

Memorandum

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U.S. CONSUMER PRODUCT
SAFETY COMMISSION
JAN 9 1986
WASHINGTON, D.C. 20207

TO Commission
 THROUGH: Sadye E. Dunn, ^{SDunn} Secretary
 FROM Daniel R. Levinson, General Counsel
 Stephen Lemberg, Assistant General Counsel
 Alan Shakin, OGC
 SUBJECT Cigarette Lighters | VOTE SHEET

DATE January 8, 1986
 CONSUMER PRODUCT SAFETY COMMISSION

Attached is a briefing package concerning disposable cigarette lighters. The staff is recommending that the Commission authorize an analysis of the hazard that such lighters present to young children. A petition (PP 85-2) is pending on this subject, but the Commission is not being asked to consider its merits at this time.

Please indicate your vote on an analysis:

1. Authorize the analysis outlined at Tab 2 of the attached materials.

 (Signature) (Date)

2. Authorize a somewhat expanded analysis to include engineering and economics support.

 (Signature) (Date)

3. Authorize a more limited analysis (e.g., see Health Sciences memo at Tab 3).

 (Signature) (Date)

4. Do not authorize any analysis at this time.

 (Signature) (Date)

5. Abstain/Other

 (Signature) (Date)

Attachments

Memorandum

08 JAN 1986

TO: The Commission
 THROUGH: Sadye E. Dunn, Secretary *SDunn*
 THROUGH: Daniel R. Levinson, General Counsel *DRL*
 THROUGH: Leonard DeFiore, Executive Director *LD*
 THROUGH: Harry I. Cohen, Director, OPM *HIC*

FROM: *for* L. J. Sharman, Acting Project Manager, New Project
 Identification *DVM*
 James F. Hoebel, Program Manager, Fire and Thermal Burn
 Hazards, Office of Program Management *JFHoebel*

SUBJECT: Cigarette Lighters

The Executive Director has suggested that we bring the issue of disposable cigarette lighters to your immediate attention, since any staff activity would affect either the FY 1986 Operating Plan or the FY 1987 Budget--subjects that you are now considering.

The scope and nature of the problem is of significant concern to staff: about 200 deaths each year, 125 of which are children less than five years old. This concern, coupled with an active petition, have resulted in the decision to bring this preliminary information to you at this time.

Children playing with cigarette lighters are frequently reported to be the cause of residential fires. Recently, a petition (PP 85-2) was submitted by a nurse in a children's hospital requesting that the Commission establish a rule to make disposable (butane) cigarette lighters child resistant. The petitioner claims that disposable cigarette lighters are associated with many of the burn injuries to young children and result from children's "fire play". She reports that over the past two years approximately one-half of the children treated in her burn unit following a lighter incident were four years of age and under.

A preliminary report on the petition prepared by the New Project Identification Project Manager with the support of the Fire and Thermal Burn Hazard team is attached as Tab A. Commission data indicate the fire death rate among young children to be high. Similar to the elderly, the rate for young children is double the rate for all ages combined. It is estimated that about 200 deaths each year are associated with fires started by cigarette lighters. Of those, approximately 140 deaths are caused by children playing with lighters and of the 140 deaths, 125 victims are less than five years old.

The Commission also has a Section 15 investigation in progress on lighters.

NOTE: This document has not been reviewed or accepted by the Commission.
 Initial *DR* Date *1/8/86*

C. 2 - 6 (b) (1) Cleared
1/2/86
 No NLRs/Privileges or
 Process Identified
 Reviewed by *PP 85-2*
 Firms Notified,

The lighter manufacturers, through the American Society for Testing and Materials F15.02 Task Group on Cigarette Lighters have been informed about the petition and available injury data have been supplied to them.

Commission staff believes that more information is needed to determine the appropriate response to this serious problem. Staff recommends that the Commission initiate an analysis of the disposable lighter hazard to young children. The Directorate for Epidemiology has outlined such a project, which it estimates would take approximately 23 staff months to carry out over a one year period.* This outline is appended at Tab 2. While this project is limited to the analysis of fire data and field incidents involving children, other staff have questioned whether the study should be broadened to include, for instance, incidents involving adults and include Engineering and Economics support and additional contact with the industry. The Directorate for Health Sciences suggests, in their memo at Tab 3, that a more limited approach might be appropriate, in which existing data are analyzed to provide guidance to the industry so that potential fixes relating to the flame reaching the combustible material may be discussed.

The staff is not currently seeking a decision on the merits of the petition. If the Commission authorizes the recommended analysis, the staff will incorporate the resulting data into a full evaluation of the petition that will permit the Commission to grant or deny it at a later date. If the Commission decides not to authorize the analysis, the staff will still evaluate the petition to permit a Commission vote on its merits. However, without the analysis, the staff would likely recommend denial of the petition, based on insufficient available data to support the regulation requested by the petitioner.

The options available include a) authorize the recommended analysis outlined at Tab 2, b) authorize a somewhat expanded analysis to include engineering and economics support, c) authorize a more limited analysis to fit within specified resources, or d) reject any analysis at this time. If an analysis is authorized, appropriate changes to the Operating Plan will be required.

Regardless of the Commission decision on the analysis, the hazard presented by disposable lighters should be brought to the attention of consumers. Staff will draft a consumer alert for Commission consideration. Also, the staff will continue communication with the ASTM F15.01 Task Group on Cigarette Lighters.

* The Budget and Operations Planning Division points out that the re dedication of 23 staff months will be very difficult to accomplish, given Gramm-Rudman cuts in both 1986 and 1987 and the probability of a lower President's request for 1987. (Tab 3)

Dr. S.

UNITED STATES GOVERNMENT

U.S. CONSUMER PRODUCT
SAFETY COMMISSION
WASHINGTON, D C 20207

Memorandum

TO: Fire & Thermal Burn Hazards Team
THROUGH: Jim Hoebel, Program Manager, Fire & Thermal Burn Hazards
Office of Program Management, EX-P

FROM: *for* Stan Morrow, Project Manager for New Project Identification
Office of Program Management, EX-P *NVM*

NOV - 8 1985

SUBJECT: Preliminary Report on Petition PP 85-2, Disposable Cigarette Lighters

The following summarizes the readily available information regarding the subject petition. It is being provided for discussion purposes in advance of a tentative staff decision whether to recommend that the petition be granted or denied. A copy of the petition and CGC Guidance memo is attached for your reference. (Attachments A and B, respectively).

Request of Petitioner: The petitioner requests the Commission to establish a rule to make disposable (butane) cigarette lighters child-resistant. OGC has docketed the petition under the Poison Prevention Packaging Act (PPPA) since the PPPA procedures and criteria appear most appropriate. However, OGC advises that FHSA or CPSA could alternatively be used.

Summary of Petition: The petitioner claims that disposable (butane) cigarette lighters are associated with many of the burn injuries to young children and result from children's "fireplay". As a hospital nurse caring for burn patients, the petitioner reports that over the past two years younger children have been involved in "fireplay", and approximately one-half the children treated in her burn unit following a lighter incident were four years of age and under. She cites similar statistics for Shriners' Burn Institute, Cincinnati, OH. She also notes that observations from local firefighters demonstrate that many fires are started by children playing with matches and lighters. She says that "although matches are still occasionally used, lighters are the main offenders".

Seriousness of the Hazard: Fires caused by children playing with lighters frequently result in death or serious disfiguring burn injuries. The NEISS hospitalization rate for burn injuries associated with cigarette lighters is 13%. This compares to 4% for all types of emergency room treated injuries.

Number of Injuries: Based on statistics derived from U.S. Fire Administration and National Fire Protection Association data, EPI estimates that:

- each year about 200* deaths are associated with fires started by cigarette lighters;
- about 140* of the 200 deaths are from fires caused by children playing with lighters;

- ° about 125* of the 140 victims are less than five years old;

The fire death rate among young children is extraordinarily high. As with the elderly, it is double the rate for all ages combined. The kinds of fires in which young children die are different from the kinds of fires that most frequently kill older children or adults. More than one-third are started by children playing with matches and cigarette lighters. Children playing with just these two heat sources account for 30% of the estimated 850 deaths per year among children less than five years old. Matches and cigarette lighters share almost equally as contributors. Even among older children the picture is not the same. The percentage of fire deaths from children playing with matches or lighters drops to 9 percent for ages 5-9 years, and to two percent for ages 10 or older.

Based on NEISS data:

- ° there were an estimated 2,970 hospital emergency room visits in 1984 associated with cigarette lighters, 2,250 of these are thermal burns;
- ° About 1/4 of these were children under five, with most being associated with children playing with lighters.

Staff had little trouble in using existing data to conclude that a significant portion of the fire deaths of children, and particularly children under five, are associated with children playing with lighters. However, it is somewhat more difficult to establish with certainty whether the child victim under five is ordinarily the one who ignited the lighter. From existing data staff can say that:

- ° a preliminary review of newspaper clippings and indepth investigations suggest that in a majority of cases the child who started the fire was under five years old.
- ° among a group of 96 newspaper clippings for FY 85, 70% of the children who ignited the lighter were under five.
- ° these data indicate that children under five have access to lighters and many have the ability to ignite them in some manner.

* These estimates are based on a 4 year average (1980-1983) EPI reports that there is no discernible trend, up or down, during this period.

Staff also compared the number of casualties associated with matches to that of lighters. Although matches are a larger source of fatalities when looking at the total for all age groups, lighters result in about the same number of deaths as matches when considering only the issue of children playing with them. EPI reports no discernible trend in the number of fire deaths for either matches or lighters over the last four years.

The Human Factors Division of the Engineering Sciences Directorate reviewed 22 IDIs collected from 1983 through February 1985 to determine the type of lighter involved and how the child ignited it. Information on these subjects is limited since (1) adults did not observe the events which led to the injury, and (2) the IDIs were conducted primarily to obtain information about the product ignited. Based on those instances where sufficient information was provided, staff can say that:

- the lighters were readily accessible to children;
- the lighters were pocket lighter (as opposed to table lighters);
- the lighters were disposable (except one believed to be a refillable model);
- two reports indicate how the victim ignited the lighter:
 - (a) 5 year old ignited lighter by running it up a stick;
 - (b) 3 1/2 year old operated a push bar on side of lighter (the intended method of ignition for that lighter).

Existing human factors information about a child's manipulative abilities suggests that a five year old and some children under five probably can operate the typical disposable lighter in a one-handed operation, similar to an adult. However, most children under five years old, particularly those under four, cannot perform a one-handed operation. Children under five can operate the push button or slide bar ignition mechanisms with little difficulty, although it may require the use of both hands for the youngest children. The Human Factors Division believes that many children probably do not operate the lighter as it was designed. Children can achieve ignition by pushing the lighter on a flat surface or their body.

Estimated Extent of Product Distribution, and Related Economic Issues:
EC estimates that in 1983 there were probably 500 million cigarette lighters sold in the U.S., 80% to 90% of which were disposable. An unknown but smaller number of disposable lighters is in use at any given time, since individual consumers may purchase or use several during a year. Sales have increased almost 30% between 1979 and 1983 with most

of the increase believed to be attributable to disposable lighters. EC also reported that the consumption of matches has been slightly but steadily decreasing since 1979, reportedly due to the popularity of disposable lighters.

The subject of the petition is "disposable lighters". Virtually all disposable lighters sold in the U.S. are believed to be butane fueled and almost all have basically the same ignition operation (rolling the thumb off a spark wheel on to spring loaded gas release lever). Other types of lighters are: (1) refillable lighters, which are fueled with either butane or naphtha fuel and have a variety of ignition mechanisms (such as a push bar on the side of the lighter), and (2) table lighters, which are virtually all butane-fired and refillable. The disposable lighter is considerably less expensive than the other types.

Similar Work being done by the Commission, Other Agencies or Voluntary Standards Groups: In 1975, the ASTM F15.01 task group on cigarette lighters published a voluntary safety standard which contained two requirements relevant to this petition: (1) a warning "Keep Out of the Reach of Children" must appear on the packaging; (2) to minimize inadvertent ignition, flame generation requires deliberate manual operation which shall conform to one or more of the following: a. positive action is required to generate and maintain a flame; b. two or more independent motions to generate a flame; c. reasonable force and speed to generate flame. In 1984, the task group amended item c to require an activating force of 15 Newtons to generate a flame. The staff is not aware of any other standards in existence, or being developed, which would address this petition.

Staff preliminarily believes that the requirements in the ASTM standard are not sufficient to address the risk to children under five.

The Fire and Thermal Burn Hazards Program has proposed a new project in FY 1987 which has a direct relationship to this petition. This project would address the same risk identified by the petitioner, through technical and field investigations leading to possible recommendations for voluntary standards performance criteria. The effectiveness of various lighter designs to reduce ignition by young children would be evaluated.

One additional matter which may be relevant to this petition is the Commission's existing mandatory standard for matchbooks which became effective in May 1978. Although the standard does not directly address the issue of child resistant matchbooks, child fireplay with matches was a major issue during the development of the standard. The Commission concluded that childproofing a matchbook did not appear feasible. The risk to children was partially addressed through quality control and manufacturing requirements.

Need for Additional Work to Resolve Petition:

To address the petition under PPPA, staff must provide information which answers two questions:

- (1) Is the degree and nature of the hazard to children in the availability of the household substance, by reason of its packaging, such that special packaging is required to protect children from serious personal injury? and
- (2) Is the special packaging to be required by such standard technically feasible, practicable, and appropriate for such substance?

Sufficient information appears to be available to permit staff to address question 1. It appears that the staff could support a finding that special packaging is required for butane fuel since that hazardous substance is contained in a package which provides a means for ignition of the fuel, and there is evidence that children under five have frequently ignited the fuel, causing fires which resulted in severe injury and death.

Question 2 is much more difficult to answer at this time. The feasibility and practicality of writing a standard that (1) prevents a significant number of children from being injured; (2) permits adults to operate the product; and (3) does not have unreasonable cost or other economic effects, can only be speculated upon without the expenditure of significant additional resources.

Therefore, in order to present the Commission with information on which to judge the feasibility of a PPPA standard, staff must either be directed to proceed by speculation, or expend resources to develop a factual basis for recommending whether a PPPA standard is feasible.

Availability of Alternatives to the Petition to Address the Issue:

At this time staff has identified three possible alternatives to granting the petition under PPPA:

- (1) Address the issue under CPSA or FHSA.
- (2) Address the hazard through the proposed FTBH project* for FY 87 (now included in the FY 87 budget at the enhancement level).
- (3) Write to the ASTM Committee on cigarette lighters to encourage them to address the issue through changes in the voluntary standard. (Staff could be directed to participate in the ASTM activity if initiated.)

(4) Do nothing.

* This alternative is not materially different than granting the petition.

Attachments

KOSAIR CHILDREN'S HOSPITAL
A service of NKC Hospitals Inc

Diane Denton, R.N.
Burn Prevention Program

P O Box 35070
Louisville KY 40232

(502) 562-8070

KOSAIR CHILDREN'S HOSPITAL
P O Box 35070 • Louisville, KY 40232
(502) 562-6000

April 29, 1985

Mr. Terrence M. Scanlon, Chairman
Consumer Product Safety Commission
1111 18th Street NW
Washington, D.C. 20207

Dear Mr. Scanlon;

I am enclosing a petition for the Safety Committee of the Consumer Product Safety Commission as instructed from our previous phone conversation in Feb. I have tried to present the problem of disposable lighters in as unbiased a manner as I can. Please pass this on to the committee for their consideration.

Sincerely,

Diane L. Denton, RN
Burn Prevention Education

RECEIVED
OFFICE OF THE
DIRECTOR
MAY 11 10 41 AM '85
COMMUNICATIONS SECTION

I, Diane Denton, RN Burn Prevention Educator for Kosair Children's Hospital, am petitioning the Safety Committee of Consumer Product Safety Commission regarding manufacturers of the disposable cigarette lighter to modify this product for safer usage.

As a burn nurse the past ten years I have had many occasions to care for children who have been burned due to fireplay. All of these cases are of course sad but over the past two years we are seeing younger children involved in this fireplay. Approximatley half of the children we see on our Burn Unit who have been burned by disposable lighters are four years and under. I have contacted Shriners' Burns Institute in Cinn., Ohio and they are seeing the same trend. I have included some supportive stats and information pertaining to this problem with this petition.

Locally our firefighters are finding very young children starting fires with disposable lighters. Within the city of Louisville in 1984 there were recorded 88 incidents of fires with children where matches or lighters were used. These incidents resulted in 8 injuries, 5 deaths and enormous monetary losses.

Although matches are still occasionally used lighters are the main offenders as more people use lighters today then matches.

Children between the ages of two to four love to imitate adults behavior and this is a normal part of their growth and development. This is one example of how their imitation can be deadly. Lighters also hold other attractions for small children; bright colors and size as they fit neatly into their small hands. The availability also must be considered but many parents report putting the lighters up and the child will still find it. I have enclosed a letter from a parent of one of our recent patients where this was the case.

Disposable lighters are a necessary tool today but could manufacturers require either more applied pressure to light them or a multiple step method similar to medicine tops and the anti-burn extension cords in use today.

Nationally our arson rates are growing and children are considered the main offenders in many areas of our nation. Locally some of our fires have been caused by very small children who were the arsonist. These children were in some cases too small to be aware of what they were doing. Besides the deaths and injuries we must then look at the financial lossess thru property, medical expenses and insurance.

Please give this petition your attention as the safety of children and others could be increased by such a small change to the product.

Submitted: April 29, 1985

1983 and 1984 Stats. Children or Adults Burned by children with disposable lighters

Kosair Children's Burn Unit, Louisville, Kentucky

Sex	Age	Total Body Surface Area Burned
F	36yrs.	10%
M	4yrs.	5%
F	5yrs.	2%
F	2yrs.	30%
F	10yrs.	20%
F	13mths.	29%
F	5yrs.	2%
M	4yrs.	5%
M	7mths.	58%
M	5yrs.	35%
M	9mths.	12%

Shriners Burns Institute, Cinn. Ohio

M	9yrs.	5%
M	14yrs.	23%
M	4yrs.	2%
F	14mths.	50%
M	4yrs.	5%
M	3yrs.	63%
M	3yrs.	19%
M	7yrs.	5%
M	8yrs.	11%
M	4mths.	2%
M	6yrs.	13%
M	6yrs.	24%
M	13yrs.	32%

April 13, 1985

To The Consumer Product
Safety Commission,

On March 29, 1985
my three 1/2 year old
daughter Heather climbed
to a shelf and got a
Butane lighter and caught
the front of her dress
in fire. She burned her
stomach, hands and
the top parts of her legs.

I just wished that
some one else would
ever have to go through
the pain and hell that
my child went through,
and the family went
through.

Thank you
Mrs [redacted]

From The Office Of The Chief

Wayne Young

Frankfort Fire Department

Fire Chief: (317) 654-4329

Office: (317) 654-7212

257 South Clay Street
Frankfort, Indiana 46041

April 15, 1985

Diane L. Denton R.N.
Kosair Children's Hospital
P.O. Box 35070
Louisville, KY. 40232

Dear Ms. Denton,

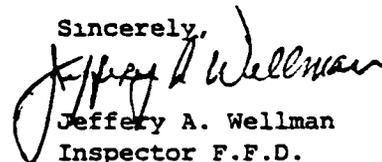
In reference to your inquiry in class on April 14, 1985, regarding fire's set by juveniles with butane lighters. Our files contain two such cases.

One case involves six young males ranging in age from four to nine, who on July 20, 1978, using a butane lighter set fire to a storage building at a local park. This fire caused approximately seven hundred dollars damage.

The second case being a three year old male who lit a bedspread in his home using a butane lighter, the resulting fire caused eighteen thousand, five hundred dollars in damage.

If desired I will be gald to forward any future information involving similiar incidents. Good luck with your petition.

Sincerely,


Jeffery A. Wellman
Inspector F.F.D.

JW/dj



B

Memorandum

TO : Dr. Leonard DeFiore, Executive Director DATE May 29, 1985
THROUGH: Sadye E. Dunn, Secretary *S. Dunn*

FROM : Daniel R. Levinson, General Counsel *DR*
Stephen Lemberg, Assistant General Counsel *SL*
Alan Shakin, Attorney, OGC *AS*

SUBJECT: Petition on disposable lighters *PP 85-2*

On May 3, 1985, the Commission received from Diane L. Denton, RN, the attached documents on the fire hazards presented by disposable (butane) cigarette lighters. Her submission should be docketed as a rulemaking petition under the Poison Prevention Packaging Act of 1970 (PPPA). In evaluating this petition, please note carefully the underlined advice in part 5 of this memo.

Ms. Denton has identified products within the Commission's jurisdiction, the lighters, and claimed that they are associated with burn injuries resulting from "fireplay" by children. She has cited as supporting evidence her own experience as a burn nurse, a letter from the mother of a child victim, statistics on children burned by the lighters, and a letter from the Frankfort (Indiana) Fire Department. Ms. Denton has asserted that the lighters are attractive to children who, imitating adults, use them to start fires. She has requested that disposable lighters be manufactured to "require either more applied pressure to light them or a multiple step method similar to medicine tops and the anti-burn extension cords in use today."

We find that Ms. Denton has met the requirements for petitions set forth at 16 CFR 1051.5(a). In particular, she has (1) requested a rule to make disposable lighters child-resistant and (2) provided facts in support of her claim that such a rule is necessary.

If the Commission were to grant the petition and propose a rule to make disposable lighters child-resistant, we believe that the PPPA procedures and criteria would be the most appropriate ones to use. (That is why we have directed docketing of the petition under the PPPA.) However, either the Federal Hazardous Substances Act (FHSA) or the Consumer Product Safety Act (CPSA) could alternatively be used as authority for issuing the requested regulation. Rather than fully discussing the potential applicability of the three statutes at this time, we will highlight some relevant points:

6 (b) CLEARED:

~~No Mfrs Identified~~
~~Excepted *Per. Authority*~~
~~Mfrs Notified *5/29/85*~~
Comments Processed *Per*

1. Under the PPPA, the Commission has regulatory authority to establish "standards for the special packaging of any household substance." 15 U.S.C. 1472(a). The butane in the lighters meets the PPPA definition of "household substance" and the lighter itself, as the immediate container of the butane, probably would be a "package" under the PPPA. 15 U.S.C. 1472(2) and (3).

2. "[S]pecial packaging" under the PPPA means "packaging that is designed or constructed to be significantly difficult for children under five years of age to open or obtain a toxic or harmful amount of the substance contained therein within a reasonable time and not difficult for normal adults to use properly, but does not mean packaging which all such children cannot open or obtain a toxic or harmful amount within a reasonable time." 15 U.S.C. 1471(4).

3. There is some question as to whether the PPPA could be properly used to regulate the flammability risk presented by disposable lighters to children:

a) The primary intent of the PPPA seems to concern the poisoning risk to children (as the name of the Act suggests). Nevertheless, the finding needed to issue a special packaging requirement involves the protection of children "from serious personal injury or serious illness resulting from handling, using, or ingesting" a household substance. 15 U.S.C. 1472(a)(1). This language indicates that the handling and use of a product, and not just its ingestion, are covered by the PPPA.

b) OGC's files contain a January 28, 1976 memo that considered this issue and concluded that "the weight of argument appears to support the proposition that special packaging standards may be established under the PPPA for a substance whose danger lies in its flammability." However, the memo recognizes the existence of arguments supporting the opposite result.

c) Since the PPPA is designed to protect children under five years of age, an important question would be whether the butane lighters are being misused by children in that age category. A special packaging requirement under the PPPA would not address misuse by children older than five.

The petition shows that some children under five have

been burned in lighter incidents, but those victims were not necessarily misusing the lighters themselves. If the Commission granted the petition, data on the ability of children under five to ignite the lighters would have to be obtained, along with any injury information on misuse of the lighters by such children.

4. Under the FHSA, the butane in the lighters would meet the definition of "hazardous substance." 15 U.S.C. 1261(f)(1)(A). Cigarette lighters containing butane are exempt from the labeling provisions otherwise applicable to "extremely flammable" household products.*/ 16 CFR 1500.83(a)(20). In order to issue a conditional ban of the lighters under the FHSA (such as a ban on any that do not meet specified child-resistance criteria), the Commission would have to find that cautionary labeling under the FHSA does not adequately protect the public. 15 U.S.C. 1261(q)(1)(B). Since the lighters are exempted from such cautionary labeling, this finding might prove difficult to make.

5. CPSA rulemaking authority could be used to issue the requested regulation if the risk from the lighters could not be sufficiently reduced under the PPPA or FHSA, or if the public interest supported use of the CPSA. 15 U.S.C. 2079(d).

Regardless of which statute would eventually be used, in the event that the Commission granted the petition, the staff's evaluation should focus on the merits of the petition's request for child-resistance requirements for disposable butane lighters. The staff should evaluate the information in the petition and any other information that is readily obtainable (i.e., "off-the-shelf" materials). If it is possible to do so from such information, the staff should include in its evaluation a discussion of any existing voluntary safety standards; the potential costs and potential benefits from regulation; and any other factors that the staff believes are appropriate.

*/ Because of this exemption, the lighters need not carry the statutorily-specified warning of "Keep out of the reach of children" (or its equivalent). 15 U.S.C. 1261(p)(1)(J). If child misuse is a safety problem, the Commission could consider modifying the exemption to require this warning on the lighters, whether or not child-resistant requirements are pursued.

Since the petition's request for child-resistance falls most directly within the PPPA, we set forth the regulatory criteria of that Act, for the staff's background information: Under the PPPA, any special packaging standard must be based on the finding that "the degree or nature of the hazard to children in the availability of [the household] substance, by reason of its packaging, is such that special packaging is required to protect children from serious personal injury or serious illness resulting from handling, using, or ingesting such substance; and...the special packaging to be required by such standard is technically feasible, practicable, and appropriate for such substance." 15 U.S.C. 1472(a). In establishing a special packaging standard, the Commission must consider "(1) the reasonableness of such standard; (2) available scientific, medical, and engineering data concerning special packaging and concerning childhood accidental ingestions, illness, and injury caused by household substances; (3) the manufacturing practices of industries affected by this Act; and (4) the nature and use of the household substance." 15 U.S.C. 1472(b).

If the staff has any questions about this petition, we will be happy to discuss them informally.

Attachments

cc: Fred Marozzi, HS
James Hoebel, OPM

37

Disposable Cigarette Lighter Study

Questions/Issues to be Addressed:

For children involved in a fire incident:

How did the child gain access to the lighter?

Who ignited the lighter?

How did the child light the lighter?

(From witnesses or questions probing prior incidents where the child gained access to and attempted to light a disposable lighter.)

Data Sources:

Primarily fire departments briefed on CPSC interest in cigarette lighter cases, supplemented by news reports. Using the metal chimney study model, CPSC residents would establish an informal case reporting network of about 75 fire departments.

National fire incident data (NFIRS) also needs to be examined in more detail for such aspects as the specific ages and per capita risk of the children most frequently involved, the materials most frequently ignited and, national estimates of fires and injuries.

Study Approach:

Once potential cases are identified, CPSC would screen each case via the telephone to make sure that it was in scope, i.e., involving a child starting a fire (with or without an injury) with a cigarette lighter. A questionnaire--not exceeding 15 minutes--would be administered of parents, guardians, or other adults knowledgeable about the incident. Basic information on the incident would be obtained, as well as information on prior behavior of the child with lighters.

An on-site investigation would be conducted, only if:

1. The person knowledgeable about prior behavior of child relative to lighters was available for interview (or)
2. A credible adult witness to the incident was available for interview and possible reenactment of the incident (and)
3. The product and relevant environment (contributing to the incident) was available to be photographed. A substitute lighter of the same brand/model could be used.

Our objective would be to accumulate 50 to 100 detailed reports on lighter incidents for epidemiological and human factors analysis.

Resources Required:

a) Staff Months

EPHA - 12

ESHF - 6

Field - 5

b) Time

Total elapsed time - 12 calendar months

UNITED STATES GOVERNMENT

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SAFETY COMMISSION
WASHINGTON, D.C. 20207

Memorandum RECEIVED

TO L. J. Sharman, Fire Programs Officer
Fire and Thermal Burn Hazards, OPM 31 A10:18

FROM Richard Kopanda, Director *R. Kopanda*
Budget and Operations Planning Division, EX-B

SUBJECT Cigarette Lighter Study

DATE 31 DEC 1985

The study recommended by the staff, which was excluded from the 1987 budget request, would require the rededication of 23 staff months. We feel it should be pointed out to the Commission that this will be very difficult to accomplish, given Gramm-Rudman cuts in both 1986 and 1987 and the probability of a lower President's request for 1987. The Commissioners may otherwise get the impression that this project could simply replace another project in the current 1986 operating plan or the budget proposal we sent to OMB.

26

Memorandum

JAN -3 1986

TO: James Sharman, Fire Programs Officer,
Fire and Thermal Burn Hazards, Office of Program Management

FROM: Andrew G. Ulsamer, Acting AED for Health Sciences AGU

SUBJECT: Cigarette Lighter

I have reviewed your memo of December 27, 1985, and have several problems with the approach embodied by the protocol for the cigarette lighter study.

In brief, it is unlikely that the protocol will produce the data needed to answer questions regarding the circumstances of the fire and ultimately of alternative packaging. It is not likely that an adult will witness the starting of the fire. Also, given the seriousness of the event, I believe that accurate answers are going to be difficult to obtain from the most likely witnesses-other young children.

It would seem more appropriate and less resource intensive to examine the existing body of cases to see if it can be determined that a child under 5 was the cause of the fire (e.g.-only victim, oldest victim, etc). Once this is established we could explore with industry the feasibility of developing fixes to lessen the likelihood of injury. These could include fixes relating to: 1) the flame reaching a combustible material or, 2) the child igniting the lighter. I believe that the former type of fix is probably preferable to the latter because attempts to childproof the lighter will probably make it more difficult for adults to use the product and not prevent all children from igniting the lighter. The present PPPA regulations allow up to 20% of children under five to open a safety closure and still have a product pass the test.

Finally, it is important to remember that no matter what is done with the lighter, we are not likely to cut fire deaths in half for children under 5 if for no other reason than the presence of matches in most households. Consumer education therefore becomes an important part of this effort and should deal with both lighters and matches.

CPSA 6 (A)(1) Cleared

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U.S. CONSUMER PRODUCT
SAFETY COMMISSION

Memorandum

DATE 16 DEC 1985

TO: Paul H. Rubin, AED, Economic Analysis

THROUGH: Warren J. Prunella, Director, ECCP *WJP*

FROM: Chuck Smith, ECCP *C.S.*

SUBJECT: Cigarette Lighters

A preliminary report on Petition PP 85-2 was prepared on November 8, 1985. The petition asks the Commission to establish a rule to make disposable cigarette lighters child resistant. This report is scheduled to be discussed at the December 16 AED meeting. As you requested, the following rough calculations have been made on the societal costs of fires started by children under 5 years old using disposable lighters.

According to Epidemiology, over the years 1980-1983 an average of 138 deaths per year resulted from fires started by children playing with lighters. Limited information is available on the percentage of incidents in which children under five years old lit the lighter; a survey of 96 newspaper clippings revealed that 70% of incidents in which the age of children that had access to lighters was reported (57) involved children under five. From this we might assume that about 100 deaths (all ages) result from fires started by children under five playing with lighters. If a value of life of one million dollars is used, annual societal costs from deaths resulting from children under five playing with lighters total about \$100 million.

Epidemiology also estimates that 2,250 burn injuries associated with lighters were treated in emergency rooms in 1984; of these, about one-fourth were to children under five. It is difficult to judge from this what percentage of injuries were from fires started by children under five; conceivably a large number of adult injuries are from fires started by children. For our rough calculations, let us assume that 1,000 injuries were from fires started by children under five. Injury costs for thermal burns (1984 data) were about \$20,000 to \$25,000 for hospitalized cases (including pain and suffering valued at about \$15,000); burns given outpatient treatment involved injury costs of \$7,000 to \$8,000 (including \$6,000 to \$7,000 for pain and suffering). Not knowing the percent of injuries that require hospitalization, let us assume average injury costs are \$15,000. Therefore, the petition potentially is addressing annual injury costs of about \$15 million.

Property losses from fires started by small children playing with lighters may also be significant; however, we only

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have estimates of losses for upholstered furniture fires ignited by children playing with matches and lighters. For 1983, Epidemiology reports that 2,200 furniture fires resulted in property damage of \$15 million. Epidemiology reports that overall, children playing with matches cause a few more deaths than children playing with lighters. Perhaps analysis of fire data will provide more information on property damage from fires started by lighters. For these calculations we may assume that perhaps \$7 million in property losses result from small children igniting upholstered furniture with lighters. Based on other estimates for furniture, total property losses may be about 2.5 times this amount, or about \$18 million annually.

Economic Analysis estimated that 500 million lighters were sold in 1983, most of which were disposable lighters that are being addressed by the petition. We do not know the percentage of deaths and injuries involving all lighters that are attributable to disposable lighters, but presumably it is very high.

Assuming lighter production is uniformly hazardous from the standpoint of ability of young children to light them, we can calculate the increased per unit retail costs for lighters addressing the hazard that would equal societal benefits in the form of reduced deaths and injuries. Assuming potential benefits totaling \$133 million might result from product changes, and annual production is 500 million units, the following calculations of per unit retail price increases that equal average per unit societal benefits are calculated:

- 27 cents, if 100% effective in reducing losses.
- 20 cents, if 75% effective.
- 13 cents, if 50% effective.

TS-1

UNITED STATES GOVERNMENT

U.S. CONSUMER PRODUCT
SAFETY COMMISSION
WASHINGTON, D.C. 20207

Memorandum

TO Commission
THROUGH: Sadye E. Dunn, ^{SD} Secretary DATE January 8, 1986

FROM Daniel R. Levinson, General Counsel
Stephen Lemberg, Assistant General Counsel
Alan Shakin, OGC

SUBJECT Cigarette Lighters VOTE SHEET

Attached is a briefing package concerning disposable cigarette lighters. The staff is recommending that the Commission authorize an analysis of the hazard that such lighters present to young children. A petition (PP 85-2) is pending on this subject, but the Commission is not being asked to consider its merits at this time.

Please indicate your vote on an analysis:

1. Authorize the analysis outlined at Tab 2 of the attached materials.

Alan A. Shank 2/5/86
(Signature) (Date)

2. Authorize a somewhat expanded analysis to include engineering and economics support.

(Signature) (Date)

3. Authorize a more limited analysis (e.g., see Health Sciences memo at Tab 3).

(Signature) (Date)

4. Do not authorize any analysis at this time.

(Signature) (Date)

5. Abstain/Other

(Signature) (Date)

Attachments