation, suggested a longer effective date, particularly for domestic manufacturers. However, the Commission received no comments from either manufacturers or importers requesting a longer effective date. Therefore, staff does not recommend changing the 6-month effective date.

A second anonymous commenter thought that additional importer costs, such as negotiation between the importer and their supplier and the effect on retail prices and consumers, ought to have been considered in the IRFA analysis. However, the importer-negotiation costs mentioned were considered by staff, but could not be quantified, and would likely vary across firms. The impact of a price increase on consumers is beyond the scope of a regulatory flexibility analysis.

V. Impact on Small Businesses

A. Impact on Small Manufacturers

Staff attempted to contact several of the small suppliers of children's folding chairs and folding stools to assess the impact of the proposed rule on their firms, and two responded. Of the four small manufacturers of children's folding chairs and folding stools, one claims compliance with the voluntary standard and participates in the ASTM process. The compliance of the other three firms could not be determined. Staff expects that the firm claiming compliance with the voluntary standard will be in compliance with ASTM F2613-17a by the time the mandatory standard becomes final. Therefore, the economic impact on this firm is expected to be minimal.

The children's folding chairs from the three small manufacturers whose products that do not meet the voluntary standard may need to redesign their products to comply with the voluntary standard. However, the cost to redesign a chair, in the event it is non-compliant, is estimated by one manufacturer to be $10,000, including 9 to 12 months of research and development time. It does not appear that the economic impact would be significant for any of the small manufacturers (*i.e.,* the cost would be less than 1 percent of annual revenue).

Under section 14 of the CPSA, once the new children's folding chairs and folding stools' requirements become effective, all manufacturers will be subject to the third party testing and certification requirements under the *Testing and Labeling Pertaining to Product Certification* rule (1107 rule). Third party testing will include any physical and mechanical test requirements specified in the final children's folding chairs and folding stools' rule. Manufacturers and importers should already be conducting required lead testing for children's folding chairs and folding stools. Third party testing costs are in addition to the direct costs of meeting the children's folding chairs and folding stools' standard.

Staff contacted two small manufacturers regarding testing costs, and one firm estimated that chemical and structural testing of one unit of a children's folding chair costs around $1,000 annually. No other firms were willing or able to supply the requested testing cost information. Estimates provided by suppliers for other section 104 rulemakings indicate that around 40 to 50 percent of testing costs can be attributed to structural requirements, with the remaining 50 to 60 percent resulting from chemical testing (lead testing, to which they are already subject). If these percentages apply to folding stools and chairs, the testing to structural components of the ASTM voluntary standard could cost about $400 to $500 per sample tested ($1,000 x .4 to $1,000 x .5), and these are consistent with testing cost estimates for products with standards of similar complexity. Based on an examination of each small domestic manufacturer's revenues, it seems unlikely that testing costs, in combination with any costs of redesign, would be economically significant for any of the small manufacturers.

B. Impact on Small Importers and Wholesalers

The economic impact on importers and wholesalers are considered together because both rely on outside firms to supply the products that they distribute to the U.S. market. Importers distribute products made by foreign firms and are often closely related to the firm producing their product. Staff was unable to determine the source of the children's folding chairs distributed by wholesalers, but they are likely purchased from other suppliers, who may be foreign or domestic.

Of the five small importers/wholesalers, only one claims that their products are compliant with the ASTM standard. The state of compliance of the other four could not be determined. For the wholesaler currently in compliance with the voluntary standard, there should be minimal burden associated with compliance.

Additionally, the revenue levels of three of the remaining four small importers are high enough that staff does not expect the rule to have a significant economic impact on these firms (*i.e.,* a cost of $10,000 that might be needed to redesign a folding chair represents less than 1 percent of their revenue), especially given the diversity of their product lines. However, we could not rule out a significant economic impact on the final small importer of noncompliant folding chairs. This firm has a low revenue level, and if their four folding chair models had to be completely redesigned, their costs could reach 3.6 percent of their revenue, which could constitute a significant impact. On the other hand, if their folding chair models have some design features in common, and if the modifications required to bring one model into compliance could be applied to other models, the impact would likely to be somewhat lower.

Like manufacturers, all importers will be subject to third party testing and certification requirements, and consequently, will be subject to costs similar to those for manufacturers, if their supplying firm does not perform third party testing. It does not appear likely that these testing

costs, alone, would exceed 1 percent of gross revenue for the five small domestic importers and wholesalers.

C. Summary of Impacts

CPSC staff is aware of a total of 13 firms and 10 small firms (4 domestic manufacturers, 5 domestic importers/wholesalers, and one firm with an unknown supply source) currently marketing children's folding chairs and folding stools in the United States. Of the four small manufacturers, it appears that none are likely to experience a significant economic impact. Similarly, the impact of the draft final rule is not expected to be significant for four of the small importers/wholesalers of children's folding chairs (one with compliant products, and three with noncompliant products).

Although we cannot completely rule out a significant impact on two small firms (*i.e.*, the remaining small importer, plus the remaining firm with an unknown supply source), these two firms constitute only 20 percent of the small businesses potentially affected by the rule. Therefore, staff believes that the Commission could certify that the rule will not have a significant economic impact on a *substantial* number of small entities.

Because the draft rule would mandate the voluntary standard with no additional requirements (and a narrower scope), the only option available to the Commission to reduce the impact of the rule is to extend the effective date. However, no comments from the firms likely to be affected by this rule have suggested the economic impact would be significant, and no comments about the effective date were received from potentially affected firms.

VI. Small Business Impacts of the Accreditation Requirements for Testing Laboratories

In accordance with section 14 of the CPSA, all children's products that are subject to a children's product safety rule must be tested by a CPSC-accepted third party conformity assessment body (i.e., testing laboratory) for compliance with applicable children's product safety rules. Testing laboratories that want to conduct this testing must meet the notice of requirements (NOR) pertaining to third party conformity testing. NORs have been codified for existing rules at 16 C.F.R. part 1112. Consequently, staff recommends that the Commission amend 16 C.F.R. part 1112 to establish the NOR for testing laboratories that want to test children's folding chairs and stools for compliance with the children's folding chair and folding stool final rule.

The Commission certified in the NPR that the proposed NOR would not have a significant impact on a substantial number of small firms because:

- No requirements were imposed on laboratories that did not intend to provide third party testing services;
- Only firms that anticipated receiving sufficient revenue from the mandated testing to justify accepting the requirements would provide testing services; and
- Most of these laboratories will already be accredited to test for conformance to other juvenile product standards, and the only costs to them would be the cost of adding the children's folding chair standard to their scope of accreditation.

There have been no substantive changes in these facts since the NPR was published, and no public comments were received that suggest that the NOR could significantly impact a substantial number of small test laboratories. Therefore, there is no reason to alter the Commission's certification of the NOR's impact on small test laboratories.