



United States
CONSUMER PRODUCT SAFETY COMMISSION
 Washington, D.C. 20207

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 JUL 20 1998

VOTE SHEET

DATE: JUL 15 1998

TO : The Commission
 Sadye E. Dunn, Secretary

FROM : Jeffrey S. Bromme, General Counsel *JSB*
 Stephen Lemberg, Asst. General Counsel *SL*
 Harleigh Ewell, Attorney, GCRA (Ext. 2217) *HE*

SUBJECT: Options for a Proposed Rule for Multi-Purpose (Utility) Lighters

This vote sheet concerns the staff's briefing package on a draft proposed rule for multi-purpose lighters (also known as utility lighters) to address the hazard of fires started by young children who operate such lighters. A draft notice of proposed rulemaking ("NPR") is at Tab A of the package for the Commission's consideration. Please indicate your vote on the following options.

- I. ISSUE A NPR FOR MULTI-PURPOSE LIGHTERS. Please check the relevant option(s) below.
- 1. APPROVE THE DRAFT FEDERAL REGISTER NOTICE (BRIEFING PACKAGE TAB A) WITHOUT CHANGE.
 - 2. PUBLISH THE DRAFT FEDERAL REGISTER NOTICE WITH CHANGES (please specify).
 - 3. OTHER (please specify).

 (Signature)

 (Date)

NOTE: This document has not been reviewed or accepted by the Commission.
 Initial SL Date 7/15/98

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 No Mfrs/PrvtLbrs or
 Products Identified
 Excepted by Rubio
 Notified

II. DO NOT ISSUE A NPR FOR MULTI-PURPOSE LIGHTERS.

(Signature)

(Date)

III. TAKE OTHER ACTION (please specify).

(Signature)

(Date)

Comments/Instructions:

BRIEFING PACKAGE
PROPOSED STANDARD FOR
MULTI-PURPOSE LIGHTERS

For Further Information Contact:

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EXECUTIVE SUMMARY

The U.S. Consumer Product Safety Commission (CPSC) initiated a rulemaking proceeding on multi-purpose lighters on January 16, 1997. In this briefing package, the CPSC staff recommends that the Commission publish a proposed safety standard to require multi-purpose lighters to be child-resistant. This standard is intended to reduce the risk of injury and death associated with fires started by children under age 5 playing with multi-purpose lighters. The staff believes that the proposed rule as drafted is the least burdensome requirement that adequately addresses the risk of injury.

Multi-purpose lighters are generally butane-filled lighters with extended nozzles from which the flames are emitted. They are commonly used to light charcoal and gas grills, pilot lights, camping stoves, candles, and similar objects. Due to different physical characteristics and different patterns of use, these lighters are a class of products separate from cigarette lighters. Therefore, the staff recommends that the Commission propose a new standard for multi-purpose lighters rather than amend the scope of the Safety Standard for Cigarette Lighters to include them.

The results of testing conducted by the staff indicate that existing multi-purpose lighters have a low level of child-resistance (4 to 41 percent) compared to the minimum level of child-resistance (85 percent) required for most cigarette lighters. The staff believes that a standard requiring child-resistance for multi-purpose lighters would have substantial net societal benefits of at least \$11.4 million annually. The net benefits will increase if, as expected, the sales of multi-purpose lighters increase.

The staff believes that a mandatory rule that requires multi-purpose lighters to be child-resistant would be the most effective way to address the risk of death and injury to consumers. There is no voluntary standard for multi-purpose lighters, and the development of voluntary requirements for child-resistance is unlikely. Members of ASTM Subcommittee F15.02 (Safety Standards for Cigarette Lighters) voted to support the Commission's action to develop a mandatory standard for multi-purpose lighters.

The staff provides a draft proposed rule which includes provisions that are essentially the same as the Safety Standard for Cigarette Lighters, including a required child-resistance of 85 percent, recordkeeping and reporting requirements for manufacturers, and anti-stockpiling provisions. The staff recommends an effective date of 12 months for any final rule



United States
CONSUMER PRODUCT SAFETY COMMISSION
Washington, D.C. 20207

JUL 15 1998

MEMORANDUM

TO : The Commission
Sadye E. Dunn, Secretary

THROUGH : Jeffrey S. Bromme, General Counsel *JS*
Pamela Gilbert, Executive Director *PG*

FROM : Ronald Medford, Assistant Executive Director *RM*
for Hazard Identification and Reduction
Barbara J. Jacobson, Project Manager for *BJJ*
Multi-Purpose Lighters, Directorate for Epidemiology
and Health Sciences (301) 504-0477 ext. 1206

SUBJECT : Draft Proposed Standard for Multi-Purpose Lighters

The U.S. Consumer Product Safety Commission (CPSC) staff recommends that the Commission publish a notice of proposed rulemaking (NPR), under the Consumer Product Safety Act (CPSA), to require multi-purpose lighters to be child-resistant.

Multi-purpose lighters are generally butane-filled lighters with extended nozzles from which the flames are emitted. They are commonly used to light charcoal and gas grills, pilot lights, camping stoves, candles and similar objects. Multi-purpose lighters are also referred to as utility lighters, grill lighters, fireplace lighters, or gas matches. These lighters are a class of products separate from cigarette lighters. Therefore, the staff recommends that the Commission propose a new standard for multi-purpose lighters rather than an amendment to the scope of 16 CFR 1210, Safety Standard for Cigarette Lighters.

This briefing package provides updated market and incident data, a report of the results of the baseline testing of multi-purpose lighters, and a discussion of the potential benefits and costs of a rule. The briefing package also provides the staff's analysis of comments received in response to the January 16, 1997, advance notice of proposed rulemaking (ANPR).

The next step in the rulemaking proceeding is a Commission decision on whether to publish a proposed rule intended to reduce the risk of injury and death associated with fires started by children under age 5 playing with multi-purpose lighters.

NOTE: This document has not been reviewed or accepted by the Commission.
Initial *RM* Date *7/15/98*

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No Mfrs/PrvtLbrs or
Products Identified
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The staff provides a draft Federal Register notice at TAB A. The draft proposed rule includes labeling, testing, recordkeeping, reporting, certification, and anti-stockpiling requirements for manufacturers and importers of multi-purpose lighters.

I. Background

In February 1996, Judy L. Carr petitioned the Commission to “initiate Rulemaking Proceedings to amend 16 CFR 1210 Safety Standard for Cigarette Lighters to include the Scripto Aim ‘n Flame™ disposable butane ‘multi-purpose’ lighter within the scope of that standard and its child resistant performance requirements”.

On May 7, 1996, the Commission published a Federal Register notice soliciting comments on issues raised by the petition, including market information, incident data, ways multi-purpose lighters could be modified to be child-resistant, and potential costs and benefits of requiring them to be child-resistant. The comment period closed on July 8, 1996.

On January 16, 1997, the Commission published an ANPR soliciting comments on the risks of injury and death associated with multi-purpose lighters, regulatory alternatives, and the economic impacts of the various regulatory alternatives. The Commission also invited interested persons to submit an existing standard, or a statement of intent to modify or develop a voluntary standard, to address the identified risks. The ANPR comment period closed on March 17, 1997.

On January 8, 1998, the Commission published a Federal Register notice extending the period for issuing a notice of proposed rulemaking until September 30, 1998. This extension was required so the staff could complete the technical work necessary for a Commission decision on whether to issue a proposed rule.

II. Discussion

A. Product and Market Information (Refer to Staff Memorandum at TAB B)

1. The Product

Multi-purpose lighters are generally butane-filled lighters with extended nozzles from which the flames are emitted. Typically the nozzles are 4 to 8 inches long, but some have nozzles of 18 inches or longer. On certain lighters, the nozzle is flexible. The long nozzle allows the user to reach hard-to-light places and it also keeps the user's hand away from the flames. Multi-purpose lighters can be either refillable or non-refillable. The lighters are activated by applying pressure to a trigger, button, or sliding mechanism, which initiates fuel flow and causes a spark. When the

lighter is activated, the fuel travels the length of the nozzle, where it is ignited by a spark generated at the end of the nozzle. Typically, a single spark is produced with each operation.

Multi-purpose lighters are most commonly used to light charcoal or gas grills and fireplaces. They are also used to light candles, campfires, camp stoves, gas ranges, and pilot lights in household gas appliances. Most multi-purpose lighters now sold include a slider-type on/off switch. The switch must be turned to the unlocked position ("on") in order to operate the lighter.

Retail prices for multi-purpose lighters begin at less than \$2.50, and most sell for less than \$8.00. However, some high-end multi-purpose lighters retail for \$20 to \$40 or more. The high-end lighters represent less than one percent of the market.

BIC Corporation (BIC) introduced a multi-purpose lighter in March of 1998. The staff has observed this lighter retailing for between \$3.49 and \$5.49. BIC reports that the lighter is child-resistant as defined in the Safety Standard for Cigarette Lighters (TAB C). The entry of the BIC lighter into the market confirms that it is feasible to design and manufacture child-resistant multi-purpose lighters at a reasonable cost.

Another manufacturer, ZELCO, is marketing a high-end multi-purpose lighter with a flexible nozzle for about \$25 that has features designed to be child-resistant, but the lighter has not been tested according to the protocol in the Safety Standard for Cigarette Lighters.

2. Manufacturers

There may be as many as 15 manufacturers and as many as 15 importers and private labelers of multi-purpose lighters. The manufacturer with the largest market share, around 90 percent, is Scripto-Tokai, (Aim 'n Flame™ brand). Some of the other manufacturers and importers include BIC, Swedish Match, Calico, and Flamagas.

Scripto, BIC, Swedish Match, and Calico are members of the Lighter Association, Inc., a trade association located in Washington, D.C. Together, the Lighter Association member companies represent about 95 percent of the market share for multi-purpose lighters.

3. Sales

Multi-purpose lighters were introduced to the U.S. market in 1985, and about 1 million units were sold in the first year. Since 1985, sales have risen steadily. Scripto-Tokai and the Lighter Association, Inc., estimated total industry sales in excess of 100 million units since the product's introduction. These industry sources expect sales of multi-purpose lighters to increase, at the rate of 5-10 percent annually, for the foreseeable future. For 1998, sales are projected at 20 million units.

4. Lighters Available for Use

The useful life of multi-purpose lighters depends on how frequently they are used. If used in everyday applications, the useful life would be similar to that of a disposable butane lighter (i.e., less than one year). If used seasonally or occasionally, the useful life would be longer than one year.

While as many as 20 million lighters were sold in 1997 a study conducted by Information Resources, Inc., for BIC indicated that fewer than 8 million U.S. households purchased a multi-purpose lighter between October 1996 and October 1997. This suggests that most multi-purpose lighters have a useful life of less than one year, and/or that a large proportion of households that have multi-purpose lighters use more than one lighter over the course of a year.

B. Fire Incidents Involving Multi-Purpose Lighters (Refer to Staff Memorandum at TAB D)

In 1995, the most recent year for which national fire loss estimates are available, there were an estimated 8,200 residential structure fires caused by children, of all ages, playing with lighters. These fires resulted in 180 deaths and 1,220 injuries.

National fire loss estimates are based on National Fire Incident Reporting System (NFIRS) data. These data do not specify the type of lighter involved in the fire (e.g., cigarette or multi-purpose), or the age of the child who started the fire. However, the staff is currently conducting a study to evaluate the effectiveness of the Safety Standard for Cigarette Lighters that will provide this type of information.

The 1998 NFIRS data covering the study period are not expected to be available until 2000 due to the time lag involved in local jurisdictions forwarding data to the U.S. Fire Administration. At that time, the staff will be able to apply the results of the Cigarette Lighter Evaluation Study to the NFIRS data in order to provide national estimates of incidents involving multi-purpose lighters.

Lacking national fire loss estimates for multi-purpose lighters, CPSC data bases were searched to identify fires caused by children playing with multi-purpose lighters. Data sources included consumer complaints, newspaper clippings, hospital emergency room-treated injuries, fire department reports, and investigation reports. Also included are incident reports from the Cigarette Lighter Evaluation Study and incidents submitted with public comments on the January 16, 1997, advance notice of proposed rulemaking.

The staff identified a total of 220 fires from January 1988 to the present reportedly started by children playing with multi-purpose lighters. These fires resulted in a total of 39 deaths and 81 injuries. For the incidents where age of the fire starter was known, children under age 5 ignited 158 fires (76%). These 158 fires resulted in 23 deaths and 58 injuries. Children age 5 and older ignited 51 fires that resulted in 16 deaths and 16 injuries. An additional 11 fires that resulted in 7 injuries were described as being caused by child play, but the ages of the children who ignited the fires were not cited.

For the fires ignited by children under age 5, 19 of the 23 reported fatalities were children under age 15. Sixteen were under age 5; 3 were between the ages of 5 and 14. Eleven of the children who died had started the fires. Five children who died were siblings of the fire starters. Three of the four adults were mothers of the children who started the fires.

For the fires caused by children under age 5, 14 of the 58 people who were injured required hospitalization. Three children received burns over 70 percent or more of their bodies, burns that will require extensive long-term treatment. One 10-month-old child, burned over 80-90 percent of his body, lost all of his toes and most of his fingers. Others who were injured but not hospitalized, were treated for burns, smoke inhalation, or lacerations.

In addition to the fatalities and injuries, most fires also resulted in property damage. Thirty-one of the 158 reports cited property damage of \$50,000 or more.

Of the 158 fires started by children under age 5, 129 (82%) of the children were either age 3 or 4. Three children were under age 2, indicating that even some very young children are capable of operating multi-purpose lighters.

The product brand name of the lighter involved was reported in 72 incidents. Of these, 66 (92%) involved lighters manufactured by one company. There were five other brands identified in the remaining six incidents.

The high proportion of deaths of children under age 5, and the severity of the injuries illustrate the hazard associated with children playing with multi-purpose lighters. Nationally, 39 percent of the estimated 780 children under age 5 who died in

home fires annually between 1991 and 1995, were in fires started by a child playing, usually with lighters or matches. The data reported by the staff indicate that children playing with multi-purpose lighters have become a part of this problem. Because these data are frequency counts of incidents reported to CPSC rather than national estimates, the staff considers them a conservative indication of the extent of the total problem.

C. Baseline Testing of Multi-Purpose Lighters

CPSC contractors conducted "baseline" testing of five different models of multi-purpose lighters using the test protocol for cigarette lighters (at 16 CFR section 1210.4.) Three of the lighters have triggers, one has a pushbutton, and one has a squeeze handle. Except for the model with the squeeze handle, all of the lighters have an "on/off" switch.

The results of the baseline testing establish the level of child-resistance of multi-purpose lighters that are currently on the market. The lighters tested were not designed to be child-resistant. The staff used the results of the baseline testing to calculate the potential benefits of a rule for multi-purpose lighters, as discussed in the Preliminary Regulatory Analysis at Tab B.

The test protocol requires panels of 100-200 children to determine the child-resistance of lighters. The test is conducted with pairs of children using unfueled surrogate lighters. A surrogate lighter produces a signal instead of a flame when the lighter is operated. CPSC staff engineers designed and built the battery-operated surrogate lighters used for the baseline testing. After the lighters were equipped with surrogate systems, the engineering staff verified that the operational forces were the same as the forces in the actual production lighters.

The testers began each test by demonstrating the signal without showing the children how the lighter operated. The children were allowed 5 minutes to try to operate the lighter. At the end of the first 5 minutes, the tester demonstrated the operation of each child's lighter to unsuccessful children. This visual demonstration, with no verbal description of how the lighter operated, was followed by another 5-minute test period.

The following table summarizes the results of the baseline testing. For a frame of reference, the standard for cigarette lighters requires a minimum child-resistance of 85 percent. The child-resistance of the multi-purpose lighters tested ranged from 4 to 41 per cent.

BASELINE TEST RESULTS		
Lighter	Successful Operations	Child-Resistance
TEST 1 Model A - Trigger without surrogate system	63/100	37%
TEST 2 Model A - Trigger	66/100	34%
TEST 3 Model B - Pushbutton	63/100	37%
TEST 4 Model C - Trigger	76/100	24%
TEST 5 Model D - Trigger	59/100	41%
TEST 6 Model D - Trigger switch unlocked ("on")	88/100	12%
TEST 7 Model E - Squeeze Handle (no switch)	96/100	4%

The test protocol in the Safety Standard for Cigarette Lighters allows unfueled production lighters with distinct operating sounds to be tested without surrogate lighter systems. However, the staff used surrogate lighters for the baseline testing to provide further assurance that the testers would accurately determine when the children operated the lighters. For Model A, testing was conducted both without (Test 1) and with (Test 2) a surrogate system. The results for these two tests were comparable. The staff believes these results confirm our experience with cigarette lighters that a distinct sound can be relied on to indicate a successful operation.

In Tests 1 through 5, the testers gave the lighters to the children with the switch in the locked position ("off") at the beginning of the test. Children who successfully operated these lighters turned the switch "on" and pulled the trigger.

In Test 6, Model D was retested with the lighters provided to the children with the switch in the unlocked ("on") position. Almost 90 percent of the children were able to operate this lighter.

In Test 7, Model E did not have an "on/off" switch. Over 95 percent of the children were able to operate this lighter.

D. Preliminary Regulatory Analysis
(Refer to Staff Memorandum at TAB B)

A preliminary regulatory analysis is required by section 9(f)(2) of the Consumer Product Safety Act. The regulatory analysis estimates the potential benefits and costs of the rule and alternatives. Consideration is given to the affect of the rule on both consumers and on small businesses.

1. Societal Costs of Fires

Based on available fire incident information for 1995-1997, the estimated societal costs of fires started by children under 5 playing with multi-purpose lighters were approximately \$98 million. The staff analysis is limited to this 3-year period because the data available for other years is less complete. In addition to the costs associated with loss of life, the estimate includes the costs of medical treatment, lost income, pain and suffering, and property damage.

During 1995-1997, an estimated 54 million multi-purpose lighters were sold and available for use. Therefore, the societal costs of the fires were about \$1.82 per lighter sold (i.e., \$98 million divided by 54 million lighters). This societal cost is likely to be an underestimate because it is based on known fires only rather than on national estimates.

2. Potential Societal Benefits

A safety standard for multi-purpose lighters is expected to reduce the societal costs by at least 75 percent. This is based on a 41 percent baseline child-resistance of multi-purpose lighters and an 85 percent acceptance criterion $(0.85-0.41)/(1.0-.41)=0.75$. Therefore, the expected gross benefit of a standard is at least \$1.37 per lighter sold. $(1.82 \times .75 = 1.37)$.

3. Potential Net Benefits

Based on discussions with manufacturers, the staff estimates that a standard may increase the cost of manufacturing multi-purpose lighters by about \$0.40. Assuming a 100 per cent mark-up, which is within the range of known markups in this industry, retail prices may increase by an average of about \$0.80 per lighter. Therefore, based on known incidents alone, the estimated net benefit (benefits minus costs) to consumers is expected to be about \$0.57 per lighter sold ($\$1.37 - .80 = .57$).

Based on sales of approximately 20 million units of complying lighters per year, this per-lighter annual net benefit would translate into societal savings of about \$11.4 million annually ($20 \times .57 = 11.4$). This annual net benefit will increase if, as expected, sales of multi-purpose lighters increase.

This estimate of net benefits is conservative for two reasons. First, it is based on known incidents rather than national estimates. And second, it is based on the test results for the model of multi-purpose lighter with the highest level of baseline child-resistance (41 per cent) for the tests conducted with the switch in the "locked" position. The child-resistance of the other three models tested with the switch in the "locked" position ranged from 24 percent to 37 percent.

Most of the children on the test panel were able to operate the model with no "on/off" switch (96 percent) and the model with the switch in the "unlocked" position (88 percent). This means that a child-resistant mechanism would provide an even greater benefit for designs with no "on/off" switch and for situations where adults don't return the switch to the locked position after use.

4. Alternatives

Alternatives for consideration by the Commission include deferring to a voluntary standard or requiring additional labeling to warn consumers of the potential hazards associated with children playing with multi-purpose lighters.

There is no voluntary standard for multi-purpose lighters, and, the development of voluntary requirements for child-resistance is unlikely. Members of ASTM Subcommittee F15.02 (Safety Standards for Cigarette Lighters) voted to support the Commission action to develop a mandatory standard for multi-purpose lighters.

The Commission could choose to promulgate labeling requirements to attempt to address the risk of child-play fires associated with multi-purpose lighters. However, the Federal Hazardous Substances Act already requires multi-purpose

lighters to be labeled "Keep out of the reach of children." The effectiveness of additional labeling is difficult to quantify but would not be expected to provide substantially greater benefits.

The staff discusses these and other alternatives in detail in TAB B. The staff concludes that the greatest net benefits would be provided by a rule requiring a high level of child-resistance.

5. Impact on Small Business

The Commission gives special consideration to the potential impact of rules on small businesses. There may be about 30 manufacturers, importers, or private labelers of multi-purpose lighters. Although the dominant firms are big, some of the firms may be considered small businesses. The staff believes that the smaller importers and private labelers are distributors of lighters manufactured in other countries. The manufacturers, rather than the distributors, will bear most of the costs for development of child-resistant models. Moreover, the currently available information indicates that multi-purpose lighters account for only a small percentage of the overall sales of the small businesses. A small importer or private labeler will not likely suffer a significant adverse effect even if it stops importing or distributing its own line of multi-purpose lighters.

6. Impact on Consumers

Aside from increased safety, a rule is likely to affect consumers in two ways. First, the increased cost for producing the child-resistant models will result in higher retail prices for multi-purpose lighters. However, the staff has observed that the BIC child-resistant lighter retails within the range of current retail prices for non-child-resistant multi-purpose lighters.

Second, it is also possible that the utility of the product will be decreased if the child-resistant features make the lighters more difficult to operate. This could result in some consumers switching to substitute products, such as cigarette lighters or matches.

The staff believes that manufacturers are capable of designing child-resistant multi-purpose lighters that offer minimal inconvenience to consumers. Therefore, the staff does not believe that a substantial number of consumers would switch as a result of a rule requiring multi-purpose lighters to be child-resistant.

E. Preliminary Environmental Assessment

Pursuant to the National Environmental Policy Act, the Commission is required to consider the potential effects of a rule on the environment. Less than one percent of non child-resistant multi-purpose lighters sold in this country are manufactured domestically. The staff does not expect a rule to cause manufacturers to shift production locations. A rule is not expected to significantly alter the amount of materials, energy, or waste generated during production of child-resistant multi-purpose lighters. There are no disposal issues since a rule would not result in a recall of existing, non-child-resistant lighters.

The staff concludes that a rule would not affect raw material usage, air or water quality, manufacturing processes, or disposal practices in a way that would significantly impact the environment.

F. Initial Regulatory Flexibility Analysis

(Refer to Staff Memorandum at TAB E)

TAB E provides the preliminary regulatory flexibility analysis required by section 604 of the Regulatory Flexibility Act. This analysis discusses the potential economic impact of a rule and various alternatives on small importers of multi-lighters.

These alternatives include taking no action, requiring additional labeling only, and exempting more expensive multi-purpose lighters from the scope of a rule. The staff rejected these alternatives since they reduce the potential net benefits to society.

The staff also considered and rejected an alternative that would have increased the burden on some small manufacturers. This alternative would have expanded the scope of the draft proposed rule to include devices that are intended, or marketed, primarily for activities such as soldering, brazing, or welding.

The staff believes a rule as drafted would maximize the potential net benefits to consumers and minimize the potential adverse impacts on industry, including small importers.

G. Discussion of ANPR Comments

(Refer to Staff Memoranda at TABS F through J)

The public comment period on the ANPR closed on March 17, 1997. The Commission received nine written comments. Three written comments received before the ANPR was published, but not addressed previously, are also discussed in this package. Copies of all written comments are available from the Office of the Secretary.

The President of the Ohio Chapter of the International Association of Arson Investigators Inc., and the President of the National Association of Pediatric Nurse Associates and Practitioners, Inc., wrote in support of the Commission's action to require multi-purpose lighters to be child-resistant.

Conrad Guthrie of Vinson & Elkins, the petitioner's attorneys, Mark W. Collmer, of McDowell Collmer, L.L.P., and D. Bruce Kehoe of Wilson, Kehoe & Winingham submitted information about incidents to support the Commission's rulemaking proceeding. Carrie Craig wrote a letter describing her experience when her home burned down after her 3-year-old daughter started a fire with a multi-purpose lighter she found on the fireplace mantle.

Scripto-Tokai Corporation (Scripto) and Swedish Match North America Inc., (Swedish Match), importers of multi-purpose lighters, submitted comments. Scripto stated that during the past twelve years they have distributed approximately 100,000,000 multi-purpose lighters and have received only about two dozen reports of children allegedly operating a multi-purpose lighter. Scripto commented that most of the incidents did not involve any claim of personal injury. Swedish Match reported they have sold several million multi-purpose lighters since 1992 and never had a single report of any child-play incident.

Scripto, Swedish Match, and the Lighter Association, Inc., request that any requirement for child-resistance be developed as a separate standard from the Safety Standard for Cigarette Lighters because multi-purpose lighters are a separate class of products from cigarette lighters. The staff agrees with this recommendation.

Refer to TABS F through J for a detailed discussion of all comments received. A summary of the most significant issues raised by the commenters and a summary of the staff responses are provided below.

1. Issue: Risk of Injury

The President of the National Association of Pediatric Nurse Associates & Practitioners, Inc., states that multi-purpose lighters which can be operated by children under the age of 5 pose an unreasonably dangerous risk to children and their families.

Scripto questioned whether multi-purpose lighters present an unreasonable risk of serious injury or death to consumers. Scripto stated that there would be a far greater societal benefit in regulating matches than in regulating multi-purpose lighters.

Response:

At this time the staff is aware of enough fires, injuries, and deaths associated with these products to preliminarily conclude that the recommended rule would address an unreasonable risk. Matches present different feasibility and cost-benefit issues.

There are no data currently available to compare the per-unit risk associated with multi-purpose lighters with any other flame source including matches. As expected, there are many more child play incidents involving matches because of the larger number of matches in use. A 1991 CPSC report, "Lighters and Matches: An Assessment of Risks Associated with Household Ownership and Use," cited an estimated 1.1 billion books or boxes of matches present in households at that time. Even at current projected sales estimates of 20 million multi-purpose lighters for 1998, the difference in the numbers available for use between the two products is significant.

2. Issue: Effectiveness of the Cigarette Lighter Standard

The Lighter Association, Inc., Scripto, and Swedish Match commented that the Commission should defer a decision about requiring multi-purpose lighters to be child-resistant until there is evidence that the Safety Standard for Cigarette Lighters has effectively addressed the incidence of child-play fires started with cigarette lighters.

Response:

The staff does not believe that the Commission should defer a decision about publishing a proposed standard. To do so would allow the deaths and injuries associated with child-play with this product to continue unabated.

The Commission's experience with the PPPA provides ample evidence that requiring a product to be child-resistant effectively reduces the risk of injury. An article published in the June 5, 1996, Journal of the American Medical Association, "The Safety Effects of Child-Resistant Packaging for Oral Prescription Drugs," demonstrates that child-resistant packaging has reduced childhood poisonings from oral prescription drugs for children under age 5 by about 45 percent since 1974, the year these drugs became subject to the packaging requirements. The staff believes the child-resistant concept used under the PPPA is applicable to requiring child-resistant features on cigarette and multi-purpose lighters.

Additionally, estimates of fire and injury losses for lighters are lower for 1995 than for any of the four preceding years. Comparing 1995 to 1994, when the Safety Standard for Cigarette Lighters went into effect, there was a greater reduction in child-play lighter fires (23 percent) than in residential structure fires overall (6 percent). This could be the first indication that child-resistant cigarette lighters help prevent child-play

fires. However, there was also a 15 percent reduction in child-play fires started with matches between 1994 and 1995, indicating that other factors, such as general fire prevention efforts, may explain these results.

More comprehensive information regarding the effectiveness of the cigarette lighter standard will be available when the staff completes its analysis of the results of the Cigarette Lighter Evaluation Study in 2000. This special study will provide information about the specific types of lighters involved in child play fires (e.g., cigarette lighter, multi-purpose) and will also identify the proportion of fires started by children under 5 years old (the group of children afforded the most protection by child-resistance). For the reasons stated above, the staff believes that the results of the study will show that the cigarette lighter standard is effective.

3. Issue: False Sense of Security

The Lighter Association, Inc., and Scripto question whether the 1994 fire incident data, showing an increase in child play fires involving cigarette lighters, indicate that smokers are becoming more careless in storing child-resistant lighters away from children because they assume "child-resistant" means "child-proof."

Response:

To our knowledge, no data are available on changes in the ways child-resistant cigarette lighters are stored. Additionally, the staff believes that the 1994 fire loss estimates are too near the July 1994, effective date to provide a measure of the effectiveness of the Safety Standard for Cigarette Lighters. More comprehensive information regarding the overall effectiveness of the standard will be available when the staff completes its analysis of the results of the Cigarette Lighter Evaluation Study in 2000.

4. Issue: Voluntary Standards

The Lighter Association, Inc., states the ANPR ignores voluntary standards, education, and labeling, in favor of a position that product design is the most effective approach to address a hazard.

Response:

The ANPR specifically invited interested persons to submit an existing standard, or a statement of intent to modify or develop a voluntary standard, to address the risks of injury and death associated with multi-purpose lighters. The ANPR also solicited comments on other possible means to effectively address the hazard.

At an April 16, 1998, meeting of ASTM Subcommittee F15.02, Safety Standards for Cigarette Lighters, the members voted to support the Commission's action to develop a mandatory standard for multi-purpose lighters. Manufacturers whose multi-purpose lighters comprise a major share of the market are members of this Subcommittee. The members also voted to form a technical task group for the purpose of providing input to the staff on the provisions of a mandatory standard. Based on these actions, the staff does not expect a voluntary standard to be developed.

5. Issue: Scope

Swedish Match urges the Commission to determine whether the child-play problem is associated with one lighter brand rather than with all multi-purpose lighters.

Response:

Although the large majority of the reported fire incidents involved lighters manufactured by one company, this is to be expected since that company has about 90 percent of the market. However, there were also five other brands identified in the fire incident data. In addition, the results of the baseline testing of five different models of multi-purpose lighters demonstrate that the majority of the children on the test panels were able to operate them, a range of child-resistance of 4 to 41 percent, in contrast to the minimum requirement of 85 percent in the Safety Standard for Cigarette Lighters.

6. Issue: Requirements for Multi-Purpose Lighters may Create New Hazards

Scripto, the Lighter Association, Inc., and Swedish Match expressed concern that a reset requirement for the child-resistant mechanism could create the potential for flashback explosions in situations such as igniting a gas grill. They state that environmental factors such as wind, low temperature, altitude or moisture can affect the consumer's ability to ignite a multi-purpose lighter.

Response:

The staff acknowledges that multi-purpose lighters often require more than one attempt to ignite. This is due, in large part, to the fact that the fuel may not reach the end of the lighter nozzle at the same time the spark is generated. Therefore, multiple trigger operations, i.e. multiple sparks, may be required in order to achieve ignition. Also, wind and other factors can affect lighting efficiency.

Staff in the Division of Engineering (LSE) conducted testing using three different gas grills. Results of testing indicate that there is a risk of flame-up or small explosion for some grills if ignition is delayed, particularly if the gas is allowed to build up with

the grill cover closed. The potential for injury from flame-up or small explosion for the grills tested would be minimal for short periods of delayed ignition such as 5 or 10 seconds. The staff believes that the potential for injury could increase as the period of delayed ignition increases, depending on a number of factors, including the size and construction of the grill, the rate of gas flow, and the air flow around the grill. However, any likelihood of flame-up or small explosion could be eliminated by igniting the match, cigarette lighter, or multi-purpose lighter prior to turning on the gas.

The staff noted that the grills used in the testing have instructions that warn the consumer to light the grill with the cover open. The instructions also advise the consumer to turn off the gas and allow residual gas to escape if the grill doesn't ignite after several attempts with the grill's piezo igniter. This would also apply to other ignition sources such as matches, cigarette lighters, and multi-purpose lighters.

To address the possibility of creating a hazardous use condition, the staff drafted the requirements of the proposed standard to allow multiple operation attempts of multi-purpose lighters before the child-resistant feature resets. With this provision, the lighting efficiency of child-resistant multi-purpose lighters should be essentially the same as for the non-child-resistant multi-purpose lighters currently in use. The current BIC child-resistant multi-purpose lighter design allows an unlimited number of operation attempts before the child-resistant feature resets. In conclusion, the staff does not agree that child-resistant multi-purpose lighters would be any more hazardous than other grill ignition sources.

7. Issue: Economic Issues

The Lighter Association, Inc., Scripto, and Cricket commented on economic issues associated with a standard for multi-purpose lighters.

a. Market Impact

Swedish Match expressed concerns about the potential adverse impact a rule would have on competition.

Response:

It is possible that some firms with a marginal position in the multi-purpose lighter market may react to a standard by exiting the market. However, if this occurs, there should not be a significant adverse impact on competition. One firm has already entered the market with a child-resistant multi-purpose lighter, and at least one other firm is developing one. Furthermore, the staff believes that, as the market expands, the degree of competition in the market will increase if, as expected, sales of multi-purpose lighters increase.

b. Estimates of Costs and Benefits

The Lighter Association, Inc., and Scripto stated that the staff underestimated the costs of modifying multi-purpose lighters to make them child-resistant.

Response:

The Lighter Association, Inc., estimated that it would cost \$.25 to \$.75 per unit to modify multi-purpose lighters. Discussions with manufacturers led the staff to believe that the high end of the range, \$.75, was based on making design modifications that would improve the lighting efficiency of multi-purpose lighters as well adding a child-resistant feature. However, the draft proposed rule does not contain a requirement for lighting efficiency. For this reason, the staff believes that a cost estimate of \$.25 to \$.40 per unit is more reasonable.

The staff does not believe that manufacturers will need to improve the lighting efficiency of their multi-purpose lighters in order to comply with a rule as drafted. The staff has made accommodation for this by drafting the proposed rule to allow for multiple operation attempts before the child-resistant feature resets.

8. Issue: Technology for Modifying Multi-Purpose Lighters

The Lighter Association, Inc., and Scripto-Tokai commented that the technology for multi-purpose lighters requires that the lighters be completely redesigned. This involves research and development costs, investment in new equipment or retooling of existing equipment, testing, and other evaluations of the product.

Response:

The staff is aware that manufacturers will incur costs to develop and test new designs, as well as to retool their plants for production. Based on the best information currently available, the staff has attempted to account for these costs in the preliminary regulatory analysis. The staff will include updated cost information in any future analysis.

9. Issue: Enforcement of the Safety Standard for Cigarette Lighters

The Lighter Association, Inc., Scripto, and Swedish Match commented that new requirements for multi-purpose lighters should not be promulgated until the Commission can assure full compliance with the Safety Standard for Cigarette Lighters. The industry comments that consumer complaints about child-resistant lighters have resulted in some importers devising ways to evade the rule. They

criticize the Commission for not taking stronger action to prevent companies from marketing tools designed to permanently remove the child-resistant feature from cigarette lighters. One commenter suggested that the Commission support international adoption of lighter standards to minimize evasion of the requirements.

Response:

The Commission and the U.S. Customs Service have taken vigorous action against firms that do not comply with the standard. While the staff is aware that some importers and distributors of lighters have taken actions to circumvent the intent and purposes of the standard, their overall numbers have been small.

The staff believes that the demand for tools to remove the child-resistant feature from cigarette lighters has declined, since many companies have improved their child-resistant designs, making them easier for consumers to use.

The staff supports the adoption of international standards for multi-purpose lighters and agrees that such standards could reduce the likelihood of evasion of requirements in the United States.

**H. The Draft Proposed Safety Standard for Multi-Purpose (Utility) Lighters
(Draft Proposed Standard at TAB A)**

1. Scope and Definition

Products subject to the draft proposed standard are hand-held, self-igniting, flame-producing products that operate on fuel and are used by consumers to ignite items such as candles, fuel for fireplaces, charcoal or gas-fired grills, camp fires, camp stoves, lanterns, fuel-fired appliances or devices, or pilot lights. Excluded are devices that are intended primarily for igniting smoking materials, devices that contain more than 10 oz. of fuel, and matches.

Also excluded are devices intended, or marketed, primarily for activities such as soldering, brazing, or welding. These products are sometimes called micro-torches or mini-torches because they produce high temperature (2,400°F) flames suitable for these purposes. The staff is aware of only one incident involving a micro-torch and there were no injuries. A determination of whether a certain micro-torch or similar product meets the definition of a multi-purpose lighter would be based on a number of factors. These factors include the lighter's physical characteristics, such as nozzle length and flame temperature, and the primary uses the lighter is marketed for.

In contrast to the Safety Standard for Cigarette Lighters, all refillable and non-refillable utility lighters are covered, regardless of their cost. The baseline testing showed that 63 out of 100 children (63 percent) were able to operate a seemingly unwieldy \$40.00 lighter with a very long handle and an 18-inch flexible nozzle. This is a child-resistance of 37 percent.

2. Acceptance Criterion and Performance Requirements

Other provisions of the draft standard are essentially the same as the Safety Standard for Cigarette Lighters, including a required child-resistance of 85 percent. The provision regarding reset of the child-resistant mechanism has been modified to allow multiple operation attempts before the child-resistant mechanism resets when it is released. This minimizes the possibility of creating a hazardous use condition. The test protocol for evaluating the child-resistance of multi-purpose lighters is the same, although there are some wording changes for clarification of original intent.

3. Recordkeeping and Reporting Requirements

The draft standard has recordkeeping and reporting requirements that will allow the staff to ensure that lighters comply. The draft standard also requires manufacturers and importers to provide a certificate of compliance to any distributor or retailer to whom the lighters are delivered.

4. Anti-stockpiling Provisions

Anti-stockpiling provisions are designed to prevent the importation or manufacture of excessive numbers of noncomplying lighters between publication of the final rule and the effective date. The definition of base period for the anti-stockpiling provisions has been changed to "the most recent calendar year" rather than the "any 1-year period during the 5-year period" prior to publication of the final rule provided in the cigarette lighter rule. The Technical Task Group of ASTM F15.02 agrees with this change. The U.S. Customs Service keeps its records by calendar year, and it is more practical for the Commission to obtain data on imports for the most recent year. The Technical Task Group also suggested that importers be required to provide the Commission with documentation of importation numbers for both the baseline period and the anti-stockpiling period. These requirements will assist the Commission in enforcing the anti-stockpiling provisions.

5. Effective Date

The draft proposed rule includes a 12-month effective date. Based on the experience with the Safety Standard for Cigarette Lighters, this would provide firms with sufficient time to design child-resistant multi-purpose lighters and bring them to market.

III. Options

A. Publish a Proposed Rule to Require Multi-Purpose Lighters to be Child-Resistant

If the Commission determines that multi-purpose lighters may present an unreasonable risk of injury because children under the age of 5 can use them to start fires, and that mandatory action is required to address this risk, the Commission may issue a proposed rule for public comment.

B. Terminate the Mandatory Rulemaking Proceeding

If the Commission determines that multi-purpose lighters do not present an unreasonable risk of injury, or that mandatory action is not required to address any identified risk, the Commission may terminate the mandatory rulemaking proceeding.

IV. Conclusions and Recommendation

The Consumer Product Safety Commission (CPSC) staff recommends that the Commission publish a proposed safety standard, under the Consumer Product Safety Act (CPSA), to require multi-purpose lighters to be child-resistant. The staff believes that the proposed rule as drafted is the least burdensome requirement that adequately addresses the risk of injury. Due to different physical characteristics and different patterns of use, these lighters are a class of products separate from cigarette lighters. Therefore, the staff recommends that the Commission propose a new standard for multi-purpose lighters rather than amend the scope of the Safety Standard for Cigarette Lighters to include them.

The staff believes that available data support the finding that multi-purpose lighters covered by the standard pose an unreasonable risk of death and injury to consumers. Based on known fire incidents alone, there have been 158 since January 1988 fires started by children under age five playing with multi-purpose lighters. These fires resulted in a total of 23 deaths and 58 injuries.

The results of baseline testing conducted by the staff indicate that multi-purpose lighters have a low level of child resistance (4 to 41 per cent) compared to the minimum level of child-resistance (85 per cent) required for most cigarette lighters. The staff believes that a standard requiring improved child-resistance for multi-purpose lighters would have substantial net societal benefits of about \$11.4 million annually. These annual net benefits will increase as sales continue to increase.

TAB A

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Billing Code 6355-01P

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Part 1212

Utility Lighters; Notice of Proposed Rulemaking

AGENCY: Consumer Product Safety Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Commission has reason to believe that unreasonable risks of injury and death are associated with utility lighters that can be operated by children under age 5. Utility lighters are hand-held, self-igniting, flame-producing products that operate on fuel and typically are used to light devices such as charcoal and gas grills and fireplaces. Devices intended primarily for igniting smoking materials are excluded; such products are already subject to a child-resistance standard at 16 CFR Part 1210.

The Commission is aware of 158 fires from January 1988 through April 15, 1998, that were started by children under age 5 using utility lighters. These fires resulted in 23 deaths and 58 injuries.

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This notice of proposed rulemaking ("NPR") proposes a rule mandating performance standards for the child resistance of utility lighters. The Commission solicits written comments from interested persons on the proposed rule.

DATES: Written comments and submissions in response to this notice must be received by the Commission by [insert date that is 75 days after publication in the FEDERAL REGISTER].

Comments on elements of the proposal that, if issued, would constitute collection of information requirements under the Paperwork Reduction Act may be filed with the Office of Management and Budget ("OMB") and with the Commission. Comments will be received by OMB until [insert date that is 60 days after publication].

ADDRESSES: Comments to CPSC should be mailed, preferably in five copies, to the Office of the Secretary, Consumer Product Safety Commission, Washington, D.C. 20207-0001, or delivered to the Office of the Secretary, Consumer Product Safety Commission, Room 502, 4330 East-West Highway, Bethesda, Maryland; telephone (301) 504-0800. Comments may also be filed by telefacsimile to (301) 504-0127 or by email to cpsc-os@cpsc.gov. Comments should be captioned "NPR for Utility Lighters."

Comments to OMB should be directed to the Desk Officer for the Consumer Product Safety Commission, Office of

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Information and Regulatory Affairs, OMB, Washington, DC 20503. The Commission asks commenters to provide copies of such comments to the Commission's Office of the Secretary, with a caption or cover letter identifying the materials as comments submitted to OMB on the proposed collection of information requirements for utility lighters.

FOR FURTHER INFORMATION CONTACT: Barbara Jacobson, Project Manager, Directorate for Epidemiology and Health Sciences, Consumer Product Safety Commission, Washington, D.C. 20207; telephone (301) 504-0477, ext. 1206; email bjacobson@cpsc.gov.

SUPPLEMENTARY INFORMATION:

A. Background

1. The product. Utility lighters, also known as multi-purpose lighters, are defined in § 1212.2(b) of the rule proposed below as follows:

(b) (1) "Utility lighter," also known as grill lighter, fireplace lighter, multi-purpose lighter, or gas match, means: a hand-held, self-igniting, flame-producing product that operates on fuel and is used by consumers to ignite items such as candles, fuel for fireplaces, charcoal or gas-fired grills, camp fires, camp stoves, lanterns, fuel-fired appliances or devices, or pilot lights.

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(2) Exclusions. The following products are not utility lighters:

(i) Devices intended primarily for igniting smoking materials that are within the definition of "lighter" in the Safety Standard for Cigarette Lighters (16 CFR 1210.2(c)).

(ii) Devices that contain more than 10 oz. of fuel.

(iii) Devices intended, or marketed, primarily for activities such as soldering, brazing, or welding.

(iv) Matches.

Utility lighters generally have a nozzle long enough to reach hard-to-light places. Further, the long nozzle allows safer ignition of products, such as gas grills, where the fuel may flare up when ignited. On certain lighters, the nozzle is flexible.

In determining whether a lighter is intended or marketed primarily for activities such as soldering, brazing, or welding, the Commission's staff will look at several factors. Factors that would weigh in favor of a lighter's being intended for soldering, etc., include a high-temperature flame, a short nozzle, ergonomics that are optimized for soldering or the like, and a lack of

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labeling or advertising for other uses, such as for grills, fireplaces, or candles. Factors that would weigh in favor of a determination that a lighter is not intended or marketed primarily for soldering include a long nozzle, prominent mention of uses other than soldering, etc., in advertising or packaging, and a relatively low-temperature flame. Determinations would be made on a case-by-case basis. The Commission requests comments on whether other specific factors exist that could differentiate between utility lighters and lighters intended for soldering, etc.

Utility lighters are activated by applying pressure to a trigger or button mechanism, which initiates fuel flow and causes a spark. Most utility lighters now sold include some type of on/off switch. Usually, this is a two-position slider-type switch that must be in the "on," or unlocked, position before the lighter can be activated.

In contrast to the Safety Standard for Cigarette Lighters, the proposed rule covers all refillable and nonrefillable utility lighters regardless of their cost. The baseline testing showed that 63 out of 100 children were able to operate a seemingly unwieldy \$40.00 lighter with a very long handle and an 18-inch flexible nozzle.

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2. Procedural background. On July 12, 1993, the Commission published a consumer product safety standard that requires disposable and novelty cigarette lighters to have a child-resistant mechanism that makes the lighters difficult for children under 5 years old to operate.¹ 16 CFR 1210. The standard excludes lighters that are primarily intended for igniting materials other than cigarettes, cigars, and pipes. Based on the information currently available to the Commission, utility lighters are not primarily intended for igniting tobacco, and thus are not subject to the cigarette lighter standard.

The on/off switch currently provided on utility lighters would not comply with the requirements for child resistance in the cigarette lighter standard, since the on/off switch is easy for young children to operate and does not reset to the "off" position automatically after each operation of the ignition mechanism of the lighter. 16 CFR 1210.3(b)(1).

In February 1996, Judy L. Carr petitioned the Commission to "initiate Rulemaking Proceedings to amend 16 CFR 1210 Safety Standard for Cigarette Lighters to include the Scripto® Tokai Aim 'n Flame™ disposable butane

¹58 FR 37554. The standard became effective July 12, 1994.

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'multi-purpose' lighter within the scope of that standard and its child resistant performance requirements."

On May 7, 1996, the Commission published a FEDERAL REGISTER notice soliciting comments on topics related to issues raised by the petition. The Commission received nine comments in response to that notice. After considering these comments and the other available information, the Commission voted to grant the petition and commence a rulemaking proceeding that could result in a mandatory standard for the child resistance of utility lighters.

The rulemaking was commenced by publication in the FEDERAL REGISTER of an advance notice of proposed rulemaking ("ANPR"). 62 FR 2327 (January 16, 1997). In a notice published January 8, 1998, the Commission extended the time for publishing a notice of proposed rulemaking until September 30, 1998. 63 FR 1077.

Nine comments were received in response to the ANPR. The Commission responds to these comments, and to three comments received earlier, in Section H of this notice. After considering these comments, the results of baseline testing of currently-marketed utility lighters for child resistance, and other available information, the Commission voted to propose the mandatory standard for utility lighters set forth below.

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B. Incident Data

The CPSC's staff identified a total of 220 fires reportedly started by children playing with utility lighters from January 1988 to the present. These fires resulted in a total of 39 deaths and 81 injuries. For the incidents where age of the fire starter was known, children under age 5 ignited 158 fires (76%). These 158 fires resulted in 23 deaths and 58 injuries. See Table 1. Children age 5 and older ignited 51 fires that resulted in 16 deaths and 16 injuries. An additional 11 fires, which resulted in 7 injuries, were described as being caused by children, but their ages were not cited.

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Table 1. Fires, Deaths, and Injuries Caused by Children Under Age Five Playing with Utility Lighters, by Year

Year	Fires	Deaths	Injuries
1988	3	-	-
1989	-	-	-
1990	2	-	1
1991	2	-	-
1992	4	1	1
1993	7	3	4
1994	7	-	-
1995	16	5	8
1996	54	8	30
1997	47	4	8
1998*	16	2	6
Total	158	23	58

* Reports received through April 15, 1998.

Source: Consumer complaints, newspaper clippings, hospital emergency room-treated injuries, fire department reports, and investigation reports.

Nineteen of the 23 fatalities were children. See Table 2. Eleven of the children who died had started the fire. Three of the four adults who died were mothers of

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the children who started the fires. The remaining fatalities were siblings of the fire starter, other relatives, or visitors to the home.

Table 2. Fatalities That Occurred in Utility Lighter Fires, by Age and Relationship to the Child Who Ignited the Fire

Relationship to Fire Starter	Ages (years) of Fatalities			
	Total	< 5	5-14	15+
Total	23	16	3	4
Self	11	11	-	-
Sibling	5	4	1	-
Mother	3	-	-	3
Other	4	1	2	1

Fourteen of the 58 people who were injured required hospitalization. Several were treated for extensive second- and third-degree burns requiring long-term treatment. In addition to the fatalities and injuries, most fires resulted in property damage. Thirty-one of the 158 reports cited property damage of \$50,000 or more.

One hundred twenty-nine of the 158 children starting the fires were either 3 or 4 years old (about 82

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percent). Three children were under age 2, indicating that even some very young children are capable of operating utility lighters. See Table 3.

Table 3. Age Distribution of Children Under Age Five Who Ignited a Fire While Playing with a Utility Lighter

Age of Child (years)	Total	< 2	2	3	4	< 5*
Number of Children	158	3	21	67	62	5

* Children were under age 5, but the exact year of age was not reported.

Source: Consumer complaints, newspaper clippings, hospital emergency room-treated injuries, fire department reports, and investigation reports

Many of the children found the utility lighters in easily accessible locations, such as on kitchen counters or furniture tops. Others, however, obtained the lighters

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from more inaccessible locations, such as high shelves or cabinets, where parents tried to hide them.

Reports of these fires were received from many sources, including the petitioner, ANPR commenters, fire departments, consumers, newspapers, and the CPSC's National Electronic Injury Surveillance System ("NEISS"). The number of fires reported each year increased sharply beginning in 1995. Part of the increase is believed to be due to CPSC's increased efforts to obtain more information on fires caused by children playing with cigarette lighters, to monitor the effectiveness of the 1994 standard. Because these data are actual incidents rather than national estimates, the extent of the total problem may be greater.

National Fire Incident Reporting System ("NFIRS") data, upon which national fire loss estimates are based, do not specify the age of the child who started the fire or the type of lighter involved. The staff is currently conducting a study to evaluate the effectiveness of the Safety Standard for Cigarette Lighters. Data collection, based on reports from participating fire departments, began in November 1997, and will continue through the fall of 1998. The results of the Cigarette Lighter Evaluation Study will provide information about the age

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of the child who started the fire and the lighter type, i.e., cigarette or utility.

The 1998 NFIRS data covering the study period are not expected to be available until 2000, due to the time lag involved in local jurisdictions forwarding data to the U.S. Fire Administration. At that time, the staff will be able to apply the results of the Cigarette Lighter Evaluation Study to the NFIRS data in order to provide national estimates of incidents involving utility lighters.

The brand name of the lighter involved was reported in 72 incidents. Of these, 66 (92 percent) involved one manufacturer's models, which represent about a 90 percent share of the market. There were five other brands identified in the remaining six incidents.

The high proportion of deaths of children under age 5, and the severity of the injuries, illustrate the hazard associated with children playing with utility lighters. Nationally, 39 percent of the estimated 780 children under age 5 who died in home fires annually between 1991 and 1995, were in fires started by a child playing, usually with lighters or matches. The data reported by the staff indicate that children playing with utility lighters have become a part of this problem.

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C. Baseline Testing

To establish the level of child resistance of utility lighters that are currently on the market, CPSC contractors conducted "baseline" testing of surrogates of 5 different models of utility lighters, using the test protocol for cigarette lighters (at 16 CFR section 1210.4). As far as child-resistance performance is concerned, the cigarette lighter protocol is essentially identical to the protocol proposed below for utility lighters. Three of the utility lighters tested have triggers, one has a pushbutton, and one has a squeeze handle. All of the lighters, except the model with the squeeze handle, have an on/off switch that must be in the "on," or unlocked, position to operate the lighter.

The lighters tested were not designed to be child resistant. The staff used the results of the baseline testing to calculate the potential benefits of mandatory requirements for utility lighters, as discussed in the Preliminary Regulatory Analysis at Section G of this notice.

The test protocol that was used for the baseline testing requires panels of 100-200 children to determine the child resistance of lighters. The test is conducted with pairs of children using surrogate lighters. A surrogate lighter has no fuel, and produces a signal

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instead of a flame when the lighter is operated. Staff engineers designed and built the battery-operated surrogate lighters used for the baseline testing. After the lighters were equipped with surrogate systems, the engineering staff verified that the operation forces were the same as the forces in the actual production lighters.

To begin the test, the tester demonstrates the signal that the lighter makes and asks the children to try to make the signal with their lighters. The children are given 5 minutes to try to operate the lighter. If one, or both, of the children are unsuccessful in the first 5 minutes, the tester demonstrates the lighters' operation using each child's lighter. This visual demonstration, with no additional description of how the lighter operates, is followed by another 5-minute test period.

The cigarette lighter test protocol allows unfueled production lighters with distinct operating sounds to be tested without special surrogate lighter systems. However, for all but one test, the staff used surrogate lighters to provide assurance, beyond the sound of the trigger click, that the children had successfully operated the lighters. One of the lighter models was tested both with and without a surrogate system to determine if the results would be comparable.

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In five of the seven tests, the testers gave the lighters to the children with the switch "off" at the beginning of the test. Children who successfully operated these lighters turned the switch "on" and pulled the trigger. After the demonstration, the testers returned the lighters to the children with the switch in the same position the children left them at the end of the first 5-minute test period. In the sixth test, Model D was retested with the lighters' switch in the "on" position. Almost 90 percent of the children were able to operate the lighters in this test. In the seventh test, the lighters did not have an on/off switch. Over 95 percent of the children were able to operate this lighter.

Table 4 summarizes the results of the baseline testing. For a frame of reference, the standard for cigarette lighters requires a minimum child resistance of 85 percent. The child resistance of the lighters tested with the on/off switch in the "off" position ranged from 24 to 41 per cent. Therefore, none of the lighters met the requirements of the cigarette lighter standard.

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Table 4-BASELINE TEST RESULTS		
Lighter	Successful Operations	Child resistance
TEST 1 Model A - Trigger without surrogate system	63/100	37%
TEST 2 Model A - Trigger	66/100	34%
TEST 3 Model B - Pushbutton	63/100	37%
TEST 4 Model C - Trigger	76/100	24%
TEST 5 Model D - Trigger	59/100	41%
TEST 6 Model D - Trigger switch unlocked ("on")	88/100	12%
TEST 7 Model E - Squeeze Handle (no on/off switch)	96/100	4%

E. The Proposed Standard

Scope. As noted previously, the products subject to the draft proposed standard are utility lighters, also referred to as grill lighters, fireplace lighters, multi-purpose lighters, or gas matches. These are hand-held,

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flame-producing devices that operate on fuel and are used by consumers to ignite candles, fuel for fireplaces, charcoal or gas-fired grills, campfires, camp stoves, lanterns, or fuel-fired appliances. The definition of utility lighters excludes matches, lighters intended primarily for igniting smoking materials, devices with more than 10 oz. of fuel, and torches and similar devices intended or marketed primarily for soldering, brazing, or welding.

Other provisions of the draft standard are essentially the same as the Safety Standard for Cigarette Lighters, including a required child resistance of 85 percent. The test protocol for evaluating the child resistance of lighters is also the same, although there are some wording changes for clarification of original intent.

The draft standard has recordkeeping and reporting requirements that will allow the Commission's staff to ensure that lighters comply. The draft standard also requires manufacturers and importers to provide a certificate of compliance to any distributor or retailer to whom the lighters are delivered. Anti-stockpiling provisions are designed to prevent the importation or manufacture of excessive numbers of noncomplying lighters between publication of the final rule and the effective

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date. The definition of base period for the anti-stockpiling provisions has been changed to "the most recent calendar year" rather than "any 1-year period during the 5-year period" prior to publication of the final rule. This change from the Safety Standard for Cigarette Lighters was recommended by the Technical Task Group of ASTM F1502. The U.S. Customs Service keeps its records by calendar year, and it is more practical for the Commission to obtain data on imports for the most recent year. The Technical Task Group also suggested that importers be required to provide the Commission with documentation of importation numbers for both the baseline period and the anti-stockpiling period. These requirements will assist the Commission in enforcing the anti-stockpiling provisions.

E. Statutory Authority for This Proceeding

Three of the statutes administered by the Commission have at least some relevance to the risk posed by non-child-resistant utility lighters. These are the Consumer Product Safety Act ("CPSA"), 15 U.S.C. 2051-2084; the Poison Prevention Packaging Act ("PPPA"), 15 U.S.C. 1471-1476; and the Federal Hazardous Substances Act ("FHSA"), 15 U.S.C. 1261-1278. The Commission has decided to use the authority of the CPSA to issue the proposed standard for the child resistance of utility lighters. A full

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explanation of the Commission's reasons for that decision is published in this issue of the FEDERAL REGISTER in a notice, under Section 30(d) of the CPSA, that proposes a rule determining that it is in the public interest to regulate this risk under the CPSA, rather than the FHSA or the PPPA. 15 U.S.C. 2079(d).

The procedure prescribed by the CPSA is as follows. The Commission first must issue an ANPR as provided in section 9(a) of the CPSA. 15 U.S.C. 2058(a). This was done by publishing the FEDERAL REGISTER notice of January 16, 1997. If the Commission decides to continue rulemaking proceeding after considering responses to the ANPR, the Commission must then publish the text of the proposed rule, along with a preliminary regulatory analysis, in accordance with section 9(c) of the CPSA. 15 U.S.C. 2058(c). This FEDERAL REGISTER notice constitutes the notice of proposed rulemaking. If the Commission then wishes to issue a final rule, it must publish the text of the final rule and a final regulatory analysis that includes the elements stated in section 9(f)(2) of the CPSA. 15 U.S.C. 2058(f)(2). And before issuing a final regulation, the Commission must make certain statutory findings concerning voluntary standards, the relationship of the costs and benefits of the rule, and the burden imposed by the regulation. CPSC § 9(f)(3), 15 U.S.C.

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2058(f)(3). Preliminary findings are contained in this proposed rule.

Comments should be mailed, preferably in five copies, to the Office of the Secretary, Consumer Product Safety Commission, Washington, D.C. 20207-0001, or delivered to the Office of the Secretary, Consumer Product Safety Commission, Room 502, 4330 East-West Highway, Bethesda, Maryland 20814; telephone (301) 504-0800. Comments may also be filed by telefacsimile to (301) 504-0127 or by email to cpsc-os@cpsc.gov. Comments should be captioned "NPR for Utility Lighters." All comments and submissions should be received no later than [insert date that is 75 days from publication].

F. Market Information

The Product. Most utility lighters are sold at retail for \$2.50 to \$8 each, with an average retail price of about \$4. Another type of utility lighter has additional features, such as refillable fuel chambers, flexible extended nozzles, and spark mechanisms powered by replaceable batteries. These lighters retail for about \$40.

Manufacturers. Although the precise number is unknown, industry sources estimate that there may be as many as 15 manufacturers of utility lighters and as many more importers and private labelers. Some manufacturers

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supply more than one importer or private labeler. The number of firms participating in the market is expected to increase as sales increase. Three manufacturers are members of the Lighter Association, a trade association representing manufacturers of cigarette lighters. The Lighter Association estimates that its members have more than 95 percent of the market for utility lighters in the United States. The manufacturer with the largest market share is Scripto-Tokai Corporation. Industry sources indicate that Scripto-Tokai may have 90 percent of the market. Other major manufacturers include Swedish Match (Cricket® brand), BIC, and Flamagas.

Retail prices for utility lighters generally start at less than \$2.50, and most retail for less than \$8.00. However, some high-end utility lighters retail for \$20 to \$40 or more. These are generally refillable lighters with battery powered ignition systems that ensure a more reliable ignition. The high-end lighters probably have less than one percent of the market for utility lighters.

BIC Corporation recently introduced a utility lighter that is believed to meet the requirements of the proposed rule. BIC expected that its utility lighter would sell for between \$3.99 and \$4.99, but its observed retail prices have been as low as \$3.49 and as high as \$5.49.

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BIC Corporation manufactures its utility lighter at a facility in South Carolina. Only one other manufacturer, Donel, is known to produce utility lighters domestically. Scripto-Tokai imports its lighters from Mexico. Flamagas (Clipper brand) lighters are produced in Spain. Most other lighters are manufactured in Asian countries, such as the Philippines, Taiwan, Korea, and China.

Another manufacturer is marketing a utility lighter for about \$25 that has features designed to be child resistant, but this lighter has not been tested according to the protocol in the Safety Standard for Cigarette Lighters, 16 CFR 1210.

Sales and useful product life. Utility lighters were introduced by Scripto-Tokai in 1985. According to Scripto-Tokai, one million units were sold the first year. Sales of utility lighters have been increasing rapidly since their introduction. An estimated 16 million units were sold in 1995, and an estimated 20 million units are expected to be sold in 1998. Industry sources expect sales to increase at the rate of 5 to 10 percent annually over the next several years. More than 100 million utility lighters have been sold since 1985.

The useful life of a utility lighter depends on the frequency and purpose for which it is used. If a typical

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utility lighter contains enough fuel for an average of 1,000 lights², a utility lighter that is used several times a day would last less than one year. On the other hand, a lighter that is used less than once a day, or only seasonally, could be expected to be used much longer. While about 20 million lighters were reportedly sold in 1997, a study based on a panel of 20,000 households indicated that fewer than 8 million U.S. households purchased utility lighters between October 1996 and October 1997.³ This suggests that most utility lighters have a useful life of less than one year, and/or that a large proportion of households that have utility lighters use more than one lighter over the course of a year.

Substitutes for utility lighters. Several products are reasonable substitutes for utility lighters. The most common substitute is probably the match. Compared with about 8 million households purchasing utility lighters in

²What constitutes an "average" light is less certain than with cigarette lighters, where the average time to light a cigarette is fairly predictable. While using a utility lighter to light a candle may require little time (and fuel), lighting a gas grill may require more time. The utility lighter would first have to be lit, the gas turned on, and then the gas would have to build up to an ignitable level.

³Information Resources Inc. study. Results provided by BIC Corporation.

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1997, a 1991 study for the CPSC indicated that more than 60 million households had either book or box matches. Cigarette lighters are also common substitutes for utility lighters.

Assuming that the typical utility lighter has enough fuel for 1,000 lights, the consumer cost per light is between 0.25 cents (i.e., one-fourth of one cent) and 0.8 cents.⁴ The consumer cost per light for kitchen matches is estimated to be less than 0.3 cents.⁵ Other types of matches, such as book matches, cost less per light.

E. Preliminary Regulatory Analysis

Potential benefits of the proposed rule. The proposed rule is intended to reduce fires resulting from young children playing with, or otherwise attempting to operate, utility lighters. The benefits to society of the proposed rule are the expected reduction in fires and in the deaths, injuries, and property damage associated with these fires. While the proposed rule is intended to address such fires caused by children under the age of 5

⁴If the retail price of a utility lighter is \$2.50, then \$2.50/1,000 lights is \$0.0025/light. If the retail price of a utility lighter is \$8.00, then \$8.00/1,000 lights is \$0.008/light.

⁵Based on retail prices observed in the Washington, DC area; 750 box kitchen matches typically sold for \$2.05 or \$0.0027 each.

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years, there may also be some reduction in the number of fires started by children over the age of 5 years.

The Commission is aware of 117 fires from 1995 through 1997 that were started by children under age 5 years playing with, or otherwise attempting to operate, utility lighters. These incidents, which are summarized in Table 5 below, resulted in 17 deaths, 46 injuries, and substantial property damage. Assuming a cost of \$5 million for each fatality, an estimate that is consistent with the existing literature, a point estimate of the societal costs of the known fatalities between 1995 and 1997 is approximately \$85 million. Of the 46 nonfatal injuries, 12 involved victims that were hospitalized with burns, some severe. An earlier CPSC study estimated that the average cost of a hospitalized fire burn was \$898,000; the average cost of a nonhospitalized burn injury was estimated to be \$15,000.⁶ These estimates include medical treatment, lost income, and pain and suffering. Using these estimates, the total cost of known injuries from Table 5 is approximately \$11.3 million (12 x \$898,000 plus 34 x \$15,000). The property damage associated with cigarette lighter fires from child play

⁶Ray, Dale R. and William W. Zamula, *Societal Costs of Cigarette Fires*. U. S. Consumer Product Safety Commission, August, 1993.

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was estimated to be an average of \$15,000 per incident. Assuming the incidents with utility lighters are similar to those resulting from cigarette lighters, the total property damage associated with the incidents in Table 5 is estimated to be at least \$1.8 million (\$15,000 x 117 fires).

Table 5. Fire Losses Resulting from Children Under 5 Operating Utility Lighters

Year	1995	1996	1997	Total
Fires	16	54	47	117
Deaths	5	8	4	17
Injuries	8	30	8	46

The total societal cost of the known incidents for the three years, including the costs associated with deaths, injuries, and property damage, is about \$98.1 million. This averages about \$32.7 million per year. It is important to note that these cost estimates are based only on the incidents reported to CPSC, not on aggregate fire loss estimates. There likely are other incidents of

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which CPSC is not aware. If so, the \$32.7 million figure understates the average annual societal cost of child-play utility lighter fires that occurred between 1995 and 1997.

The proposed rule is not expected to eliminate all fire incidents involving children under the age of 5. Some children will probably be able to operate utility lighters that meet the requirements of the rule. Indeed, a utility lighter will meet the requirements of the proposed rule provided no more than 15 percent of the subjects in the test panel can operate the lighter (or the surrogate used in place of the lighter).

On the other hand, some children under the age of 5 cannot operate the "non-child-resistant" utility lighters currently on the market. CPSC baseline testing indicates that, depending on the model, 4 to 41 percent of test subjects cannot operate non-child-resistant utility lighters. Therefore, all other things being equal, the proposed rule for utility lighters is expected to reduce the number of children under the age of 5 that can operate utility lighters by 75 to 84 percent, depending

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on the model.⁷ Assuming that this reduces the number of fires started with utility lighters by children under the age of 5 by the same percentage, the societal costs of the fires will be reduced. For example, for the period 1995 through 1997, societal costs would have been reduced by at least \$24.5 million to \$27.5 million annually had all utility lighters been child resistant.

The expected benefits of the proposed rule will be even higher if manufacturers achieve a child-resistance level greater than 85 percent. The experience with cigarette lighters indicates that most manufacturers achieve 90 percent or higher child resistance. If manufacturers of utility lighters achieve the same level of child resistance, the estimated societal benefits of the proposed rule could be 6 to 11 percent higher than set forth above.

Potential costs of the proposed rule. There would be several types of costs associated with the proposed rule. Manufacturers would have to devote some resources to develop or modify technology to produce child-resistant

⁷For lighters that already have a high baseline child resistance (e.g., could not be operated by 41 percent of the test subjects, the improvement will be 75 percent $[(0.85 - 0.41)/(1.0 - .41) = 0.75]$. For lighters that do not have a high degree of baseline child resistance (e.g., could not be operated by only 4 percent of the test subjects, the improvement will be 84 percent $[(.85 - .04)/(1 - .04) = .84]$.

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utility lighters. Before being marketed, the lighters must be tested and certified to the new standard. Manufacturing child-resistant lighters may require more labor or material than non-child-resistant lighters. Finally, the utility that consumers derive from lighters may be diminished if the new lighters are more difficult to operate.

Manufacturing costs. Manufacturers will have to modify their existing utility lighters to comply with the proposed rule. There are several methods by which manufacturers might comply. One method may require the user to operate two mechanisms simultaneously, one to release the gas and another to activate the igniter. Another may require a switch or lever that prevents the operation of the lighter when in the "off" position. This would be similar to the safety locks on some current models, except that they would automatically reset between uses. A third method may simply require an amount of force to operate the lighter that could be achieved by most adults but not by most children.

In general, costs that manufacturers would incur in developing, producing, and selling new complying lighters include the following:

- Research and development toward finding the most promising approaches to improving child resistance,

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including building prototypes and surrogate lighters for preliminary child panel testing;

- Retooling and other production equipment changes required to produce more child-resistant utility lighters, beyond normal periodic changes made to the plant and equipment;
- Labor and material costs of the additional assembly steps, or modification of assembly steps, in the manufacturing process;
- The additional labeling, recordkeeping, certification, testing, and reporting that will be required for each new model;
- Various administrative costs of compliance, such as legal support and executive time spent at related meetings and activities; and
- Lost revenue if sales are adversely affected.

Industry sources have not been able to provide firm estimates of these costs. One major manufacturer, BIC, has introduced a child-resistant utility lighter. However, because BIC did not manufacture a non-child-resistant lighter, it was unable to estimate the incremental cost of developing and manufacturing child-resistant utility lighters.

A representative of another manufacturer speculated that the costs of developing, testing, and retooling for

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production of utility lighters might be \$1 million, if it is possible to adapt the same technology used to make cigarette lighters child resistant. However, if it were not possible to adapt the cigarette lighter technology, the commenter said that costs could be as much as \$5 million. Another manufacturer expected these costs to be significantly less than \$1 million.

Although it is conceivable that some manufacturers will spend as much as \$5 million to develop and retool to produce child-resistant utility lighters, especially if they have to make several attempts before they come up with acceptable designs, the investment in research and development by most manufacturers will likely be closer to \$1 million.⁸ If, however, it is assumed that there are 15 manufacturers and that each invests an average of \$2 million to develop and market complying lighters, the total industry cost for research development, retooling, and compliance testing would be approximately \$30 million. If amortized over a period of 10 years, and assuming a modest 3 percent sales growth each year, the average of these costs would be about \$0.13 per unit.⁹ For a manufacturer with a large market

⁸This estimate is similar to the estimate used in evaluating the cigarette lighter standard.

⁹If 20 million lighters are sold in the first year (approximately the current annual sales volume) and sales increase at the rate of 3 percent a year (industry sources

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share (i.e., selling several million units or more a year), the cost per unit for the development could be lower than the estimated \$0.13 per unit, even at the high end of the estimates. On the other hand, for manufacturers with a small market share, the per-unit development costs would be greater. Some manufacturers with small market shares may even drop out of the market (at least temporarily) or delay entering the market.

In addition to the research, development, retooling, and testing costs, material and labor costs are likely to increase. For example, additional labor will be required to add the child-resistant mechanism to the lighter during assembly. Additional materials may also be needed to produce the child-resistant mechanism. While the CPSC staff was unable to obtain reliable estimates, some industry sources indicated that they believed that these costs would be relatively low, probably less than \$0.25 per unit.

Utility lighters will also be required to have a label that identifies the manufacturer and the approximate date of manufacture. However, virtually all products are already labeled in some way. Since the requirement in the proposed rule allows substantial flexibility to the manufacturer in

indicate that they have been growing at 5 to 10 percent annually), then over a 10-year period approximately 230 million lighters would be sold. \$30 million/230 million = \$0.13/unit.

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terms of things such as color, size, and location, this requirement is not expected to increase the costs significantly.

Certification and testing costs include costs of producing surrogate lighters, conducting child panel tests, and issuing and maintaining records for each model. The largest component of these costs is believed to be conducting child-panel tests, which, based on CPSC experience, may cost about \$25,000 per lighter model. Administrative expenses associated with the compliance and related activities are difficult to quantify, since many such activities associated with the proposed rule would probably be carried out anyway and the marginal impact of the recommended rule is probably slight. Overall, certification, testing, and administrative costs are expected to cost less than \$450,000 annually, industry wide.¹⁰ On average, these costs are expected to add about \$0.02 per unit to the cost of producing utility lighters (\$450,000 for 20 million units).

In total, the proposed rule will likely increase the cost of manufacturing utility lighters by about \$0.40 per

¹⁰Assuming 15 manufacturers with 1 utility lighter model each and an average of \$30,000 for certification, testing, and administrative costs per lighter, the total costs would be \$450,000. Although the estimate assumes that these costs are incurred annually, in fact, these costs are likely to be lower in subsequent years.

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unit.¹¹ The high-end estimates provided by the Lighter Association may have assumed that the proposed rule would contain additional provisions that are not in the proposed rule, such as requirements covering the reliability of achieving ignition. Therefore, the middle and low end of the estimates provided by the Lighter Association are probably more reasonable.

The proposed rule contains anti-stockpiling provisions, authorized by section 9(g)(2) of the CPSA (15 U.S.C. 2058(g)(2)), to prohibit excessive production or importation of noncomplying lighters during the 12-month period between the final rule's publication date and its effective date. The provision limits the production or importation of noncomplying products to 120 percent of the amount produced or imported in the most recent calendar year before the publication date of the rule. Although the anti-stockpiling provision may, in the short term, prevent some companies from increasing their sales volume as quickly as they could otherwise, the Commission believes the provision should have little impact on the market as a whole.

Effects on competition and international trade. At the present time, one manufacturer has about 90 percent of the

¹¹This estimate is based on the following estimates: \$0.13/unit for research, development and retooling; \$.25/unit for labor and materials; and \$.02/unit for certification, testing and administrative costs.

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market for utility lighters. The other manufacturers, importers, and private labelers divide up the remaining 10 percent of the market, with none of the other manufacturers thought to have more than 2 or 3 percent of the market. Thus, there is already a very high degree of concentration in the market. Even so, one manufacturer has already entered the market with a model that is believed to meet the requirements of the proposed rule, another manufacturer has a model that they claim is child resistant, and at least one other firm is believed to be actively developing a child-resistant lighter. Moreover, other firms are expected to enter the market for utility lighters, and thereby increase competition, as the market expands. Therefore, since the number of firms in the industry is not expected to decrease, the proposed rule is not expected to have any adverse impact on competition.

With the exception of BIC, which manufactures its utility lighters in South Carolina, and one smaller manufacturer, most utility lighters are imported. To the extent that BIC has developed a child-resistant utility lighter before other manufacturers have, it may enjoy at least a short-term competitive benefit from the proposed rule, particularly to the extent its competitors are not yet in a position to manufacture child-resistant utility lighters. However, other manufacturers are expected to have

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child-resistant utility lighters ready to market on or before the rule's effective date.

Impact on small business. The Commission gives special consideration to the potential impact of its rules on small businesses. There may be about 30 manufacturers, importers, or private labelers of utility lighters. The number of firms participating in the market is increasing as the market grows. Although the dominant firms are not small, some number of the other firms may be considered to be small businesses. The cost of developing a product that complies with the proposed rule could cause some of the small importers or private labelers to stop offering utility lighters, at least temporarily. However, most of the smaller importers and private labelers are not believed to manufacture the lighters themselves, but instead import or distribute the lighters for manufacturers based, for the most part, in other countries. It is the manufacturers that will likely bear most of the costs for development of the child-resistant models. Moreover, utility lighters probably account for only a small percentage of the smaller importers' and private labelers' sales. Therefore, even if a small importer or private labeler stopped importing or distributing its own line of utility lighters, it is not likely to suffer a significant adverse effect.

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The staff examined the information available on the 24 firms that were identified as being manufacturers, importers, or private labelers of utility lighters. Of these, 13 could be considered to be small businesses. Of the 13 small businesses, one is believed to manufacture its own lighters, and 9 are believed to be importers. Insufficient information was available to make these determinations on the other three firms.

Impact on consumers. Aside from increased safety, the proposed rule is likely to affect consumers in two ways. First, the increased cost for producing the child-resistant models will likely result in slightly higher retail prices for utility lighters. Second, the utility derived from child-resistant lighters may be decreased if complying lighters are less easy to operate.

Consumers ultimately will bear the increased cost of manufacturing utility lighters. Assuming a 100 percent markup over the incremental cost to manufacturers (estimated at \$0.40/unit), the proposed rule may be expected to increase the retail price of utility lighters by \$0.80 per unit. If the actual incremental cost of manufacturing is closer to the lower end of the range of estimates provided by the Lighter Association (i.e., about \$0.25/unit), the impact on consumers could be lower. If the cost increase is \$0.25/unit, and assuming a 100 percent markup at retail, the

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recommended rule may increase retail prices by about \$0.50. However, some manufacturers may be unable to pass all of the incremental costs directly to consumers. In these cases, the costs may be indirectly borne by consumers in the form of generally higher prices on the range of other products produced by the manufacturer or in the form of reduced earnings on investments in the company.

The utility that consumers receive from utility lighters may be reduced if the rule makes the lighters more difficult to operate. This could result in some consumers switching to substitute products, such as cigarette lighters or matches. However, as with child-resistant cigarette lighters, the increased difficulty of operating child-resistant utility lighters is expected to be slight. Moreover, even if some consumers do switch to other products, the risk of fire is not expected to increase significantly. Most cigarette lighters (one possible substitute) must already meet the same child-resistant standard being proposed for utility lighters. Although consumers that switch to matches may increase the risk of child-play fires somewhat, matches seem to be inherently more child resistant than non-child-resistant utility lighters. Previously, the CPSC determined that non-child-resistant cigarette lighters were 1.4 times as likely as matches to be involved in child-play fires and 3.9 times as

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likely to be involved in a child-play death.¹² Thus, even if some consumers did switch to using matches, the risk of child-play fires would still likely be less than if they continued to use non-child-resistant utility lighters.

Estimated net benefits of the proposed rule. As previously stated, the total societal costs of fires known to have been started during 1995 through 1997 by young children playing with, or otherwise attempting to operate, utility lighters was approximately \$98.1 million. This is probably an underestimate, since it only includes the cases of which CPSC is aware. During the same period, an estimated 54 million utility lighters were sold and available for use. The societal costs of the fires started by young children with utility lighters is, therefore, about \$1.82 per lighter (\$98.1 million/54 million lighters). The proposed rule is expected to reduce this cost by 75 to 84 percent. Therefore, the expected societal benefit of the proposed rule in terms of reduced fires, deaths, injuries, and property damage is expected to be \$1.37 to \$1.53 per complying lighter sold.

As discussed above, the proposed rule may increase the cost of manufacturing utility lighters by \$0.40 and may increase the retail prices by as much as \$0.80. Therefore,

¹²Smith, Linda E., Charles L. Smith, and Dale R. Ray, *Lighters and Matches: An Assessment of Risks Associated with Household Ownership and Use*, U.S. Consumer Product Safety Commission, Washington, D.C. (June 1991).

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assuming that sales of utility lighters remain the same, the net benefit to consumers of the proposed rule is expected to be at least \$0.57 per unit (\$1.37 - \$0.80). Based on current sales of approximately 20 million units per year, the proposed rule would result in an annual net benefit to consumers as high as \$11.4 million (20 million x \$0.57) each year. If sales of utility lighters continue to increase at current rates (5 to 10 percent annually), the annual net benefit will also increase by a similar percentage.

If, however, sales of utility lighters fall, the net benefits to consumers would be somewhat less. The reduced sales would result in higher per-unit costs, since amortization of the research and development costs, described earlier, would have to be spread over fewer units. Furthermore, there would be some reduction in consumer surplus associated with the use of utility lighters.¹³ Consumer surplus would be reduced by an amount equal to the difference in the utility that consumers would have received from the utility lighters that will not be purchased due to the price increase and the utility that consumers receive from the substitute products.

¹³Consumer surplus is a concept that refers to the difference between what consumers pay for a product and the maximum price they might be willing to pay; it represents a benefit for which the consumer does not actually pay.

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If the costs to manufacture utility lighters that complied with the proposed rule were significantly higher than estimated, the net benefits would be reduced. Assuming a 100-percent markup over manufacturing costs, the manufacturer's costs attributed to the proposed rule would have to be as high as \$0.68 to \$0.76 per unit (as opposed to the \$.040 per unit estimated earlier) before the expected net benefits to consumers would be eliminated.

CPSC tested the child resistance of five different non-child-resistant lighters. The models tested were found to have a baseline child resistance ranging from 4 percent to 41 percent. This translates to an expected effectiveness of the rule of 75 percent to 84 percent.

The CPSC believes the estimate of net benefits is conservative for two reasons. First, the benefit estimate is based on known incidents rather than national estimates. Second, it is based on the test results for the model of utility lighter with the highest level of baseline child resistance (41 per cent) for the tests conducted with the switch in the "off," or locked, position. The choice of this test for baseline purposes would tend to lower the benefit estimate in two ways. The child resistance of the other three models tested with the switch in the locked position ranged from 24 percent to 37 percent. Thus, the effective child resistance of currently used utility

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lighters likely is somewhat lower than the baseline figure used for the benefit estimates. In addition, essentially all of the children on the test panel were able to operate the model with no on/off switch (96 percent) and the model with the switch in the unlocked position (88 percent). This means that, to the extent that adults do not return the switch to the locked position after use, the effective child resistance of utility lighters in use would be less than that obtained from a test of a lighter in the "off" position. Thus, a child-resistant mechanism could provide a greater benefit than estimated above.

Alternatives to the proposed rule. There are several significant alternatives to the proposed rule. These alternatives include not taking any action, labeling requirements, deferring to voluntary standards, and differences in the scope of the rule. These alternatives are discussed below.

1. *No action.* One alternative is to take no action to reduce the occurrence of fires started by children playing with, or otherwise attempting to operate, utility lighters. If no mandatory rule were issued, some manufacturers might still introduce child-resistant utility lighters. While these manufacturers can emphasize the safety of their product, they could be at a competitive price disadvantage compared to manufacturers who continue to sell non-child-