

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Parts 1615 and 1616

Standard for the Flammability of Children's Sleepwear: Sizes 0 through 6X; Standard for the Flammability of Children's Sleepwear: Sizes 7 through 14; Withdrawal of Proposed Revocation of Amendments

AGENCY: Consumer Product Safety Commission.

ACTION: Withdrawal of proposed rule.

SUMMARY: The Commission withdraws its proposed revocation of certain amendments to the standards for the flammability of children's sleepwear, sizes 0 through 6X and sizes 7 through 14. As directed by the fiscal year 1999 appropriations legislation for the Departments of Veterans Affairs and Housing and Urban Development, and several independent agencies, including the Consumer Product Safety Commission, the Commission previously proposed to revoke the sleepwear amendments. In accordance with the appropriations legislation, the Commission has considered all relevant comments and information and has determined not to revoke the amendments. Elsewhere in this issue of the **Federal Register** the Commission is modifying the amendments to require that tight-fitting sleepwear bear a label and hangtag informing consumers that the garments should fit snugly. Also in this issue of the **Federal Register** the Commission corrects some misidentified references in the amendments. In that notice the Commission is also clarifying the definition of infant garments.

DATES: The proposed rule is withdrawn on June 28, 1999.

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SUPPLEMENTARY INFORMATION:

A. The Decision

After considering reports issued by the General Accounting Office and available information and comments, the Commission has decided to withdraw the January 19, 1999 proposed revocation of exemptions from the Commission's sleepwear standards. As explained in detail below, the Commission believes the reasons for the exemptions remain sound.¹ In a separate

notice published elsewhere in the **Federal Register**, the Commission is issuing a rule modifying the 1996 amendments to require labeling and hangtags on tight-fitting sleepwear.² The labels and hangtags will inform consumers that these garments are intended to be worn with a snug fit for safety. Also in this issue of the **Federal Register** the Commission corrects some misidentified references in the amendments.³

B. Background

1. The Original Standards

Since the 1970's there have been federal flammability standards to protect children whose sleepwear becomes ignited by a small open flame. The Department of Commerce ("DOC") issued the flammability standard for children's sleepwear in sizes 0 through 6X (16 CFR Part 1615) in 1971. The Consumer Product Safety Commission issued the flammability standard for children's sleepwear in sizes 7 through 14 (16 CFR Part 1616) in 1974.

Both of these standards were issued under section 4 of the Flammable Fabrics Act ("FFA"), which authorizes flammability standards for a fabric, related material or product when necessary to "protect the public against unreasonable risk of the occurrence of fire leading to death or personal injury, or significant property damage." 15 U.S.C. 1193(a).

When the DOC issued the original standard in 1971, it relied upon reports of cases in which people suffered burns from such activities as cooking, smoking, burning trash, lighting furnaces, and while children were playing with matches and lighters or contacting stove burners. (DOC Analysis of Data from Apparel Burn Cases for Children's Sleepwear Standard DOC PFC 3-70.) The flammability test that DOC issued focused on burns resulting from these kinds of ignitions. It was not intended to address all fires in which sleepwear happened to burn. For example, the DOC excluded incidents involved wearing apparel contaminated by flammable liquids when developing the standard because of the variability and complexities involved. Rather, the purpose was to "provide a high and effective level of protection to children approximately 5 years of age and

younger against unreasonable risk of death or injury suffered as a result of ignition and continued burning of sleepwear garments." 36 FR 14063 (July 29, 1971).

Once the Commission was established it took over administration of the FFA and standards set under it. 15 U.S.C. 2079(b). In 1974, the Commission issued a flammability standard for children's sleepwear in sizes 7-14. 39 FR 15210. This standard was nearly identical to the standard for smaller sized sleepwear.

Under both standards a specimen is exposed for 3 seconds to a small open flame ignition source that resembles the type of flame that would result from a child playing with matches or a lighter. The specimens must self-extinguish, that is, they must stop burning when the ignition source is removed. 16 CFR 1615.3 and 1616.3. Seams and trim of sleepwear garments must also pass this test.

This is a performance test and does not require or prohibit any type of fabric or mandate any flame-retardant treatment. Due to the characteristics of certain fabrics, however, untreated cotton fabrics generally will not pass the flammability test while some synthetic ones do.

The standards apply to "children's sleepwear," which before the exemptions was defined as "any product of wearing apparel" in the sizes covered by the standard "such as nightgowns, pajamas, or similar or related items, such as robes, intended to be worn primarily for sleeping or activities related to sleeping." The standards exclude diapers and underwear. 16 CFR 1615.1(a) and 1616.2(a). The definition has long engendered questions of what garments are intended for sleeping or related activities.⁽⁵⁹⁾⁴

2. The Exemptions

In the 1990's the Commission began considering whether the standards could be amended so that close-fitting sleepwear could be made out of cotton without increasing the risk of fire with such garments. The Commission started this inquiry for several reasons. The staff noticed increased marketing of non-sleepwear to be used for sleeping, particularly cotton long underwear-style garments. This marketing was confusing for consumers and Commission staff as the line between sleepwear and underwear (daywear) became increasingly blurred.⁽⁶⁾ The Commission staff developed

¹ The Commission voted to withdraw the proposed revocation by two to one. Commissioners

Mary Gall and Thomas Moore voted in favor of withdrawal while Chairman Ann Brown voted against it.

² Commissioners Mary Gall and Thomas Moore voted to require labeling. Chairman Ann Brown abstained.

³ Commissioners Mary Gall and Thomas Moore voted to issue the corrections. Chairman Ann Brown abstained.

⁴ Numbers in parentheses refer to documents in the List of Relevant Documents at the end of this notice.

enforcement guidelines to try to distinguish between sleepwear and non-sleepwear garments. However, frequent fashion changes required numerous revisions of these guidelines. The Commission staff believed that this confusion was difficult both for consumers attempting to put their children in suitable sleeping garments and for Commission staff trying to enforce the existing standard.

Moreover, the Commission staff was concerned that to the extent consumers were turning to long underwear-style cotton garments to satisfy a desire for cotton sleepwear, this could be placing children at an increased risk of injury. The Commission staff believed that, without reducing safety, specific exemptions from the standards could respond to marketing practices responding to consumer demands for cotton, and reduce market confusion and compliance and enforcement problems.

The Commission published an advance notice of proposed rulemaking ("ANPR") on January 13, 1993 that began the process of amending the children's sleepwear standards. 58 FR 4111. The ANPR discussed the regulatory alternatives being considered and stated that the Commission could amend the standards to exempt tight-fitting sleepwear and garments intended for infants. The ANPR discussed existing standards and requested comments. On the same date the Commission published the ANPR it also issued a stay of enforcement stating that it would not enforce the sleepwear requirements against garments being used as sleepwear that are labeled and marketed as underwear if those garments are skin-tight or nearly skin-tight, relatively free of ornamentation, and made from fabrics such as rib knit, interlock knit or waffle knit. 58 FR 4078.

In response to the ANPR the Commission received 2,173 comments. The comments were overwhelmingly in favor of the exemption (2,121 in favor, 52 opposed). Many of these responses were form letters. Many letters came from parents who wanted to have cotton sleepwear for their children.(8)

The Commission continued its consideration, and on October 25, 1994 issued a notice of proposed rulemaking ("NPR") proposing to exempt tight-fitting garments and infant garments from the sleepwear standards.(22) The Commission proposed to do this by amending the definition of "children's sleepwear" in the standards. For purposes of the proposed exemption, "infant garments" were defined as those labeled 0-6 months; less than 21 inches in length (for a one piece garment) or

with no pieces longer than 14½ inches (for a two piece garment); and less than 19 inches at the chest. "Tight-fitting garments" were defined by specifying maximum dimensions for the chest, waist, seat, upper arm, thigh, wrist and ankle for each size. These dimensions were based on ASTM standards and an anthropometric study of children conducted in 1977 by the University of Michigan. 59 FR 53621. All exempt garments would still have to meet the flammability standards for clothing textiles and vinyl plastic film (16 CFR parts 1610 and 1611). The Commission considered the 39 comments it received in response to the NPR as well as the views expressed in a public meeting held on April 25, 1995 attended by sleepwear manufacturers and importers, consumers and other interested persons.

On September 9, 1996, the Commission issued a final rule amending the flammability standards for children's sleepwear to exclude from the definition of "children's sleepwear," (1) infant garments sized 9 months or smaller, and if a one piece garment, does not exceed 25.75 inches in length; if a two-piece garment, has no piece exceeding 15.75 inches in length, and (2) tight-fitting garments sized larger than 9 months (meeting maximum dimensions specified for each size). 61 FR 47634. The Commission stated that the amendments would take effect on January 1, 1997. The Commission also continued the stay of enforcement on certain underwear garments until March 9, 1998 (it was subsequently extended until June 9, 1998). 61 FR 47412.

Once manufacturers began to design sleepwear that would meet the tight-fitting exemption they encountered some design and construction problems. The staff met with industry members to discuss these problems. The Commission proposed (63 FR 27877) and then on January 19, 1999 issued in final (64 FR 2833), technical amendments to adjust the points of measurement for the upper arm, seat and thigh to make a more practical, wearable garment and to clarify how the sleeve must taper. The Commission also clarified its policy statements so that infant garments and tight-fitting garments could be marketed and promoted with other sleepwear. 64 FR 2832.

3. Legislation and Proposed Revocation

On October 21, 1998, Congress enacted fiscal year 1999 appropriations for the Commission. Public Law 105-276. Section 429 of that law required the Commission to propose to revoke the 1996 amendments to the sleepwear standards. The law also required the

General Accounting Office ("GAO") to review burn incident data from the ignition of children's sleepwear from small open-flame sources for the period July 1, 1997 through January 1, 1999. As required by the legislation, GAO completed this review by April 1, 1999. The Conference Report also directed GAO to assess the information and education campaign conducted by industry and the Commission (H.R. Rep. No. 769, 105th Cong., 2d Sess. 267 (1998)). The appropriations measure requires the Commission to issue a final rule revoking, maintaining or modifying the 1996 amendments and any later amendments by July 1, 1999. The Commission must consider and substantively address the findings of the GAO and other information available to the Commission. Congress specified that the rulemaking conducted with respect to this matter is not subject to (1) the Consumer Product Safety Act, 15 U.S.C. 2051 *et seq.*, (2) the Flammable Fabrics Act, 15 U.S.C 1191 *et seq.*, (3) the Regulatory Flexibility Act, 5 U.S.C 601 *et seq.*, (4) the National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.*, (5) the Small Business Regulatory Enforcement Fairness Act of 1996, Public Law 104-121, or (6) any other statute or Executive order.

As directed, on January 19, 1999, the Commission issued a notice proposing to revoke the September 9, 1996 amendments, and subsequent amendments, including the technical amendments and the amendment to the policy statements. 64 FR 2867. The Commission received over 3,400 comments responding to the proposed revocation. These comments and the Commission's responses to the principal issues they raised are discussed in section G below. Although not required by the appropriations measure, the Commission held a public hearing on April 22, 1999, for interested persons to present their views on the proposed revocation orally. Twenty-one people provided testimony.

The Commission has considered GAO's reports, written comments submitted in response to the proposed revocation, oral testimony before the Commission, and other available information and has determined to maintain the exemptions. The basis for this decision is discussed below.

C. The Basis for the Exemptions Still Stands

The comments and testimony indicate that people appear to have the false impression that the 1996 amendments abolished all standards for sleepwear. In fact, the Commission's action was narrowly tailored. The Commission's

review of research and injury data indicates that the principal risk from sleepwear is posed by loose-fitting garments. The sleepwear standard continues to cover these types of garments. They must pass the standard's flammability test, that is, they must self-extinguish when exposed to a small open flame. Thus, the flammability standards still cover nightgowns and looser fitting pajamas and robes—the types of sleepwear most often involved in clothing-ignited fires.

Considerable confusion also exists concerning the purpose of the flammability standards and their ability to reduce injuries and deaths due to fires. The original flammability standard was intended to address fires in which clothing was ignited by a small open flame such as matches or lighters. Thus, the original standard was not designed to reduce injuries sustained in whole house or bedding fires. The occurrence of such incidents does not undermine the exemptions because even absent the exemptions, the standard would not address such incidents.

The Commission has determined to maintain the 1996 amendments because the basis for them remains sound. As discussed in sections E through G below, GAO's reports, as well as comments and information received since the amendments, present no new evidence that would change the rationale for the 1996 exemptions. A brief review of the basis for the 1996 amendments follows.

1. Technical Research Supports Tight-Fit

Before issuing the proposed and final exemptions, the Commission conducted an extensive review of technical research and information considering the effect garment design can have on clothing fires. The Commission found that garment design is a major factor; it influences the probability of ignition, flame spread, duration of burning, and the amount of heat transferred to the body. (10)

The idea that tight-fitting garments may be less hazardous than loose-fitting ones did not originate with the Commission's work in the early 1990's. Numerous studies from the 1970's and 1980's examined the issue. Several studies in the 1970's placed loose and tighter-fitting garments on manikins to observe their performance when ignited. For example, in a 1971 study, when sleepwear garments were burned on toddler-size manikins the researchers found that a full, loose garment made of a relatively flammable lightweight fabric is more hazardous than a close-fitting one made of a heavier cotton. Two

manikin studies from the later 1970's found that closer-fitting cotton ski pajamas were likely to produce less extensive injuries than looser fitting nightgowns. A manikin study in 1986 compared five different fabrics and found that, for each of the fabrics, nightgowns were more hazardous than pajamas. These are just some of the studies the Commission considered. (10)

After reviewing all the available literature on the issue of garment fit and safety, the staff concluded:

The reduced probability of ignition of tight fitting clothing is related to three factors: the limited supply of oxygen from underneath the garment, the role the skin plays as a heat sink and reduced likelihood of contacting the flame source.

Garment configurations in which large air spaces are created between the body and the garment act as chimneys in which the flame spread accelerates as it travels an unrestricted path. The resultant rapid burning is characterized by large flames. The excess fabric also serves as a fuel supply that makes it difficult for the flames to be extinguished. Ignition of tight fitting clothing or sections of tight fitting clothing is characterized by both lower flame spread and smaller flames, allowing the wearer to take action sooner. Because tight fitting clothing is less likely to support propagation, it is often easier to extinguish the flames.

(10) The Commission is not aware of any studies conducted since the 1996 amendments that invalidate these findings.

2. Data Support Exemptions

Tight-fitting. When it issued the 1996 exemptions, the Commission reviewed available injury data from the period 1980–1994. During that period, there were an estimated annual average 90 hospital emergency room-treated thermal burn injuries to children involving sleepwear. (The corresponding average annual estimate involving daywear was 850.) Significantly, injuries associated with sleepwear predominantly involved females (71 percent) while burn injuries from daywear usually involved males (69 percent). (25) This tendency for sleepwear-related burns to involve females was true even when the Department of Commerce developed the original standard (DOC Analysis of Data for standard). Females are more likely to have been wearing nightgowns or looser fitting garments for sleeping. Of the 20 nightwear-related cases involving children under 15 years reported to NEISS during the 1980–1994 period, 11 involved nightgowns, six involved pajamas (not tight-fitting), two involved nightshirts, and one involved a polyester blanket sleeper. (25)

The Commission conducted in-depth investigations of incidents reported from 1992–1994 involving sleepwear or daywear used as sleepwear. Summaries of these investigations were included in staff memos that were part of the briefing packages for the proposed and final amendments. (12 and 25) Most of the incidents involved loose-fitting clothing such as nightgowns, nightshirts and tee shirts. Ignition sources were items such as cigarette lighters, stoves, matches, and fireplaces. Based on its investigations of NEISS cases, the staff estimated that about 200 thermal burn injuries involving daywear used as sleepwear were treated in hospital emergency rooms during 1994. (25)

In 1993, when the Commission began the rulemaking proceeding that resulted in the 1996 amendments, the Commission issued a stay of enforcement for garments that were marketed and labeled as underwear and were skin-tight or nearly skin-tight. These garments are closer fitting than traditional pajamas but looser than garments allowed under the 1996 exemption. The Commission is not aware of any burn incidents involving such stay garments. (62) If tight-fitting garments posed an increased risk of fire, one would expect to see an increase in clothing-related incidents after these stay garments were allowed since they are even looser than exempt garments. This has not been the case. When the Commission issued the tight-fitting exemption, the NEISS estimate for clothing-related incidents involving children under 15 was about the same as before the stay. (25) When the staff reviewed the data for the current proceeding it found no increase in fatalities in the last 20 years and no trends in injuries since before the stay. (62) According to National Purchase Diary data, purchases of cotton sleepwear garments have increased from 9.7 percent in 1992 to 27.5 percent in 1998. More cotton garments are on the market, but there has not been a corresponding increase in incidents. (61)

In fact, relatively close-fitting garments resembling underwear have been available long before the stay of enforcement. In 1979, the Commission received a petition from a sleepwear manufacturer who was concerned about thermal underwear being marketed and worn as sleepwear. Beginning in 1984, the Commission staff developed a series of enforcement pamphlets to try to distinguish between these types of cotton underwear garments and sleepwear. (59) Throughout this time, sleepwear-related burn incidents have continued to involve primarily loose-fitting garments such as nightgowns,

traditional (loose) pajamas, and oversized tee-shirts.(25)

Complementing the research discussed above and the data, the staff also conducted a review of literature concerning the association of closeness of fit and burn severity.(13) For example, a 1985 study reviewed the Canadian experience with clothing-ignited injuries involving children under 9 years old. There were 192 cases reported with statistical analyses performed on 174 cases. The study found that the two significant predictors of burn severity were the style of garment and the ignition situation; burns tended to be more severe when the victims wore loose-fitting clothing and when no adult was present.(13)

A study published in 1973 used data from the Flammable Fabric Accident Case and Testing System ("FFACTS") to determine that close-fitting garments were associated with less severe burn injuries. The study concluded that closeness of fit had a stronger influence than fiber content on burn severity in incidents where the clothing was the first to ignite.(13)

Infants. Very few incidents involving infants under one year have been reported. The original standard was only intended to address incidents in which an infant's clothing was ignited from a brief exposure to a small open flame. Flame-resistant fabrics burn or char until the ignition source is removed. Flame retardant sleepwear will not protect a baby whose crib becomes engulfed in flames. This is the type of scenario that most often occurs when an infant suffers burn injuries.(15) Industry representatives reported that infant sizing is not true to age. As a common rule, according to the retail industry, parents buy infants' sleepwear at double the age (i.e., for 6 month old infants, purchasing the 12 month size). The exemption applies to garments in sizes 9 months and smaller. As the preamble to the final rule noted, these garments are frequently purchased for babies 6 months of age and younger. 61 FR 47638. (See also oral testimony of Julie Goldschneider and Commissioner Moore's April 30, 1996 statement.)

A 1973 review of the FFACTS data base found 434 incidents up to that date involving persons of any age clothed in sleepwear. Of these, only three involved children under one year of age. Two of these involved house or trailer fires and the third was a bedding fire.(13) A 1978 study of 66 burn injuries to children under one year old associated with clothing found similar results. "In ten cases, the clothing involved was specifically identified as sleepwear. Nine of those cases involved whole-

house fires; the other involved a home-made garment. The Commission concluded that none of these cases involved risks of injury which the sleepwear standard was intended to address." 61 FR 47637.

The Commission previously considered exempting infants from the sleepwear standard. In 1977, the Commission proposed to delete coverage of sleepwear in sizes below size one. 42 FR 56568. In 1978, the Commission withdrew this proposal. 43 FR 31348. In the twenty years since that decision, clothing-ignited fires involving infants have remained a rare event.

In its review of data for the 1996 exemptions, the staff found only three reported cases involving children under one year old between 1980 and 1994. Only one of these involved nightwear, and it was a house fire.(25 and 12) In its review of incidents reported since 1996, the staff found two involving children under one year old. Both incidents were house fires. It was difficult to determine what type of clothing the children were wearing.(62)

3. Experiences of Other Countries Support Exemptions

The experiences of several other countries, particularly Canada, bolster the Commission's conclusion that the exemptions would not reduce the level of protection for children.

In 1971 Canada issued flammability regulations for children's sleepwear that established a minimal standard similar to CPSC's general wearing apparel standard. However, sleepwear-related burn injuries and deaths continued, and studies showed that garment style was a major factor. Thus, in 1987, Canada revised its sleepwear regulations so that there are essentially two regulations; one applies to sleepwear considered to be a high fire hazard—such as nightgowns, nightshirts, robes and loose-fitting pajamas—the other to sleepwear posing a low fire hazard. Garments presenting a high fire hazard must meet a flammability test similar to the U.S. sleepwear standard for non-exempt garments. Sleepwear posing a low fire hazard must meet a test similar to the Commission's general wearing apparel flammability test. Canada considers sleepwear of the following types to present a low fire hazard: polo pajamas and sleepers in sizes 0–14x, sleepwear designed for infants up to 7 kg (15.4 lbs.), and sleepwear designed for hospital use in sizes 0–14. Polo pajamas and sleepers have tight waists, ankles and wrists.(26)

In a 1993 letter, the director of Canada's Office of Product Safety told

CPSC that the standard has been a success.(26) The rationale for provisions concerning infants and closer-fitting garments was similar to CPSC's. She stated: "Infants up to 7 kg (about 5 months old) are usually under the close supervision of their parents and they are not crawling, walking or climbing at this age." As for polo pajamas and sleepers: "Studies have demonstrated that garment style play [sic] a major role in the flammability of sleepwear. Snug fitting garments with tight waists, ankles and wrists as polo pajamas and sleepers, are safer as they are less likely to come into contact with ignition sources, and burn slowly." She stated that no deaths had been reported after the 1987 standard. A five year study to assess the effectiveness of the regulations was initiated, but because there were so few injuries reported, the study was discontinued. The Director concluded: "Since the Regulations, injuries due to the ignition of children's sleepwear are no longer an issue in Canada." (26) As of May 1999, Canada reports that it still has no reported fire deaths related to children's sleepwear since 1987.(68)

Several other countries distinguish between loose-fitting sleepwear such as nightgowns and closer-fitting sleepwear such as pajamas and make exceptions for infant garments.(13) Australian standards have three categories: (1) Low fire hazard type fabric, (2) form fitting clothing designed to reduce fire hazard, and (3) garments not complying with either of these categories and perceived to be of greater risk. Garments must be labeled as to their fire hazard category.

The United Kingdom has sleepwear regulations issued in 1987 that require nightdresses, dressing gowns and similar garments commonly worn for sleeping by children between 3 months and 13 years to meet flammability performance requirements. Other garments—such as pajamas, cotton terry bath robes and garments for babies under 3 months—do not have to comply with the flammability standard, but must have a permanent label indicating whether they meet the flammability standard.(13)

New Zealand's sleepwear standards went into effect in 1980. They require that sleepwear for children from 1 to 14 years old be made from fabrics defined as "low fire risk" or be made of a closer-fitting pajama style.(13)

These other countries do not have the extensive death and injury databases that the U.S. does. Therefore, it is difficult to make statistical comparisons between burn deaths and injuries before their standards and after. However, the fact that these other countries have also distinguished between safer close-fitting

garments and more hazardous loose ones bolsters the Commission's conclusions based on its review of research and incident data. Notably, these other countries all allow garment dimensions larger than those CPSC specifies.

D. Statutory Provisions

1. Authority for the Exemptions

The original children's sleepwear standards were issued under the Flammable Fabrics Act ("FFA"), which allows the Commission (previously the Secretary of Commerce) to issue a flammability standard for a fabric or product if needed to protect the public against unreasonable risk of the occurrence of fire leading to death, personal injury or significant property damage. 15 U.S.C. 1193(a). The Commission issued the 1996 amendments under the same authority. In accordance with the procedures in the FFA, 15 U.S.C. 1193(g), the Commission first issued an ANPR beginning the rulemaking process. 58 FR 4111. After considering the thousands of comments responding to the ANPR, the Commission issued a notice of proposed rulemaking as required by the FFA, 15 U.S.C. 1193(i). 59 FR 53616. The Commission issued the final standard in accordance with section 4(j) of the FFA, 15 U.S.C. 1193(j). 61 FR 47634.

As discussed above, section 429 of the legislation that provided the Commission's appropriations for fiscal year 1999 required the Commission to propose to revoke the 1996 sleepwear exemptions and to issue a rule by July 1 revoking, maintaining or modifying the amendments. Public Law 105-276. The legislation states that neither the FFA, the Consumer Product Safety Act, nor any other statute applies to this proceeding. Thus, the Commission is not required to follow the process or make the findings the FFA directs. Rather, in determining what action to take on the 1996 exemptions, Congress instructed the Commission to "consider[] and substantively address[] the findings of the General Accounting Office and other information available to the Commission." *Id.* As discussed above, the Commission has reconsidered the information on which the 1996 amendments were based and believes that information still supports the exemptions. The following sections discuss the Commission's consideration of the GAO reports and the comments presented to the Commission.

E. The GAO Report on Incident Data

Congress directed GAO to review "incident data relating to burns from the ignition of children's sleepwear from small open flame sources for the period July 1, 1997 through January 1, 1999." P.L. 105-276. In its report GAO said it addressed the questions: "(1) how many burn injuries involving children's sleepwear occurred annually before and after the amendments? and (2) what conclusions, if any, can be drawn from these data about the effect of the changes to the sleepwear standard on the risk of injury?"(55)

1. Summary of Report

GAO concluded that data were not sufficient to clearly answer either of these questions. The report states that "[t]he exact number of burn injuries associated with children's sleepwear before and after CPSC amended its standard is uncertain." *Id.* Because few sleepwear-related injuries are reported annually to CPSC's sample hospital emergency rooms, GAO concludes that "precise national estimates" are not possible, and it is therefore difficult to observe injury trends. *Id.* The report notes that over the period 1990 to 1998, NEISS reported only 13 cases and in some years, such as 1998, no cases were reported at all. The report also asserts that, because multiple factors are involved in burn injuries, additional information would be necessary to reach firm conclusions about the effect of the changes. In particular, the report asserts that without data concerning the numbers of consumers who use each type of sleepwear it is not possible to determine the type of sleepwear most likely to be associated with injuries. *Id.*

2. Data Are Sufficient To Support Exemption

The GAO report correctly notes that few burn incidents involving sleepwear have been reported through NEISS over the period 1990 to 1998. However, the fact that only 13 cases have been reported during this period does not invalidate that data. One can correctly conclude, as GAO acknowledges, that the risk of injury from such incidents is small.(55) These data are sufficient to provide an estimate of injuries, which is the purpose of NEISS.

The GAO report underemphasizes an important part of the Commission's examination of incident data. Because it is difficult to obtain details from information in NEISS reports, the Commission conducts in-depth investigations of selected incidents. The staff conducted 40 such investigations of clothing-related incidents that

appeared to involve sleepwear or garments used as sleepwear occurring between 1993 and 1998. As GAO notes, 28 of the 40 cases involved loose-fitting tee shirts, six cases involved nightgowns or nightshirts, three involved traditional flame-resistant sleepwear, one involved a tight-fitting tee-shirt and two involved cotton pajamas. While these investigations do not provide a statistical analysis, they confirm what the research shows and what other countries have found. In a footnote, GAO acknowledges that the patterns from these investigations "are consistent with data from other sources." The footnote continues:

For example, we reviewed case files from one burn center that was not included in CPSC's NEISS sample. These cases involved 12 injuries to children younger than 15 in 1997 and 1998 that the staff at the burn center identified as involving sleepwear. * * * Although burn center staff did not have information on the fabric content of the children's sleepwear for nine cases they noted the general type of sleepwear. The results from this small group were similar to those CPSC found—six of the nine cases involved loose-fitting nightgowns or shirts.

(55). Thus, the only additional data GAO discusses affirm the Commission's assessment that it is looser garments that pose a risk. The fact that conclusions are based on few cases does not undermine those conclusions when all available information supports them.

GAO's criticism that more information on the factors involved in burn injuries is necessary to determine risk is unjustified. GAO's example in its report illustrates this. The report states that GAO reviewed a case in which a 6-year-old girl wearing a nightgown backed into a space heater. From this example, GAO concludes: "It is uncertain whether either reducing the flammability of the nightgown or improving the design or performance of the space heater could have prevented her injury." (55) This example confirms the Commission's conclusions. The girl was wearing a nightgown, precisely the type of clothing the Commission's analysis shows is most likely to be involved in burn injuries. Nightgowns continue to be covered by the sleepwear standard as amended by the 1996 exemptions. Thus, the example is not relevant to the question of risk posed by exempt garments.

More information concerning the use of different types of sleepwear (for example from a use survey) is not necessary to an informed and supported Commission decision, as the report itself illustrates. As GAO acknowledges, the patterns the Commission has

observed that loose clothing is more likely to be involved in burn incidents "are consistent with data from other sources." (55) These patterns have been consistent before the standards were promulgated in 1971 to the present time. They are consistent with research, and they are consistent with other countries' experiences. With this consistent information, a use survey is unnecessary.

The report states that tight-fitting pajamas designed to meet the exemption have only been available for a short period of time so one cannot determine if they are more hazardous. However, close-fitting underwear similar to sleepwear has been available under the stay of enforcement since 1993. For as far back as 15 years prior to the stay of enforcement, Compliance staff took action against the companies marketing these garments in violation of the standard. There have not been any reports of incidents involving these types of garments.

The GAO report looks at sleepwear incident data in isolation. However, the Commission's decision on the exemptions was based on all available information since 1971. The NEISS incident data constituted just one part of this information. The Commission continues to believe that the incident data support the conclusion that the exempt garments do not pose an unreasonable risk of burn injuries.

F. The GAO Report on the Information and Education Campaign

The Conference Committee Report on the appropriations bill that required the Commission to propose to revoke the sleepwear amendments directed GAO to assess the information and education ("I&E") campaign that industry and the Commission conducted (H.R. Rep. No. 769, 105th Cong., 2d Sess. 267 (1998)). When the Commission issued the 1996 amendments it recognized that consumers needed information about the changes. The industry, particularly the American Apparel Manufacturers Association ("AAMA"), volunteered to work with the Commission in developing appropriate materials and making them available to consumers. The GAO report assessed the availability of such I&E materials.

GAO visited more than 70 retail stores in 14 metropolitan areas across the country. It found hangtags on 73 percent of tight-fitting sleepwear garments. The most common hangtags were the ones that AAMA designed. The other types of hangtags varied greatly in design but had similar language. Fewer than 16 percent of stores displayed consumer education brochures or signs about

sleepwear safety. About 63 percent of stores mixed other clothing (such as long underwear and loose-fitting shirts) along with sleepwear in retail displays. GAO concluded that consumers generally get some information from point of sale materials, but not to the extent the Commission had envisioned. GAO found that concerns about the initial acceptance of tight-fitting sleepwear and fears that the standards might change made industry reluctant to provide more I&E. (70)

The Commission believes that consumers need information to choose appropriate sleepwear. The GAO report confirms that some information, particularly on hangtags, is available, but more needs to be done. The labeling rule the Commission is adding to the standards should ensure that consumers have the information they need about the importance of fit for tight-fitting sleepwear.

G. Comments on the Proposed Revocation

In accordance with the appropriations legislation, on January 19, 1999 the Commission proposed to revoke the 1996 amendments. 64 FR 2867. The Commission received over 3,400 comments in response. The Commission heard from fire safety professionals, physicians, parents, farmers, sleepwear manufacturers and retailers, consumer advocates, and members of Congress. Although not required by the appropriations language, the Commission held a public hearing on April 22, 1999. Twenty-one people testified. Many of these had also sent written comments responding to the proposed revocation.

Below is a summary of the principal issues the written comments and the hearing testimony raised, along with the Commission's responses.

1. General Comments

Scope of the Standards and Exemptions

Comment: Some commenters had the impression that the exemption eliminated all clothing flammability requirements for children's sleepwear. Others believed that the amendments did not affect loose pajamas, nightgowns, and robes, which are the kind of nightwear involved in burn injuries and fatalities.

Response: The Commission exempted infant sleepwear and only one limited style of sleepwear (defined as tight fitting) in larger sizes. Other sleepwear garments like nightgowns, robes, and looser-fitting pajamas remain subject to the requirements for flame resistance. Exempted children's sleepwear

(including infant sizes 0 to 9 months and tight-fitting sleepwear in larger sizes) must still meet the less stringent general clothing textile flammability requirements of 16 CFR 1610.

Comment: A number of commenters believed that the Commission issued the 1996 amendments with the expectation that consumers would switch to tight-fitting sleepwear from loose-fitting tee-shirts.

Response: The 1996 amendments were intended to provide consumers who prefer natural fibers (cotton) with a safer alternative to the loose-fitting, non-complying garments used frequently as sleepwear, such as long underwear. While the staff did not necessarily expect consumers using tee-shirts to switch to the tight-fitting garments, they did anticipate that any such substitutions by consumers could reduce the number and severity of burn injuries should they occur.

Motive for Amendments

Comment: Some commenters suggested the Commission had an economic motive, responding to influence by the cotton industry, for amending the sleepwear standards.

Response: The amendments were not based on pressure from any outside interests, but on two principles: (1) safety and (2) enforcement. As discussed above, the Commission studied this issue for several years, relying on laboratory and other analytical data, including injury and death data, to arrive at its conclusions. The Commission believed that the exemptions would allow more effective enforcement of the sleepwear standards and would provide a safer cotton alternative.

Findings Supporting the Amendments

Comment: Two commenters argued that the amendments were issued without the proper findings of unreasonable risk required by the Flammable Fabrics Act. One commenter stated that CPSC never showed that the net effect of the amended standards on all affected children would be beneficial.

Response: The 1996 amendments exempted specified garments from the children's flammability standard. Because they were exemptions, the correct question was not whether these garments posed an unreasonable risk of fire, but whether taking those garments out of the standard would reduce the level of safety and expose the public to an unreasonable risk. As explained in the preamble to the 1996 amendments, the original 1971 and 1974 flammability standards reached farther than

necessary to protect the public. Inclusion of infant garments and tight-fitting garments meant the standards were not reasonably necessary to protect the public; the standards were not limited to garments that present an unreasonable risk of injury.

2. Children's Sleepwear Marketing Issues

Availability of Tight-Fitting Sleepwear

Comment: Several commenters thought that tight-fitting garments have only been available since the exemption became effective in January 1997, and, therefore, it would be difficult to determine their safety.

Response: As discussed above, non-flame resistant garments of this style (skin-tight or nearly skin-tight) have been used as sleepwear with increasing frequency for at least 20 years. During the 1980's the Compliance staff saw an increase in the number of cotton garments labeled as "long underwear" or "playwear" that appeared to be sleepwear.

Industry sources estimate that, before the staff started work on the amendments in 1992, the share of total sleepwear purchases accounted for by complying cotton garments was about 1-2%. According to National Purchase Diary data, cotton sleepwear (the consumer's intended use) purchases have increased from 9.7% to 27.5% of the total sleepwear purchases from 1992 to 1998.

Effect of Cotton Sleepwear Sales on FR (Polyester) Sales

Comment: One commenter suggested that with the emergence of cotton garments, flame-resistant children's sleepwear would be forced out of the market and manufacturers would find that they could not sell flame-resistant sleepwear.

The American Apparel Manufacturers Association stated that "polyester garments still dominate the market for children's sleepwear. Sales of synthetic pajamas are very strong and are expected to remain so for the foreseeable future."

Response: Information from the National Purchase Diary shows that purchases of children's sleepwear are increasing. While the proportion of cotton sleepwear purchases is growing, the market for other sleepwear (flame-resistant) has steadily increased in volume from 106.6 million in 1992 to 112.5 million garments in 1998. Flame-resistant polyester garments reportedly represented over 70% of the total children's sleepwear purchases in 1998.

Garment Returns From Retail Sales

Comment: One commenter, a major retailer of children's clothing, noted that it has experienced returns of tight-fitting sleepwear at about 8% of sales, which it describes as high.

Response: The Commission expected some consumer returns of tight-fitting sleepwear during the transition period following the exemption of these garments. Manufacturers contacted by the Commission staff late in 1998 indicated returns ranging from "negligible" to 5%, considered high. The retailer in the current comment noted that consumers were not seeking refunds, but rather were exchanging the garments for a larger size. Except for some marginal costs associated with the transaction costs of the exchange, retailers are not likely to bear a significant cost burden associated with returns. With the clarification of measurements, availability of stretchable fabrics, manufacturer adjustments to new design and production demands, increasing consumer familiarity with the fit of this style of garment, returns and exchanges should decrease.

Costs of Revocation

Comment: Commenters noted that manufacturers and others have borne significant costs in order to produce and market tight-fitting sleepwear garments under the exemption. A trade group noted that firms changed their business practices as a result of the amendments, but they did not quantify the associated costs. A retail chain reported that revocation would cost that firm approximately \$7 million.

Response: The Commission agrees that there would be some costs to manufacturers and others associated with revocation, but does not have information to quantify those costs. The Commission is not basing its withdrawal of the proposed revocation on the fact that industry would incur some costs if the amendments were withdrawn.

3. Death/Injury Data Involving Children's Sleepwear

Trend in Clothing-Related Burn Fatalities

Comment: Some commenters asserted that enactment of the sleepwear standard in 1972 reduced the number of annual sleepwear-related burn deaths from 60 to 4. Others have expressed this in reverse—there would be ten times as many deaths without the sleepwear standard.

Response: These assertions are incorrect because they refer to all

clothing-related burn deaths reported by the National Center for Health Statistics ("NCHS"). The NCHS mortality files providing these data do not distinguish sleepwear-related burn cases from other clothing-related burn cases. There are no reliable data on the number of sleepwear-related deaths before the standards were issued that could be compared with data assembled thereafter.

Mobility of Infants Wearing Sizes 0-9

Comment: Many commenters rejected the contention that infants wearing sizes 0-9 months are immobile. "These children may not be able to walk; however, they certainly can crawl or roll, which may put them in a situation where they may be exposed to open flame."

An industry commenter stated at the April 22 hearing that infant sizing is not true to age (it is not standardized by regulation). She stated that an infant who is six months of age wears a 12 month size, and an infant who is 5 months of age probably wears a 9 month size, and would not likely be mobile.

Response: In 1993, CPSC staff reported from the literature that infants' first ambulatory motions usually consist of crawling-type movements, which begin around 7 to 8 months of age. Industry representatives had previously reported, as above, that infant sizing is not true to age. Most likely, an infant six months or younger would be wearing garments sized 9 months and under. These children are typically not yet walking or crawling. The definition of infant garment in section 1615.1(c)(2) accommodates all but the largest 6 month old infants. (ASTM Standard D 4910-95.)

Relationship of Mobility to the Risk of Burn Injury

Comments: Many commenters rejected the claim that the risk of burn injury to infants is minimal because of their immobility. Commenters note that infants are less able to remove themselves from a potentially dangerous situation. Ignition sources also come to them. Many commenters argued that the relative immobility of infants puts them at greater risk, not less, of being severely burned in an otherwise minor conflagration.

Response: CPSC knows of several incidents in which a fire started by another child or source approached and ignited the clothing of a pre-ambulatory infant who thereby sustained severe burns from burning clothing. However, analyses of over 150 potentially survivable fire and thermal burn cases involving infants 0-9 months old from

January 1990 to May 1999 in CPSC files revealed insufficient information about the type of clothing involved in these cases to determine whether the type of clothing would affect the likelihood or severity of injury.

Validity of CPSC Data

Comment: Many commenters questioned the validity of CPSC data indicating a low, stable frequency of sleepwear-related thermal burn injuries. They asserted that "problems in the reporting of burn injuries" are a partial explanation that some argue there has been no increase in the number of burn injuries and deaths since the standard changed. The GAO report asserted that CPSC's sleepwear burn data were both too sparse to provide reliable national estimates and subject to coding biases possibly leading to underestimation of sleepwear-related burns.

Response: There is no reason to believe that the number of burn injuries in the U.S. is underestimated by CPSC's National Electronic Injury Surveillance System. The NEISS sample of 101 hospitals, 2.2% of the universe of 5,387 U.S. emergency-room hospitals, includes 4 or 4% of the 119 hospitals that are self-identified burn treatment centers. Although some severely burned children may be admitted directly to burn treatment facilities, more often such victims are taken to the nearest hospital emergency room for stabilization and later transferred to burn treatment facilities. These transfer cases would be reported through NEISS. Although estimates of infrequent occurrences are subject to relatively large variances, NEISS does provide a powerful case-finding tool with 101 hospitals searching for sleepwear burns. Each case is carefully reviewed and any serious burn cases are quickly identified and investigated. A change in frequency of sleepwear-related pediatric burn injuries would be readily detected, while a change in severity would be more difficult because of the few sleepwear-related burn cases reported in NEISS.

Infant Exemption's Likely Effect on Burn Injuries

Comment: Several commenters (physicians) gave accounts of cases where they believe flame-resistant sleepwear could or did, in their opinion, reduce the severity of the injuries sustained by infants and other children in fires. In some of these cases, they said children had burns on the exposed portions of their bodies while those areas covered by the flame retarded clothing were not injured. A surgeon heading a burn treatment facility,

estimated that burn units across the country have treated approximately 472 sleepwear-related thermal burn injuries to victims 0-9 months old since January of 1997. He argued that the severity of cases like these could be positively affected by a return to flame-resistant sleepwear for infants.

Response: The typical scenarios involving infants are bedding or larger room/house fires. The children's sleepwear standards were not intended to address the risk of death and injury from exposure to a whole house or bedding fire. The test method in the standards uses a three second exposure to a moderate sized flame and a requirement that the fabric self-extinguish. The ignition source in the fire scenarios mentioned by commenters is larger and more intense and sustained well beyond three seconds. The heat released and temperatures produced in larger fire scenarios easily exceed the temperatures produced by the small open flame sources. Because of the fabrics' melting and ignition temperatures and the high temperatures and sustained fire growth that occurs in these larger fire scenarios, and the many other factors affecting the outcome of an incident, flame-resistant sleepwear garments cannot be counted on to provide enough protection to prevent life-threatening burn injury from occurring in these scenarios.

Comment: Burn centers, burn victims, and others shared information on various burn injury cases arguing that the exemptions should be revoked to prevent an increase in burn injuries.

Response: The CPSC staff investigated all cases possible within the time constraints of this proceeding. Four Shriners burn hospitals referred 134 cases involving thermal burns from children's clothing to the CPSC staff. Most of these involved garments or fire scenarios not addressed by the sleepwear standard. The staff requested for investigation 30 cases meeting certain criteria relevant to this proceeding. With permission from the hospitals and victims' families, the staff completed analysis of 21 cases. The CPSC in-depth investigations revealed that none of these cases involved garments exempted from the standard by the 1996 amendments or garments previously subject to the stay of enforcement.

Several commenters were burn victims or parents of burn victims. Two of the garments involved in these incidents were nightgowns. These garments must still be flame-resistant under the 1996 amendments. Another case involved an infant wearing a cotton sleeper injured in a bedding fire, a

scenario that the standard does not address. One commenter was a burn victim whose only injury was singed hair when his "tight-fitting" (by his description) thermal underwear ignited from a stove burner. This case and another involving a tight-fitting tee-shirt illustrate how the fit of a garment can minimize injury severity when exposed to a small ignition source.

4. Safety-Related Technical Information

Fires Addressed by the Standards

Comment: A number of commenters expressed concerns that the exemptions would eliminate protection of children from a variety of fire scenarios, including house fires and bedding/mattress fires. Others claimed that injuries would be less severe in these cases had victims been wearing flame-resistant sleepwear. Other commenters argued that although these cases are tragic and still occur, the standard (flame-resistance) does not protect against injuries from house fires or the rare infant crib/bedding fires.

Response: As discussed above, the children's sleepwear standards were not intended to address the risk of a whole house or bedding fire. The intent of the sleepwear standards is to eliminate the risk of serious personal injury or death from fire as a result of contact between the sleepwear garment and a small ignition source. Even flame-resistant sleepwear may not prevent burn injury in a whole house or bedding fire.

Importance of Fit

Comment: A number of commenters expressed concerns that the combination of non-flame resistant material and loose fit are dangerous. Others argued that tight fit is a reasonable choice with reduced likelihood of ignition.

Response: As discussed above, garment fit, along with fiber content can influence a garment's flammability. Children's sleepwear made from cotton fabric needs to fit close to the body, to provide an acceptable level of risk. There is a great deal of information in the literature discussing the concept of tight-fitting garments being less hazardous than loose-fitting garments. The ease of ignition increases when the wearer's clothing stands away from the body and the excess fabric functions as a connector to the ignition source. Without a tight fit, if ignition occurs, the oxygen under the garment and the absence of a heat sink (the body) increase the opportunity for sustained burning. Research indicates that reasonably safe sleepwear garments can be made from cotton fabrics that do not

meet the flammability requirements of the children's sleepwear standards, i.e. they do not self-extinguish.

Comfortable, practical, tight-fitting sleepwear can and is being produced that is acceptable to consumers.

Fire Safety

Comment: One commenter asserted that non-flame resistant cotton sleepwear is dangerous based on a local fire department demonstration in which two sleepwear garments, one flame-resistant and the other untreated cotton were burned.

Response: It is not surprising that the commenter observed that the cotton sleepwear "flamed up and burned very quickly." Light weight, cellulosic fabrics usually ignite readily when in contact with an ignition source, burn steadily, and are often difficult to extinguish. Flame-resistant fabrics made from thermoplastic fibers are not as easily ignited and have a tendency to shrink away from the heat source. These fabrics self-extinguish when the flame source is removed.

The fire department demonstration did not take into account garment design, one of the major factors influencing a garment's flammability. A tight fit reduces the possibility of ignition occurring. If ignition of tight-fitting clothing occurs, flame spread is slower and less intense, allowing the wearer to take action sooner. Because tight-fitting clothing is less likely to support flame propagation, it is often easier to extinguish the flames.

Comment: Commenters presented differing views concerning the relative protection offered by cotton and flame-resistant garments in house and bedding fires. Medical professionals noted cases where exposed portions of a child's body were burned but portions covered by flame-resistant garments were not. The National Cotton Council stated that cotton sleepwear may be slightly more protective than flame-resistant garments in a crib or house fire.

Response: The fire scenarios described above are not addressed by the children's sleepwear standards that define the protection provided in terms of self-extinguishment after a 3 second exposure to a small gas burner flame. A number of variables contribute to the outcome of burn injury such as the circumstances surrounding the incident, the victim's reaction/activity, the fabric characteristics (weight, weave, finishes/treatments applied, fiber content, dyes, etc.), size of the flame and the garment location contacted by the flame, flame propagation, rate of heat transfer, presence of undergarments, etc. Much of this data cannot be obtained through

investigations. The staff cannot conclude based on available data that there are substantial benefits associated with the sleepwear standards beyond those represented by the test method.

Upsizing Practices

Comment: Commenters noted that parents may "upsize," that is, buy sleepwear in sizes larger than their children's current size, because they will get longer wear from the garments. In store interviews, customers indicated that if they were to purchase tight-fitting sleepwear, they would buy a larger size. Others added concerns that handing down clothes to younger children and second hand sales will interfere with parents using the correct garment size.

Response: Commenters provided no information about whether parents are actually buying larger sizes for tight-fitting sleepwear. The staff contacted manufacturers and retailers for this perspective. A representative of a sleepwear retailer, based on discussions with parents during garment fittings, believes that parents would probably purchase only one size larger, otherwise the garment would be too large (i.e. the legs and sleeves would be too long). A manufacturer/retailer of successful tight-fitting sleepwear does not believe their customers are upsizing.

During the development of the technical amendments in 1997, the staff observed that garments using fabrics with adequate stretch provided children with ample room for movement and comfort while maintaining the tight fit required by the exemption. The staff also observed children wearing garments one size larger than their age-appropriate size. The differences in garment dimensions between sizes are small. The larger garments still conformed to the contours of the children's bodies, touching them at many points, thus reducing the likelihood of ignition.

Informational labeling is important for tight-fitting children's sleepwear to help consumers distinguish among flame-resistant and non-flame-resistant (tight-fitting) garments. Consumers need to be informed that certain sleepwear is no longer flame-resistant and that proper fit is necessary for safety.

5. Information and Education Campaign

Confusion in the Market Place

Comment: Many commenters criticized the voluntary information and education program as inadequate and confusing in the market place. Several commenters surveyed retail stores and reported on the mixing of garment types, inconspicuity and inconsistency

of label messages, and absence of information for the consumer.

Response: Many of these criticisms appear valid. Commenters reported that the current labeling on the hangtags is not distinctive or conspicuous but is mixed with promotional and brand literature. The hangtags are not consistent, and wording on permanently-affixed labels is indistinguishable from size and washing instructions. The Commission's labeling requirement will address these concerns.

6. Garment Design and Production Issues

Expansion of Tight-Fitting Dimensions

Comment: Several commenters recommended increasing slightly the dimensions, especially the upper arm, that define a tight-fitting garment exempt from children's sleepwear flammability standards. They argued that this may make the garments more attractive to parents currently avoiding tight-fitting sleepwear without compromising the garment's safety. A slightly larger garment, they argued, is far safer than an oversized tee shirt.

Response: Commission staff carefully considered the option to allow a less than tight fit for exempted children's sleepwear when amending the sleepwear standards. The reduced probability of ignition of tighter-fitting clothing is related to three factors: the limited supply of oxygen from underneath the garment, the role that the body plays as a heat sink, and reduced likelihood of contacting the flame source. However, while a tighter-fitting garment can reduce the possibility of the garment coming in contact with a source of ignition, a review of the literature did not reveal a specific safe level or range of fit. The Commission concluded that for tight-fitting garments to be exempt from the children's sleepwear standards, the garment must touch the body at all critical locations. To do this, children's sleepwear garments must be equal to or less than the body dimension at these locations. Comfortable, tight-fitting sleepwear garments are currently being manufactured and successfully marketed without making additional dimensional adjustments with a questionable impact on safety.

Sewing Tolerances

Comment: An industry commenter again requested that the standard be amended to allow specific tolerances to accommodate mass-production variances and sewing errors. Such tolerances, a long-recognized practice in

the apparel industry, would provide sleepwear makers and retailers with a workable margin of error.

Response: The Commission recognizes that tolerances are normally used in the production of all garments and allow for permissible variations to the pattern specifications that can occur during cutting or sewing of the garment. However, adding a production tolerance which would increase the garment dimensions from those specified in the amended children's sleepwear standards, would result in a less than tight-fitting garment. The importance of a tight fit has been stated earlier. Knit fabrics are available with a sufficient degree of stretch so that the garment would still fit the intended size child even if the manufacturer undercuts the fabric somewhat. Sleepwear garments manufactured to the dimensions specified in the sleepwear standards using such knit fabrics are currently being sold to consumers.

7. Compliance Issues

Comment: One commenter questioned the Commission's efforts to enforce the amended standards that exempt tight-fitting sleepwear garments.

Response: Earlier this year, the Commission staff initiated a program for CPSC investigators to inspect retail stores throughout the United States to determine whether sleepwear marketed and promoted as being tight-fitting meets the measurements required for an exemption. This program is continuing, and the staff is conducting full investigations of firms found to be selling or manufacturing violative merchandise. The staff also learns of potential violations from firm inspections, incident investigations, and trade complaints.

H. Date of Withdrawal

The proposed revocation of the 1996 amendments is withdrawn on the date of publication. Because revocation was proposed but never finalized, withdrawal of the proposal does not make any substantive change. Therefore, it is unnecessary to delay the withdrawal of the proposed revocation.

List of Subjects in 16 CFR Parts 1615 and 1616

Clothing, Consumer Protection, Flammable materials, Infants and children, Labeling, Reporting and recordkeeping requirements, Sleepwear, Textiles, Warranties.

Conclusion

Pursuant to Public Law 105-276, the Commission withdraws the proposed

revocation of January 19, 1999, 64 FR 2867.

Dated: June 22, 1999.

Sadye E. Dunn,

Secretary, Consumer Product Safety Commission.

List of Relevant Documents

1. Memorandum from Liz Gomilla, Division of Regulatory Management and Eric Stone, Division of Administrative Litigation, to Terrance R. Karels, Project Manager, dated March 13, 1992, entitled "Problems Associated with Enforcement of the Children's Sleepwear Standards."
2. Memorandum from Bea Harwood and Terry L. Kissinger, EPHA, to Terrance R. Karels, Project Manager, dated April 20, 1992, entitled "Injury Data Related to the Sleepwear Flammability Standards and Information on Surveys of Burn Treatment Centers."
3. Memorandum from Linda Fansler, ESME, to Terrance R. Karels, ECPA, dated May 6, 1992, entitled "Final Report, Children's Sleepwear Project."
4. Memorandum from Anthony C. Homan, ECPA, to Terrance R. Karels, Project Manager, dated March 25, 1992, entitled "Market Sketch—Children's Sleepwear."
5. Briefing Memorandum from Terrance R. Karels to the Commission, dated November 3, 1992.
6. **Federal Register** notice "Standards for the Flammability of Children's Sleepwear: Sizes 0 Through 6X and 7 Through 14; Advance Notice of Proposed Rulemaking," published by the Consumer Product Safety Commission; January 13, 1993 (58 FR 4111).
7. **Federal Register** notice "Standards for the Flammability of Children's Sleepwear: Sizes 0 Through 6X and 7 Through 14; Stay of Enforcement," published by the Consumer Product Safety Commission; January 13, 1993 (58 FR 4078).
8. Tabular summaries of comments and staff responses to comments to the Advance Notice of Proposed Rulemaking; 50 pages; July 19, 1994.
9. "Statement by The Children's Sleepwear Coalition In Response to the Consumer Product Safety Commission's Advance Notice of Proposed Rulemaking"; March 25, 1993.
10. Memorandum from Linda Fansler, ESME, to Terrance R. Karels, ECPA, entitled "Technical Rationale Supporting Tight-Fitting Children's Sleepwear Garments"; March 14, 1994.
11. Memorandum from Linda Fansler, ESME, to Terrance R. Karels, ECPA, entitled "Recent Conversation Between Staff of Consumer and Corporate Affairs Canada and Commission Staff"; July 17, 1992.
12. Memorandum from Dr. Terry L. Kissinger, EPHA, to Terrance R. Karels, ECPA, entitled "Injury Data Related to the Children's Sleepwear Standards"; February 8, 1994.
13. Memorandum from Dr. Terry L. Kissinger, EPHA, to Terrance R. Karels, ECPA, entitled "Results of Review of Available Literature," and attachments; April 1, 1994.
14. Memorandum from George Sweet, EPHF, to Terrance R. Karels, ECPA, entitled

"Human Factors Issues Regarding Sleepwear," and attachment; March 8, 1994.

15. Memorandum from George Sweet, EPHF, to Terrance R. Karels, ECPA, entitled "Garments Intended for Infants"; July 8, 1994.

16. "Preliminary Regulatory and Regulatory Flexibility Analyses for the Proposed Amendments to the Children's Flammability Standards," by Anthony C. Homan, Directorate for Economic Analysis; June, 1994.

17. "Market Sketch—Children's Sleepwear," by Anthony C. Homan, Directorate for Economic Analysis; March, 1992.

18. Memorandum from Eva S. Lehman, HSPS, to Terrance R. Karels, ECPA, entitled "Toxicological Evaluation of Fabrics Used in Children's Sleepwear"; June 7, 1994.

19. Memorandum from Patricia Fairall, CERM, to Terrance R. Karels, ECPA, entitled "Compliance History—Enforcement of Children's Sleepwear"; 6 pages; April 20, 1994.

20. Memorandum from James F. Hoebel, Acting Director, ESME, to Terrance R. Karels, ECPA, entitled "Amendments to Children's Sleepwear Standards"; July 7, 1994.

21. Memorandum from Dr. Terry L. Kissinger, EPHA, to Terrance R. Karels, ECPA, entitled "Proposed Amendment to Children's Sleepwear Standards"; July 15, 1994.

22. **Federal Register** notice "Standard for the Flammability of Children's Sleepwear: Sizes 0 Through 6X; Standard for the Flammability of Children's Sleepwear: Sizes 7 Through 14; Proposed amendments" published by the Consumer Product Safety Commission; October 25, 1994 (59 FR 53616).

23. **Federal Register** notice "Continuation of Stay of Enforcement of Standards for the Flammability of Children's Sleepwear, Sizes 0 Through 6X and 7 Through 14" published by the Consumer Product Safety Commission; October 25, 1994 (59 FR 53584).

24. Comments on proposed amendments.

25. Memorandum from Terry L. Kissinger, Ph.D., EPHA, to Terrance R. Karels, ECPA, entitled "Injury Data Related to the Children's Sleepwear Standards"; July 12, 1995.

26. Letter from Carole LaCombe, Director, Product Safety Canada, to Eric C. Peterson, Executive Director, Consumer Product Safety Commission, concerning Canadian standards for the flammability of children's sleepwear; September 13, 1993.

27. Memorandum from Linda Fansler, ES, concerning telephone conversation between staff of the Consumer Product Safety Commission and staff of Consumer and Corporate Affairs Canada on June 18, 1992, concerning the Canadian standards for the flammability of children's sleepwear.

28. Memorandum from Linda Fansler, ESME, to Terrance R. Karels, ECPA, entitled "Tight Fitting Children's Sleepwear"; July 14, 1995.

29. Memorandum from Terrance R. Karels, Project Manager, to Warren J. Prunella, Associate Executive Director for Economic Analysis, entitled "Sleepwear Market Update"; October 6, 1995.

30. Final Regulatory Analysis for amendments of the children's sleepwear standards by Terrance R. Karels; July 1995.

31. Memorandum from David Schmeltzer, Assistant Executive Director for Compliance, to Terrance Karels, Project Manager, entitled "Sleepwear Briefing Package"; August 24, 1995.

32. Memorandum from Patricia Fairall, Compliance Officer, to Terrance Karels, Project Manager, entitled "Compliance Discussion of the Proposed Amendments to the Children's Sleepwear Standards"; June 26, 1995.

33. Memorandum from Terry L. Kissinger, Ph.D., EHHA, to Terrance R. Karels, ECPA, entitled "Response to Public Comments Received after Publication of the Notice of Proposed Rulemaking"; July 12, 1995.

34. Memorandum from George Sweet, EPHF, to Terrance R. Karels, ECPA, entitled "Human Factors Responses to Sleepwear NPR Comments"; May 5, 1995.

35. Memorandum from Linda Fansler, ESME, to Terrance R. Karels, ECPA, entitled "Response to Comments"; July 14, 1995.

36. Memorandum from Suad Nakamura, Ph.D., EHPS, to Terrance R. Karels, Project Manager, entitled "Children's Sleepwear—Response to Comments on the Notice of Proposed Rulemaking"; July 19, 1995.

37. Memorandum from Patricia Fairall, Compliance Officer, to Terrance R. Karels, Program Manager, entitled "Response to Comments from Proposed Amendments to the Children's Sleepwear Standards published in the **Federal Register** on October 25, 1994"; June 26, 1995.

38. Memorandum from Terry L. Kissinger, Ph.D., EHHA, to Terrance R. Karels, ECPA, entitled "Response to Letter from John Krasny to James Hoebel"; August 3, 1995.

39. Memorandum from George Sweet, ESHA, to Terrance R. Karels, ECPA, entitled "Issues involved in amendment the sleepwear flammability regulation: Sizing and Labeling"; September 20, 1995.

40. Memorandum from Karen G. Krushaar, OIPA, to Terrance R. Karels, ECPA, entitled "Children's Sleepwear Informational Campaign"; July 11, 1995.

41. Position statement of the National Fire Protection Association and the Learn Not to Burn Foundation in Opposition to the Proposed Amendment of the Children's Sleepwear Standards; July 1995.

42. Letter from John F. Krasny to J.F. Hoebel concerning paper by Vickers, Krasny, and Tovey entitled "Some Apparel Fire Hazard Parameters"; July 17, 1995.

43. Memorandum from Linda Fansler, ESME, concerning telephone conversation with John Krasny on September 20, 1995.

44. Log of public meeting conducted on April 25, 1995, concerning proposed amendments of the children's sleepwear flammability standards.

45. Memorandum from James F. Hoebel, Chief Engineer for Fire Hazards, to Terrance R. Karels, Project Manager, entitled "Children's Sleepwear"; October 10, 1995.

46. Memorandum from Warren J. Prunella, Associate Executive Director for Economic Analysis, to file concerning small business effects of proposed amendments to the children's sleepwear flammability standards; February 17, 1995.

47. Memorandum from Warren J. Prunella, Associate Executive Director for Economic Analysis, to Eric A. Rubel, General Counsel, concerning requirements for Congressional review of final amendments to the children's sleepwear standards; undated.

48. Vote sheet to accompany briefing package on children's sleepwear flammability standards; October 11, 1995.

49. Memorandum from Terrance R. Karels, Project Manager, and Ronald L. Medford, Assistant Executive Director for Hazard Identification and Reduction entitled "Questions Regarding Children's Sleepwear Amendments," with attachments; January 30, 1996.

50. **Federal Register** notice "Proposed Technical Changes; Standard for the Flammability of Children's Sleepwear: Sizes 0 Through 6X; Standard for the Flammability of Children's Sleepwear; sizes 7 Through 14" published by the Consumer Product Safety Commission, May 21, 1998 (63 FR 27877). Corrected on June 11, 1998 (63 FR 31950).

51. **Federal Register** notice "Proposed Clarification of Statement of Policy; Standard for the Flammability of Children's Sleepwear: Sizes 0 Through 6X; Standard for the Flammability of Children's Sleepwear; sizes 7 Through 14" published by the Consumer Product Safety Commission, May 21, 1998 (63 FR 27885).

52. **Federal Register** notice "Final Technical Changes; Standard for the Flammability of Children's Sleepwear: Sizes 0 Through 6X; Standard for the Flammability of Children's Sleepwear; sizes 7 Through 14" published by the Consumer Product Safety Commission, January 19, 1999 (64 FR 2833).

53. **Federal Register** notice "Final Clarification of Statement of Policy; Standard for the Flammability of Children's Sleepwear: Sizes 0 Through 6X; Standard for the Flammability of Children's Sleepwear; sizes 7 Through 14" published by the Consumer Product Safety Commission, January 19, 1999 (64 FR 2832).

54. **Federal Register** notice "Proposed Revocation of Amendments; Standard for the Flammability of Children's Sleepwear: Sizes 0 Through 6X; Standard for the Flammability of Children's Sleepwear; sizes 7 Through 14" published by the Consumer Product Safety Commission, January 19, 1999 (64 FR 2867).

55. United States General Accounting Office Report to Congressional Committees and the Consumer Product Safety Commission, "Injury Data Insufficient to Assess the Effect of the Changes to the Children's Sleepwear Safety Standard," GAO/HEHS-99-64, April 1999.

56. Memorandum from Martha A. Kosh, OS, to Sadye E. Dunn, Secretary, OS, "Sleepwear Revocation," list of comments on CF99-1, March 17, 1999.

57. Memorandum from Martha A. Kosh, OS, to Sadye E. Dunn, Secretary, OS, "Sleepwear Revocation," list of additional comments on CF99-1, March 29, 1999.

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59. Memorandum from Marilyn Borsari, Office of Compliance to Margaret Neily,

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60. Memorandum from Terence R. Karels, EC, to Margaret Neily, ES, "Children's Sleepwear Revocation Project," May 27, 1999.

61. Memorandum from Terence R. Karels, EC, to Margaret Neily, ES, "Children's Sleepwear—Issues Related to Proposed Revocation," May 27, 1999.

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63. Memorandum from C. Craig Morris, EHHA, to Margaret Neily, ESME, "Response to Public Comments Related to the Children's Sleepwear Flammability Requirements for sizes 0 to 9 Months," May 28, 1999.

64. Memorandum from Carolyn Meiers, ES, to Margaret Neily, ES, "Human Factors Issues in Sleepwear," May 27, 1999.

65. Memorandum from Carolyn Meters, ES, to Margaret Neily, ES, "Labeling of Tight-Fitting Sleepwear," May 27, 1999.

66. Memorandum from Linda Fansler, ES, to Margaret Neily, ES, "Review of Foreign Flammability Standards for Children's Sleepwear," May 25, 1999.

67. Memorandum from Linda Fansler, ES, to Margaret Neily, ES, "Response to Comments Received as a Result of Publishing the Children's Sleepwear Revocation Proposal," May 28, 1999.

68. Log of Telephone Call, Linda Fansler, LSE, with Ms. Christine Simpson, Health Canada, Product Safety Bureau, March 31, 1999.

69. Memorandum from Margaret L. Neily, ES, to File, "Analysis of Public Comments on Proposed Revocation of the 1996 and Subsequent Amendments to the Children's Sleepwear Flammability Standards," May 27, 1999.

70. United States General Accounting Office Report to Congressional Committees and the Consumer Product Safety Commission, "Consumer Education Efforts for Revised Children's Sleepwear Safety Standard" June 1999.

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72. Briefing Memorandum from Ronald L. Medford, Office of Hazard Identification and Reduction and Margaret L. Neily, ES, to the Commission, "Children's Sleepwear Flammability Standards—Analysis of Public Comments on the Proposed Revocation of the September 1996 and Subsequent Amendments," June 3, 1999.

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