



## INVESTIGATION GUIDELINE

Appendix 23A  
11/23/1999

### CHILDREN'S WEARING APPAREL

#### I. INTRODUCTION

##### A. Background

Currently there are two flammability standards in effect for children's sleepwear, one for sizes 0 through 6X, the other for sizes 7 through 14. Both standards require that test specimens must self-extinguish when exposed to a small open-flame ignition source. Both standards also require manufacturers of sleepwear garments to perform prototype tests on specimens of fabric, seams, and trim with acceptable results before beginning production of sleepwear garments. Additionally, both standards require manufacturers of sleepwear fabrics and garments to select samples from production and to obtain passing results from flammability testing of those samples before introducing those fabrics or garments into interstate commerce. The standard does not apply to shoes, gloves, and hats.

CPSC amended the sleepwear flammability standards in 1996. As a result, infant garments sized nine months or smaller and tight fitting sleepwear garments for older children are now exempt from the flammability standards.

CPSC has experienced difficulties in enforcing the sleepwear flammability standards. The marketplace has changed substantially since the original children's sleepwear standards went into effect. Today, some children are sleeping in T-shirts or clothing marketed as playwear or underwear. A precise definition as to what qualifies as sleepwear has contributed to the difficulty in the enforcement of sleepwear standards.

Although the standards specifically apply to sleepwear garments, ignition incidents of all types of clothing for children under age 15 should be investigated. Clothing ignition cases, as well as cases in which clothing melted or smoldered are of interest. Determining whether the garment fit the victim loosely or tightly is crucial.

## **INVESTIGATION GUIDELINE**

### **B. Study Purpose**

The purpose of this data collection is to obtain information about clothing fire and burn injuries to children younger than age 15. Of particular interest is clothing being worn as sleepwear. The data will be used to gather information regarding the impact of the amended standards and to learn more about the range of children's clothing involved in fires.

### **C. Product Description**

This guideline applies to incidents involving the ignition, melting, or smoldering of all wearing apparel items worn by children under 15 years of age, excluding shoes, gloves, and hats.

### **D. Specific Items of Interest**

- 1) Description of the garment(s) involved including material, labeling, age, manufacturer, and if the garment was used for sleeping. Especially of interest are incidents in which articles of clothing marketed as daywear, such as T-shirts, sweatsuits, leggings, and underwear, are being used as sleepwear.
- 2) Description of the fit of the garment(s) on the victim. Whether or not the garment fit the victim snugly (worn fitting tightly against the child's body) or if it was loose fitting (a roomier fit; not close against the child's skin).
- 3) Description of how the garment burned and the extent of the injuries to the victim. Indicate whether there was ignition or only melting or smoldering.
- 4) Collect the entire garment(s) or as much of it as possible.

### **E. Headquarters Contacts**

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## **INVESTIGATION GUIDELINE**

### **II. INSTRUCTIONS FOR COLLECTING SPECIFIC INFORMATION**

#### **A. Synopsis**

Describe the ignition, smoldering, or melting incident, the age of victim, and the injuries incurred. Describe the garment the victim was wearing and the manner in which it burned.

For computer data retrieval, please use the following key words as appropriate: sleepwear, snug fit, loose fit, daywear, pajamas, long sleeved, short sleeved, blanket sleeper, T-shirt, underpants, robe, dress, blouse, shirt, sweatshirt, sweatpants, leggings, long underwear, nightgown, jeans, sweater.

#### **B. Data Record Sheet**

The data record sheet is provided as a check-list for on-site investigations to ensure that all the required elements are covered by the investigator. The incident environment narrative is important since the data record sheet is not all-inclusive.

#### **C. Telephone Questionnaire**

If the garment is not available for collection, conduct a telephone interview using the telephone questionnaire. Again, the narrative portion of the telephone questionnaire in which the incident environment is described in detail is important since the questions in the questionnaire are not all-inclusive.

#### **D. Description of Incident Environment**

##### **Pre-Incident**

Describe the environment in which the incident occurred.

Describe the garment(s) that smoldered, ignited, or melted in the incident. Report how frequently the garment involved in the incident was worn for sleeping. Report the size of the garment and the approximate height and weight of the victim at the time of the incident. Describe the fit of the garment on the victim. Specify the age of the child at the time of the incident (if the child is less than 2 years old, please record the age in months).

## **INVESTIGATION GUIDELINE**

### **Incident**

Determine the source of ignition (or melting or smoldering) and describe in detail how it occurred (e.g., dropped a match in lap, ignited sleeve on stove burner, etc.). Report the involvement of any flammable liquids, including a description of the type, approximate amount, and how it was involved.

Record the time of the incident. Determine if anyone witnessed the incident.

### **Post-Incident**

Indicate how the fire was extinguished. Determine if the fire department arrived. If the fire department was involved, obtain the fire department's report.

Describe the medical care administered as a result of the incident. Report the type and extent of injury, treatment and long term prognosis for the victim.

### **E. Description of Injured Child and Product Interaction**

Note what part of the garment ignited, smoldered, or melted first. Describe how the garment burned (e.g., surface flash; melted and dripped on the victim; etc.). If multiple garments were involved, determine the order that the garments ignited (e.g., pants then shirt; shirt then T-shirt; etc.).

Describe the actions of the victim upon discovering that the clothing was on fire (e.g., dropped and rolled, ran to another location, tried to pat flames out, tried to remove clothing, etc.).

Determine if the victim was under the influence of alcohol, medication, or any other drugs at the time of the incident. Determine if the victim suffered from any physical infirmities that may have contributed to the cause of the incident or hindered quick reaction to the burning clothing.

## **INVESTIGATION GUIDELINE**

### **F. Description of Product**

Describe in detail the garments that smoldered, melted, or ignited in the incident. Identify the material that the garment was made of and the source used to make that determination. Determine if the fabric was a knit or a woven textile. Describe the extent of the damage to the garment.

Report the wording of any labels on the garment(s), including fiber content, care instructions, size, FTC registration numbers (RNS and WPLS), etc. Indicate the manufacturer, age, and laundering history of the garment. Indicate when and where the garment was purchased.

Provide as specific information as possible about the fit of the garment on the child involved in the incident (snug or loose). For example, knit pajamas that are manufactured to fit snugly (i.e. tight against a child's body) may be loose fitting if several sizes too large for the child who is actually wearing them.

### **G. Product Safety Standards**

The Commission administers two mandatory standards, issued under section 4 of the Flammable Fabrics Act, 15 U.S.C. 1193, that prescribe flammability tests for children's sleepwear garments and fabrics intended for use in children's sleepwear. The first, issued in 1971 by the Department of Commerce, covers children's sleepwear in sizes 0 through 6X (16 CFR Part 1615). After responsibility for administration and enforcement of the FFA was transferred to CPSC, the Commission issued a flammability standard for children's sleepwear in sizes 7 through 14 (16 CFR Part 1616). The amendment to exempt infant sleepwear in sizes 9 months or smaller and tight fitting sleepwear from the standard was issued on September 9, 1996 (16 CFR Part 47634).

The standard for the flammability of clothing textiles, CFR 1610, details the flammability standard for general wearing apparel.

## **INVESTIGATION GUIDELINE**

### **III. INSTRUCTIONS FOR PHOTOGRAPHING AND/OR DIAGRAMMING INCIDENT SCENE AND FACTORS RELATED TO THE INCIDENT SEQUENCE**

Include a photograph, or diagram of the garment, indicating where ignition, melting or smoldering first occurred and/or what part of the garment was sampled. If photographs are taken, please include a view of any labeling present on the garment. Indicate the body surface injured in the incident on the body diagram at the end of the data record sheet.

### **IV. INSTRUCTIONS FOR OBTAINING SAMPLES AND DOCUMENTS RELATED TO INVESTIGATION**

Obtain a copy of the fire incident report, casualty reports, and any other fire department investigative reports of the incident. Obtain copies of any insurance or engineering report on fire cause and circumstances involved. Obtain a summary of medical records if an injury or death occurred.

Attempt to collect the entire garment or as large a sample as possible, in order to provide enough fabric for testing. Indicate from what part of the garment the sample was obtained.

Contact Marilyn Borsari if it is possible to purchase new garments identical to the item(s) of clothing that burned.

Mail the sample and a copy of the accompanying Sample Collection Report (form 166) to the sample custodian, to the attention of Debra Ascone, EPHA. On the sample collection form, please specify the investigation task number.



## INVESTIGATION GUIDELINE

### CHILDREN'S WEARING APPAREL

#### Data Record Sheet

Task Number: \_\_\_\_\_

Incident Date: \_\_\_\_\_

1. What was the age and the approximate height and weight of the child when the incident occurred?

\_\_\_\_\_ years \_\_\_\_\_ months; age (in months if age < 2 years)

\_\_\_\_\_ height

\_\_\_\_\_ weight

2. What was the extent of the injury (how serious were the burns suffered, how much body surface area was burned, etc.)? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Was the victim hospitalized? \_\_\_\_\_

4. What did the victim do upon discovering that the clothing had ignited?

\_\_\_\_\_ ran to another location

\_\_\_\_\_ tried to pat flames out

\_\_\_\_\_ tried to remove clothing

\_\_\_\_\_ dropped and rolled

\_\_\_\_\_ other (specify) \_\_\_\_\_

5. Did the victim suffer from any sort of physical infirmity that may have contributed to the incident or reduced reaction time?

\_\_\_\_\_ yes (specify) \_\_\_\_\_

\_\_\_\_\_ no

6. Was the victim under the influence of medication or any other drugs at the time of the incident?

\_\_\_\_\_ yes (specify) \_\_\_\_\_

\_\_\_\_\_ no

## INVESTIGATION GUIDELINE

7. What type of garment ignited/smoldered/melted?

- infant wear
  - sleeper
  - playwear
  - underwear (undershirt, onesies - snap under the crotch to stay in place)
  - diaper
  - other (specify) \_\_\_\_\_
- blanket sleeper
- T-shirt
  - daywear
  - underwear
- pants
- jeans
- underpants
- robe
- dress
- blouse
- shirt
- sweater
- sweatshirt
- sweatpants
- leggings
- long underwear
  - printed/decorated
  - undecorated
- nightgown
- pajama top
  - short sleeves
  - long sleeves
- pajama bottom
  - short bottoms
  - long bottoms
- other (specify) \_\_\_\_\_

8. How frequently did the victim sleep in this garment?

- usually
- sometimes
- never
- unknown

9. What was the garment made of?

- 100 percent cotton
- cotton blend
- synthetic
- other (specify) \_\_\_\_\_
- unknown



**INVESTIGATION GUIDELINE**

10. How did you determine what the garment was made of?

- from the tag
- from memory of victim or bystander
- from general knowledge of fabrics
- other (specify) \_\_\_\_\_

Report wording of tag if available: \_\_\_\_\_

11. Was the fabric knit or woven?

- knit (fabric formed by interlooping yarns)
- woven (fabric formed by interlacing two yarns)
- unknown

12. How would you describe the fit of the garment?

- snug fitting
  - loose fitting
- (give short explanation of the fit) \_\_\_\_\_

13. What was the size of the garment? \_\_\_\_\_ unknown

14. Who was the manufacturer of the garment? \_\_\_\_\_ unknown

15. How old was the garment?

- first time wearing it
- at most one year old
- more than one year old
- unknown

16. When and where was the garment purchased? \_\_\_\_\_ unknown

17. Had the garment been laundered or dry cleaned prior to the incident?

- yes
  - laundered (approximate number of times)
  - dry cleaned (approximate number of times)
- no
- unknown

18. What part of the garment ignited first (e.g., sleeve of a shirt, hem of a dress)? \_\_\_\_\_ unknown

## INVESTIGATION GUIDELINE

19. How did the garment burn?

- surface flash
- rapidly spreading fire
- melted and dripped
- smoldered
- other (specify) \_\_\_\_\_

20. What was the source of ignition?

- stove (cooking) burner; if so, what type of stove?
  - gas
  - wood-burning
  - electric
- space heater; if so, what type of space heater?
  - electric
  - kerosene
  - gas
  - wood-burning
  - other (specify) \_\_\_\_\_
- match
- cigarette
- lighter
- fireplace
- candle
- other; (specify) \_\_\_\_\_

21. Were any flammable liquids involved (e.g., gasoline or lighter fluid)?

- yes (specify kind and amount) \_\_\_\_\_
- no
- unknown

22. At what time did the incident occur? (Give approximate hour, including a.m. or p.m.) \_\_\_\_\_ unknown

23. Where did the incident occur?

- kitchen
- living room/family room
- dining room
- bathroom
- bedroom
- other (specify) \_\_\_\_\_

24. Did anyone witness the incident?

- yes (age and relationship) \_\_\_\_\_
- no

## INVESTIGATION GUIDELINE

25. How was the fire extinguished?

\_\_\_\_\_ water

\_\_\_\_\_ fire extinguisher

\_\_\_\_\_ other (specify) \_\_\_\_\_

26. Did the fire department arrive?

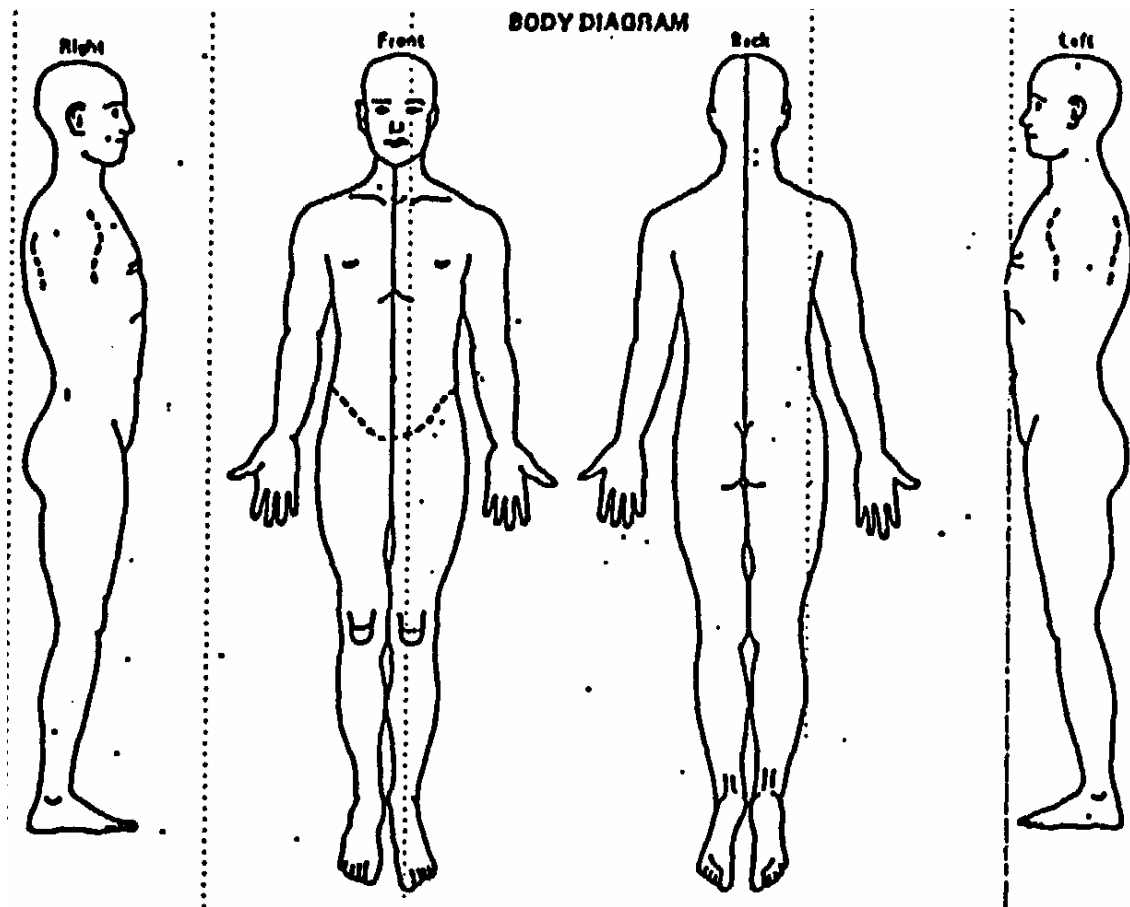
\_\_\_\_\_ yes

\_\_\_\_\_ no

27. Was a sample collected?

Sample number \_\_\_\_\_

### Diagram the Body Surface Injured



**INVESTIGATION GUIDELINE**



**Telephone Questionnaire  
Children's Wearing Apparel**

Task Number: \_\_\_\_\_

Incident Date: \_\_\_\_\_

1. Please tell me how the accident happened and what injury the victim received. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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## INVESTIGATION GUIDELINE

I WOULD LIKE TO VERIFY WITH YOU THE FOLLOWING INFORMATION ABOUT THE INCIDENT. IF I ASK YOU SOMETHING THAT YOU HAVE ALREADY TOLD ME, PLEASE CONFIRM IT ONCE MORE.

2. What was the age and the approximate height and weight of the child when the incident occurred?  
\_\_\_\_\_years \_\_\_\_\_months; age (in months if age < 2 years)  
\_\_\_\_\_height  
\_\_\_\_\_weight

3. What was the extent of the injury (how serious were the burns suffered, how much body surface area was burned, etc.)? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Was the victim hospitalized? \_\_\_\_\_

5. What did the victim do upon discovering that the clothing had ignited?  
\_\_\_\_\_ran to another location  
\_\_\_\_\_tried to pat flames out  
\_\_\_\_\_tried to remove clothing  
\_\_\_\_\_dropped and rolled  
\_\_\_\_\_other (specify)\_\_\_\_\_

6. Did the victim suffer from any sort of medical condition that may have contributed to the incident or reduced reaction time?  
\_\_\_\_\_yes (specify)\_\_\_\_\_  
\_\_\_\_\_no

7. Was the victim under the influence of medication or any other drugs at the time of the incident?  
\_\_\_\_\_yes (specify)\_\_\_\_\_  
\_\_\_\_\_no

8. How frequently did the victim use this garment for sleeping?  
\_\_\_\_\_usually  
\_\_\_\_\_sometimes  
\_\_\_\_\_never  
\_\_\_\_\_unknown

## INVESTIGATION GUIDELINE

NOW I WOULD LIKE TO ASK ABOUT THE CLOTHING THAT PRODUCED THE INJURY.

9. What type of garment ignited/smoldered/melted?

- infant wear
  - sleeper
  - playwear
  - underwear (undershirt, onesies - snap under the crotch to stay in place)
  - diaper
  - other
- blanket sleepers
- T-shirt
  - daywear
  - underwear
- pants
- jeans
- underpants
- robe
- dress
- blouse
- shirt
- sweater
- sweatshirt
- sweatpants
- leggings
- long underwear
  - printed/decorated
  - undecorated
- nightgown
- pajama top
  - short sleeves
  - long sleeves
- pajama bottom
  - short bottoms
  - long bottoms
- other (specify) \_\_\_\_\_

10. What was the garment made of?

- 100 percent cotton
- cotton blend
- synthetic
- other (specify) \_\_\_\_\_
- unknown

**INVESTIGATION GUIDELINE**

**INTERVIEWER: IF THE ANSWER TO QUESTION 10 IS "UNKNOWN,"  
SKIP TO QUESTION 12.**

11. How did you determine what the garment was made of?

- \_\_\_\_\_ from the tag
- \_\_\_\_\_ from memory of victim or bystander
- \_\_\_\_\_ from general knowledge of fabrics
- \_\_\_\_\_ other (specify)

Report wording of tag if available: \_\_\_\_\_

\_\_\_\_\_

12. Was the fabric knit or woven?

- \_\_\_\_\_ knit (fabric formed by interlooping yarns)
- \_\_\_\_\_ woven (fabric formed by interlacing two yarns)
- \_\_\_\_\_ unknown

13. How would you describe the fit of the garment?

- \_\_\_\_\_ snug fitting
- \_\_\_\_\_ loose fitting

(give short explanation of the fit) \_\_\_\_\_

\_\_\_\_\_

14. What was the size? \_\_\_\_\_

\_\_\_\_\_ unknown

15. Who was the manufacturer? \_\_\_\_\_

\_\_\_\_\_ unknown

16. How old was the garment?

- \_\_\_\_\_ first time wearing it
- \_\_\_\_\_ at most one year old
- \_\_\_\_\_ more than one year old
- \_\_\_\_\_ unknown

17. When and where was the garment purchased? \_\_\_\_\_

\_\_\_\_\_ unknown

18. Had the garment been laundered or dry cleaned prior to the incident?

- \_\_\_\_\_ yes
  - \_\_\_\_\_ laundered (approximate number of times)
  - \_\_\_\_\_ dry cleaned (approximate number of times)

- \_\_\_\_\_ no
- \_\_\_\_\_ unknown

**INVESTIGATION GUIDELINE**

19. What part of the garment ignited first (e.g., sleeve of a shirt, hem of a dress)? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. How did the garment burn?

- \_\_\_\_\_ surface flash
- \_\_\_\_\_ rapidly spreading fire
- \_\_\_\_\_ melted and dripped
- \_\_\_\_\_ smoldered
- \_\_\_\_\_ other (specify) \_\_\_\_\_

**NOW I WOULD LIKE TO ASK ABOUT THE SOURCE OF THE FIRE.**

21. What was the source of ignition?

- \_\_\_\_\_ stove (cooking) burner; if so, what type of stove?
  - \_\_\_\_\_ gas
  - \_\_\_\_\_ wood-burning
  - \_\_\_\_\_ electric
- \_\_\_\_\_ space heater; if so, what type of space heater?
  - \_\_\_\_\_ electric
  - \_\_\_\_\_ kerosene
  - \_\_\_\_\_ gas
  - \_\_\_\_\_ wood-burning
  - \_\_\_\_\_ other (specify) \_\_\_\_\_
- \_\_\_\_\_ match
- \_\_\_\_\_ cigarette
- \_\_\_\_\_ lighter
- \_\_\_\_\_ fireplace
- \_\_\_\_\_ candle
- \_\_\_\_\_ other (specify) \_\_\_\_\_

22. Were any flammable liquids involved (e.g., gasoline or lighter fluid)?

- \_\_\_\_\_ yes (specify kind and amount) \_\_\_\_\_
- \_\_\_\_\_ no
- \_\_\_\_\_ unknown

23. At what time did the incident occur? (Give approximate hour, including a.m. or p.m.) \_\_\_\_\_  
\_\_\_\_\_

- \_\_\_\_\_ unknown



## INVESTIGATION GUIDELINE

24. Where did the incident occur?

- kitchen
- living room
- dining room
- bathroom
- bedroom
- other (specify) \_\_\_\_\_

25. Did anyone witness the incident?

- yes (age and relationship) \_\_\_\_\_
- no

26. How was the fire extinguished?

- water
- fire extinguisher
- other (specify) \_\_\_\_\_

27. Did the fire department arrive?

- yes
- no

**INTERVIEWER: THANK PERSON AND END INTERVIEW.**

### Diagram the Body Surface Injured

