

# U.S. Consumer Product Safety Commission - Current Fire Projects -



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# CPSC Overview

- The CPSC is an independent regulatory agency of the U.S. government
- Established in 1973 under the Consumer Product Safety Act
- Three Commissioners, nominated by the President, approved by the Senate

# CPSC Mission

To protect the public against unreasonable risks of injuries and deaths associated with consumer products by:

- Developing voluntary consensus safety standards in cooperation with consumer interest groups, industry, and other stakeholders
- Adopting and enforcing mandatory standards or banning consumer products if no feasible standard would adequately protect the public
- Obtaining the recall of products or arranging for their repair or replacement
- Conducting research on emerging and potential product hazards
- Informing and educating consumers through the media, state and local governments, private organizations, and responding to consumer inquiries

# Size of CPSC

- FY 2007 budget of \$62 million
- About 420 full time staff
  - Headquartered in Bethesda, MD
  - Field personnel throughout the U.S.
  - Engineering and Chemistry Laboratory in Gaithersburg, MD

# CPSC Jurisdiction

- CPSC jurisdiction covers about 15,000 different types of consumer products
- CPSC does not regulate:
  - Alcohol, tobacco products, firearms (ATF)
  - Food, drugs, cosmetics, medical devices (FDA)
  - Motor vehicles for road use (NHTSA), aircraft (FAA), boats (USCG)
  - Pesticides (EPA)
  - Workplace products (varied)

# 1999 – 2003 Residential Fire Loss Statistics

CPSC staff estimated annual average:

- 2,540 civilian deaths
- 14,070 civilian injuries
- \$4.81 billion in property loss

# Strategic Goal

Reduce the rate of death from fire-related causes by 20 percent from 1998 to 2013

# Regulatory Activities

- Upholstered Furniture
- Mattresses, Open Flame Ignition
- Mattresses, Smoldering Ignition
- Bedclothes
- Clothing Textiles
- Carpets and Rugs
- Cigarette Lighters

# Upholstered Furniture

- 1999-2002 average annual national fire loss estimates – addressable residential fires in which upholstered furniture was 1<sup>st</sup> item ignited:
  - 4,800 non-intentional fires
  - 360 civilian deaths
  - 740 civilian injuries
  - \$133 million property damage
  - Annual average societal costs = \$2.1 billion
- 84% of deaths and 65% of injuries resulted from smoking material-ignited fires

# Upholstered Furniture

- December 2005 CPSC staff draft standard published
- Next Steps: Continue testing and research in support of standard development



# Mattresses

- 1999 - 2002 average annual addressable fire losses:
  - 14,300 residential fires
  - 330 civilian deaths
  - 1,680 civilian injuries
  - \$281.5 million in property damage
  - Annual average societal costs = \$2.2 billion

# Mattresses

## Open Flame Ignition

- New standard effective on July 1, 2007
- Addresses open flame ignition
- Limits fire intensity and prevents/delays flashover
- Provides time for discovery and escape
- Estimated to eliminate 240-270 deaths and 1,150-1,330 injuries annually when fully effective

# Mattress Set with Conventional Materials

In 3 to 5 minutes,  $>2,000$  kW

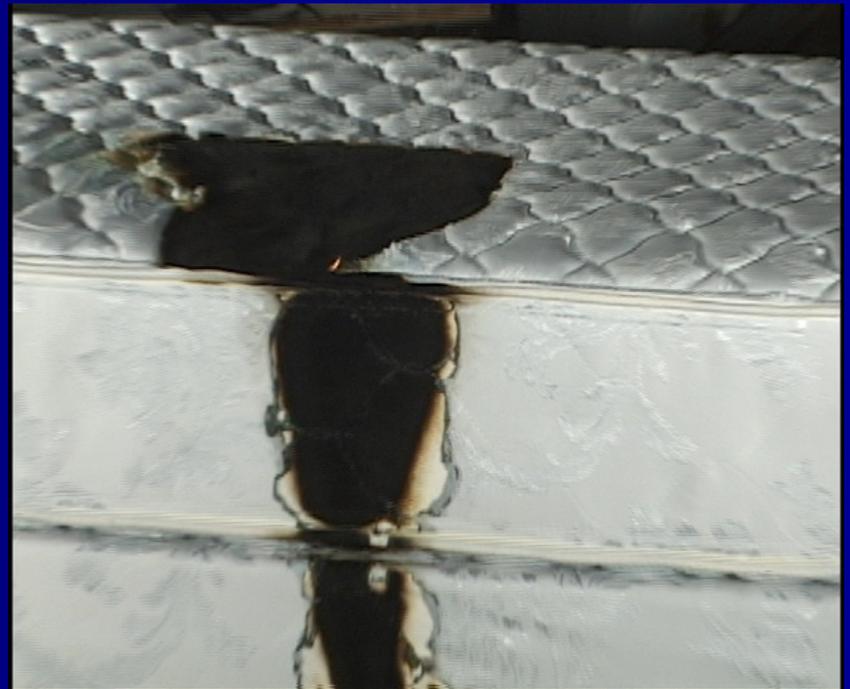


# Improved Mattress Set Performance

30 minutes after exposure to burners



**Under 100 kW**



**Under 50 kW**

# Mattresses

## Smoldering Ignition

- Standard in effect for 30 years
- Need to revisit in light of new open flame mattress standard
- Testing underway
- Enforcement relief

# Rule Review

- *Standard for the Flammability of Clothing Textiles*
  - Purpose: To eliminate dangerously flammable clothing textiles from the marketplace
  - Review Result: Updating to address changes in the test equipment, environmental laws, and consumer textile cleaning practices
- *Standards for the Surface Flammability of Carpets and Rugs*
  - Purpose: To determine the surface flammability response to a small ignition source
  - Review Result: Updating specifications for ignition source

# Voluntary Standards Activities

- Arc-Fault Circuit Interrupters
- Batteries
- Candles
- Emergency Escape Masks
- Fans, Portable
- Fire Sprinklers
- Heaters, Fixed Electric
- Lighting
- National Electrical Code
- Smoke Alarms
- Turkey Fryers

# Candles

- 1999-2003 annual average of 15,000 fires resulting in 150 deaths and 1,450 injuries
- Petition deferred
- Voluntary standards address:
  - Labeling
  - Secondary ignition
  - Flame height
  - End of useful life performance
  - Stability
  - Gel candles (underway)
  - Candle accessories (underway)
  - Candleholders (underway)



# Smoke Alarms

## CPSC staff initiatives for 2000-2007

- 10-Year Batteries
  - CPSC staff study (2002) supported improvements to UL 217
- Wireless Smoke Alarms
  - Contracts with Naval Research Laboratory (2003 & 2004)
- Smoke Alarm Audibility
  - CPSC staff studies (2004 & 2005) supported changes to the *National Fire Alarm Code* (NFPA 72, 2007 edition)
- Improved Detection
  - Contract with Naval Research Laboratory (2005)
- Smoke Alarm Research
  - NIST conducted full-scale testing using smoke alarms (2000-2002)
  - Sponsored by CDC, HUD, CPSC, USFA, and UL

# Research

- Fire Escape Planning
- Range-top Fire Extinguishing Systems
- Lower Ignition Propensity Cigarettes
- Residential Fire Survey

# Range-top Fire Extinguishing Systems

- 1999-2003 residential fire loss statistics: cooking equipment accounted for largest percentage of fires
- In 2006, began study of extinguishing systems for residential kitchens (IAG with NIST)
- Testing to evaluate effectiveness of automatic and hand held systems
- Evaluation results expected in 2007



# Lower Ignition Propensity Cigarettes

- 1999-2002 average annual residential fire loss estimates involving cigarettes –
  - 19,100 fires
  - 620 civilian deaths
  - 1,500 civilian injuries
  - \$305.5 million property damage
- 6 states have passed legislation and 22 states have filed legislation requiring cigarettes to demonstrate a reduced ignition propensity
- CPSC staff will evaluate and compare the ignition hazard of these new cigarettes to traditional cigarettes
- Cigarettes are currently used as the ignition source for several CPSC regulations

# Residential Fire Survey

- National telephone survey of causes and characteristics of residential fires
- Data collected about performance of smoke alarms, sprinklers, fire extinguishers
- Data collected on fires both attended and not attended by fire service
- Data analysis should be completed this year

# Government Collaboration

- NIST
- USFA
- ATF
- CDC
- NRL

QUESTIONS?