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

BP - Infant Walkers - Final Rule
The contents of this document will be discussed at the Open Commission Meeting on Wednesday, May 19, 2010

THIS MATTER IS NOT SCHEDULED FOR A BALLOT VOTE.

A DECISION MEETING FOR THIS MATTER IS SCHEDULED ON: May 26, 2010

Date: May 12, 2010

TO : The Commission
Todd Stevenson, Secretary

THROUGH: Maruta Budetti, Executive Director

FROM : Cheryl A. Falvey, General Counsel
Philip L. Chao, Assistant General Counsel, RAD
Patricia M. Pollitzer, Attorney

SUBJECT : Final Rule for Infant Walkers under Section 104(b) of the Consumer Product Safety Improvement Act

Section 104(b) of the Consumer Product Safety Improvement Act ("CPSIA") directs the Commission to issue safety standards for durable infant or toddler products. Attached is a staff briefing memorandum recommending that the Commission issue a final rule under section 104(b) of the CPSIA for infant walkers that is substantially the same as the applicable voluntary standard, ASTM F 977-07, with certain modifications. A draft final rule is provided at Tab E of the briefing package for your consideration.

Please indicate your vote on the following options.

I. Approve publication in the *Federal Register* of the draft final rule for walkers without change.

_____ _____
Signature Date

RH 5/12/2010
CLEARED FOR PUBLIC RELEASE
UNDER CPSA 6(b)(1)

THIS DOCUMENT HAS NOT BEEN REVIEWED OR ACCEPTED BY THE COMMISSION.

II. Approve publication in the *Federal Register* of the draft final rule for walkers with changes (please specify changes):

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_____ _____

Signature Date

III. Do not approve publication in the *Federal Register* of the draft final rule for walkers .

_____ _____

Signature Date

IV. Take other action (please specify):

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_____ _____

Signature Date

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Memorandum

This document has been electronically approved and signed.

Date: MAY 12 2010

TO : The Commission
Todd A. Stevenson, Secretary

THROUGH: Cheryl A. Falvey, General Counsel
Maruta Z. Budetti, Executive Director

FROM : Robert J. Howell, Assistant Executive Director,
Office of Hazard Identification and Reduction
Patricia Edwards, Division of Mechanical Engineering,
Directorate for Engineering Sciences

SUBJECT : Consumer Product Safety Improvement Act of 2008 (CPSIA), Draft Final Rule for a Safety Standard for Infant Walkers

A) Introduction

Section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA), *Standards and Consumer Registration of Durable Nursery Products*, requires the U.S. Consumer Product Safety Commission (CPSC, or Commission) to study and develop safety standards for certain infant and toddler products. The list of products in section 104 includes: full-size and non-full-size cribs; toddler beds; high chairs, booster chairs, and hook-on chairs; bath seats; gates and other enclosures for confining a child; play yards; stationary activity centers; infant carriers; strollers; walkers; swings; and bassinets and cradles. The Commission is charged with examining and assessing the effectiveness of any voluntary consumer product safety standards and for promulgating mandatory consumer product safety standards for these products.

Section 104 of the CPSIA also requires the Commission to consult with representatives of consumer groups, juvenile product manufacturers, and independent child product engineers and experts to examine and assess the effectiveness of the voluntary standards. This consultation process commenced in October 2008 during the ASTM International (formerly known as the American Society for Testing and Materials) subcommittee meeting regarding the ASTM infant walker voluntary standard, in which CPSC staff participated. Consultations with members of the ASTM subcommittee are ongoing.

The Commission issued a notice of proposed rulemaking (NPR) in 74 *Federal Register* 45704 dated September 3, 2009 (Tab A). The proposed rule incorporated by reference the requirements for infant walkers as outlined in the voluntary standard, ASTM F 977-07, *Standard Consumer Safety Specification for Infant Walkers,* with certain changes to specific provisions in the voluntary standard in order to strengthen the proposed rule.

RH 5/12/2010
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UNDER CPSA 6(b)(1)

In December 2009, three months after the NPR was published, ASTM published a revision to the infant walker standard, F 977-09. This revision included some of the new requirements found in the NPR, but not the majority of them. It also included a significant change to the rearward facing stair fall test procedure[1] for open back frame walker models that staff believes is less stringent than what was proposed in the NPR. Therefore, this briefing package will continue to refer to the earlier version of the ASTM standard, F 977-07, with regard to the draft final rule, and it is the '07 version that the draft final rule incorporates by reference.

This briefing package presents a final regulatory flexibility analysis to evaluate the possible economic impact of the draft final rule on small businesses, and provides staff's responses to the comments on the NPR as well as our recommendations regarding the draft final rule.

B) Incident Data

In the NPR briefing package, staff discussed eight fatality reports related to infant walkers that occurred during the five year period 2004-2008. Since the writing of that briefing package, there have been no additional deaths reported to the agency.

The NPR briefing package also presented the estimated annual average of 3,000[2] injuries involving infant walkers among children under the age of 15 months that were treated in U.S. hospital emergency departments over the five year period 2004-2008 as reported through the National Electronic Injury Surveillance System (NEISS). This package also presented an overview of the historical NEISS data, showing the 88% reduction in injuries from 1994 to 2008, which may be attributed to the addition of the stair fall requirement included in the 1997 version of the ASTM voluntary standard. However, despite the significant reduction of injuries associated with infant walkers, the stair fall hazard is still the most prevalent in reported infant walker incidents and NEISS data.

C) Final Regulatory Flexibility Analysis (Tab B)

The Regulatory Flexibility Act (RFA) requires that final rules be reviewed for their potential economic impact on small entities, including small businesses. Section 604 of the RFA requires that CPSC staff prepare a final regulatory flexibility analysis and make it available to the public for comment when the final rule is published. The final regulatory flexibility analysis must describe the impact of the proposed rule on small entities and identify any alternatives that may reduce the impact.

There are seven firms currently known to be marketing infant walkers in the United States.[3] Two are large domestic manufacturers and two are foreign manufacturers with U.S. divisions. Based on Small Business Administration definitions, there are three small firms—two small domestic manufacturers and a small domestic importer—likely to be affected by the staff-recommended final rule, as described in the Directorate for Economic Analysis memo (Tab B).

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[1] See Tab D, memorandum from Han Lim "Response to comments regarding the Notice of Proposed Rulemaking for Infant Walkers and Proposed Additional Changes to the Draft Final Rule" for details on this test procedure.

[2] This estimate has been adjusted to exclude jumpers from the walker code.

[3] An eighth is also supplying infant walkers to the U.S. market, but does not appear to be manufacturing them anymore.

One small domestic manufacturer currently produces seven walker models and approximately 57 other juvenile products, one of which is a substitute for infant walkers.[4] The second small domestic manufacturer currently produces only one infant walker model and approximately 110 other juvenile products. The two small domestic manufacturers [which are certified by the Juvenile Products Manufacturers Association (JPMA) as compliant with the voluntary standard] may not need to make product modifications. If they do, it will most likely be due to changes needed to comply with the modified stair fall requirements. The costs to these manufacturers are not likely to be substantial, but may increase by as much as several dollars per unit.

The only known small domestic importer is not believed to be compliant with the voluntary standard; therefore, at least some product modifications would be necessary. The impact of the staff-recommended infant walker requirements on this importer is unclear, because little is known about the walkers sold by this company. However, the impact is unlikely to be large. Even if the company responded to the rule by discontinuing the import of its non-complying walkers, either replacing them with a complying product or another juvenile product, deciding to import an alternative product would be a reasonable and realistic way to offset any lost revenue from walker sales. There may also be additional small importers of walkers that staff has been unable to identify. However, the impacts of the draft final rule on these firms, if any, are unknown.

The final regulatory flexibility analysis must contain a description of any significant alternatives which accomplish the stated objectives of the final rule while minimizing the economic impact on small entities. It must also include a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected. One alternative under section 104 of the CPSIA that could potentially reduce the impact on small entities would be to make the voluntary standard mandatory with no modifications. However, CPSC staff does not believe that this alternative would adequately address all of the known hazard patterns. Additionally, any reduced impact on small firms under this alternative is expected to be minimal. Because the two small domestic manufacturers already meet the requirements of the voluntary standard, adopting the standard without modifications may reduce their costs, but only marginally. Similarly, limiting the requirements of the standard to those already contained in the voluntary standard would probably have little beneficial impact on small importers that do not meet the requirements of the voluntary standard. This is because, to these firms, most of the infant walker cost increases would be associated with meeting the requirements of the voluntary standard, rather than the minor add-ons associated with the draft final standard.

D) Effective Date of Final Rule

As already proposed in the NPR, CPSC staff believes that six months from publication of the final rule is reasonable and adequate for implementation of the rule.

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[4] Typical substitutes for infant walkers are products known as "stationary activity centers" or "walker alternatives." These products continue to provide portability, as do traditional walkers, but only limited mobility. The baby is seated in the product in a similar orientation as that of an infant walker. However, stationary activity centers have a flooring surface so that the child's feet do not contact the floor. The baby can bounce up and down or rotate 360° in the seat, but cannot move from one physical location to another.

E) Public Comments (Tabs C and D)

CPSC received seven comments, including five from individuals, one from the Juvenile Products Manufacturers Association (JPMA), and one from various consumer groups, including Consumers Union, Consumer Federation of America, and Kids in Danger, regarding the notice of proposed rulemaking for infant walkers (Docket No. CPSC – 2009 – 0065). Comments that were general or non-technical in nature are addressed in Tab C, while the technical comments regarding the proposed rule or the ASTM standard are addressed in Tab D.

The general comments are related to the CPSIA and the rulemaking process of section 104(b). The technical comments are related to three main areas of CPSC's proposed changes to the voluntary standard outlined in the NPR: 1) the inclusion of a new 30° incline plane stability test, 2) a change to the maximum allowable distance (of walker movement) for the parking device performance test, and 3) various changes to the stair step fall performance test.

F) Recommended Changes to the Proposed Rule

Based on the technical comments reviewed, discussions with interested parties, and a further review of the standard, staff recommends making four changes to the proposed rule as discussed below.

1) The 30 Degree Incline Stability Test

In the NPR, the Commission proposed an additional stability test, one that was modeled after a requirement in the European standard for walkers, EN 1273:2005. In their comments to the NPR, JPMA expressed their desire to maintain the stability test of the ASTM F 977-07 standard for infant walkers, and advocated eliminating the additional CPSC-proposed 30° incline plane stability test.

During the October 13, 2009 ASTM infant walker subcommittee meeting, a technical analysis[5] comparing the stability test in ASTM F 977-07 vs. the 30° incline plane test proposed in the NPR was presented. The conclusion of the analysis was that the 30° incline plane test was not as severe as the ASTM stability test. CPSC staff concurred with this presentation and their comparison of stability test methods. Therefore, CPSC staff recommends removing the proposed addition of the 30° incline plane test from the draft final rule.

2) Parking Brake Test Procedure

JPMA also had a comment regarding a test procedure for the parking brake test. Specifically, they were concerned with how to measure the displacement (movement) for a walker that has fixed direction wheels in the rear of the walker. To address this issue, CPSC staff is recommending a specific procedure to measure the displacement for those types of walkers. That recommendation (shown in bold print) is added to the test procedure below:

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[5] Paper from Corey Campbell of David E. Campbell and Associates, Inc. "Infant Walker Stability Test Comparison: ASTM F 977-07 vs. EN 1273:2005" presented at the July 21, 2009 ASTM meeting in Philadelphia, PA.

Sideward facing test of parking devices

Position the walker including Test Mass B facing sideward so that plane B is perpendicular to the front edge of the platform and passes through the center of the pulley. Engage all parking devices in accordance with the manufacturers' instructions.

Within 1 minute of placing the walker with Test Mass B on the platform, attach an 8 lb weight gradually within 5 seconds to the walker frame base at plane A by means of a rope and a pulley per the test apparatus specifications in the step test procedure, adjusted so that the force is applied horizontally (rope angle shall be $0 \pm 0.5°$). Remove the 8 lb weight after 1 minute. Measure the displacement.

If the walker is equipped with fixed direction rear wheels and the walker is displaced in a curved path, establish the location of the rope attachment as the reference point and measure the linear displacement of that reference point after performing the procedure as described above.

3) Stair Fall Test Calculation

In the NPR, CPSC proposed calculating the launch distance ("d") for each walker, rather than using the specified distance in the stair fall test procedure outlined in ASTM F 977-07. This calculation requires the actual weight of the test walker to be used, whereas the specified distance in the voluntary standard assumes the walker is 8 pounds. In discussions with testing laboratory personnel, it has been pointed out to CPSC staff that there are also variations in the weight of CAMI infant dummies (Mark II)[6] (subsequently referred to as "CAMI dummy") and the vests which are used during the stair fall test. Therefore, CPSC staff recommends keeping the distance "d" calculation as proposed in the NPR with a slight modification that would also require the testing lab to measure the weight of the CAMI dummy and vest and use those values in the calculations. The equations themselves will not change; however, the legend that describes all the parameters of the equation will require a slight editorial change.

4) Stair Fall Test Procedure – Dummy Head Position

The consumer group comments to the NPR requested CPSC to consider specifying how the CAMI dummy is to *"be positioned and restrained during testing so that the center of gravity will be consistent from lab to lab".*

CPSC staff agrees in principle that it is plausible that a CAMI dummy's flexibility properties may change over time with use. Testing done by CPSC staff did not show any significant variability when the CAMI dummy's head was not secured. However, at the same time, many other parameters were proposed in the NPR to be standardized: rope type, pulley type, spring rate for the pulley mounting bracket, CAMI arm position, use of the standardized military rope to secure CAMI legs, etc. Securing the CAMI head in a most rearward or forward position could possibly produce different results, depending on the flexibility of the dummy. Thus, CPSC staff

[6]Civil Aeromedical Institute (CAMI) Infant Dummy, Mark II, constructed in accordance with the Department of Transportation Specification dated April 29, 1975.

is now specifically recommending that the head not be secured. When the CAMI is positioned as described in the proposed procedure, the CAMI head movement, while it exists, is minimized to the extent possible and should not affect the results.

5) Force Calibration Interval

The NPR proposed a one-year calibration interval for the force gauges. However, staff is now recommending in the draft final rule a general, or more generic, interval because a force gauge could go out of calibration before one year. Appropriate calibrations are necessary to maintain accuracy.

6) Test Table Length Specification

For the draft final rule, CPSC staff recommends removing a notation in Figure 10 of the ASTM standard (and also in the cooresponding figure in the NPR) that shows the stair fall test table to be 48 inches long. CPSC staff now recommends leaving the length of the test table unspecified so that a test laboratory may use a table of adequate length to accommodate the maximum calculated launching distance "d" for the draft final rule. A test table length of 48 inches may not be sufficient for all walkers in light of the changes proposed in the NPR for calculating the launch distance.

G) Conclusions

CPSC staff believes that ASTM F 977–07, *Standard Consumer Safety Specification for Infant Walkers,* is the result of many years of development yet there are areas that require improvement. After careful review of the comments to the NPR, CPSC staff recommends eliminating the proposed 30° incline plane test, but keeping the stair fall launching distance calculation requirement and parking device performance test with some editorial modifications.

The changes between what the Commission proposed in the NPR and what the staff recommends for the final rule are:

a) Remove the 30° incline plane test.
b) In the parking brake test procedure (in the sideward direction only) for walkers with fixed direction rear wheels, add a paragraph to indicate how to measure displacement if the walker moves in a curved path.
c) In the stair fall calculations, use the actual measured weight of the CAMI dummy and vest.
d) Clarify the position of the CAMI dummy in the stair fall test to indicate that the head shall not be restrained.
e) Specify that the calibration interval for force gauges shall be maintained to ensure that the accuracy does not drift beyond the stated tolerance.
f) Revise Figure 10 to remove the 48" length of the test table and to indicate that the length should be adequate for the test.

TAB A

74 Federal Register Notice 45704
Thursday September 3, 2009

http://www.cpsc.gov/businfo/frnotices/fr09/walkers.pdf

TAB B

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Memorandum

Date: February 2, 2010

TO : Patricia L. Edwards
Project Manager for Infant Walkers

THROUGH: Gregory B. Rodgers, Ph.D., Associate Executive Director,
Directorate for Economic Analysis
Deborah V. Aiken, Ph.D., Senior Staff Coordinator,
Directorate for Economic Analysis

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

SUBJECT : Final Regulatory Flexibility Analysis of Staff-Recommended Final Standard for Infant Walkers

Introduction

On August 14, 2008, the Consumer Product Safety Improvement Act (CPSIA) was enacted. Among its provisions, section 104 requires that the Consumer Product Safety Commission (CPSC) evaluate the existing voluntary standards for durable infant or toddler products and promulgate a mandatory standard substantially the same as, or more stringent than, the applicable voluntary standard. Walkers, also known as infant or baby walkers, are among the durable products specifically named in section 104.

Upon review, CPSC proposed adopting the voluntary ASTM International (formerly known as the American Society for Testing and Materials) standard for infant walkers (F 977 – 07) with a few modifications, hereafter referred to as the voluntary standard.[7] The staff now recommends that the Commission make the proposed rule final with four changes.[8] The main provisions of the staff-recommended final standard include: 1) requirements that walkers pass a series of step tests intended to prevent babies from falling down stairs in their walkers, which would be updated to ensure uniformity in testing equipment and account for heavier walkers; 2) stability

[7] In December 2009, three months after the NPR was published, ASTM published a revision to the infant walker standard, F 977-09. This revision included some of the new requirements found in the NPR but not the majority of them. It also included a significant change to the rearward facing stair fall test procedure that staff believes is less stringent than what was proposed in the NPR. Therefore, this memo refers to the earlier version of the ASTM standard, F 977-07, as the voluntary standard which is revised with regard to the draft final rule.

[8] CPSC staff has determined that the 30 degree incline plane stability test is not needed and therefore recommends dropping it from the draft final rule. Staff also recommends revising the launching distance calculation for the stair fall test to accommodate different CAMI dummy and CAMI dummy with vest weights. Staff further recommends clarifying that the CAMI dummy's head not be restrained for the stair fall test. Finally, CPSC staff recommends modifying the parking brake test procedure to account for walkers with fixed direction wheels in the rear that travel in a curve during the sideward facing portion of the test.

requirements, which are designed to prevent product tip-over; 3) structural integrity requirements, including both dynamic and static load tests, and a leg opening requirement intended to prevent entrapment; and 4) torque and tension tests intended to prevent product components from being removable. The standard also includes various general requirements, including the permanency and adhesion of labels, latching and locking mechanisms, warning statements in instructional literature, minimum and maximum opening size requirements, and bans on scissoring, shearing, or pinching. Additionally, CPSC staff recommends including tests for parking brakes (for walkers that have them) based on a similar requirement in the European standard.

The Regulatory Flexibility Act (RFA) requires that final rules be reviewed for their potential economic impact on small entities, including small businesses. Section 604 of the RFA requires that CPSC staff prepare a final regulatory flexibility analysis and make it available to the public for comment when the final rule is published. The final regulatory flexibility analysis must describe the impact of the proposed rule on small entities and identify any alternatives that may reduce the impact. Specifically, the final regulatory flexibility analysis must contain:

1. a succinct statement of the objectives of, and legal basis for, the rule;
2. a summary of the significant issues raised by public comments in response to the initial regulatory flexibility analysis, a summary of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;
3. a description of and, where feasible, an estimate of the number of small entities to which the rule will apply;
4. a description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities subject to the requirements and the type of professional skills necessary for the preparation of reports or records; and
5. a description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

The Product

Infant walkers are products that support very young, preambulatory children (usually 6 to 15 months old). Children may use walkers to sit, recline, bounce, jump, and, most importantly, use their feet to move around. Infant walkers typically consist of fabric seats attached to rigid trays. The trays are fastened to bases that have wheels or casters to make them mobile.[9] For over a century, parents have used infant walker-type products in child rearing, with their use increasing

[9] Rodgers and Leland, "A retrospective benefit-cost analysis of the 1997 stair-fall requirements for baby walkers," *Accident Analysis and Prevention* 40 (2008): 61-68 and Rodgers and Leland, "An evaluation of the effectiveness of a baby walker safety standard to prevent stair-fall injuries," *Journal of Safety Research* 36 (2005): 327-332.

in the 1940s.[10] Focus group studies have found that parents believe walkers provide a way for children to explore the environment in a controlled manner, as well as prevent children from ingesting foreign objects that might otherwise be within reach.[11] Walkers are considered unique in their mobility (babies can move from one physical location to another) and portability (some can be easily packed, folded, and carried from one location to another).

The Market for Walkers

Infant walkers are produced and/or marketed by juvenile product manufacturers and distributors. CPSC staff believes that there are currently at least seven manufacturers or importers supplying infant walkers to the U.S. market. There are four domestic manufacturers, two foreign manufacturers with U.S. divisions, and one domestic importer. Under Small Business Administration (SBA) guidelines, a manufacturer of infant walkers is small if it has 500 or fewer employees and an importer is considered small if it has 100 or fewer employees. Based on these guidelines, of the seven firms, there are two small domestic manufacturers[12] and one small domestic importer known to be supplying the U.S. market. However, CPSC staff believes that there are probably other unknown small importers operating in the U.S. market as well.

All known suppliers are members of the Juvenile Products Manufacturers Association (JPMA), the major U.S. trade association that represents juvenile product manufacturers and importers. Each supplies a variety of children's products, of which walkers are only a small proportion. Infant walkers are available in many countries besides the U.S., including China, the U.K., and Australia. Therefore, any foreign manufacturer is a potential supplier to the U.S. market, either directly or indirectly through an importer.

All domestic manufacturers, both small and large, supplying infant walkers to the U.S. market are JPMA certified[13] as compliant with the ASTM voluntary standard for infant walkers. Based on limited CPSC staff testing, the two foreign manufacturers and the domestic importer are not believed to be compliant with the voluntary standard.

Sales of infant walkers peaked in the early 1990s at under 2 million annually. By 2005, however, annual walker sales had fallen to around 600,000. Following a similar pattern, walkers in use (the number of walkers estimated to still be in use, regardless of when sold) peaked in the

[10] Graco Children's Products, Inc. "Address to the Commission: Comments Opposing the Petition of the Consumer Federation of America et al. to Ban Baby Walkers" December 4, 1992.
[11] See, for example, Shugoll Research for Abt Associates on behalf of U.S. Consumer Product Safety Commission, "Qualitative Research to Examine Perceptions of Baby Walkers and Evaluate Alternative Products," March 1995.
[12] A third small manufacturer also sells infant walkers, but (based on their current product list) is no longer manufacturing them.
[13] Since 1976, JPMA has run a voluntary Certification Program for several juvenile products, beginning with high chairs. Products voluntarily submitted by manufacturers are tested against the appropriate ASTM standard and only passing products are allowed to display JPMA's Certification Seal. See http://www.jpma.org/pdfs/certfacts08.pdf for more information.

mid-1990s, but have since fallen sharply as well (by 55 percent between 1996 and 2005). As of 2005, the estimated number of walkers in use was probably fewer than 2 million.[14]

Reason for Agency Action and Legal Basis for the Draft Final Rule

Section 104 of the CPSIA requires CPSC to promulgate a mandatory standard for infant walkers that is substantially the same as, or more stringent than, the voluntary standard. In order to assure that walkers are less likely to fall over stairs or tip over, CPSC staff is recommending one modification and one addition to the ASTM standard.[15] CPSC staff believes that the more stringent standard recommended would reduce the risk of injury associated with infant walkers.[16]

Compliance Requirements of the Draft Final Rule

CPSC staff recommends adopting the voluntary ASTM standard for infant walkers with one modified requirement and one new requirement. Key components of the ASTM standard for infant walkers (F 977 – 07) include:[17]

- Prevention of falls down stairs – intended to ensure that a walker will not fall over when facing front, back, and sideways.
- Tipping resistance – intended to ensure that walkers are stable and do not tip over when on a flat surface; includes tests for forward and rear tip resistance, as well as for the occupant leaning over the front.
- Dynamic and static load testing on seating area – intended to ensure that the child remains fully supported while stationary and while bouncing/jumping.
- Occupant retention – intended to prevent entrapment by setting requirements for leg openings.

The voluntary standard also includes: 1) torque and tension tests to assure that components cannot be removed; 2) requirements for several walker features to prevent entrapment and cuts (minimum and maximum opening size, accessible coil springs, leg openings, and edges that can scissor, shear, or pinch); 3) latching/locking mechanism requirements to assure that walkers do not accidentally fold while in use; 4) requirements for the permanency and adhesion of labels; and 5) requirements for instructional literature.

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[14] Rodgers and Leland, "A retrospective benefit-cost analysis of the 1997 stair-fall requirements for baby walkers," *Accident Analysis and Prevention* 40 (2008): 61-68.

[15] All changes and additions between the voluntary standard and the draft final rule relate to either the stair fall test (a modified requirement) or the parking brake test (a new requirement). CPSC staff recommends dropping a second new requirement (the 30° incline stability test) from the rule presented in the NPR.

[16] Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated February 23, 2010, Subject: Response to comments regarding the Notice of Proposed Rulemaking for Infant Walkers and Proposed Additional Changes to the Draft Final Rule and Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated July 29, 2009, Subject: Proposed changes to the Voluntary Standard for Infant Walkers (ASTM F 977 – 07) – Segue to a mandatory CPSC Standard for Infant Walkers.

[17] JPMA, *ASTM Standards listed in JPMA Directory*, http://www.jpma.org/pdfs/JPMA_Directory_Final2008.pdf.

As part of the draft final rule, CPSC staff recommends modifying the ASTM F 977 – 07 stair fall test and adding one new requirement:[18]

- Stair fall test
  - Details of the stair fall test (such as the type of rope and pulley used, as well as the orientation of wood grain in the floor) are left up to the manufacturers/testers. In the notice of proposed rulemaking (NPR), the Commission proposed modifying the test requirements to be specific about the equipment used, thereby providing consistency to the test results.[19]
  - The calculation of launching distance was modified in the NPR to take into account the actual weight of the walker being tested. CPSC staff recommends that testing facilities be required to weigh the CAMI Dummy and the CAMI Dummy with 11 pound vest and use these measurements in the calculation as well.
  - CPSC staff recommends that the test procedure be modified for the draft final rule to clarify that the CAMI dummy's head not be restrained. Staff believes that this should not affect the test results, where securing the CAMI dummy head in a rearward or forward direction could do so.
- New requirement
  - A parking brake test similar to that included in the European standard was proposed by the Commission in the NPR.[20] In order to address the possibility that a walker equipped with fixed direction wheels in the rear may travel in a curved path, CPSC staff recommends adding explicit guidance for how the displacement along a curved path should be measured.

As stated above, the recommended changes to the stair fall test requirements would provide consistency across manufacturers. Also, because the specific test modifications have been selected to minimize the friction associated with the test procedure, they may effectively add stringency to the tests. It is unknown the extent (if any) to which the modification in the stair fall requirements of the voluntary standard will affect walkers that now comply with the voluntary standard. However, initial testing shows that the recommended requirements impact the test results of a few walkers.[21] Therefore, staff believes that some manufacturers will need to make walker modifications to comply.[22] Based on staff estimates of the costs of complying with the

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[18] In addition to dropping the 30° incline stability test, CPSC staff recommends two additional changes to the stair fall test and one to the parking brake test for the draft final rule. Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated February 23, 2010, Subject: Response to comments regarding the Notice of Proposed Rulemaking for Infant Walkers and Proposed Additional Changes to the Draft Final Rule and Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated July 29, 2009, Subject: Proposed changes to the Voluntary Standard for Infant Walkers (ASTM F 977 – 07) – Segue to a mandatory CPSC Standard for Infant Walkers. Additionally, there are two minor changes that have no effect on the regulatory flexibility analysis. The first is a modification to a figure to maintain consistency with the text of the rule, and the second specifies test equipment calibration intervals.

[19] Specifically, CPSC staff recommends a 1.25" stainless steel ball bearing pulley and a 7-strand fibrous military cord with 550-pound tensile strength. CPSC staff also recommends specifying the direction of the wood grain in the flooring and what is meant by "horizontal," among other modifications.

[20] EN 1273:2005 European Standard.

[21] Based on discussions with Han Lim, Directorate for Engineering Sciences.

[22] Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated February 23, 2010, Subject: Response to comments regarding the Notice of Proposed Rulemaking for Infant Walkers and Proposed Additional

1997 stair fall requirements,[23] this cost is unlikely to exceed more than several dollars per unit.[24] Possible modifications include: increasing the rolling friction within the walker's wheels; reducing the walker weight; and refining the friction strip design.[25]

Infant walkers are not currently required to have parking brakes, nor would they be required to have them under the draft final standard. However, CPSC proposed including a test of parking brakes where they exist to assure that they work properly.[26] Limited initial testing on a few models finds that existing walkers have no difficulty in passing this requirement.[27] Therefore, CPSC staff does not expect it to represent a burden to current manufacturers. However, its inclusion would minimize the risk of walkers with ineffective brakes entering the U.S. market in the future.

Issues Raised by Public Comments

There were no issues raised by public comments in response to the initial regulatory flexibility analysis. However, four comments received in response to the notice of proposed rulemaking (NPR) effected changes to the final draft standard that are reflected in the final regulatory flexibility analysis. CPSC staff agrees that the 30 degree incline plane stability test is not needed and has dropped it from the draft final requirements; staff revised the recommended procedure for calculating the launching distance for the stair fall test to require the weighing of the CAMI Dummy and the CAMI Dummy with vest actually used for the test; staff clarified that the CAMI dummy's head should not be restrained during the stair fall test; and staff added guidelines for measuring a curved path displacement during the sideward facing parking brake test for walkers with fixed direction rear wheels. However, these modifications did not affect the regulatory flexibility analysis.

Other Federal Rules

CPSC staff has not identified any federal or state rule that either overlaps or conflicts with the staff's draft final rule.

Changes to the Draft Final Rule and Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated July 29, 2009, Subject: Proposed changes to the Voluntary Standard for Infant Walkers (ASTM F 977 – 07) – Segue to a mandatory CPSC Standard for Infant Walkers.

[23] Rodgers and Leland (2008).

[24] Minor design and/or materials changes may also be necessary to accommodate the new method of calculating launching distance. However, the effects are expected to be small both in terms of the number of affected walkers and the modification costs. This is based on discussions with Han Lim, Directorate for Engineering Sciences.

[25] Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated February 23, 2010, Subject: Response to comments regarding the Notice of Proposed Rulemaking for Infant Walkers and Proposed Additional Changes to the Draft Final Rule and Memorandum from Han Lim, ESME, Directorate for Engineering Sciences, dated July 29, 2009, Subject: Proposed changes to the Voluntary Standard for Infant Walkers (ASTM F 977 – 07) – Segue to a mandatory CPSC Standard for Infant Walkers.

[26] Maximum displacement of 1.97 inches (50 mm) using the recommended test procedure.

[27] Based on discussions with Han Lim, Directorate for Engineering Sciences.

Impact on Small Businesses

There are seven firms currently known to be marketing infant walkers in the United States.[28] Two are large domestic manufacturers and two are foreign manufacturers with U.S. divisions. The impact on the remaining three small firms—two small domestic manufacturers and a small domestic importer—is the focus of the remainder of this analysis.

Small Manufacturers

One small domestic manufacturer has annual sales of approximately $31-72.5 million.[29] It currently produces seven walker models and approximately 57 other juvenile products, one of which is a substitute for infant walkers.[30] The second is a small domestic manufacturer with annual sales of approximately $2.5-5 million.[31] Although their annual sales are lower, they are currently producing only one infant walker model and approximately 110 other juvenile products.

Based on the information presented above, the two small domestic manufacturers (which are JPMA certified as compliant with the voluntary standard) may not need to make product modifications. If they do, it will most likely be due to changes needed to comply with the modified stair fall requirements. The costs to these manufacturers are not likely to be substantial, but may increase by as much as several dollars per unit.

Small Importers

The only known small domestic importer has annual sales of approximately $2.5-5 million.[32] As described above, this importer is not believed to be compliant with the voluntary standard; therefore, at least some product modifications would be necessary. The impact of the draft final infant walker requirements on this importer is unclear, because little is known about the walkers sold by this company. However, the impact is unlikely to be large. Even if the company responded to the rule by discontinuing the import of its non-complying walkers, either replacing them with a complying product or another juvenile product, deciding to import an alternative product would be a reasonable and realistic way to offset any lost revenue from walker sales.

There may also be additional small importers of walkers that we have been unable to identify. However, the impact of the draft final rule on these firms, if any, is unknown.

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[28] An eighth is also supplying infant walkers to the U.S. market, but does not appear to be manufacturing them anymore.

[29] ReferenceUSAGov.

[30] Typical substitutes for infant walkers are products known as "stationary activity centers" or "walker alternatives." These products continue to provide portability, as do traditional walkers, but only limited mobility. The baby is seated in the product in a similar orientation as that of an infant walker. However, stationary activity centers have a flooring surface so that the child's feet do not contact the floor. The baby can bounce up and down or rotate 360° in the seat, but cannot move from one physical location to another.

[31] ReferenceUSAGov.

[32] ReferenceUSAGov.

Alternatives

The final regulatory flexibility analysis must contain a description of any significant alternatives which accomplish the stated objectives of the final rule while minimizing the economic impact on small entities. It must also include a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why other significant alternatives to the rule considered by the agency which affect the impact on small entities were rejected.

CPSC staff identified one alternative under section 104 of the CPSIA that would reduce the impact on small entities. That alternative is to make the voluntary standard mandatory with no modifications. Based on the pattern of injuries, CPSC staff does not feel that this is an appropriate alternative. Additionally, any reduced impact on small firms under this alternative is expected to be minimal. Because the two small domestic manufacturers already meet the requirements of the voluntary standard, adopting the standard without modifications may reduce their costs, but only marginally. Similarly, limiting the requirements of the standard to those already contained in the voluntary standard would probably have little beneficial impact on small importers that do not meet the requirements of the voluntary standard. This is because, to these firms, most of the infant walker cost increases would be associated with meeting the requirements of the voluntary standard, rather than the minor additions associated with the draft final standard.

Conclusion

It is not expected that the draft final standard will have a substantial effect on a large number of small firms. In some cases, small firms may not need to make *any* product modifications to achieve compliance. Even if they were so required, and the cost of developing a compliant product proved to be a barrier for individual firms, the loss of infant walkers as a product category is expected to be minor and would likely be mitigated by increased sales of competing products, such as activity centers, or entirely different juvenile products.

TAB C

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Memorandum

Date: February 18, 2010

TO : Briefing Package

THROUGH: Linda Edwards, Acting Associate Executive Director
Directorate for Engineering Sciences
Mark Kumagai, Director, Division of Mechanical Engineering
Directorate for Engineering Sciences

FROM : Patricia L. Edwards, Project Manager for Infant Walkers
Directorate for Engineering Sciences
Patricia M. Pollitzer, Attorney, Regulatory Affairs Division
Office of the General Counsel

SUBJECT : Staff Response to Comments on the Infant Walkers Notice of Proposed Rulemaking, Section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA)

I Introduction

CPSC received seven comments, including five from individuals, one from the Juvenile Products Manufacturers Association (JPMA),[33] and one from various consumer groups, including Consumers Union, Consumer Federation of America, and Kids in Danger, regarding the Notice of Proposed Rulemaking for Infant Walkers (Docket No. CPSC – 2009 – 0065). Comments that are technical in nature regarding the proposed rule or the ASTM standard are addressed in a separate memo, prepared by Han Lim, Engineering Sciences. This memo will address the general or non-technical specific comments.

II Response to Comments

a) Individual Commenters

Of the five individual commenters, all were in support of a regulation for infant walkers. Two of the individual commenters also had concerns regarding the proposed revocation of the current mandatory rule on walkers. Those comments are addressed separately, in the briefing package associated with the current walker rule revocation.

[33] Letter from Robert Waller of JPMA to the Office of the Secretary of CPSC, "RE: In the Matter of Docket No. CPSC-2009-0065 JPMA Comments on Notice of Proposed Rulemaking on Infant Walkers," November 17, 2009.

b) JPMA

Most of JPMA's comments raised specific technical concerns and are addressed in the memo from Engineering Sciences. In addition, JPMA had two other suggestions:

1) JPMA suggested that the Commission adopt ASTM F 977-07 and compared CPSIA section 104 vs. CPSIA section 106. Specifically, JPMA stated:

"...we believe the most streamlined approach to following the primary congressional mandate that standards required to be developed are to be "substantially the same as" applicable voluntary standards, would be to adopt a regulation that wholly adopts the existing ASTM standard, with the ability to subject it to the ASTM update and review process. CPSC can assure itself veto authority as part of an implementing regulation, which provides it with the ability to restrict diminution of effective ASTM standard provisions, similar to the authority applicable under CPSIA Section 106, as a check to changes that reduce stringent protections. We suggest that the CPSC staff consider by rule adopting ASTM F 977-07 as a consumer product safety standard issued by the Commission under section 9 of the Consumer Product Safety Act ("CPSA"; 15 U.S.C. 2058). To the extent additional changes to the pending ASTM standard are sought we recommend that they be submitted to the ASTM standard setting process. This process could also incorporate a provision by rule that a reservation of right to the CPSC to object to any subsequent revisions to the ASTM Standard, similar to that afforded under CPSIA Section 106(g). This would provide the Commission with the ability to object to a revision, within 90 days after receiving notice of it, if the Commission notifies ASTM International that it has determined that the proposed revision does not improve the safety of the consumer product covered by the standard. Upon such objection, the existing standard can continue to be considered to be a consumer product safety rule without regard to the proposed revision".

CPSC Staff Response
Section 104(b) of the CPSIA requires the Commission to use the notice and comment rulemaking process under the Administrative Procedure Act, not ASTM's standard setting process, to promulgate consumer product safety standards for durable infant or toddler products. The CPSIA directs the Commission to issue a rule that is "substantially the same as" the applicable voluntary standard or "more stringent than" the voluntary standard if the more stringent standard "would further reduce the risk of injury associated with the product."

The standard the Commission proposed for infant walkers incorporates by reference most of the ASTM standard with a few modifications to strengthen the standard. Section 104(b) of the CPSIA sets forth the procedure for these standards for durable infant or toddler products, and it is different from what Congress provided in section 106 of the CPSIA. We are doubtful that a Commission rule could change the procedure Congress provided for section 104 rules to the one it provided for section 106 rules.

2) JPMA also discussed the requirements of the Commission under section 104(b) of the CPSIA. Specifically, JPMA stated the following:

"Section 104(b) of the Consumer Product Safety Improvement Act of 2008 ("CPSIA") requires the United States Consumer Product Safety Commission ("CPSC" or "Commission") to promulgate consumer product safety standards for durable infant or toddler products. The standards required to be developed 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. To make such conclusions the Commission must have data available on the record that reasonably supports the conclusion that changes to the ASTM standard will reduce the risk of injury directly associated with the product. CPSC should not modify existing effective standards, unless it can clearly substantiate on the record before it that such changes will provide a demonstrable reduction in injury. Hypothetical improvements are insufficient on the record to justify the imposition of additional requirements."

CPSC Staff Response

Section 104(b) of the CPSIA does not require the Commission to "clearly substantiate on the record before it" that changes to a voluntary standard "will provide a demonstrable reduction in injury." Section 104 takes durable infant or toddler products out of the Commission's usual rulemaking procedure and all of the findings that would be required under sections 7 and 9 of the CPSA. For these products, Congress wanted "the highest level of safety for such products that is feasible." Under the mandate of section 104, the Commission is promulgating more stringent requirements where necessary to address those continuing incidents. The staff has conducted testing to support the requirements that are different from the ASTM requirements and has explained both the basis for these changes as well as its conclusion that such changes would further reduce the risk of injury associated with infant walkers.

c) Consumers Groups

All of the comments from the consumer groups raised specific technical concerns and are addressed in the memo from Engineering Sciences.

TAB D

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Memorandum

Date: February 23, 2010

TO : Patricia Edwards
Directorate for Engineering Sciences
Division of Mechanical Engineering (ESME)

THROUGH: Mark Kumagai
Division Director, ESME

Linda Edwards
Acting Associate Executive Director
Directorate for Engineering Sciences

FROM : Han Lim
ESME

SUBJECT : Response to comments regarding the Notice of Proposed Rulemaking for Infant Walkers and Proposed Additional Changes to the Draft Final Rule

I Introduction

The U.S. Consumer Product Safety Commission (CPSC) received seven comments, including five from individuals, one from the Juvenile Products Manufacturers Association (JPMA)[34] and one from various consumer groups, including Consumers Union, Consumer Federation of America, and Kids in Danger, regarding the Notice of Proposed Rulemaking (NPR) for Infant Walkers (Docket No. CPSC – 2009 – 0065). This memorandum responds to specific technical comments from the commenters.

II Individual Commenters

One of the individuals had a comment regarding the parking brake performance requirement and warning. The commenter remarked that the parking brake requirement should be more stringent because parking brakes should keep the walker completely stationary and that the proposed warning in the Notice of Proposed Rulemaking is contradictory to the perception of a parking brake's function.

[34] Letter from Robert Waller of JPMA to the Office of the Secretary of CPSC, "RE: In the Matter of Docket No. CPSC-2009-0065 JPMA Comments on Notice of Proposed Rulemaking on Infant Walkers", November 17, 2009.

CPSC staff believes that the purpose of the parking brake warning is to alert the caregiver that the parking brake is used for temporarily preventing the walker from moving. In several ASTM meetings, some infant walker manufacturers have characterized the purpose of the parking brakes as such, and that the child in the walker must always be kept in view. The parking brake feature is added on some models for convenience to the caregiver. The parking brake is not meant to keep a child in the walker indefinitely without supervision. Also, the warning is meant to prevent any false sense of security by the caregiver. CPSC staff believes the proposed warning and the performance requirements as they appeared in the NPR are adequate. CPSC staff does not recommend any changes to the NPR regarding the warning language nor the performance requirements for parking brakes, except for an editorial update (detailed discussions on page 4 of this memorandum).

III JPMA Comments

JPMA references the Engineering Sciences memo[35] as the basis for their comments. A substantial portion of the infant walker manufacturers are represented by JPMA. Their technical comments are related to three main areas of concern: CPSC proposed inclusion of a 30° incline plane stability test, a proposed change to the maximum allowable distance for the parking brake performance test, and a proposed inclusion of the launching distance calculation for the stair step fall performance test.

a) THE 30° INCLINE PLANE STABILITY TEST

JPMA expressed its desire to maintain the cantilevered stability test as described in Section 7.3.4 of the ASTM F 977 – 07 standard for infant walkers, and advocated eliminating the additional CPSC proposed 30° incline plane stability test to address tip over hazards.

From the time CPSC staff initiated proposing the 30° incline plane test (based on the European standard for baby walking frames EN 1273:2005), numerous discussions about the added benefits of the 30° incline plane stability test have occurred among CPSC staff and ASTM. Over the past year, these discussions have taken place at ASTM headquarters, as well as in conference calls. A JPMA member was tasked to perform analyses on the two test methods to ascertain if the 30° incline plane test is needed. During ASTM's presentation at the October 13, 2009 meeting, the JPMA member demonstrated using real examples that Section 7.3.4 stability test of the ASTM F 977 – 07 standard is adequate and that the 30° incline plane test is not needed.[36] The analyses included a comparison of the two stability test methods using the dimensions of an exemplar walker. The conclusion was that the 30° incline plane test was not as severe as the Section 7.3.4 stability test. CPSC staff concurred with this presentation and the comparison of stability test methods. Therefore, CPSC staff recommends removing the proposed addition of the 30° incline plane test as the testing and analysis does not support the idea that adding such test method would reduce the risk of injury from baby walkers.

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[35] Memorandum from Han Lim, Engineering Sciences to Patricia Edwards, Engineering Sciences "Proposed changes to the Voluntary Standard for Infant Walkers (ASTM F 977-07) – Segue to a mandatory CPSC Standard for Infant Walkers" July 31, 2007.

[36] Paper from Corey Campbell of David E. Campbell and Associates, Inc. "Infant Walker Stability Test Comparison: ASTM F977-07 vs. EN 1273:2005" presented at the October 13, 2009 ASTM meeting in Philadelphia, PA.

b) PARKING BRAKE TEST

JPMA supports the concept for having a performance test for walkers with parking brakes but disagrees with CPSC staff's proposal to adopt the European EN 1273:2005 standard for baby walking frames performance test. The performance test is similar to that of the stair fall test, except that the 8 lb weight guided by a rope and pulley is released gradually and there is no set launching distance. Upon completion of the gradual 8 lb force application, the maximum allowable displacement (i.e., movement) of the walker is 1.97 inches. JPMA believes that a lack of incidents involving parking devices supports its argument. In addition, JPMA makes comparisons of the proposed parking device test to the ASTM F 2012 standard for stationary activity centers. JPMA asserts that a stationary activity center is similar to that of an infant walker with its parking brakes engaged. Based on this comparison to stationary activity centers, JPMA advocated increasing the maximum allowable displacement to 6 inches per ASTM F 2012.

CPSC staff believes that if a product is equipped with a feature, that feature needs to function properly and safely. Such is the case with a parking brake which is utilized for the caregiver to temporarily disable the walker from moving. CPSC staff agrees with JPMA that to CPSC staff's knowledge, there are no incidents involving parking devices in the United States. However, CPSC staff recommends including this performance test, as it is the only benchmark from a comparable standard and it was developed by a widely accepted standard setting body.

CPSC staff does not believe that walkers and stationary activity centers are similar, nor has JPMA demonstrated adequate similarities. CPSC staff views use patterns of a stationary activity center are different from that of an infant walker even with the walker's parking brakes engaged. An infant in a walker will have a tendency to exert a horizontal force to propel him or herself horizontally, whereas the stationary activity center may not necessarily exert the same type of horizontally concentrated forces as the infant may be preoccupied jumping up and down, spinning about the seat, and playing with toys. CPSC staff believes that the parking brake performance test has to set limits on the displacement of the walker in the horizontal direction to resist motion when the parking brakes are engaged. The appropriate amount of force needs to be applied. Furthermore, upon comparison between ASTM F 2012 and EN 1273:2005, CPSC staff noted the following observations:

- A force gauge is used to apply the 8 lb force in ASTM F 2012 instead of a rope and pulley guided 8 lb weight as specified in EN 1273:2005. The 8 lb weight is released gradually over a 5 second period and then hung from the test assembly for 1 minute. Arguably, the force of gravity is more consistent than a test technician applying a consistent rate of 8 lbs over a 10 second period. The longer duration of 1 minute is more stringent than 10 seconds;
- The location application of the 8 lb force in ASTM F 2012 has infinite variability as it is any location 2 inches above the floor level. The EN 1273:2005 standard requires the rope to be secured onto the bottom frame member of the infant walker which is arguably more consistent;
- In the "Rationale" section of ASTM F 2012, there is no mention of how the maximum allowable limit for displacement is 6 inches per minute was obtained.

Walkers sold in Europe and perhaps elsewhere are probably certified to this standard. In the technical support document[37] for the EN 1273:2005, there were not any data or analyses to suggest that a 1.97 inch displacement is unreasonable. EN 1273:2005's maximum allowable 1.97 inch displacement is more stringent than ASTM F 2012's 6 inches. CPSC's adoption of this performance test would harmonize with the European EN 1273:2005 standard for this requirement.

For the reasons above, CPSC staff recommends using the EN 1273:2005 performance requirement for parking brakes as it is more appropriate than the ASTM F 2012 and is the best standard available to the Commission to date. Clearly, the maximum allowable displacement of 1.97 inch in EN 1273:2005 is more stringent than the 6 inch displacement in ASTM F 2012 and would further reduce the risk of injury from incidents caused by parking brake performance issues.

JPMA also had a comment regarding how to measure the displacement for a subset of walkers that have fixed direction wheels in the rear of walker. With these types of wheels, there is the natural tendency for the walker to travel in a curved path instead of in a straight path. A walker with four casters does not have this issue. To address this subset of walkers, CPSC staff recommends adding the following new paragraph (in bold text) to the language the Commission previously proposed:

> *Sideward facing test of parking devices*
>
> Position the walker including Test Mass B facing sideward so that plane B is perpendicular to the front edge of the platform and passes through the center of the pulley. Engage all parking devices in accordance with the manufacturers' instructions.
>
> Within 1 minute of placing the walker with Test Mass B on the platform, attach an 8 lb weight gradually within 5 seconds to the walker frame base at plane A by means of a rope and a pulley per the test apparatus specifications in the step test procedure, adjusted so that the force is applied horizontally (rope angle shall be $0 \pm 0.5°$). Remove the 8 lb weight after 1 minute. Measure the displacement.
>
> **If the walker is equipped with fixed direction rear wheels and the walker is displaced in a curved path, establish the location of the rope attachment as the reference point and measure the linear displacement of that reference point after performing the procedure as described above.**

CPSC staff notes that this performance test is only required for infant walker models equipped with parking devices. If JPMA is concerned that some models cannot meet this performance standard, those manufacturers can elect to exclude parking devices from their product.

[37] "Baby Walking Frames – Final Report," Consumer Council Austrian Standards Institute in co-operation with Association for Consumer Information, European Committee For Standardization, CEN/TC 252/WG 1 N. 255 February 2001.

CPSC staff recommends the EN 1273:2005 performance test and maximum allowable displacement for 1.97 inches (CPSC staff assumes JPMA used 2 inches in their discussions for convenience) for parking devices as it was proposed in the NPR, except to include an editorial change to address some walkers that have fixed direction rear wheels.

c) STAIR STEP PROCEDURES WITH AN ADDED CALCULATION TO DETERMINE LAUNCHING DISTANCE

The stair step performance test involves subjecting a test sample walker with a CAMI dummy[38] seated to a horizontal dynamic force by means of dropping an 8 lb weight guided by a pulley and rope. The falling 8 lb weight propels the walker and CAMI dummy towards the edge of a hardwood floor surface test table. To achieve a target maximum velocity, the launching distance, d can vary. For the forward and rearward directions, the target maximum velocity is 4 ft/sec and 2 ft/sec for the sideward direction. In the ASTM F 977 – 07 standard, Table 1 of Section 7.6 shows the values for launching distances d for the various test scenarios – forward direction, rearward direction, with CAMI dummy vest fitted, etc. These values for d are fixed values and computed using assumptions that the average weight of a walker is 8 lbs.

JPMA asserts that increasing the launching distance for heavier walkers is not necessary or is "self correcting" because a child seated in the walker will naturally not move as fast. They requested keeping the launching distances as they are in Table 1 of Section 7.6 of the ASTM F 977 – 07 Standard. CPSC proposed changing the fixed distances to a computed value for d which will vary due to the weight of the test sample walkers. In the X1 rationale section of the ASTM F 977 – 07 Standard, there is no mention of the walker weight. However, 8 lbs was used in the free body diagram equations to arrive at the standard launching distances in Table 1 of Section 7.6.

CPSC staff believes that the stair fall test requirements should be modified to account for heavier modern walkers. The 8 lb walker used to develop the ASTM stair fall requirement for the original 1997 standard is now outdated. The average modern walker weighs more than 8 lbs.

The critical parameter of the stair fall test is the velocity of infant/walker. CPSC staff believes that it would be more robust to assume that the child maintains a 4 ft/sec top speed, regardless of the walker's weight. CPSC staff's testing showed that children can achieve 4 ft/sec in an 8 lb walker (1996 ASTM Working Group) and in a 10.5 lb walker (2000 Austrian study[39]). Both of these studies were based on small sample sizes of seven and five children, respectively. Stair fall incidents continue to occur, and some incidents involved modern walkers that met the ASTM requirements. Since the infant/walker speed is the critical factor in determining stopping distance of a moving walker at the edge of the step, CPSC staff believes that a 4 ft/s velocity should be maintained regardless of the walkers' weights.

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[38] This Civil Aeromedical Institute (CAMI) Infant Dummy, Mark II, was constructed in accordance with the Department of Transportation Specification dated April 29, 1975.

[39] "Baby Walking Frames – Final Report," Consumer Council Austrian Standards Institute in co-operation with Association for Consumer Information, European Committee For Standardization, CEN/TC 252/WG 1 N. 255 February 2001.

1. Incident Data

JPMA commented that there are no incident data on record which would indicate the need to require changes to velocities in the stair test.

The CPSC Directorate for Epidemiology staff estimates that, from 2004 to 2008, there was an annual average of approximately 3,000 incidents involving infant walkers, 62 percent of which involved falls[40]. These estimates were derived from CPSC's National Electronic Injury Surveillance System (NEISS) which captures information on incidents from hospital records. Details concerning the age and make of the walkers involved in the incidents are not available as part of the hospital records. To gather more detailed information on walkers involved in incidents, CPSC staff conducted a special study consisting of follow-up calls to the caregivers of victims involved in stair fall incidents. A review of the follow-up reports shows that there were several reported incidents involving walkers that were manufactured to comply with the ASTM stair step requirement, and the walkers were reported to have been in good condition when the incidents occurred.

In addition, a list of over 200 non-NEISS incidents involving infant walkers was distributed by a JPMA member[41] at a March 18, 2009 ASTM subcommittee meeting. This list was compiled by CPSC Directorate for Epidemiology staff. This data set spanned from 1999 to 2008. Over 40 percent of those incidents involved stair falls, including one death due to a fractured skull.

CPSC staff's review of the data also showed that popular larger, heavier models (greater than 8 lbs) manufactured after 1998 were involved in stair falls. For example, in incident report 081112HEP9038, a 10 month old male fell down a set of steps when he traveled past an unlatched gate, which required a trip to the emergency room. Also, in incident report 081113HEP9029, an 11 month old male fell down a set of stairs; the victim was found upside down, still in the walker. Both incidents involved walkers made by a leading manufacturer. Both incidents occurred between 2007 and 2008, and both walkers were equipped with friction strips. Therefore, data show that modern walkers continue to be involved in stair fall incidents.

CPSC staff believes that if a walker is traveling too fast, even if it is equipped with friction strips, it may fall down a set of steps. Thus, by increasing the launching distance for the stair fall performance test, CPSC staff believes the standard will be more stringent, and should result in walkers that are safer when traveling at faster speeds.

2. ASTM Walker Working Group

The ASTM 977 stair fall requirements were developed in 1995-1996 by the ASTM Walker Working Group. The working group measured the propelling forces of 10 children in an 8 lb traditional walker and the maximum speeds of seven children in the same walker. Testing was performed using an 8 lb walker, which was typical at that time. The walkers also had smaller bases without friction strips. Heavier walkers were not available, nor was it anticipated that

[40] Memo from Risana Chowdhury to Patricia Edwards titled "Infant Walker-Related Injuries and Deaths Among Children Under 15 Months of Age Calendar Years 2004 – 2008," May 26, 2009.
[41] Meeting packet from Kandi Mell of JPMA "Section F15.17: Walkers" March 18, 2009, 11:00 am.

walkers would become heavier. Since the ASTM F977 – 07 standard is based on the above outdated parameters; the stair fall test should be updated to account for heavier walkers.

3. Austrian Study

In a study conducted by the Consumer Council Austrian Standards Institute, speed measurements were made on five children placed in a walker[42]. This study showed that infants in walkers weighing more than 8 lbs can achieve speeds of 4 ft/sec and greater. The data from this study counters JPMA's assertion that the scenario of an infant in a heavier walker will be "self correcting" and travel slower. For this study, a tachometer was instrumented in the walker. Tests were performed on smooth floors (plastic floor covering) **and outdoors** in a yard (concrete surface). The tests were run in a similar manner to those conducted the ASTM Walker Working Group. The weight range of the children was from 8 kg to 13 kg (17.7 lb to 28.7 lb). The maximum speed observed was 4.5 km/hr (4.1 ft/sec), which is in close agreement with the ASTM Working Group. More importantly, these children were capable of achieving velocities of 4.1 ft/sec in a 10.5 lb walker (the test walker was an 8.4 lb walker equipped with instrumentation weighing 2.1 lbs consisting of a fifth wheel, hoop support mechanism, and a tachometer). Another consideration is that with the relatively small number of children involved in the study, there is a possibility that the worst case is not represented. The oldest child among the five children was 13 months old. It is possible that the velocity 4 ft/sec could be an underestimate. However, since this is the best information available to CPSC staff, CPSC staff recommends using 4 ft/sec.

4. Recent Anthropometric Data from CDC

By providing the maximum input kinetic energy to the walker/CAMI system, where the energy is proportional to the mass and the square of the velocity, CPSC staff believes that manufacturers must test to the worst possible case scenario. As explained in the rationale section X1.4 of ASTM F 977 – 07, the ASTM standard considered the 95th percentile weight of a 12 to 15 month old to be 28 lbs. This anthropometric data came from a study performed by the University of Michigan and published in 1977.[43] This data may be outdated. Recent data from the Centers for Disease Control and Prevention (CDC) show that the 95th percentile of a 15.5 month old male is approximately 30 lbs.[44] It is not unreasonable to assume that a heavier child may be stronger and can exert slightly more force.

5. ASTM F 977 – 07 Requirements

In their comments, JPMA illustrates that if a 14 lb walker in the scenario with the CAMI dummy without vest is launched from 14.6 inches, the velocity achieved will be 3.6 ft/sec, which is 10

[42] "Baby Walking Frames – Final Report," Consumer Council Austrian Standards Institute in co-operation with Association for Consumer Information, European Committee For Standardization, CEN/TC 252/WG 1 N. 255 February 2001.
[43] "Anthropometry of Infants, Children, and Youths to Age 18 for Product Safety Design" by Highway Safety Research Institute, University of Michigan May 31, 1977.
[44] http://www.cdc.gov/growthcharts/html_charts/wtageinf.htm and http://www.cdc.gov/growthcharts/clinical_charts.htm

percent slower than 4 ft/sec. Table 1 of Section 7.6 of ASTM F 977 – 07 (reproduced below for convenience) contains a column for "simulated speed":

TABLE 1 Summary of Step(s) Tests

Section Number	Facing Direction of Walker	Weight of CAMI Dummy, lb	Distance *d* from Platform Edge, in.	Simulated Speed, ft/s	Apply Tipover Test
7.6.3	forward	17	14.6	4	yes
7.6.3.6	forward	28 (vest)	21.2	4	yes
7.6.4	sideward	17	3.6	2	yes
7.6.4.6	sideward	28 (vest)	5.3	2	yes
7.6.5	rearward	17	14.6	4	no
7.6.5.5	rearward	28 (vest)	21.2	4	no

Per Table 1 above, a 14 lb walker cannot simulate 4 ft/sec if launched from 14.6 inches. Thus, to properly simulate 4 ft/sec, the 14 lb walker with a CAMI dummy[45] need to be launched from 18 inches (3.4 inches greater than 14.6 inches), which is the computed value obtained from the CPSC proposed equation. JPMA's assertion that an infant will tend to move slower in a heavier walker is inconsistent with the existing simulated speeds as they appear in ASTM F 977 – 07. An infant in a walker cannot achieve the target simulated speed unless the launching distance is greater. It is possible that some products certified by JPMA to the ASTM F 977 – 07 standard may not have been simulating 4 ft/sec if the walker weighed more than 8 lbs.

Further examination of Table 1 above shows that a heavier CAMI dummy fitted with vest (sections 7.6.3.6 and 7.6.4.6 and 7.6.5.5) requires launching the 28 lb combination from a longer distance, i.e., 21.2 inches instead of 14.6 inches. The same physical principle applies if the weight of the walker is heavier – the heavier walker with CAMI dummy needs to be launched from a longer distance to achieve the same target velocity of 4 ft/sec.

6. Summary

JPMA commented that a child in a heavier walker will not be able to accelerate the walker to 4 ft/sec. CPSC staff disagrees with this statement and believes that 4 ft/sec could be achieved by a child in a heavier walker because of the following:

- The Austrian study showed that children achieved speeds up to 4.1 ft/sec with a heavier walker (10.5 lbs).
- Today's modern walker weighs at least 10 lbs. Recent data shows that popular larger, heavier walkers equipped with friction strips manufactured after 1998 were involved in stair falls.
- JPMA's comment is based on an energy analysis of test data for children in light weight (8 lb walkers). This analysis has not been verified with actual test data for 12 to 15 month old children in modern, heavier walkers.
- The original estimate used in the 1997 version of the ASTM standard for the 95th percentile 12 to 15 month old infant was 28 lbs; the recent CDC estimate for the 95th

[45] This Civil Aeromedical Institute (CAMI) Infant Dummy, Mark II, was constructed in accordance with the Department of Transportation Specification dated April 29, 1975.

percentile 15.5 month old male is 30 lbs. Heavier children may be somewhat stronger and may exert more force

JPMA commented that this would be a substantial change and would affect the outcome of the test results for walkers that pass the requirement. Based on limited CPSC staff testing, some manufacturers will not require changes to their product. CPSC staff agrees that some manufacturers will have to modify their product; however, these changes are feasible. Possible modifications could include increasing the rolling friction within the walkers' wheels, reducing the walker weight, or refining the friction strip design.

JPMA commented that ASTM F 977 – 07 stair fall requirements are conservative because they are based on tests of a group of children in which the measured maximum propelling force was 7.5 lb and the maximum velocity achieved was 4.02 ft/sec. CPSC staff believes these tests were based on 1995 walker sizes. However, walkers have become heavier over the past 14 years and CPSC staff review of recent data show that heavier walker models equipped with friction strips were involved in stair fall incidents. CPSC staff believes that the standard needs to be updated and improved by accounting for heavier walkers.

JPMA commented that there are no incident data to indicate changes to velocities in the stair test are needed. CPSC staff review of recent data show that heavier walker models equipped with friction strips were involved in stair falls.

7. CPSC Staff's Recommendation

Using the research and data that are available to date, CPSC staff is recommending a standard based on the appropriate physical parameters that would reduce injuries and deaths due to infants in walkers falling down stairs. CPSC staff recommends modifying the distance d calculation that would require that the weight of the CAMI dummy and vest be measured, as it has been pointed out to CPSC staff that there are variations in weights of CAMI dummies and vests.

The equations themselves would not change from the proposal outlined in the NPR, but the legend that describes all the parameters of the equations will require editorial changes, as shown below in bold text and struck-out text:

$$d_{CAMI} = \frac{(V_f^2 - V_o^2) * (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$$

$$d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) * (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$$

where

d_{CAMI} = Launching distance with the CAMI dummy seated in the test walker
$d_{CAMI\ w/vest}$ = Launching distance with the CAMI dummy fitted with vest seat in the test walker

V_f = Maximum velocity of walker at edge of platform = 4 ft/sec (for forward and rearward directions); 2 ft/sec (for sideward direction)
V_o = Initial velocity = 0
W_{CAMI} = **Measured** ~~W~~weight of CAMI dummy ~~=17 lb~~
$W_{CAMI\ w/vest}$ = **Measured** ~~W~~weight of CAMI dummy with ~~11 lb~~ weighted vest ~~= 28 lbs~~
W_{walker} = Weight of the walker
$W_{drop\ weight}$ = 8 lbs
μ_k = Dynamic coefficient of friction = 0.05
N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker
$N_{CAMI\ w/vest}$ = Normal force (for CAMI dummy fitted with weighted vest scenario) = weight of CAMI dummy + vest + walker
g = Acceleration of gravity = 32.2 ft/sec^2

IV Consumer Group's Comments

a) PARKING BRAKES

The consumer groups agreed with the majority of the Commission's proposal regarding adoption, with modification, of ASTM F 977 – 07. However, they also recommended a requirement that all infant walkers have "parking brakes" so the walkers can be rendered immobile at the discretion of the caregiver. The comment stated *"Requiring parking brakes will prevent an infant from scooting out of a caregiver's view and encountering hazards such as hot stoves, which have accounted for numerous serious injuries. The CPSC should make the inclusion of parking brakes a requirement of the standard. Without that feature, walkers remain too dangerous for use in many environments, which has led to their banning in Canada and prohibition of use in child care settings in some states and municipalities".*

There were numerous discussions at ASTM subcommittee meetings regarding the possible mandatory inclusion of parking brakes. Although some manufacturers have elected to include parking brakes as a convenience, the subcommittee concluded that parking brakes should not be mandatory. CPSC staff believes the function of walkers is to aid/train infants to walk, entertaining infants with toy trays, and do not serve the same purpose as a stationary activity center. A walker is a mobile device, not a stationary one. Some manufacturers have elected to include parking brakes as a convenience. CPSC staff agrees with ASTM that parking brakes should not be mandatory. However, if a walker is equipped with parking brakes, then that walker should meet performance requirements as proposed by CPSC to assure their proper functionality.

b) CAMI DUMMY HEAD POSITION

The consumer groups also requested that CPSC consider specifying how the CAMI dummy is to *"be positioned and restrained during testing so that the center of gravity will be consistent from lab to lab".*

CPSC staff agrees in principle that it is plausible that CAMI dummies' flexibility properties may change over time with use. Last year, round robin testing of infant walkers was done by CPSC

staff, several manufacturers, and a testing laboratory. In addition to pass/fail testing, quantitative measurements of the displacement of a walker relative to the edge of the test table were made. The early testing done by CPSC staff did not show any substantial variability in the test results when the CAMI dummy's head was not secured. Several test parameters were standardized for the staff testing: rope type, pulley type, spring rate for the pulley mounting bracket, etc. Furthermore, the proposed CPSC standard provides many areas of additional specificity of the CAMI positioning: arms positioned on top of the toy tray, use of the standardized military rope to secure the legs, etc. Securing the CAMI head in a most rearward or forward position could possibly produce different results, depending on the flexibility of the dummy. Thus, CPSC staff specifically recommends that the head not be secured. When the CAMI is positioned as described in the proposed procedure, the CAMI head movement, while it exists, is minimized to the extent possible. CPSC staff recommends that the CAMI head to remain unrestrained during all the stair fall tests. See Graphic 2 on page 18.

c) FRICTION PAD WEAR AND TEAR

The consumer groups also asked the CPSC to consider the effects of wear and tear as well as dirt and dust a walker's compliance with the stair fall test. They stated that, *"The friction pads used to prevent a walker from tumbling down stairs are apt to become less effective as they are used. As a result, testing a new walker may not indicate real world performance. Therefore, we recommend that a stair fall test be conducted on new walkers as well as one that has simulated wear and tear characteristics".*

CPSC staff does not recommend any additional performance requirements involving stair fall tests with worn friction strips. CPSC staff recognizes that friction pad wear may reduce the pads' effectiveness. However, this may not be the case for all walker friction pads. Some pads may last longer than others. Assessing the amount of wear and standardizing the wear characteristics may be somewhat subjective. Given the variation between friction pad vendors and the changing compositions of the rubber used in the friction pads, it may be difficult to standardize this aspect of the test. CPSC staff has suggested other changes that address the stair fall hazard, such as increasing the input kinetic energy for heavier walkers (i.e., walkers heavier than 8 lbs would need to be launched from a longer distance to achieve the target terminal velocities). In an indirect way, setting the higher input kinetic energy requirement for heavier walkers creates revised design criteria for walker manufacturers. One area where those manufacturers can address the resistance to stair falls may lie in revisions to the friction pad design. CPSC staff believes standardizing the target velocity will have an important impact on the actual test, as the kinetic energy of the walker and CAMI dummy is proportional to the square of the velocity. Furthermore, each walker will be subjected to 18 impacts which will sufficiently subject the sample walkers to abuse (3 directions x 2 configurations with and without vest x 3 replicates).

V Additional Changes to the Draft Final Rule

Additional technical changes to the NPR are recommended in the staff's draft final rule.

a) FORCE CALIBRATION INTERVAL

The NPR proposed a one-year calibration interval for the force gauges. However, the draft final rule provides a general interval because a force gauge could go out of calibration before one year. Appropriate calibrations are necessary to maintain accuracy. Table 1 at the end of this memorandum shows the recommended text for the draft final rule.

b) TEST TABLE LENGTH SPECIFICATION

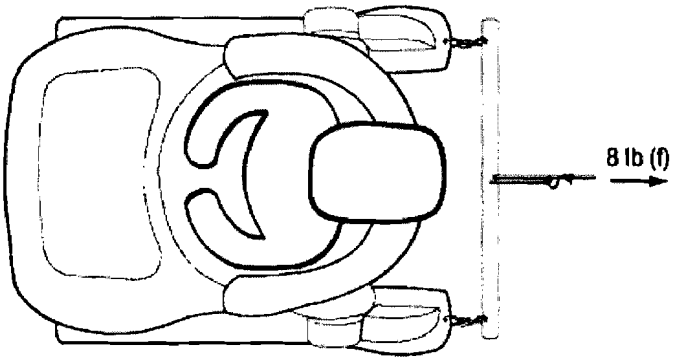
CPSC staff recommends removing a specification that the test table be 48 inches for the draft final rule. This specification appears in a notation in Figure 10 of ASTM F 977 – 07. The NPR showed figure 10 with the noted 48-inch length table. However, for the draft final rule, CPSC staff recommends leaving the length of the test table unspecified so that a test laboratory may use a table of adequate length to accommodate the maximum calculated launching distance. A test table length of 48 inches may not be sufficient for all walkers in light of the changes proposed in the NPR for calculating the launch distance. See Graphic 2 at the end of this memorandum.

VI Reasons for Referencing ASTM F 977 – 07 for the Draft Final Rule

The NPR was based on ASTM F 977 – 07, which was the applicable version of the standard at the time the NPR was published. ASTM F 977 – 07 therefore provided the reference baseline for addressing the public comments to the NPR. ASTM F 977 – 09, published in December 2009, contained some changes that were contrary to the NPR. ASTM F 977 – 09 did not include the following critical changes as recommended in the NPR: (a) the launching distance calculation equations, (b) the stair test procedure in the rearward direction for open back frame walkers (as proposed by CPSC staff), (c) the parking brake warnings, (d) parking brake performance requirement, and (e) parking brake test procedures. In addition, CPSC staff does not believe that ASTM F 977 – 09 provides the appropriate reference baseline to address comments and discuss changes for the draft final rule due to the inclusion of a less stringent test for the rearward stair fall test for open back frame walkers (discussed in the section below).

a) STAIR FALL TEST IN THE REARWARD DIRECTION FOR OPEN BACK FRAME WALKER MODELS

As mentioned above, staff proposed a test procedure in the NPR to perform the stair fall test on walkers that have open backs. The NPR states to utilize a 1 inch aluminum angle firmly attached to the walker frame for stair fall testing of these type of walkers. This proposed test procedure was not adopted by ASTM in their recent revision to the standard. In Section 7.6.5.1of ASTM F 977 – 09, the ASTM standard states that *"If a walker has an open back base design, attach the ends of a lightweight bar to the back of the walker near the wheels using loops of cord to allow the bar to float."* The standard also includes the following figure.



CPSC staff believes this indirect method of attaching cord to the walker, attaching a lightweight bar to the cord, and then attaching the cord for the 8 lb falling weight to the bar could result in the cord not remaining taut throughout the entire stair fall test. The moment the friction strips at the bottom of the walker make contact with the edge of the test table, it is possible the loose loops of cord and floating bar may not enable the maximum transfer of energy from the falling 8 lb weight to the walker and CAMI dummy system. This moment is very brief, e.g., fractions of a second, but it may significantly impact performance during the test. In addition, there is no rationale in the ASTM F 977 – 09 standard to discuss why this test procedure using loops of cord and the lightweight bar was chosen. CPSC staff believes the proposed test procedure as presented in the NPR is more stringent since attaching a 1-inch aluminum angle firmly to the walker frame would maximize the transfer of dynamic energy from the 8 lb falling weight by maintaining a direct, taut rope connection.

VII Conclusion

CPSC staff believes that the ASTM F 977 – 07 standard is the result of many years of development. However, there are areas that require improvement. After review of all the comments received in response to the NPR for infant walkers, CPSC staff recommends the following changes to what the Commission proposed in the NPR and what CPSC staff recommends for the draft final rule:

a) Remove the 30° incline plane test.
b) In the stair fall calculations, use the actual weight of the CAMI dummy and vest and update the equation legends.
c) Clarify the position of the CAMI dummy in the stair fall test to indicate that the head shall not be restrained.
d) In the parking brake test procedure (in the sideward direction only) for walkers with fixed direction rear wheels, add a paragraph to indicate how to measure displacement if the walker moves in a curved path.
e) Specify that the calibration interval for the force gauges shall be maintained to ensure that the accuracy does not drift beyond the specified tolerances.
f) Revise Figure 10 to indicate that the length of the test table should be adequate for the test, rather than 48" long.

Table 1 below is a comparative chart that shows the original text from the ASTM F 977 – 07 standard, the corresponding changes as written in the NPR, and the recommended changes that are included in the staff's draft final rule.

Table 1: Staff Recommended Changes between ASTM F 977-07, The NPR and the Draft Final Rule

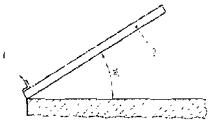
As presented in the ASTM F 977 – 07 Standard	As proposed in the NPR	Draft Final Rule
4.6.1 Equipment—Chatillon Model DPPH 25 or equivalent, 4.6.2 Range—0 to 25 lbf (110 N), 4.6.3 Tolerance—±1 Div., 4.6.4 Calibration Interval—1 year, 4.6.5 Equipment—Chatillon Model DPPH 100 or equivalent, 4.6.6 Range—0 to 100 lbf (500 N), 4.6.7 Tolerance—±1 Div., 4.6.8 Calibration Interval—1 year.	4.6.1 Equipment -Force gauge with a range of a to 25 lbf (110 N), tolerance of ± 1 Div., and a calibration interval of 1 year 4.6.2 Equipment -Force gauge with a range a to 100 lbf (500 N) tolerance of ± 1 Div., and a calibration interval of 1 year	4.6.1 Equipment – Force gauge with a range of 0 to 25 lbf (110 N), tolerance of ± 0.25 lbf (1.1 N). A calibration interval shall be maintained for the force gauge which will ensure that the accuracy does not drift beyond the stated tolerance. 4.6.2 Equipment – Force gauge with a range 0 to 100 lbf (500 N) tolerance of ± 1 lbf (4.44 N). A calibratiou interval shall be maintained for the force gauge which will ensure that the accuracy does not drift beyond the stated tolerance.
There is no section for the 30° incline plane test	*(c) Static stability 30° incline plane test.* *(1) Requirement.* When tested to the procedure described in paragraph *(c)* (3) of this section, the infant walker shall not overturn. *(2) Test equipment.* (i) A sloping platform inclined at 30° to the horizontal with a stop fitted to the lower edge of the slope. The height of the stop shall be 3.94 in (100 mm). See Figure 15. (ii) Test Mass A: A rigid cylinder 6.30 in ± 0.04 in (160 mm ± 1 mm) in diameter, 11.02 in ± 0.04 in (280 mm ± 1 mm) in height with a mass of 26.4 lb (12 kg), with its center of gravity in the center of the cylinder. All edges shall have a radius of 0.79 in ± 0.04 in (20 mm ± 1mm).	The recommended text shall be removed.
There is no section for the 30° incline plane test	(iii) Test Mass B: A rigid cylinder 6.30 in ± 0.04 in (160 mm + 1 mm) in diameter, 11.02 in ± 0.04 in (280 mm ± 1 mm) in height with a mass of 16.8 lb (7.65 kg), with its center of gravity in the center of the cylinder. *(3) Test method.* (i) Adjustable seats shall be adjusted to their highest position. Place Test Mass A vertically in the center of the walker seat. To restrict movement of the test mass, packing of negligible mass may be used. Position the castors or wheels in their most onerous position. Place the walker on the slope against the stop. Carry out the test in the forward, sideward, and rearward directions. 	The recommended text shall be removed.
There is no section for the parking devices performance test	*(2) Test equipment.* (i) A test platform as specified in Figure 10 with a hardwood floor pre-finished with polyurethane. (ii) Test Mass A and Test Mass B as specified in paragraph (c) (2) (ii) and (iii) of this section.	Replace paragraph (ii) with the following: (ii) Test Mass: A rigid cylinder 6.30 in ± 0.04 in (160 mm ± 1 mm) in diameter, 11.02 in ± 0.04 in (280 mm ± 1 mm) in height with a mass of 16.9 lb (7.65 kg), with its center of gravity in the center of the cylinder.
There is no section for the parking devices performance test	(iii) *Sideward facing test* of *parking devices.* (A) Position the walker including Test Mass B facing sideward so that plane B is perpendicular to the front edge of the platform and passes through the center of the pulley. Engage all parking devices in accordance with the manufacturer's instructions. (B) Within one minute of placing the walker with Test Mass B on the platform, attach an 8 lb weight gradually within 5 seconds to the walker frame base at plane B by means of a rope and a pulley per the test apparatus specifications in the step test procedure, adjusted so that the force is applied horizontally (rope angle shall be a ± 0.5°). Remove the 8 lb weight after 1 minute. Measure the displacement.	Replace paragraph (iii) with the following: iii) *Sideward facing test* of *parking devices.* (A) Position the walker including the Test Mass facing sideward so that plane B is perpendicular to the front edge of the platform and passes through the center of the pulley. Engage all parking devices in accordance with the manufacturer's instructions.

Table 1: Staff Recommended Changes between ASTM F 977-07, The NPR and the Draft Final Rule

As presented in the ASTM F 977 – 07 Standard	As proposed in the NPR	Draft Final Rule
		(B) Within one minute of placing the walker with the Test Mass on the platform, attach an 8 lb weight gradually within 5 seconds to the walker frame base at plane B by means of a rope and a pulley per the test apparatus specifications in the step test procedure, adjusted so that the force is applied horizontally (rope angle shall be a ± 0.5°). Remove the 8 lb weight after 1 minute. Measure the displacement. (C) If the walker is equipped with fixed direction rear wheels and the walker is displaced in an curved path, establish the location of the rope attachment as the reference point and measure the linear displacement of that reference point after the performing the procedure as described above.
7.6.1.2 The dummy may be secured to the tray to maintain contact during the test. Raise the dummy's legs just enough so its feet do not touch the platform during the performance test and position using a non-elastic means.	In the NPR, Section 7.6.1.2 was not recommended for any changes.	Replace 7.6.1.2 with the following: 7.6.1.2 The dummy may be secured to the tray to maintain contact during the test. Raise the dummy's legs just enough so its feet do not touch the platform during the performance test and position using a non-elastic means. The dummy's head shall remain unrestrained for all the step tests.
7.6.3.1 Center the walker on the test platform facing forward so that Plane A is perpendicular to the front edge of the platform and the walker is distance d from the center of the most forward wheel(s) to the edge of the test platform, d = 14.6 in. (371 mm). Position swivel wheels as they would be if the walker was moving forward.	(7) Instead of section 7.6.3.1: "Center the walker on the test platform facing forward so that Plane A is perpendicular to the front edge of the platform and the walker is distance d from the center of the most forward wheel(s) to the edge of the test platform, $d_{CAMI} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$ where V_f = Maximum velocity of walker at edge of platform = 4 ft/sec V_o = Initial velocity = 0 W_{CAMI} = Weight of CAMI dummy =17 lb W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker g = acceleration of gravity = 32.2 ft/sec^2 Position the swivel wheels in such a way that the walker moves forward in a straight line parallel to Plane A."	Replace 7.6.3.1 with the following: 7.6.3.1 Center the walker on the test platform facing forward so that Plane A is perpendicular to the front edge of the platform and the walker is distance d from the center of the most forward wheel(s) to the edge of the test platform. $d_{CAMI} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$ where V_f = Maximum velocity of walker at edge of platform = 4 ft/sec V_o = Initial velocity = 0 W_{CAMI} = Measured weight of CAMI dummy W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker g = acceleration of gravity = 32.2 ft/sec^2 Position the swivel wheels in such a way that the walker moves forward in a straight line parallel to Plane A.
7.6.3.6 Repeat 7.6.3.1-7.6.3.5 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d = 21.2 in. (538 mm).	(11) Instead of section 7.6.3.6: "Repeat 7.6.3.1-7.6.3.5 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d, computed using the following equation: $d_{CAMI\ w/\ vest} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI\ w/\ vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/\ vest})}$ where V_f = Maximum velocity of walker at edge of platform = 4 ft/sec V_o = Initial velocity = 0 $W_{CAMI\ w/vest}$ = Weight of CAMI dummy with 11 lb vest = 28 lb W_{walker} = Weight of the walker	Replace 7.6.3.6 with the following: 7.6.3.6 Repeat 7.6.3.1 through 7.6.3.5 using the CAMI dummy with the weighted vest and with distance d, computed using the following equation: $d_{CAMI\ w/\ vest} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI\ w/\ vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/\ vest})}$ where V_f = Maximum velocity of walker at edge of platform = 4 ft/sec V_o = Initial velocity = 0

Table 1: Staff Recommended Changes between ASTM F 977-07, The NPR and the Draft Final Rule

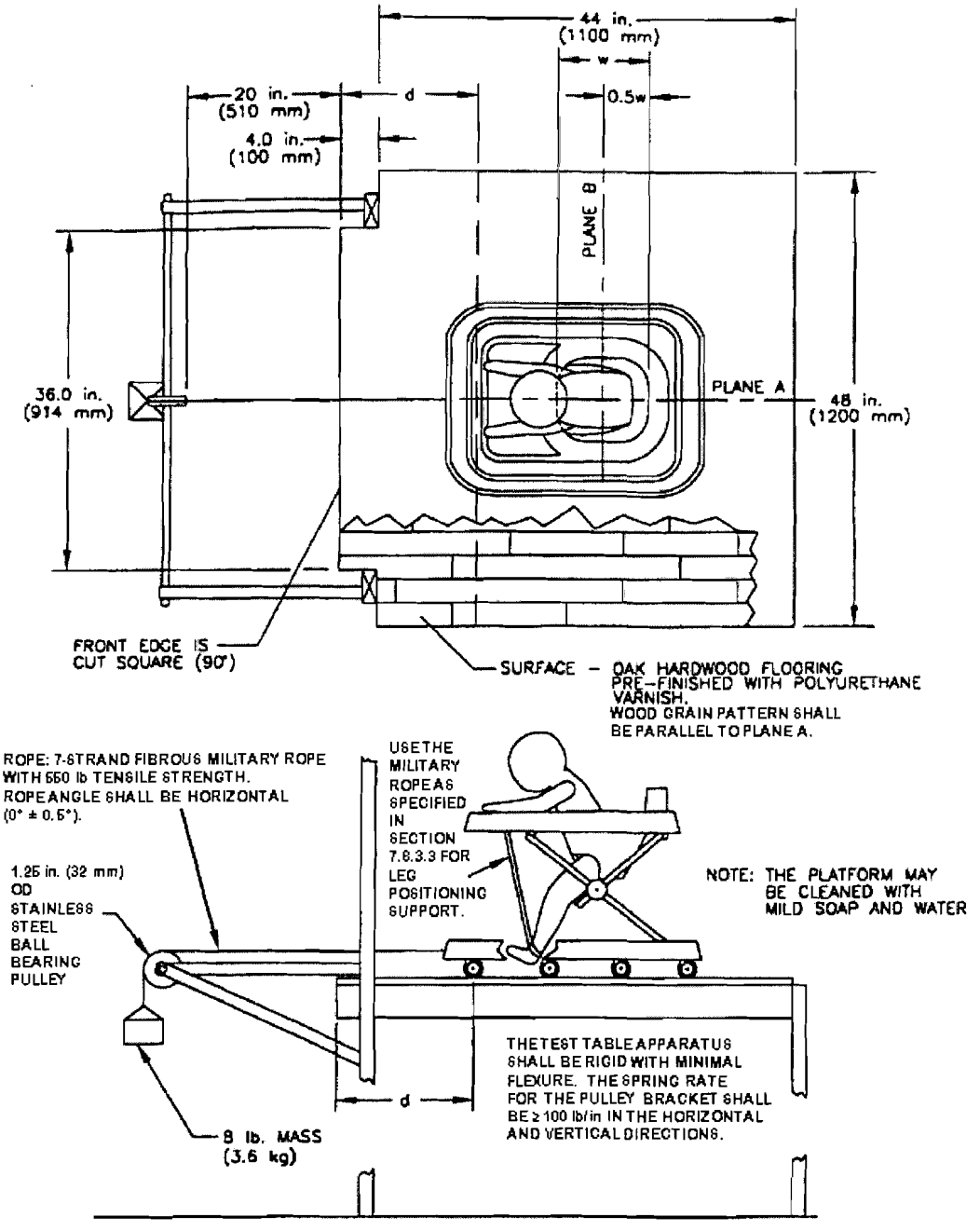
As presented in the ASTM F 977 – 07 Standard	As proposed in the NPR	Draft Final Rule
	$W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 N_{CAMI} = Normal force (for CAMI dummy fitted with 11 lb vest scenario) = weight of CAMI dummy + vest weight + walker weight g = acceleration of gravity = 32.2 ft/sec^2	$W_{CAMI\ w/vest}$ = Measured weight of CAMI dummy and weighted vest W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 $N_{CAMI\ w/vest}$ = Normal force (for CAMI dummy fitted with the weighted vest scenario) = Measured weight of the CAMI dummy + measured weight of the vest + walker weight g = acceleration of gravity = 32.2 ft/sec^2
7.6.4.1 Center the walker on the test platform facing sideways so that Plane B is perpendicular to the front edge of the platform and the walker is distance d from the center of the most sideward wheel(s) to the edge of the test platform, d = 3.6 in. (91 mm). Position swivel wheels as they would be if the walker was moving sideward.	(13) Instead of 7.6.4.1: "Center the walker on the test platform facing sideways so that Plane B is perpendicular to the front edge of the platform and the walker is distance d from the center of the most sideward wheel(s) to the edge of the test platform, $d_{CAMI} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$ where V_f = Maximum velocity of walker at edge of platform = 2 ft/sec V_o = Initial velocity = 0 W_{CAMI} = Weight of CAMI dummy =17 lb W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker g = acceleration of gravity = 32.2 ft/sec^2 Position the swivel wheels in such a way that the walker moves sideward in a straight line parallel to Plane A."	Replace 7.6.4.1 with the following: 7.6.4.1 Center the walker on the test platform facing sideways so that Plane B is perpendicular to the front edge of tbe platform and the walker is distance d fiom the center of the most sideward wheel(s) to the edge of the test platform, $d_{CAMI} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$ where V_f = Maximum velocity of walker at edge of platform = 2 ft/sec V_o = Initial velocity = 0 W_{CAMI} = Measured weight of CAMI dummy W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of frictiou = 0.05 N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker g = acceleration of gravity = 32.2 ft/sec^2 Position the swivel wheels in such a way that the walker moves sideward in a straight line parallel to Plane B.
7.6.4.6 Repeat 7.6.4.1-7.6.4.5 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d = 5.3 in. (130 mm).	(15) Instead of section 7.6.4.6: "Repeat 7.6.4.1 through 7.6.4.5 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d, computed using the following equation: $d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$ where V_f = Maximum velocity of walker at edge of platform = 2 ft/sec V_o = Initial velocity = 0 $W_{CAMI\ w/vest}$ = Weight of CAMI dummy with 11 lb vest = 28 lb W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb	Replace 7.6.4.6 with the following: 7.6.4.1 Repeat 7.6.4.1 through 7.6.4.5 using the CAMI dummy with the weighted vest and with distance d, computed using the following equation: $d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) \cdot (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$ where V_f = Maximum velocity of walker at edge of platform = 2 ft/sec V_o = Initial velocity = 0 $W_{CAMI\ w/vest}$ = Measured weight of CAMI dummy and weighted vest

Table 1: Staff Recommended Changes between ASTM F 977-07, The NPR and the Draft Final Rule

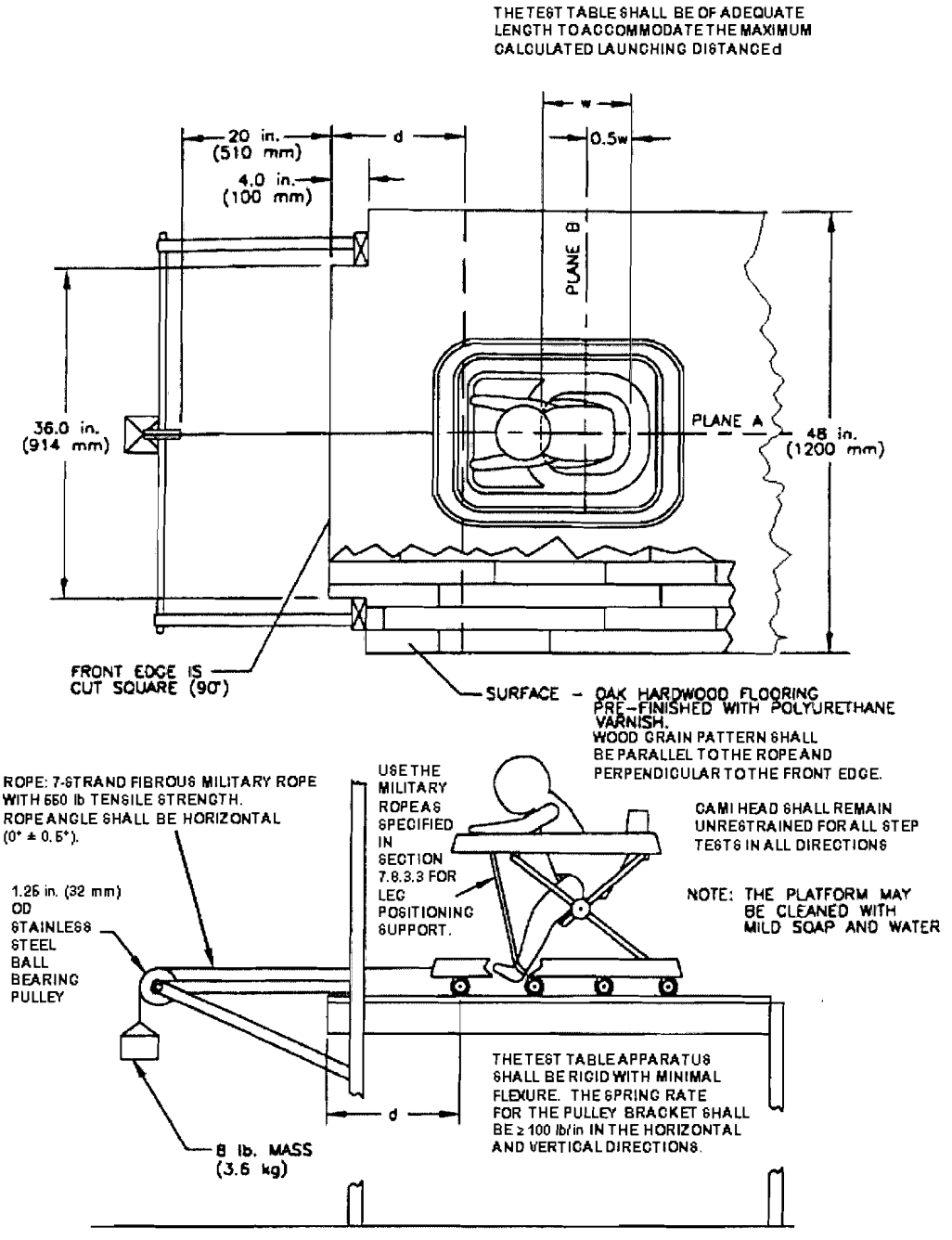
As presented in the ASTM F 977 – 07 Standard	As proposed in the NPR	Draft Final Rule
	μ_k = Dynamic coefficient of friction = 0.05 N_{CAMI} = Normal force (for CAMI dummy fitted with 11 lb vest scenario) = weight of CAMI dummy + vest weight + walker weight g = acceleration of gravity = 32.2 ft/sec^2	W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 $N_{CAMI\ w/vest}$ = Normal force (for CAMI dummy fitted with the weighted vest scenario) = Measured weight of the CAMI dummy + measured weight of the vest + walker weight g = acceleration of gravity = 32.2 ft/sec^2
Figure 10 as shown in page 9 of ASTM F 977 – 07	GRAPHIC 1 as shown at the end of this memorandum	GRAPHIC 2 as shown at the end of this memorandum
7.6.5.1 Center the walker on the test platform facing rearward so that Plane A is perpendicular to the front edge of the platform and the walker is distance d from the center of the most rearward wheel(s) to the edge of the test platform, d = 14.6 in. (371 mm). Position swivel wheels as they would be if the walker was moving rearward.	(18) Instead of section 7.6.5.1: "Center the walker on the test platform facing rearward so that Plane A is perpendicular to the front edge of the platform and the walker is distance d from the center of the most rearward wheel(s) to the edge of the test platform, $d_{CAMI} = \frac{(V_f^2 - V_o^2) * (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$ where V_f = Maximum velocity of walker at edge of platform = 4 ft/sec V_o = Initial velocity = 0 W_{CAMI} = Weight of CAMI dummy =17 lb W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker g = acceleration of gravity = 32.2 ft/sec^2 Position the swivel wheels in such a way that the walker moves rearward in a straight line parallel to Plane A. If the walker has an open back design, attach the 1 in aluminum angle used in 7.3.4 to span the back frame."	Replace 7.6.5.1 with the following: (18) Instead of section 7.6.5.1: "Center the walker on the test platform facing rearward so that Plane A is perpendicular to the front edge of the platform and the walker is distance d from the center of the most rearward wheel(s) to the edge of the test platform, $d_{CAMI} = \frac{(V_f^2 - V_o^2) * (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$ where V_f = Maximum velocity of walker at edge of platform = 4 ft/sec V_o = Initial velocity = 0 W_{CAMI} = Measured weight of CAMI dummy W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker g = acceleration of gravity = 32.2 ft/sec^2 Position the swivel wheels in such a way that the walker moves rearward in a straight line parallel to Plane A. If the walker has an open back design, attach the 1 in aluminum angle used in 7.3.4 to span the back frame."
7.6.5.5 Repeat 7.6.5.1-7.6.5.4 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d = 21.2 in. (538 mm).	(20) Instead of section 7.6.5.5: "Repeat 7.6.5.1 through 7.6.5.4 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d, computed using the following equation: $d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) * (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$ where V_f = Maximum velocity of walker at edge of platform = 2 ft/sec V_o = Initial velocity = 0 $W_{CAMI\ w/vest}$ = Weight of CAMI dummy with 11 lb vest = 28 lb W_{walker} = Weight of the walker $W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05	Replace 7.6.5.5 with the following: 7.6.5.5 Repeat 7.6.5.1 through 7.6.5.4 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d, computed using the following equation: $d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) * (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$ where V_f = Maximum velocity of walker at edge of platform = 2 ft/sec V_o = Initial velocity = 0 $W_{CAMI\ w/vest}$ = Measured weight of the CAMI dummy with the weighted vest W_{walker} = Weight of the walker

Table 1: Staff Recommended Changes between ASTM F 977-07, The NPR and the Draft Final Rule

As presented in the ASTM F 977 – 07 Standard	As proposed in the NPR	Draft Final Rule
	N_{CAMI} = Normal force (for CAMI dummy fitted with 11 lb vest scenario) = weight of CAMI dummy + vest weight + walker weight g = acceleration of gravity = 32.2 ft/sec^2	$W_{drop\ weight}$ = Drop weight = 8 lb μ_k = Dynamic coefficient of friction = 0.05 $N_{CAMI\ wvest}$ = Normal force (for CAMI dummy fitted with the weighted vest scenario) = Measured weight of the CAMI dummy + measured weight of the vest + walker weight g = acceleration of gravity = 32.2 ft/sec^2



GRAPHIC 1 – Figure 10 as shown in the NPR



GRAPHIC 2 – Corrections to the NPR figure

TAB E

Draft Federal Register Notice
Safety Standard for Infant Walkers – Final Rule

DRAFT 5-12-10

[Billing Code 6355-01-P]
CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Part 1216

CPSC Docket No. CPSC-2010-_____

Safety Standard for Infant Walkers: Final Rule

AGENCY: Consumer Product Safety Commission.

ACTION: Final rule.

SUMMARY: Section 104(b) of the Consumer Product Safety Improvement Act of 2008 ("CPSIA") requires the United States Consumer Product Safety Commission ("CPSC" or "Commission") 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 infant walkers in response to the direction under section 104(b) of the CPSIA.

DATES: The rule will become effective on **[insert date 6 months after publication in *Federal Register*]** and apply to products manufactured or imported on or after that date.

FOR FURTHER INFORMATION CONTACT: Carolyn Manley, Office of Compliance and Field Operations, Directorate for Engineering Sciences, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone (301) 504-7607; cmanley@cpsc.gov.

SUPPLEMENTARY INFORMATION:

A. Background and Statutory Authority

The Consumer Product Safety Improvement Act of 2008 ("CPSIA", Pub. Law 110-314) was enacted on August 14, 2008. Section 104(b) of the CPSIA requires the Commission 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. Section 104(b)(2) of the CPSIA directs the Commission to begin rulemaking for two standards by August 14, 2009. Under this provision, the Commission published a proposed standard for infant walkers in the FEDERAL REGISTER on September 3, 2009. 74 FR 45704. The standard is substantially the same as a voluntary standard developed by ASTM International (formerly known as the American Society for Testing and Materials), ASTM F 977-07, *Standard Consumer Safety Specification for Infant Walkers*, but with several modifications that strengthen the standard in order to reduce the risk of injury associated with walkers.

There are existing mandatory regulations applicable to baby bouncers, walker-jumpers, and baby walkers, which were originally issued in 1971 by the Food and Drug Administration. 16 CFR 1500.18(a)(6) and 16 CFR 1500.86(a)(4). These regulations do not address hazards associated with falls down stairs, structural integrity, occupant retention, or loading/stability issues. The ASTM F 977-07 standard contains provisions that the mandatory regulations lack or requirements that are more stringent than the mandatory standard. On September 3, 2009, the Commission proposed to revoke the existing CPSC regulations for baby bouncers, baby jumpers and walkers. As explained elsewhere in this issue of the FEDERAL REGISTER, the Commission has determined to

revoke the existing regulations only with regard to walkers. They will remain in effect for baby bouncers and baby jumpers.

B. The Product

Infant walkers are used to support very young children before they are walking (usually 6 to 15 months old). ASTM F 977-07 defines "walker" as "a mobile unit that enables a child to move on a horizontal surface when propelled by the child sitting or standing within the walker, and that is in the manufacturer's recommended use position." Children may use walkers to sit, recline, bounce, jump, and use their feet to move around. Walkers typically consist of fabric seats attached to rigid trays. The trays are fastened to bases that have wheels or casters to make them mobile.

Currently, there are at least seven manufacturers or importers supplying walkers to the United States market (four domestic manufacturers, two foreign manufacturers with divisions in the United States, and one domestic importer).

All known suppliers of infant walkers are members of the Juvenile Products Manufacturers Association ("JPMA"), the major United States trade association that represents juvenile product manufacturers and importers. Each supplies a variety of children's products, of which walkers are only a small proportion. Infant walkers are available in many countries besides the United States, including China, the United Kingdom, and Australia. Therefore, any foreign manufacturer is a potential supplier to the United States market, either directly or indirectly through an importer.

Infant walkers made by all of the domestic manufacturers supplying walkers to the United States market are JPMA certified as compliant with the ASTM voluntary standard. Based on limited CPSC staff testing, CPSC staff does not believe that the two

foreign manufacturers and the domestic importer are making walkers that are compliant with the voluntary standard.

Sales of infant walkers peaked in the early 1990s at less than 2 million annually. By 2005, however, annual walker sales had fallen to around 600,000. Following a similar pattern, walkers in use (the number of walkers estimated to still be in use, regardless of when sold) peaked in the mid-1990s, but have since fallen sharply as well (by 55 percent between 1996 and 2005). As of 2005, the estimated number of walkers in use was probably less than 2 million.

C. Incident Data

The preamble to the proposed rule summarized incident data involving walkers. There has been no change in the fatality reports or injury estimates related to walkers since publication of the proposed rule. That information is repeated below.

1. Injury Estimates

There were an estimated total of 14,900 (an annual average of 3,000) injuries related to infant walkers among children under the age of 15 months that were treated in hospital emergency departments in the United States over the five-year period 2004-2008.[1] (This estimate has been adjusted to exclude jumpers from the walker code.) No deaths were reported through NEISS. There was no statistically significant increase or decrease observed in the estimated injuries from one year to the next, nor was there any statistically significant trend observed over the 2004-2008 period. For injuries requiring emergency department treatment that were related to infant walkers, the following characteristics occurred most frequently based on an annual average:

[1] The source of injury estimates is the National Electronic Injury Surveillance System ("NEISS"), a statistically valid injury surveillance system based on data gathered from emergency departments of hospitals selected as a probability sample of all the United States hospitals with emergency departments.

- Hazard – falls either out of the walker or down stairs/to a lower level while in the walker (62%)
- Injured body part – head (45%) and face (27%)
- Injury type – contusions/abrasions (37%) and internal organ injury (28%)
- Disposition – treated and released (90%) and hospitalized (5%).

For approximately 72 percent of the injuries reported, the walker was directly involved in the incident (such as the walker falling down stairs, tipping over, collapsing). However, many (nearly 20 percent) of the injuries treated in emergency departments were not necessarily caused by failures of the walkers.

As discussed in the preamble to the proposed rule (74 FR at 45705), the stair fall protection provisions in the ASTM standard dramatically affected incidents related to walkers (an 88% decrease in estimated incidents related to walkers treated in emergency rooms from 1994 to 2008). However, the stair fall hazard remains the most prevalent hazard in incidents related to walkers with some of these incidents involving walkers that do not comply with the voluntary standard, damaged or worn walkers, or children who are strong enough to lift the walker and defeat the stair fall protection.

2. Fatalities

CPSC staff has reports of eight fatal incidents involving an infant in a walker during the five year period 2004 to 2008.[2] One of these appears to involve a stair fall incident. The walker involved did not conform to the ASTM walker standard's stair fall performance requirements and had been under recall at the time of the death (due to the lack of stair fall protection). There were three deaths that resulted from accidental drowning when the child moved in a walker into a residential pool or spa. Two of these three deaths involved walkers that were certified to the JPMA standard, though pictures

[2] The reported fatalities and non-fatalities are neither a complete count of all incidents that occurred during the period nor a sample of known probability of selection.

showed that one of the walkers was missing a wheel. The physical condition of the other walker is unknown. The circumstances of the remaining four deaths varied and involved circumstances unrelated to falls (*i.e.*, a slow cooker overturned on an infant in a walker who pulled the cord of the cooker, an infant pulled a heavy dining chair on himself, an infant rolled down a driveway and struck a moving vehicle, and an infant aspirated a screw while seated in a walker).

3. Non-Fatal Injuries

A total of 78 non-fatal injuries were reported to have occurred between 2004 and 2008. All of these injuries occurred when the infant was seated in a walker. The leading cause of injury (about 42% of the injuries) was falls down the stairs or to a lower level. The next major cause of injury was product failure, either structural or mechanical failure of the walker, and these accounted for another 37% of the incidents. The attached toys, toy bars, or toy trays on the walker caused another 17% of the injuries, such as lacerations, abrasions, pinching, etc. Three percent of the non-fatal reported injuries were serious burn injuries resulting from infants pulling cords of small cooking appliances and spilling hot liquids onto themselves. Finally, one percent of the reported incidents did not specify the injury.

D. Voluntary Standards

1. ASTM Voluntary Standard

ASTM F 977, *Standard Consumer Safety Specification for Infant Walkers,* was first published in 1986 and was revised in 1997 to address the stair fall hazard. The Commission's proposed rule, published September 3, 2009, was based on the 2007 version of the ASTM standard, ASTM F 977-07. In December 2009, ASTM published a

revision to the infant walker standard, F 977-09. This revision included some of the changes in the Commission's proposed rule, but not the majority of them. The 2009 revision of the ASTM standard also included a significant change to the rearward facing stair fall test procedure for open back frame walker models. This test procedure was different from the test procedure the Commission proposed for these types of walkers. The proposed rule requires using a 1-inch aluminum angle firmly attached to the walker frame. The ASTM '09 version uses loops of cord and a lightweight floating bar. Because this method of attachment may not remain taut throughout the stair fall test, this procedure in the ASTM '09 version is not as stringent as the test method the Commission proposed for these types of walkers. For this reason, the final rule incorporates by reference ASTM F 977-07 rather than the 2009 revision.

JPMA provides certification programs for juvenile products, including infant walkers. Manufacturers submit their products to an independent testing laboratory to test the product for conformance to the ASTM standard. Currently, infant walkers from five manufacturers are JPMA certified as being in compliance with the ASTM standard.

The ASTM standard includes performance requirements specific to infant walkers, general performance requirements, and labeling requirements. The key provisions of the ASTM infant walker standard include the following:

- Prevention of falls down stairs – intended to ensure that a walker will not fall down stairs when facing front, back, and sideways.
- Tipping resistance – intended to ensure that walkers are stable and do not tip over when on a flat surface; includes tests for forward and rear tip resistance, as well as for the occupant leaning over the front.

- Dynamic and static load testing on seating area – intended to ensure that the child remains fully supported while stationary and while bouncing/jumping.
- Occupant retention – intended to prevent entrapment by setting requirements for leg openings.

The ASTM standard also includes: (1) Torque and tension tests to assure that components cannot be removed; (2) requirements for several walker features to prevent entrapment and cuts (minimum and maximum opening size, accessible coil springs, leg openings, and edges that can scissor, shear, or pinch); (3) latching/locking mechanism requirements to assure that walkers do not accidentally fold while in use; (4) requirements for the permanency and adhesion of labels; and (5) requirements for instructional literature.

The stair fall protection requirement, also called the step test, is the key provision in the ASTM standard. For this test, a walker with a Civil Aeromedical Institute infant dummy (Mark II) (subsequently referred to as "CAMI dummy") is placed in the walker's seat which is propelled with a horizontal dynamic force by means of a pulley, rope, and a falling 8-pound weight on a hardwood floor surface. The walker passes the test if it stays on the test table which has a hardwood floor surface. It fails the test if the walker completely falls off the table surface.

The step test in the ASTM F 977-07 standard is based on the assumption that an average walker weighs 8 pounds. However, when CPSC staff weighed five 2008 to 2009 model walkers, the weight values ranged from 11 to 14 pounds. Computing the launching distance "d" as described in section 7.6 of ASTM F 977-07 depends on the weight of the walker, the weight of the CAMI dummy, the weight of the CAMI vest, the

coefficient of friction between the walker wheels and the test table surface, and the maximum velocity at the edge of the test table platform (4 ft/sec or 2 ft/sec). According to section 7.6 of ASTM F 977-07, the d value for the forward and rearward directions with only the CAMI dummy seated in the walker is 14.6 inches. The d value for the forward and rearward directions with the CAMI dummy fitted with the 11-pound vest seated in the walker is 21.2 inches. The values of 14.6 inches and 21.2 inches were based on the assumption that the walker weight is 8 pounds. (As in the proposed rule, the final rule requires calculation of the launching distance using the actual weight of the walker.)

In the ASTM F 977-07 standard, most of the hardware and test apparatus components are not specified. Variability in the type and size of the pulley, rope type, test table flexure etc. can lead to different test results. Two different labs could test the same model walker and obtain different results. (As in the proposed rule, the final rule adds specificity to these requirements.)

2. European Standard EN 1273:2005

CPSC staff evaluated EN 1273:2005 European Standard and its two performance tests that are not in the ASTM F 977-07: the 30° incline plane stability test and the parking device test.

The Commission proposed adding the 30° incline plane test, which is a standard stability test common in several EN children's product safety standards, to the walker mandatory standard. In this test, the walker, occupied by a 26.4 lb (12 kg) test mass is placed on a sloping platform inclined at 30° to the horizontal with a stop on the lower edge of the slope. The walker must not tip over. As explained in part F.2 of the preamble, the Commission is not including this test in the final rule.

The parking device test is only applicable to walkers that are equipped with a parking brake. It essentially requires conducting a semi-static version of the stair fall test, but with the parking device engaged. The walker must not move more than 1.97 inches (50 mm) in order to pass. The Commission proposed adding this test, and the final rule retains this addition.

E. Response to Comments on the Proposed Rule

CPSC received seven comments regarding the proposed rule for infant walkers, including five from individuals, one from JPMA, and one from various consumer groups, including Consumers Union, Consumer Federation of America, and Kids in Danger. These comments and the Commission's responses are discussed below.

1. *Parking Brake Requirement and Warning*

a. Comment: One commenter remarked that the parking brake requirement should be more stringent because parking brakes should keep the walker completely stationary and also commented that the proposed warning in the proposed rule is contradictory to the perception of a parking brake's function. Another commenter recommended requiring parking brakes for all infant walkers.

Response: CPSC believes that the purpose of the parking brake warning is to alert the caregiver that the parking brake is used for temporarily preventing the walker from moving. In several ASTM meetings, some infant walker manufacturers have characterized the purpose of the parking brakes as such, and that the child in the walker must always be kept in view. The parking brake feature is added on some models for convenience to the caregiver. The parking brake is not meant to keep a child in the walker indefinitely without supervision. Also, the warning is meant to prevent any false

sense of security by the caregiver. CPSC believes the proposed warning and the performance requirements as they appeared in the proposed rule are adequate.

b. Comment: One commenter supported the concept for having a performance test for walkers with parking brakes, but disagreed with the proposal to adopt the EN 1273:2005 European Standard's test for parking brakes. The performance test is similar to that of the stair fall test, except that the 8-pound weight guided by a rope and pulley is released gradually and there is no set launching distance. Upon completion of the gradual 8-pound force application, the maximum allowable displacement (i.e., movement) of the walker is 1.97 inches. The commenter argued that a lack of incidents involving parking devices supports its argument. In addition, the commenter compared the proposed parking device test to the ASTM F 2012, *Standard for Stationary Activity Centers*. The commenter asserted that a stationary activity center is similar to that of an infant walker with its parking brakes engaged. Based on this comparison to stationary activity centers, the commenter advocated increasing the maximum allowable displacement to 6 inches in accordance with ASTM F 2012.

Response: CPSC believes that if a product is equipped with a feature, such as a parking brake, that feature should function properly and safely. Although CPSC is not aware of any incidents involving parking devices in the United States, the Commission believes that requiring the parking brake test is appropriate for the following reasons.

There are important distinctions between walkers and stationary activity centers. An infant in a walker tends to exert a horizontal force to propel himself or herself horizontally, whereas a child in a stationary activity center may not necessarily exert the same type of horizontally concentrated forces because the infant may be preoccupied

jumping up and down, spinning about the seat, and playing with toys. The parking brake performance test should set limits on the displacement of the walker in the horizontal direction to resist motion when the parking brakes are engaged. The appropriate amount of force should be applied. Furthermore, upon comparison between ASTM F 2012 and EN 1273:2005, CPSC staff noted the following observations:

- A force gauge is used to apply the 8-pound force in ASTM F 2012 instead of a rope and pulley guided 8-pound weight as specified in EN 1273:2005. In the EN 1273:2005 test, the 8-pound weight is released gradually over a 5 second period and then hung from the test assembly for 1 minute. Arguably, the force of gravity is more consistent than a test technician applying a consistent rate of 8 pounds over a 10 second period (as in the ASTM F 2012 test). The longer duration of 1 minute is more stringent than 10 seconds.
- The location application of the 8-pound force in ASTM F 2012 has infinite variability as it is any location 2 inches above the floor level. The EN 1273:2005 standard requires the rope to be secured onto the bottom frame member of the infant walker which is arguably more consistent.
- In the "Rationale" section of ASTM F 2012, there is no mention of how the maximum allowable limit for displacement of 6 inches per minute was obtained. EN 1273:2005's maximum allowable 1.97- inch displacement is more stringent than ASTM F 2012's 6 inches. Moreover, CPSC's adoption of this performance test would harmonize with the European EN 1273:2005 Standard for this requirement.

The Commission notes that this performance test is required only for infant walker models equipped with parking devices. Manufacturers can choose to exclude parking devices from their product.

The final rule retains the EN 1273:2005 performance test and maximum allowable displacement for 1.97 inches (CPSC staff assumes the commenter referred to 2 inches in its discussions for convenience) for parking devices as it was proposed in the proposed rule, except for an editorial change (discussed in the next response) to address some walkers that have fixed direction rear wheels.

c. Comment: The same commenter observed that the parking brake test, as written in the proposed rule, may present problems for measuring the displacement for walkers that have fixed direction wheels in the rear of the walker. With these types of wheels, the walker has a natural tendency to travel in a curved path instead of in a straight path. A walker with four casters does not have this issue.

Response: To address this subset of walkers, the final rule adds the following new paragraph to the language the Commission previously proposed for the sideward facing test of parking devices:

> "If the walker is equipped with fixed direction rear wheels and the walker is displaced in a curved path, establish the location of the rope attachment as the reference point and measure the linear displacement of that reference point after performing the procedure as described in paragraph (c)(3)(iii)(A) and (B)."

2. The 30° Incline Plane Test

Comment: One commenter favored maintaining the cantilevered stability test as described in Section 7.3.4 of the ASTM F 977–07 Standard for infant walkers, and

advocated eliminating the additional CPSC proposed 30° incline plane stability test to address tip over hazards.

Response: From the time CPSC staff recommended the 30° incline plane test (based on EN 1273:2005), numerous discussions about the added benefits of the 30° incline plane stability test have occurred among CPSC staff and ASTM. Over the past year, these discussions have taken place at ASTM headquarters, as well as in conference calls. A JPMA member was tasked to perform analyses on the two test methods to determine if the 30° incline plane test is needed. During ASTM's presentation at the October 13, 2009 meeting, the JPMA member demonstrated using real examples that Section 7.3.4 stability test of the ASTM F 977–07 Standard is adequate and that the 30° incline plane test is not needed. The analyses included a comparison of the two stability test methods using the dimensions of an exemplar walker and concluded that the 30° incline plane test was not as severe as the Section 7.3.4 stability test. CPSC staff concurred with this presentation and the comparison of stability test methods. Therefore, the final rule does not include the 30° incline plane test that was in the proposed rule.

3. Adding Calculation to Determine Launching Distance to Step Test Procedures

Comment: One commenter objected to the proposed rule's proposal to change the fixed distances in the step test to a computed value for d which will vary due to the weight of the test sample walkers. The commenter asserted that increasing the launching distance for heavier walkers is not necessary or "self correcting" because a child seated in the heavier walker will naturally not move as fast. The commenter requested keeping the launching distances as they are in Table 1 of Section 7.6 of the ASTM F 977-07

Standard. The commenter also commented that no incident data indicates a need to change velocities in the step test.

Response: As discussed in the proposed rule (74 FR at 45706), the Commission believes that the step test requirements should be modified to account for heavier modern walkers. The 8-pound walker used to develop the ASTM step requirement for the original 1997 standard is now outdated because the average modern walker is heavier than 8 pounds.

The critical parameter of the step test is the velocity of a walker with a child in it. CPSC staff believes that it would be more robust to assume that the child maintains a 4 feet/second top speed, regardless of the walker's weight. CPSC staff showed that children can achieve 4 feet/second in an 8-pound walker (1996 ASTM Working Group) and in a 10.5-pound walker (2000 Austrian study[3]). (Both of these studies were based on small sample sizes of 7 and 5 children, respectively.) Stair fall incidents continue to occur, and some involve modern walkers that meet the ASTM requirements. Since the child/walker speed is the critical factor in determining stopping distance of a moving walker at the edge of the step, CPSC staff believes that a 4 feet/second velocity should be maintained regardless of the walker's weight. This necessitates using the walker's actual weight in the calculation for the stair fall test.

With regard to incident data supporting the change, a special study conducted by CPSC indicates that several reported incidents involved walkers that were manufactured to comply with the ASTM stair step requirement and were reported to have been in good condition at the time of the incident. In addition, a review of a list compiled by CPSC

[3] "Baby Walking Frames – Final Report," Consumer Council Austrian Standards Institute in co-operation with Association for Consumer Information, European Committee For Standardization, CEN/TC 252/WG 1 N. 255 February 2001.

staff of over 200 incidents (reported through sources other than NEISS) involving infant walkers from 1999 to 2008 indicates that over 40 percent of those incidents involved stair falls, including one death which occurred due to a fractured skull.

CPSC staff's review of the data has also shown that popular larger, heavier models (greater than 8 pounds) manufactured after 1998 were involved in stair falls. For example, in incident 081112HEP9038, a 10-month old male fell down a set of steps when he traveled past an unlatched gate; the child required a trip to the emergency room. In incident 081113HEP9029, an 11-month old male fell down a set of stairs and was found upside down still in the walker. Both incidents involved walkers made by a leading manufacturer. Both incidents occurred from 2007 to 2008 and both walkers were equipped with friction strips. Therefore, data shows that modern walkers continue to be involved in stair fall incidents. If a walker is traveling too fast, even if it is equipped with friction strips, it may fall down a set of steps. By increasing this launching distance, the Commission is making the standard stricter, which should result in walkers that are made to be safer when traveling at faster speeds.

4. Impact of Change to Step Test

Comment: The same commenter stated that using a calculation in the step test would be a substantial change and would affect the outcome of the test results for walkers that pass the requirement.

Response: Based on limited testing by CPSC staff, the Commission believes that some manufacturers will not need to make changes to their product. CPSC staff agrees that some manufacturers will have to modify their product. However, these changes are

feasible. Possible modifications could include increasing the rolling friction within the walker's wheels, reducing the walker weight, or refining the friction strip design.

5. *CAMI Dummy Head Position*

Comment: One commenter requested CPSC to consider specifying how the CAMI dummy is to "be positioned and restrained during testing so that the center of gravity will be consistent from lab to lab."

Response: CPSC agrees in principle that it is plausible that a CAMI dummy's flexibility properties may change over time and use. Last year, round robin testing was done by CPSC staff, several manufacturers, and a testing laboratory. In addition to pass/fail testing, quantitative measurements were made, measuring the displacement of the walker relative to the edge of the test table. Testing done by CPSC staff did not show any substantial variability in the CPSC test results when the CAMI dummy's head was not secured. However, many other parameters, such as rope type, pulley type, and the spring rate for the pulley mounting bracket, were standardized. Furthermore, the CPSC standard provides additional specificity concerning the CAMI positioning: arms positioned on top of the toy tray, use of the standardized military rope to secure the legs, etc. Securing the CAMI head in a most rearward or forward position could possibly produce different results, depending on the flexibility of the dummy. Thus, CPSC staff believes that the CAMI head should not be secured. When the CAMI is positioned as described in the proposed (and final) procedure, the CAMI head movement, while it exists, is minimized to the extent possible. Thus, the final rule, like the proposed rule, provides for the CAMI head to remain unrestrained during all the step tests.

6. Friction Pad Wear and Tear

Comment: The same commenter asked the CPSC to consider the affect of wear and tear as well as dirt and dust on the walker's compliance with the step test.

Response: The final rule does not include any additional performance requirements involving step tests with worn friction strips. Although CPSC recognizes that friction pad wear may reduce the pad's effectiveness, this may not be the case for all walker friction pads. Some pads may last longer than others. Assessing the amount of wear and standardizing the wear characteristics may be somewhat subjective. Given the variation between friction pad vendors and the changing compositions of the rubber used in the friction pads, it may be difficult to standardize this aspect of the test. The final standard includes other changes that address the stair fall hazard, such as increasing the input kinetic energy for heavier walkers (i.e., walkers heavier than 8 pounds would need to be launched from a longer distance to achieve the target terminal velocities). In an indirect way, setting the higher input kinetic energy requirement for heavier walkers creates revised design criteria for walker manufacturers. One area where those manufacturers can address the resistance to stair falls may lie in revisions to the friction pad design. CPSC staff believes standardizing the target velocity will have an important impact on the actual test, as the kinetic energy of the walker and CAMI dummy is proportional to the square of the velocity. Furthermore, each walker will be subjected to 18 impacts which will sufficiently subject the sample walkers to abuse (3 directions x 2 configurations with and without vest x 3 replicates). For these reasons, CPSC staff believes there is insufficient data and rationale to add performance requirements involving stair fall tests with worn friction strips.

F. Assessment of Voluntary Standard ASTM F 977-07 and Description of Final Rule

1. Section 104(b) of the CPSIA: Consultation and CPSC Staff Review

Section 104(b) of the CPSIA requires the Commission to assess the effectiveness of the voluntary standard in consultation with representatives of consumer groups, juvenile product manufacturers, and other experts. This consultation process began in October 2008 during the ASTM subcommittee meeting regarding the ASTM infant walker voluntary standard. Consultations between Commission staff and members of this subcommittee have continued and are still ongoing.

As discussed in the preamble to the proposed rule (74 FR at 45706), CPSC staff conducted testing on JPMA certified walkers in order to evaluate the ASTM infant walker standard and develop recommendations for changes to it. The testing focused on the stair fall test in the ASTM standard, a stability performance requirement, and a parking brake requirement (the latter two both taken from EN 1273:2005).

Consistent with section 104(b) of the CPSIA, this rule establishes a new 16 CFR part 1216, "Safety Standard for Infant Walkers." The new part incorporates by reference the requirements for infant walkers in ASTM F 977-07 with certain changes to specific provisions to strengthen the ASTM standard, as discussed in the next section of this preamble, to further reduce the risk of injury. These modifications are similar to the changes the Commission proposed in its September 3, 2009 proposed rule. Differences from the proposed rule are noted in the following section of this preamble.

2. Description of Final Rule Including Changes to the ASTM Standard's Requirements

While most requirements of the ASTM F 977-07 standard are sufficient to reduce the risk of injury posed by infant walkers, the Commission has modified several

provisions in the standard to make them more stringent and clarified the test procedures. The following discussion describes the final rule, including changes to the ASTM requirements, and notes any changes from the proposed rule. In addition, some editing and formatting changes have been made which make the final text different from the proposed rule. The Commission made these editing and formatting changes to respond to concerns raised by the Office of the Federal Register; the editing and formatting changes do not alter the substance of the rule.

a. Scope (§ 1216.1)

The final rule states that part 1216 establishes a consumer product safety standard for infant walkers manufactured or imported on or after a date which would be six months after the date of publication of a final rule in the FEDERAL REGISTER.

The Commission received no comments on this provision in the proposed rule and is finalizing it without change.

b. Incorporation by reference (§ 1216.2(a))

Section 1216.2(a) explains that, except as provided in § 1216.2(b), each infant walker must comply with all applicable provisions of ASTM F 977-07, "Standard Consumer Safety Specification for Infant Walkers," which is incorporated by reference. Section 1216.2(a) also provides information on how to obtain a copy of the ASTM standard or to inspect a copy of the standard at the CPSC.

The Commission received no comments on this provision in the proposed rule and is finalizing it without change.

c. Summary of Changes to ASTM F 977-07

The more substantive modifications to the ASTM standard for walkers are discussed in greater detail in part F.2.d. of this preamble below. A summary of these changes along with the other, more editorial/technical changes that the rule makes to the ASTM standard follows. The final rule:

- Updates the illustration of types of models of walkers in Figure 1 of the ASTM standard to include an open back design (§ 1216.2(b)(1));
- Revises equipment specifications in section 4.6 of the ASTM standard to eliminate brand and model of force gauge and provide performance specifications instead. The NPR proposed a year calibration interval. However, the final rule provides a more general interval because a force gauge could go out of calibration before one year. Appropriate calibrations are necessary to maintain accuracy. (§ 1216.2(b)(2));
- Revises Figure 10 of the ASTM standard to show specific rope, other equipment and procedures for the step test (§ 1216.2(b)(15));
- In step test procedures, adds a calculation (discussed below) using the actual weight of the walker to determine the launching distance rather than assuming an 8-pound walker. (§ 1216.2(b)(5)(i), (6)(i), (8)(i), (9)(i)(11), (13)(i), (16)(i), (18)(i));
- In step test procedures, specifies the position for walker wheels (§ 1216.2(b)(6)(i), (11)(i), (16)(i));
- In step test procedures, specifies the position for the CAMI dummy. (§ 1216.2(b)(7)(i));

- In step test procedures, specifies rope type, pulley type, and force to be applied. (§ 1216.2(b)(4)(i), (8)(i), (12)(i), (17)(i));
- In step test procedures, requires each aspect of the test (forward, sideward, and rearward) three times to make it consistent with EN 1273:2005 and allow more confidence in the test results. (§ 1216.2(b)(10)(i), (14)(i), (19)(i));
- Adds the following warning concerning the parking brake if a walker has a parking brake: "WARNING: Parking brake use does not totally prevent walker movement. Always keep child in view when in the walker, even when using the parking brakes." (§ 1216.2(b)(21)(i));
- Revises the stair hazard warning to state: "Block stairs/steps securely before using walker, even when using parking brake." (§ 1216.2(b)(22)(i)); and
- Adds parking device test (§ 1216.2(b)(20)).

d. More Detailed Description of Changes to the ASTM Standard's Step Test

Specification of equipment and procedures. The ASTM F 977-07 standard's step test lacks numerous details which allow for variability in testing that could result in different test results. The Commission proposed specifying the equipment and procedure needed for the test (e.g., type of rope and pulley to be used, orientation of wood grain in the floor). The final rule retains these changes. Additionally, the Commission proposed modifying the test procedure language in several provisions, such as specifying a tolerance for the term "horizontal" (0° ± 0.5°). The final rule retains these changes.

The final rule removes a specification that the test table be 48 inches. This specification appears in a notation in Figure 10 of the ASTM standard. The proposed

rule showed figure 10 with the noted 48-inch length table. However, the final rule leaves the length of the test table unspecified so that a test laboratory may use a table of adequate length to accommodate the maximum calculated launching distance d. A test table length of 48 inches may not be sufficient for all walkers once the calculation is based on the actual weight of the walker.

Calculation of launching distance. The Commission proposed a change in the calculation of the launching distance used in the step test. The Commission proposed weighing the walker and computing the appropriate launching distances using the actual weight of the walker.

As discussed in the preamble to the proposed rule (74 FR at 45704) and in this preamble, the launching distances may vary depending on the weight of the walker and the maximum velocity of the walker at the edge of the platform (4 ft/sec or 2 ft/sec). If the walker weight is not appropriately accounted for, then it is possible the target maximum velocity cannot be achieved. For example, if the scenario involved computing distance d where the walker is tested in the forward direction with the CAMI dummy and the walker weight is 14 pounds, distance d would equal 18.0 inches (instead of 14.6 inches if the walker weight value is 8 pounds). The longer distance is needed to achieve the target velocity of 4 feet/second. If a 14-pound walker is launched from 14.6 inches, the walker may not achieve the maximum velocity of 4 feet/second. The final rule retains the distance d calculation with a slight modification that requires the testing lab to measure the weight of the CAMI dummy and vest. This will account for variations in the weight of CAMI dummies and vests.

e. More Detailed Description of Parking Brake Test

The Commission proposed adding the parking brake test of the European Standard EN 1273:2005. The final rule retains this test. It applies to infant walkers that provide parking brakes, but it does not require walkers to have parking brakes. Under this test, the walker is set up to run a quasi-static version of the step test, but with the parking device activated. If the walker moves a distance greater than 1.97 inches (50 mm), the walker fails the requirement. The parking brake test will ensure that, if a walker has a parking brake, it will work effectively.

f. Elimination of 30° Incline Plane Test

The Commission proposed adding the 30° incline plane test from the European Standard EN 1273:2005 for walkers. As discussed more fully in the response to comment 2 in part E of this preamble, the final rule eliminates this additional requirement because testing and analysis by a JPMA member demonstrated the adequacy of the stability test in the ASTM F 977-07 standard.

G. Effective Date

The Commission proposed that the standard would become effective 6 months after publication of a final rule. The Commission received no comments on the proposed effective date. The final rule provides that the rule will become effective six months after publication and thus will require that infant walkers manufactured or imported on or after that date must meet this standard.

H. Paperwork Reduction Act

Sections 8 and 9 of ASTM F 977-07 contain requirements for marking, labeling and instructional literature that are considered "information collection requirements" under the Paperwork Reduction Act, 44 U.S.C. 3501-3520. In a separate notice

elsewhere in this issue of the FEDERAL REGISTER, the Commission is publishing a notice requesting comments on this collection of information.

I. Regulatory Flexibility Act

The Regulatory Flexibility Act ("RFA") generally requires that agencies review rules for their potential economic impact on small entities, including small businesses. 5 U.S.C. 604.

1. The Market

There are currently at least seven manufacturers or importers supplying infant walkers to the United States market (four domestic manufacturers, two foreign manufacturers with divisions in the United States, and one domestic importer). Under Small Business Administration (SBA) guidelines, a manufacturer of infant walkers is small if it has 500 or fewer employees and an importer is considered small if it has 100 or fewer employees. Two domestic manufacturers (a third small manufacturer also sells infant walkers, but based on their current product list is no longer manufacturing them) and one domestic importer known to be supplying the United States market qualify as small businesses under these guidelines. However, CPSC staff believes that there are probably other unknown small importers operating in the United States market as well.

All domestic manufacturers supplying infant walkers to the United States market certify their products as compliant with the ASTM voluntary standard through the JPMA certification program. Based on limited CPSC staff testing, the two foreign manufacturers and the domestic importer are not believed to be complying with the voluntary standard.

2. Impact of the Rule

The changes to the existing stair fall test requirements would reduce variability across manufacturers. Also, because the specific test modifications have been selected to minimize the friction associated with the test procedure, they may effectively add stringency to the tests. It is unknown the extent (if any) to which the modification in the existing stair fall requirements of the voluntary standard will affect infant walkers that now comply with the voluntary standard. However, initial testing shows that the requirements impact the test results of a few walkers. Therefore, it is possible that some manufacturers might need to make walker modifications to comply. Based on staff estimates of the costs of complying with the 1997 stair fall requirements, this cost is unlikely to exceed more than several dollars per unit. Possible modifications include: increasing the rolling friction within the walker's wheels; reducing the walker weight; and refining the friction strip design.

Infant walkers are not currently required to have parking brakes, nor would they be required to have them under the standard. However, the final rule includes a test of parking brakes, if a walker has them, to assure that they work properly. Initial testing finds that existing walkers have no difficulty in passing this requirement. Therefore, the Commission does not expect it to represent a burden to current manufacturers. However, its inclusion would minimize the risk of walkers with ineffective brakes entering the United States market in the future.

Of the seven firms currently known to be marketing infant walkers in the United States, three are small firms — two small domestic manufacturers and a small domestic importer. We discuss the possible impact of the rule on these entities immediately below.

Small manufacturers. One small domestic manufacturer has annual sales of approximately $31-72.5 million. It currently produces seven walker models and approximately 57 other juvenile products, one of which is a substitute for infant walkers. The second is a small domestic manufacturer with annual sales of approximately $2.5-5 million. Although their annual sales are lower, they are currently producing only one infant walker model and approximately 110 other juvenile products.

The two small domestic manufacturers (which are JPMA certified as compliant with the voluntary standard) may not need to make product modifications. If they do, it will most likely be due to changes needed to comply with the modified stair fall requirements. The costs to these manufacturers are not likely to be substantial, but may increase by as much as several dollars per unit.

Small importers. The only known small domestic importer has annual sales of approximately $2.505 million and is not believed to be in compliance with the voluntary standard. Therefore, some product modifications would be necessary. The impact of the infant walker requirements on this importer is unclear, because little is known about the walkers sold by this company. However, the impact is unlikely to be large. Even if the company responded to the rule by discontinuing the import of its non-complying walkers, either replacing them with a complying product or another juvenile product, deciding to import an alternative product would be a reasonable and realistic way to offset any lost revenue from walker sales.

There also may be additional importers of walkers that the staff has been unable to identify. However, the impacts of the rule on these firms, if any, are unknown.

3. Alternatives

Under section 104 of the CPSIA, the primary alternative that would reduce the impact on small entities is to make the voluntary standard mandatory with no modifications. Because the two small domestic manufacturers already meet the requirements of the voluntary standard, adopting the standard without modifications may reduce their costs, but only marginally. Similarly, limiting the requirements of the standard to those already contained in the voluntary standard would probably have little beneficial impact on small importers that do not currently meet the requirements of the voluntary standard. This is because, to these firms, most of the infant walker cost increases would be associated with meeting the requirements of the voluntary standard, rather than the minor additions associated with the Commission's modification of the standard.

4. Conclusion of final regulatory flexibility analysis

It is not expected that the standard will have a substantial effect on a large number of small firms. In some cases, small firms may not need to make any product modifications to achieve compliance. Even if modifications were necessary, and the cost of developing a compliant product proved to be a barrier for individual firms, the loss of infant walkers as a product category is expected to be minor and would likely be mitigated by increased sales of competing products, such as activity centers, or entirely different juvenile products.

J. Environmental Considerations

The Commission's regulations provide a categorical exclusion for the Commission's rules from any requirement to prepare an environmental assessment or an environmental impact statement as they "have little or no potential for affecting the

human environment." 16 CFR 1021.5(c)(1). This rule falls within the categorical exclusion.

K. Preemption

Section 26(a) of the CPSA, 15 U.S.C. 2075(a), provides that where a "consumer product safety standard under [the CPSA]" 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," thus implying that the preemptive effect of section 26(a) of the CPSA would apply. Therefore, a rule issued under section 104 of the CPSIA will invoke the preemptive effect of section 26(a) of the CPSA when it becomes effective.

L. Certification

Section 14(a) of the Consumer Product Safety Act ("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 requirements. 15 U.S.C. 2063(a). Such certification must be based on a test of each product or on a reasonable testing program or, for children's products, on tests on a sufficient number of samples by a third party conformity assessment body accredited by the Commission to test according to the applicable requirements. As discussed above in part K of this

preamble, section 104(b)(1)(B) of the CPSIA refers to standards issued under that section, such as the rule for infant walkers established in this final rule, as "consumer product safety standards." By the same reasoning, such standards also would be subject to section 14 of the CPSA. Therefore, any such standard would be considered to be a consumer product safety rule to which products subject to the rule must be certified.

Because infant walkers are children's products, they must be tested by a third party conformity assessment body whose accreditation has been accepted by the Commission. The Commission is issuing a separate notice of requirements to explain how laboratories can become accredited as a third party conformity assessment bodies to test to the new safety standard. (Infant walkers also must comply with all other applicable CPSC requirements, such as the lead content requirements of section 101 of the CPSIA, potentially the phthalate content requirements in section 108 of the CPSIA if the walker incorporates a toy component, the tracking label requirement in section 14(a)(5) of the CPSA, and the consumer registration form requirements in section 104 of the CPSIA.)

List of Subjects in 16 CFR 1216

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

Therefore, the Commission amends Title 16 of the Code of Federal Regulations by adding part 1216 to read as follows:

PART 1216 – SAFETY STANDARD FOR INFANT WALKERS

Sec.

AUTHORITY: The Consumer Product Safety Improvement Act of 2008, Pub. Law 110-314, § 104, 122 Stat. 3016 (August 14, 2008).

§ 1216.1 Scope.

This part 1216 establishes a consumer product safety standard for infant walkers manufactured or imported on or after **[insert date 6 months after date of publication in the FEDERAL REGISTER]**.

§ 1216.2 Requirements for infant walkers.

(a) Except as provided in paragraph (b) of this section, each infant walker shall comply with all applicable provisions of ASTM F 977-07, Standard Consumer Safety Specification for Infant Walkers, approved April 1, 2007. 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, PO Box 0700, West Conshohocken, PA 19428; 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/code_of_federal_regulations/ibr_locations.html.

(b) Comply with the ASTM F 977-07 standard with the following additions or exclusions:

(1) Instead of Figure 1 of ASTM F 977-07, comply with the following:

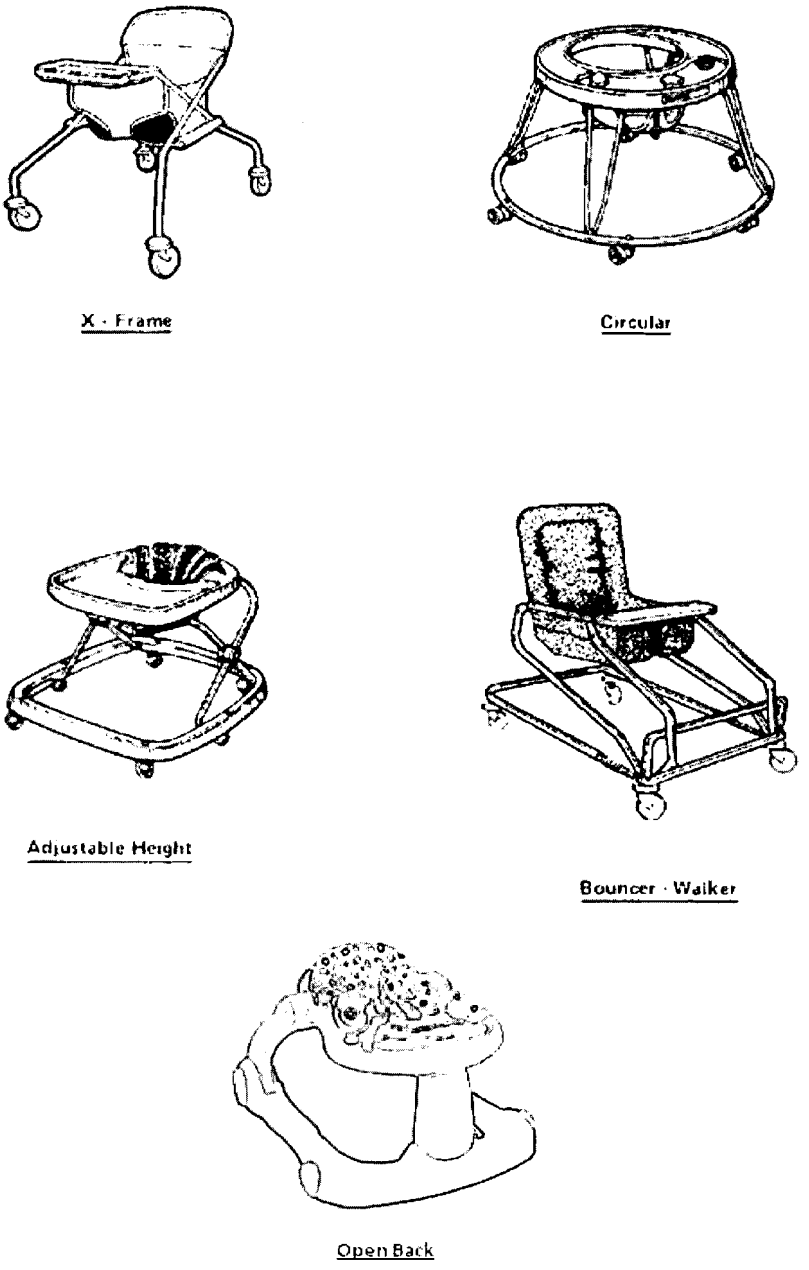


Figure 1 Illustration of Types of Infant Walkers

(2) Instead of complying with section 4.6 through 4.6.8 of ASTM 977-07, comply with the following:

(i) " 4.6 The following guidelines shall apply to force gauges used for testing:"

(ii) "4.6.1 *Equipment* – Force gauge with a range of 0 to 25 lbf (110 N), tolerance of ± 0.25 lbf (1.1N). A calibration interval shall be maintained for the force guage which will ensure that the accuracy does not drift beyond the stated tolerance. "

(iii) "4.6.2 *Equipment* – Force gauge with a range 0 to 100 lbf (500 N) tolerance of ± 1 lbf (4.44 N). A calibration shall be maintained for the force gauge which will ensure that the accuracy does not drift beyond the stated tolerance."

(3) In addition to complying with section 6.3 of ASTM 977-07, comply with the following:

(i) "6.4 *Parking Device (applicable to walkers equipped with parking brakes)* – The walker shall have a maximum displacement of 1.97 inches (50 mm) for each test in each direction (forward, rearward, and sideward) when tested in accordance with 7.7."

(ii) [Reserved]

(4) In addition to complying with section 7.6.1.2 of ASTM 977-07, comply with the following:

(i) "7.6.1.2 … The dummy's head shall remain unrestrained for all the step tests."

(ii) [Reserved]

(5) Following section 7.6.2 of ASTM 977-07, use the following table instead of Table 1 Summary of Step(s) Tests:

(i) TABLE 1 Summary of Step(s) Tests

Section Number	Facing direction of walker	Weight of CAMI dummy, lb.	Simulated speed, ft/s	Apply tipover test
7.6.3	Forward	17	4	Yes
7.6.3.6	Forward	28 (vest)	4	Yes
7.6.4	Sideward	17	2	Yes
7.6.4.6	Sideward	28 (vest)	2	Yes
7.6.5	Rearward	17	4	No
7.6.5.5	Rearward	28 (vest)	4	No

(ii) [Reserved]

(6) Instead of complying with section 7.6.3.1 of ASTM 977-07, comply with the following:

(i) "7.6.3.1 Center the walker on the test platform facing forward so that Plane A is perpendicular to the front edge of the platform and the walker is distance *d* from the center of the most forward wheel(s) to the edge of the test platform,

$$d_{CAMI} = \frac{(V_f^2 - V_o^2) * (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$$

where

V_f = Maximum velocity of walker at edge of platform = 4 ft/sec
V_o = Initial velocity = 0
W_{CAMI} = Measured weight of CAMI dummy
W_{walker} = Weight of the walker
$W_{drop\ weight}$ = Drop weight = 8 lb
μ_k = Dynamic coefficient of friction = 0.05
N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker
g = acceleration of gravity = 32.2 ft/sec^2

Position the swivel wheels in such a way that the walker moves forward in a straight line parallel to Plane A."

(ii) [Reserved]

(7) Instead of complying with section 7.6.3.2 of ASTM 977-07, comply with the following:

(i) "7.6.3.2 Place a CAMI infant dummy Mark II in the walker and position it as shown in Fig. 11 with the torso contacting the front of the occupant seating area and arms placed on the walker tray."

(ii) [Reserved]

(8) Instead of complying with section 7.6.3.3 of ASTM 977-07, comply with the following :

(i) "7.6.3.3 While holding the walker stationary, attach an 8 lb (3.6 kg) weight to the front of the walker base at Plane A by means of a 7-strand military rope with 550 lb tensile strength (e.g., paracord 550) and a stainless steel ball bearing pulley with an outside diameter of 1.25 in (32mm) and adjust the pulley so that the force is applied horizontally ($0 \pm 0.5°$ with respect to the table surface)."

(ii) [Reserved]

(9) Instead of complying with section 7.6.3.6 of ASTM 977-07, comply with the following:

(i) "7.6.3.6 Repeat 7.6.3.1-7.6.3.5 using the CAMI dummy with the weighted vest and with distance d, computed using the following equation:

$$d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) * (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$$

where

V_f = Maximum velocity of walker at edge of platform = 4 ft/sec
V_o = Initial velocity = 0

$W_{CAMI\ w/vest}$ = Measured weight of CAMI dummy and weighted vest
W_{walker} = Weight of the walker
$W_{drop\ weight}$ = Drop weight = 8 lb
μ_k = Dynamic coefficient of friction = 0.05
$N_{CAMI\ w/vest}$ = Normal force (for CAMI dummy fitted with 11 lb vest scenario) = weight of CAMI dummy + vest weight + walker weight
g = acceleration of gravity = 32.2 ft/sec^2

(ii) [Reserved]

(10) In addition to complying with section 7.6.3.6 of ASTM 977-07, comply with the following:

(i) " 7.6.3.7 Repeat tests in the following sequence: section 7.6.3.4, section 7.6.3.5, and section 7.6.3.6 two additional times."

(ii) [Reserved]

(11) Instead of complying with 7.6.4.1 of ASTM 977-07, comply with the following :

(i) "7.6.4.1 Center the walker on the test platform facing sideways so that Plane B is perpendicular to the front edge of the platform and the walker is distance *d* from the center of the most sideward wheel(s) to the edge of the test platform,

$$d_{CAMI} = \frac{(V_f^2 - V_o^2) * (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$$

where

V_f = Maximum velocity of walker at edge of platform = 2 ft/sec
V_o = Initial velocity = 0
W_{CAMI} = Measured weight of CAMI dummy
W_{walker} = Weight of the walker
$W_{drop\ weight}$ = Drop weight = 8 lb
μ_k = Dynamic coefficient of friction = 0.05
N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker
g = acceleration of gravity = 32.2 ft/sec^2

Position the swivel wheels in such a way that the walker moves sideward in a straight line parallel to Plane A."

(ii) [Reserved]

(12) Instead of complying with section 7.6.4.3 of ASTM 977-07, comply with the following:

(i) "7.6.4.3 While holding the walker stationary, attach an 8 lb (3.6 kg) weight to the side of the walker base at Plane B by means of a rope (as specified in 7.6.3.3) and a pulley (as specified in 7.6.3.3) and adjust the pulley so that the force is applied horizontally (0 ± 0.5° with respect to the table surface)."

(ii) [Reserved]

(13) Instead of complying with section 7.6.4.6 of ASTM 977-07, comply with the following :

(i) "7.6.4.6 Repeat 7.6.4.1 through 7.6.4.5 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d, computed using the following equation:

$$d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) * (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$$

where

V_f = Maximum velocity of walker at edge of platform = 2 ft/sec
V_o = Initial velocity = 0
$W_{CAMI\ w/vest}$ = Measured weight of CAMI dummy and weighted vest
W_{walker} = Weight of the walker
$W_{drop\ weight}$ = Drop weight = 8 lb
μ_k = Dynamic coefficient of friction = 0.05
$N_{CAMI\ w/vest}$ = Normal force (for CAMI dummy fitted with 11 lb vest scenario) = weight of CAMI dummy + vest weight + walker weight
g = acceleration of gravity = 32.2 ft/sec^2"

(ii) [Reserved]

(14) In addition to complying with section 7.6.4.6 of ASTM 977-07, comply with the following:

(i) "7.6.4.7 Repeat tests in the following sequence: section 7.6.4.4, section 7.6.4.5, and section 7.6.4.6 two additional times."

(ii) [Reserved]

(15) Instead of complying with Figure 10, use the following:

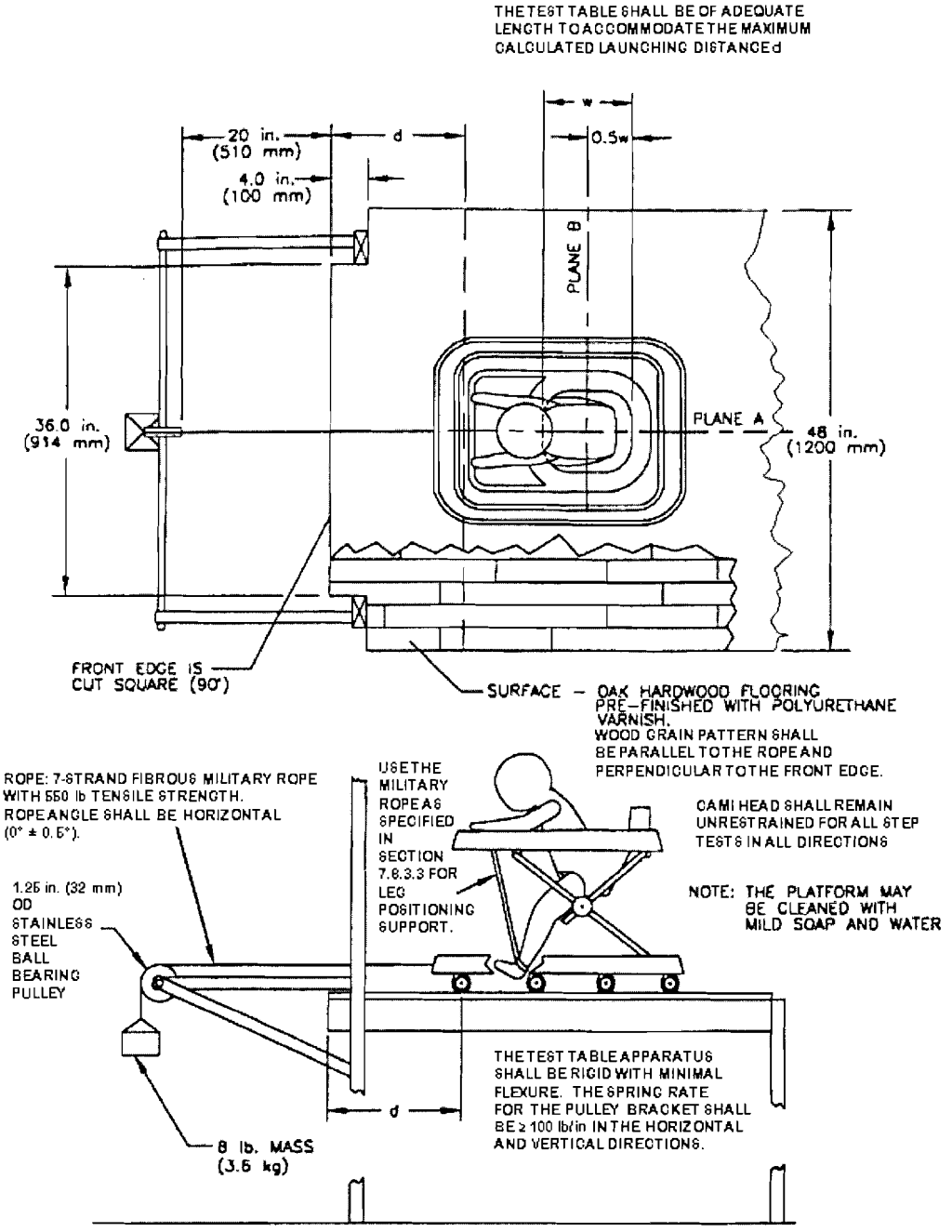


Figure 10 Test Platform Specifications

(16) Instead of complying with section 7.6.5.1 of ASTM 977-07, comply with the following:

(i) 7.6.5.1 Center the walker on the test platform facing rearward so that Plane A is perpendicular to the front edge of the platform and the walker is distance *d* from the center of the most rearward wheel(s) to the edge of the test platform,

$$d_{CAMI} = \frac{(V_f^2 - V_o^2) * (W_{CAMI} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI})}$$

where

V_f = Maximum velocity of walker at edge of platform = 4 ft/sec
V_o = Initial velocity = 0
W_{CAMI} = Measured weight of CAMI dummy
W_{walker} = Weight of the walker
$W_{drop\ weight}$ = Drop weight = 8 lb
μ_k = Dynamic coefficient of friction = 0.05
N_{CAMI} = Normal force (for CAMI dummy scenario) = weight of CAMI dummy and walker
g = acceleration of gravity = 32.2 ft/sec^2

Position the swivel wheels in such a way that the walker moves rearward in a straight line parallel to Plane A. If the walker has an open back design, attach the 1 in aluminum angle used in 7.3.4 to span the back frame."

(ii) [Reserved]

(17) Instead of complying with section 7.6.5.3 of ASTM 977-07, comply with the following:

(i) "7.6.5.3 While holding the walker stationary, attach an 8 lb (3.6 kg) weight to the rear of the walker base at Plane A by means of a rope (as specified in 7.6.3.3) and a pulley (as specified in 7.6.3.3) and adjust the pulley so that the force is applied

horizontally (0 ± 0.5° with respect to the table surface)."

(ii) [Reserved]

(18) Instead of complying with section 7.6.5.5 of ASTM 977-07, comply with the following:

(i) "7.6.5.5 Repeat 7.6.5.1 through 7.6.5.4 using the CAMI dummy with the weighted vest (see Fig. 12) and with distance d, computed using the following equation:

$$d_{CAMI\ w/vest} = \frac{(V_f^2 - V_o^2) * (W_{CAMI\ w/vest} + W_{walker} + W_{drop\ weight})}{2g(W_{drop\ weight} - \mu_k N_{CAMI\ w/vest})}$$

where

V_f = Maximum velocity of walker at edge of platform = 4 ft/sec
V_o = Initial velocity = 0
$W_{CAMI\ w/vest}$ = Measured weight of CAMI dummy and weighted vest
W_{walker} = Weight of the walker
$W_{drop\ weight}$ = Drop weight = 8 lb
μ_k = Dynamic coefficient of friction = 0.05
$N_{CAMI\ w/vest}$ = Normal force (for CAMI dummy fitted with weighted vest scenario) = Measured weight of CAMI dummy + measured weight of vest + walker weight
g = acceleration of gravity = 32.2 ft/sec^2"

(19) In addition to complying with section 7.6.5.5 of ASTM 977-07, comply with the following:

(i) "7.6.5.6 Repeat tests in the following sequence: section 7.6.5.3, and section 7.6.5.5 two additional times."

(ii) [Reserved]

(20) In addition to complying with section 7.6 of ASTM 977-07, comply with the following:

(i) "7.7 *Parking Device Test* (see 6.4):"

(A) "7.7.1 Perform the parking device test using a Test Mass that is A rigid

mm) in height with a mass of 16.9 lb (7.65 kg), with its center of gravity in the center of the cylinder."

(B) "7.7.2 Adjust the walker seat to the highest position (if applicable). Place the Test Mass vertically in the walker seat. Set any manual speed control to the fastest position (if applicable). Establish a vertical plane A that passes through the center of the seating area and is parallel to the direction the child faces. Establish a vertical plane B that is perpendicular to plane A and passes through the center of the seating area.

(C) "7.7.3 Perform the parking device test in the forward, sideward, and rearward directions."

(D) "7.7.4 *Forward facing test of parking devices."*

(E) "7.7.4.1 Position the walker including the Test Mass facing forward so that plane A is perpendicular to the front edge of the platform (see fig. 10) and passes through the center of the pulley. Engage all parking devices in accordance with the manufacturer's instructions."

(F) "7.7.4.2 Within one minute of placing the walker with the Test Mass on the platform, attach an 8 lb weight gradually within 5 seconds to the walker frame base at plane A by means of a rope and a pulley per the test apparatus specifications in the step test procedure, adjusted so that the force is applied horizontally (rope angle shall be 0 ± 0.5°). Remove the 8 lb weight after 1 minute. Measure the displacement."

(G) "7.7.5 *Sideward facing test of parking devices."*

(H) "7.7.5.1 Position the walker including the Test Mass facing sideward so that plane B is perpendicular to the front edge of the platform and passes through the center of the pulley. Engage all parking devices in accordance with the manufacturer's

instructions."

(I) " 7.7.5.2 Within one minute of placing the walker with the Test Mass on the platform, attach an 8 lb weight gradually within 5 seconds to the walker frame base at plane B by means of a rope and a pulley per the test apparatus specifications in the step test procedure, adjusted so that the force is applied horizontally (rope angle shall be 0 ± 0.5°). Remove the 8 lb weight after 1 minute. Measure the displacement."

(J) "7.7.5.3 If the walker is equipped with fixed direction rear wheels and the walker is displaced in a curved path, establish the location of the rope attachment as the reference point and measure the linear displacement of that reference point after performing the procedure as described in 7.7.5.1 and 7.7.5.2.

(K) "7.7.6 *Rearward facing test of parking devices."*

(L) "7.7.6.1 Position the walker including the Test Mass facing rearward so that plane A is perpendicular to the front edge of the platform and passes through the center of the pulley. Engage all parking devices in accordance with the manufacturers' instructions."

(M) "7.7.6.2 Within one minute of placing the walker with the Test Mass on the platform, attach an 8 lb weight gradually within 5 seconds to the walker frame base at plane A by means of a rope and a pulley per the test apparatus specifications in the step test procedure, adjusted so that the force is applied horizontally (rope angle shall be 0 ± 0.5°). Remove the 8 lb weight after 1 minute. Measure the displacement."

(ii) [Reserved]

(21) In addition to complying with section 8.2.3.2 of ASTM 977-07, comply with the following:

(i) "8.2.3.3 A warning statement shall address the following:

WARNING: Parking brake use does not totally prevent walker movement. Always keep child in view when in the walker, even when using the parking brakes."

(ii) Reserved]

(22) Instead of complying with section 8.2.4.2 of ASTM 977-07, comply with the following :

(i) "8.2.4.2 The stairs warning shall be stated exactly as follows:

⚠ WARNING – STAIR HAZARD
Avoid serious injury or death
Block stairs/steps securely before using walker, even
when using parking brake."

Dated: _____

_____
Todd Stevenson, Secretary
U.S. Consumer Product Safety Commission