

The American Academy of Pediatrics commented that consumer education is very important but that it will not be as effective as making the lighters child-resistant. Independent Safety Consulting states that an education campaign is not likely to significantly reduce these fires. Child-resistant mechanisms should be coupled with information and education so that parents can be aware of the limitations of a child-resistant feature.

The Lighter Association provided information about education programs they developed with the Learn Not to Burn Foundation and the National Fire Protection Association. The programs warn preschoolers and adults of the risk of lighters and matches. The Lighter Association also submitted an article from the January/February 1999 National Fire Protection Association (NFPA) Journal reporting that the Portland, Oregon, program showed a 36-percent decline in juvenile fire-setting as a result of use of the Youth Education Program.

BIC submitted a copy of their "play safe! be safe!"<sup>®</sup> safety program, which was developed in 1994 in cooperation with Fireproof Children of Pittsford, New York. This program teaches young children the basics of fire prevention and shows them how to respond to specific situations in case of fire. The program is being utilized in hundreds of pre-school classrooms in the U.S. and Canada.

Response: The Commission does not believe that education alone can effectively address the risks associated with multi-purpose lighters. As an injury prevention strategy, education is less effective than product modifications, which do not rely on behavior changes. Education serves to provide the public with accurate information. For example, it may be appropriate to advise consumers that child-resistant does not mean child-proof, and that child-resistant mechanisms are intended to prevent lighter use by most children under 5.

The incident data, however, show little need for an education program to "address consumer behavior in leaving their lighters and their young children unattended." The data show that, in general, children were not "unattended," and that in many cases, lighters were placed where they could be thought to be "out of reach" but were nevertheless reached.

The effectiveness of the Youth Education Program is unsubstantiated because there are important confounding factors that preclude a valid inference of a direct cause-effect relationship between the program and any statistically significant change in fires set by juveniles. Furthermore, it is not clear that the Youth Education Program addressed the age group targeted by a standard for child resistance.

The Safety Standard for Cigarette Lighters was issued in 1993 and became effective in 1994. It is possible that the use of child-resistant cigarette lighters contributed to the drop in the proportion of fires attributable to juveniles over the 4-year period (1993/1994 to 1996/1997) cited in the NFPA Journal article (if, as noted above, children under 5 are included in the age group studied).

Given the lack of consistent evidence of their effectiveness, the Commission concludes that education programs are an inadequate substitute for the a standard that requires multi-purpose lighters to be child resistant.

11. Issue: Provisions of Test Protocol

a. Position of on/off switch. BIC contended that multi-purpose lighters with on/off switches should be tested with the switch in the unlocked position, rather than in the locked position, as proposed. BIC stated that many consumers would leave the lighter in the unlocked position. Further, BIC pointed out that a manufacturer could design a lighter with an on/off switch that is very difficult for a child to unlock, and with a very simple child-resistance mechanism which, in itself, would not meet the 85% child-resistance requirement.

Response: The Commission agrees with BIC's recommended modification to the test protocol because on/off switches are not adequate to serve as part of the child-resistance

mechanism. First, as the Commission's baseline testing demonstrated, most children in the panel age group (42 to 51 months old) can operate the switches, which are similar to those used on many types of toys. Second, when practical, safety devices should function automatically. When in the locked position, the switch may help delay or deter some proportion of children. This protection, however, is not reliable. To provide this protection, intended users must return the switch to the locked position every time the lighter is used. For a variety of reasons, even careful adults may fail to do so. Thus, as BIC points out, test results for lighters tested with the switch in the locked position may not reflect the true child-resistance of the product as actually used by consumers.

Therefore, on August 4, 1999, the Commission published a notice in the **Federal Register** to propose that the test protocol should require that lighters with on/off switches that do not automatically reset to the locked position be tested with the switch in the on, or unlocked, position. The Commission also provided an opportunity for interested parties to present oral comments on this issue on September 15, 1999. The Executive Director of the National Fire Protection Association Center for High-Risk Outreach commented that conducting the protocol test with the lighter

on/off switch in the unlocked position would add an important element of realism to the test.

Accordingly, the Commission revised the test procedure at § 1212.4(f)(1) in the final rule to provide:

Note: For multi-purpose lighters with an "on/off" switch that does not automatically reset to the locked position, the surrogate lighter shall be given to the child with the switch in the "on," or unlocked, position.

b. Participation of children in multiple tests. Milford Consulting Associates endorses the provision that allows the same children to test child-resistant packaging, cigarette lighters, and multi-purpose lighters, so long as the children participate in each test on a different day. It stated that the cross learning from test to test would be negligible, but that the children's familiarity with the test setting would be facilitated by multiple tests, making the test less intimidating to the children.

Response: The Commission agrees that the cross learning from one type of test to another would be negligible. The test procedure in § 1212.4(a)(7) of both the proposal and the final rule allows children to participate in tests of different products, provided that the tests are conducted on different days.

c. Tester quotas and lighter quotas. Milford Consulting Associates requested some changes to the requirements for the number of children who are tested by each tester and in the number of tests conducted with each surrogate lighter. They requested that when two central location test sites are used and a tester or a surrogate lighter drops out, the remaining tests be allocated equally to the remaining testers at that one test site.

Response: Currently, the test procedure has very specific requirements for the number of children who can be tested by each tester and the number of times each surrogate lighter can be used in testing. The reason for these requirements is to minimize the impact of any one tester or any one lighter on the final test results. Based on the staff's experience with the standard for cigarette lighters, tester variability can influence the test results. In addition, surrogate lighters may vary in operation forces. Because exceeding the proposed quotas could introduce test bias, the Commission did not make any changes.

d. Participation. Milford Consulting Associates requested that children who refuse to attempt to operate the surrogate multi-purpose lighter throughout the entire test period should be counted in the test results, provided they are not disruptive. They stated that in a real-life

situation some children would refuse to touch a lighter even while a companion is doing so.

Response: The Commission believes that refusing children should continue to be eliminated from the test results because it provides a more appropriate test for the lighter. A child's refusal in a test may be related to the circumstances of the test and does not necessarily mean that the child would not attempt to operate a lighter in the home. The Commission believes that the 85% acceptance criterion should be based on the number of children who attempt to operate the lighter and are unable to so. This is the procedure used in the Safety Standard for Cigarette Lighters.

e. Orientation of lighter during demonstration. BIC Corporation and Milford Consulting Associates requested a change in § 1212.4(f)(3) of the test protocol. In the proposed rule, during the demonstration of lighter operation to the children, the tester was instructed to hold the surrogate multi-purpose lighter in a vertical position in one hand with the child-resistant feature exposed. BIC pointed out that the normal operating position of multi-purpose lighters for many purposes is horizontal.

Response: The Commission agrees that this requirement should be changed because some multi-purpose lighters are operated in a vertical position and some are operated in a

horizontal position. The final rule eliminates reference to any specific orientation. Instead, the rule provides that the tester should hold the lighter in a comfortable operating position in one hand so both children can see the operation of the child-resistant mechanism and the ignition mechanism during each demonstration. The purpose of this provision is to assure that the children are able to clearly see the operation of the lighter. As long as the children can see the operation, there is no need to hold the lighter in any particular position.

12. Issue: Anti-Stockpiling Reporting

Scripto recommends a change to the anti-stockpiling provision. This change would require information used to establish the number of lighters made or imported during the year following publication of the final rule to be filed with CPSC at the end of each calendar month instead of within 10 days of shipment, as proposed. Scripto states that this would reduce the reporting requirements and provide the Commission with better visibility and control of these shipments.

Response: Because industry members reported abuses of the similar anti-stockpiling requirement in the Safety Standard for Cigarette Lighters, the Commission proposed a reporting requirement for this rule. The Commission agrees with Scripto's recommendation, in the interest of reducing



the paperwork burden on manufacturers and the staff without compromising the ability of the Commission to effectively enforce the anti-stockpiling provision. The final rule requires reporting within 10 days of the end of each calendar month, for lighters shipped within that month, instead of within 10 days of lighter shipment.

13. Issue: In-Bond Shipments

Scripto reported problems it has experienced seizures by customs and delays at foreign ports of shipments of non-child-resistant lighters that are imported into the U.S. in bond for export to other nations. It requested CPSC to review this transit-and-export process in order to reduce unnecessary delays and paperwork in the future.

Response: Scripto refers to the process of moving noncomplying cigarette lighters manufactured in Mexico through the United States, in bond, for export to foreign countries that do not require that the lighters to be child-resistant. This process is a program of the U.S. Customs Service. If contacted in advance of such shipments, the Office of Compliance is able to work with manufacturers and importers to facilitate the smooth movement of in-bond shipments.

14. Issue: Households Without Young Children

Ms. Lorraine Daly, a consumer, wrote that there is a very large percentage of older citizens in the country who

don't have children in their homes and therefore don't need the protection of child-resistance on medicines or lighters. Similarly, Ms. Eve Mallett wrote, "We can't child proof the world at the expense of childless or older people."

Response: Available data indicate that both lighter child-play fires and accidental ingestions of medicines have occurred in the homes of older consumers. These incidents commonly occur while grandparents are baby-sitting or during family visits. The Poison Prevention Packaging Act has provisions that allow for availability of non-child-resistant packaging for medicines otherwise required to be in child-resistant packaging. These provisions allow handicapped or arthritic consumers to have ready access to their medicines. However, there is no comparable need for a consumer to have a non-child-resistant multi-purpose lighter.

In addition, unlike multi-purpose lighters, the particular design of child-resistant packaging for medicines is selected by the manufacturer or the pharmacist, not the consumer. Like child-resistant cigarette lighters, there will be a number of different multi-purpose lighter designs to choose from. The Commission believes that older consumers who can operate a current multi-purpose lighter will find a child-resistant multi-purpose lighter that they are able to operate with little or no difficulty.

Therefore, there is no need to forego the lifesaving benefits of the rule to accommodate the special needs of elderly or handicapped persons.

#### **F. Environmental Considerations**

Pursuant to the National Environmental Policy Act and CPSC's procedures, the Commission considered the potential environmental effects of the rule. Under CPSC's regulations, this rule falls within a category of actions that normally have little or no potential for affecting the human environment, and for which neither an environmental impact assessment nor an environmental impact statement is required. 16 CFR 1021.5(c)(1).

Less than 1% of the non-child-resistant multi-purpose lighters that are sold in this country are manufactured domestically. The rule is not expected to significantly alter the amount of materials, energy, or waste generated during production of the lighters. Nor should the rule cause manufacturers to shift production to other countries or locations. Molds and other tools used by manufacturers in the production of multi-purpose lighters or their components are periodically replaced. Potentially, the rule may cause some manufacturers to replace the molds and other tools earlier than they would have otherwise.

The rule does not require any recall of non-child-resistant lighters manufactured or imported before

the effective date; therefore, there are no disposal issues with regard to such lighters. The rule is not expected to affect the manner in which multi-purpose lighters are packaged for sale, or to affect the amount of butane or other fuel used in the operation of the lighters.

The Commission concludes, from the available information, that the rule will not significantly affect raw material usage, air or water quality, manufacturing processes, or disposal practices in a way that will significantly impact the environment.

#### **G. Statutory Findings**

The CPSA also requires the Commission to make the following findings before it promulgates a rule:

(A) that the rule (including its effective date) is reasonably necessary to eliminate or reduce an unreasonable risk of injury associated with such product;

(B) that the promulgation of the rule is in the public interest;

(C) that the benefits expected from the rule bear a reasonable relationship to its costs; and

(D) that the rule imposes the least burdensome requirement that prevents or adequately reduces the risk of injury for which the rule is being promulgated

15 U.S.C. 2058(f)(3).

The Commission has made the required findings, which are published as the Appendix to the final rule.

#### **H. Regulatory Analysis**

Before issuing a final rule, the CPSA requires the Commission to consider and make appropriate findings for inclusion in the rule with respect to:

(A) the degree and nature of the risk of injury the rule is designed to eliminate or reduce;

(B) the approximate number of consumer products, or types or classes thereof, subject to such rule;

(C) the need of the public for the consumer products subject to such rule, and the probable effect of such rule, upon the utility, cost, or availability of such products to meet such need; and

(D) any means of achieving the objective of the order while minimizing adverse effects on competition or disruption or dislocation of manufacturing and other commercial practices consistent with the public health and safety

15 U.S.C. 2058(f)(1). These findings are also published in the appendix to the final rule.

Based on these findings, the Commission must, if it issues a final rule, publish a final regulatory analysis with the rule, containing:

(A) a description of the potential benefits and the potential costs of the rule, including costs and benefits that cannot be quantified in monetary terms, and the identification of those likely to receive the benefits and bear the costs;

(B) a description of any alternatives to the final rule which were considered by the Commission, together with a summary description of their potential benefits and costs and a brief explanation of the reasons why these alternatives were not chosen; and

(C) a summary of any significant issues raised by the comments submitted during the public comment period in response to the preliminary regulatory analysis, and a summary of the assessment by the Commission of such issues

15 U.S.C. 2058(f)(2).

The Commission's final regulatory analysis of the rule on multi-purpose lighters is published below.

Final Regulatory Analysis

Requirements of the Rule

The rule addresses the risk of death and injury caused by children under the age of 5 playing with multi-purpose lighters, including micro-torches. Manufacturers or importers of products meeting the definition of "multi-purpose lighters" will have to certify that their products comply with the rule and provide evidence of a reasonable testing program, as required by 15 U.S.C. 2063, to support the certification. The rule specifies minimum requirements and features of the required testing program.

The test protocol is intended to determine the percentage of children in a specified age range that could be expected to be able to operate the lighter. It requires surrogates that will not produce a flame be used in the tests in place of production lighters. Up to two panels of 100 children are used to test the surrogates. If a child succeeds in operating a surrogate, a visual or audible signal is produced. If at least 85% of the children in the test panels are unable to operate the surrogates, the production lighters comply with the child-resistance requirements.

The rule also establishes certain minimum recordkeeping and reporting obligations for manufacturers, importers, and distributors. The effective date of the rule is [insert date that is 1 year after the date of its publication in the **Federal Register**]. All multi-purpose lighters manufactured

in the U.S. or imported on or after this date will have to comply with the requirements of the rule.

### Product and Market Information

#### The Product

The product subject to this rule, multi-purpose lighters, is described in Section A of this notice.

#### Sales, Retail Prices and Useful Product Life

Multi-purpose lighters, including micro-torches, were introduced around 1985. Sales of multi-purpose lighters increased rapidly after their introduction. Scripto-Tokai, the firm that introduced multi-purpose lighters, reports that it sold one million units the first year. Industry sources estimate that sales of multi-purpose lighters were about 20 million units in 1998 and will be approximately 21 million units in 1999. Industry sources are divided over their expectations for future sales. Some expect sales to continue to increase at the rate of 5 to 10% annually over the next several years. Others believe that the market for multi-purpose lighters is becoming satiated and that sales are likely to increase at a slower pace than in the past.

Retail prices of multi-purpose lighters have declined over the last couple of years. Currently, retail prices for multi-purpose lighters start at less than \$2.50, and most sell for less than \$6.00. However, some high-end multi-purpose lighters retail for \$20 to \$40 or more.



Micro-torches have been observed retailing for as little as \$12, but they more frequently retail for around \$20 to more than \$100. Micro-torches and other high-end multi-purpose lighters combined probably have less than 5% of the market for multi-purpose lighters.

The useful life of a multi-purpose lighter depends on how often and for what purpose it is used. If a typical multi-purpose lighter contains enough fuel for an average of 1,000 lights, a multi-purpose lighter that is used several times a day would be expected to last less than 1 year. On the other hand, a lighter that is used less than once a day, or only seasonally, could last longer.

The fuel supply is not the only thing that limits the useful life of a multi-purpose lighter. A multi-purpose lighter can break or wear out, the piezo crystals can become dirty or misaligned, the fuel lines can become clogged, and the O-rings may fail and allow fuel to leak out of the lighter. Since most multi-purpose lighters are relatively inexpensive, some may simply be misplaced by consumers.

According to industry sources, more than 18 million lighters were sold in 1997. At the same time, a study based on a panel of 20,000 households indicated that fewer than 8 million U.S. households purchased multi-purpose lighters 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.

The useful life of the more expensive models and micro-torches can be longer. These lighters are refillable and retail for \$20 to more than \$100. Although the unit sales of the more expensive lighters account for only a small portion of the annual sales of multi-purpose lighters, the number in use at any given time, because of their longer expected life, is likely to be somewhat higher than their share of the annual sales.

Based on the assumption that the average useful life of multi-purpose lighters is approximately one year or less, the Commission estimates that the number of multi-purpose lighters used during a given year is roughly equal to the estimated annual sales. Thus, in the period 1995 through 1998, the number of multi-purpose lighters in use in a given year was probably in the range of 16 million to 20 million.

#### Manufacturers

CPSC has identified about 40 firms that manufacture, import, or privately label multi-purpose lighters. There are likely other firms, especially small importers or private labelers, that have not been identified. The number of firms participating in the market has increased as sales have increased.

Four manufacturers are members of the Lighter Association Inc., a trade association representing manufacturers of cigarette lighters. In 1997, the Lighter Association estimated that its members had more than 90% of the market for multi-purpose lighters in the United States. However, the market share of the Lighter Association members appears to be declining as competition from Asian and other imports is increasing.

The manufacturer with the largest market share is Scripto-Tokai Corporation. Although Scripto once had over 90% of the market, industry sources indicate that its share has fallen, and probably is now in the range of 80 to 90%. Most of the remaining 10 to 20% are manufactured by companies such as BIC, Swedish Match, Ronson, and various Asian manufacturers.

BIC Corporation manufactures its multi-purpose lighter in South Carolina. Only one other manufacturer, Donel, a manufacturer of high-end lighters, is known to produce multi-purpose lighters domestically. Scripto-Tokai imports its lighters from Mexico. Flamagas (Clipper brand) lighters are produced in Spain. Most other lighters are manufactured in Asia.

There are a handful of small U.S.-based companies that have proprietary designs for multi-purpose lighters. These companies generally work with Asia-based manufacturers to

manufacture their products. However, the U.S.-based companies have often borne the research and development costs. Other small U.S.-based companies are known to import and privately label multi-purpose lighters for which they do not hold proprietary designs.

#### Substitutes for Multi-Purpose Lighters

There are a number of products that can be used for the same purposes as multi-purpose lighters. The most likely and versatile substitute is probably ordinary box or book matches. Compared with about 8 million households purchasing multi-purpose lighters in 1997, a 1991 study for the CPSC indicated that more than 60 million households had matches (either book or box matches). Cigarette lighters can also be used for many of the purposes for which multi-purpose lighters are used. The retail prices of the substitutes are reasonably close to the retail prices of multi-purpose lighters. However, since sales of multi-purpose lighters have climbed rapidly from approximately 1 million units in 1985 to 20 million in 1998, we can infer that some consumers perceive that they receive greater utility from multi-purpose lighters than they would from the substitutes in some applications.

There are also reasonable substitutes for micro-torches when they are used in applications such as soldering. The closest substitutes would likely be butane or propane

torches that do not have internal ignition mechanisms. These are functionally nearly identical to micro-torches when used for torch applications, except that they must be ignited with a match or other external lighter. Electric soldering irons can also be used for many of the same applications. The cost to consumers of these substitutes may be reasonably similar to the cost of micro-torches.

#### Potential Benefits of the Rule

##### Societal Costs of Child-Play Fires

The rule is intended to reduce fires resulting from children under the age of 5 playing with multi-purpose lighters. The benefits to society of the rule will be the expected reduction in the societal costs of the deaths, injuries, and property damage associated with these fires.

The Commission is aware of 196 fires from 1995 through 1998 started by children under age 5 playing with multi-purpose lighters. These incidents resulted in 35 deaths, 81 injuries, and substantial property damage. The societal costs of these fires are discussed below. The analysis is limited to this 4-year period because the data available for other years are less complete.

Deaths: If we assume 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 1998 is \$175 million.

Injuries: Many of the 81 non-fatal injuries were severe. At least 43 involved burn injuries. Fire burns are among the most costly of injuries in terms of the cost of medical treatment and the pain and suffering of the victim. A CPSC study estimated that: the average cost of a hospitalized fire burn injury was \$898,000; the average cost of a burn injury where the victim was treated and released was estimated to be \$15,000; and the average cost of a burn injury treated elsewhere was \$2,000. These costs include medical and transportation costs, lost productivity, and pain and suffering. Of the 43 burn injuries, at least 15 were hospitalized and 12 were treated and released. The remaining 16 burn victims were either treated at the scene or the treatment they received is unknown. Based on the average societal costs from these types of injuries, the total cost of the burn injuries known to have occurred during this period is estimated to be at least \$13.7 million ( $15 \times \$898,000 + 12 \times \$15,000 + 16 \times \$2,000$ ).

At least 20 of the 81 injuries involved smoke inhalation. The CPSC study referenced above estimated that the average societal cost of a smoke inhalation injury was about \$130,000 if the victim was hospitalized, and \$13,000 if the victim was treated and released. If the victim was treated at the scene or received other treatment, the average societal cost was estimated to be \$2,000. At least

one of the smoke inhalation victims was hospitalized, and 12 were treated and released. If we assume that the remaining 7 victims were treated at the scene, the total societal costs associated with the smoke inhalation cases are estimated to be about \$0.3 million (1 x \$130,000 + 12 x \$13,000 + 7 x \$2,000).

The remaining 18 victims either had other types of injuries, such as broken bones or lacerations, or the type of injury was not reported. The treatment of these 18 victims was either unknown or not reported. Based on the above referenced CPSC study, the average societal costs of other non-hospitalized injuries is estimated to be \$13,000. Therefore, the total societal costs of the 16 victims who had injuries other than burns or smoke inhalation can be estimated at \$.2 million (18 x \$13,000).

Based on the above discussions, the Commission estimates that the total societal costs of the injuries associated with children playing with multi-purpose lighters that we know to have occurred during the 1995 through 1998 period to be \$13.4 million. This is a conservative estimate, as it includes only the incidents of which the CPSC is aware.

Property Damage: The total property damages from the 196 child-play fires known to have occurred from 1995 through 1998 exceeded \$5 million. This number is

conservative because it only includes the fires known to CPSC. And, of those known fires, it only includes fires where a property damage estimate was reported to CPSC.

Total Societal Costs: Summarizing all of the above costs (deaths, injuries, and property damage), the total estimated societal costs of the known incidents for the 4-year period 1995 through 1998 is about \$194.2 million, or \$48.6 million annually. This comes to about \$2.43 per year for each multi-purpose lighter in use. It is important to note that these cost estimates are based only on the incidents reported to CPSC, not on national fire loss estimates. There are likely to be other incidents of which CPSC is not aware.

#### Expected Reduction in Societal Costs

The rule is not expected to eliminate all fire incidents involving children under the age of 5. Some children in that age range will be able to operate multi-purpose lighters that meet the requirements of the rule. Indeed, a multi-purpose lighter will meet the requirements of the rule even if up to 15% of the subjects in the test panel can operate the lighter.

On the other hand, some children under the age of 5 cannot operate the non-child-resistant multi-purpose lighters currently on the market. CPSC baseline testing indicates that, depending on the model, 4 to 41% of test



subjects cannot operate non-child-resistant multi-purpose lighters. Therefore, the rule for multi-purpose lighters is expected to reduce the number of children under the age of 5 that can operate multi-purpose lighters by 75 to 84%.<sup>2</sup>

Additionally, the overall effectiveness of the standard may be higher than the 75 to 84% estimated above for two reasons. First, manufacturers may achieve an average level of child-resistance greater than 85% to ensure that their design will always achieve at least the minimum level of child resistance required by the rule. The experience with cigarette lighters, for example, indicates that most manufacturers achieve 90% or higher child resistance.

Second, CPSC probably over-estimated the baseline child-resistance of the non-child-resistant multi-purpose lighters in use. This is because CPSC tested lighters with on/off switches in the off, or locked, position. If the lighter had been tested with the switch in the on, or

---

<sup>2</sup>The estimated minimum improvement in child resistance due to the rule for any given non-child-resistant lighter is calculated by dividing the percentage improvement in child resistance (the 85% minimum requirement of the rule minus the baseline child resistance of the non-child-resistant lighter) by the percentage of children that can operate the non-child-resistant lighter (100% minus the baseline %). For example, the least child-resistant lighter in the baseline testing (4% child resistance) would show an estimated 84% improvement in child resistance, and the same percent reduction in child-play fires  $[(85 - 4)/(100 - 4) = 81/96 = 84\%]$ . The most child-resistant lighter in the baseline testing would show a 75% improvement  $[(85 - 41)/(100 - 41) = 44/59 = 75\%]$ .

unlocked, position, as required by the final rule, the baseline child-resistance would have been much lower than the 41% estimated above. We expect that some multi-purpose lighters will at times be stored with the switch in the unlocked position.

Using the lower end of the range of the estimated effectiveness of the rule, during the 1995 through 1998 time frame, societal costs of child-play fires involving multi-purpose lighters would have been reduced by about \$36.5 million annually had all multi-purpose lighters been child-resistant.<sup>3</sup> Assuming that an average of 20 million multi-purpose lighters were used each year, the gross benefit per lighter would have been about \$1.82. If there were child-play fires involving multi-purpose lighters during this period of which CPSC is not aware, or if a substantial number of consumers store multi-purpose lighters unlocked, the estimated benefits would have been higher.

#### Potential Costs of the Rule

Manufacturing costs. Manufacturers will incur costs to modify their products to comply with the rule. In general, costs that would be incurred by the manufacturers in developing, producing, and selling new complying lighters include the following:

---

<sup>3</sup>Calculated by multiplying the estimated \$48.6 million in societal costs by 0.75 (the expected reduction in such fires).

- Research and development toward finding the most promising approaches to improving child resistance, including building prototypes and surrogate lighters for preliminary child-panel testing;
- Retooling and other production equipment changes required to produce child-resistant multi-purpose lighters, beyond normal periodic changes made to the plant and equipment;
- Labor and material costs of the additional assembly steps, or of the modification of assembly steps, in the manufacturing process;
- The additional labeling, recordkeeping, certification, testing, and reporting that will be required for each model.
- Various administrative costs of compliance, such as legal support and executive time spent at related meetings and activities; and
- Lost revenue if the child-resistant features adversely affect sales.

Industry sources have not provided firm estimates of these costs. However, the Lighter Association stated that its members believed the costs would average between \$0.25 and \$0.75 per lighter. One major manufacturer, BIC, has introduced a child-resistant multi-purpose lighter. Because BIC did not previously manufacture a non-child-resistant lighter, a spokesman was unable to estimate the incremental

cost of developing and manufacturing child-resistant multi-purpose lighters.

Research and Development Costs. One manufacturer speculated that the costs of developing, testing, and retooling for production of multi-purpose lighters might be \$1 million per manufacturer, if it is possible to adapt the same technology used to make cigarette lighters child-resistant. However, the manufacturer stated that, if it were not possible to adapt the cigarette lighter technology, the costs could be as high as \$5 million per manufacturer. Two other manufacturers provided lower estimates of the costs. They expected to spend \$100,000 to \$1 million. However, they stressed that these were guesses and that unforeseen problems, such as problems stemming from patents owned by others, could increase the costs. After evaluating this conflicting information from some manufacturers, it seems likely that the average investment in research, development, and retooling would be no more than \$2 million.

If, as discussed above, there are 20 manufacturers of multi-purpose lighters and research and development costs are as high as \$2 million per manufacturer, then the total industry-wide research, development, and retooling costs will be about \$40 million. If these costs are amortized over 10 years and sales increase at an annual rate of 1% from a

base of 21 million units in 1999, then the research, development and retooling costs will average about \$0.23/unit. For a manufacturer with a large market share (i.e., selling several million units annually) the cost per unit for research, development and retooling may be significantly lower than this. On the other hand, for manufacturers with a small market share, such as the manufacturers of high-end lighters and micro-torch lighters, the per-unit development costs could be substantially greater, because these costs would be amortized over a significantly lower production volume. However, the information available is insufficient to provide a reliable estimate of the cost per unit for the higher-end and micro-torch-type lighters.

Material and Labor Costs. In addition to the research, development, and retooling 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 CPSC was unable to get reliable estimates, some industry sources indicated that these costs would be low, probably less than \$0.25 per unit.

Multi-purpose 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 rule allows substantial flexibility to the manufacturer for things such as color, size, and location, this requirement is not expected to increase the costs significantly.

Certification and Testing Costs. Certification and testing costs include the costs of producing the surrogates needed in the testing, conducting the child-panel tests, and issuing and maintaining records for each model. These costs could average \$25,000 per model. However, the cost for any individual firm may be different. The cost for conducting child-panel tests for one model could be substantially lower if only one panel is required. The cost could be higher if the manufacturer must use a second panel or redesign a model that failed the initial test. The cost of designing surrogates could range from virtually nothing (if the production lighter has an audible signal, such as a click, that occurs when it has been operated successfully) to several thousand dollars (if surrogates must be designed and built).

These costs are incurred only once, and would therefore, be amortized over the entire production of the model. Based upon the estimates described above, the amortized certification and testing costs are expected to average less than one cent per unit. However, for models

with small market shares, the cost per unit for certification and testing may be higher.

Administrative Costs. There may be some additional and ongoing administrative expenses associated with compliance and related activities. While these expenses are difficult to quantify, they are expected to be slight and have little impact on the unit costs.

Multi-purpose lighters are sold in countries other than the United States. Some manufacturers may develop lighters that meet the requirements of the rule for distribution in the United States, but may continue to distribute the current, non-child-resistant models in other countries. Thus, some manufacturers may incur the incremental costs associated with producing multiple lines of similar products. These costs could include extra administrative costs required to maintain different lines and the incremental costs of producing different lines of similar products, such as using different molds or different assembly steps. These costs would be mitigated if other countries adopted similar standards.

Total Manufacturing Costs. The rule will likely increase the total cost of manufacturing multi-purpose lighters by about \$0.48 per unit. This estimate is in the \$0.25 to \$0.75 per unit range provided by the Lighter Association in response to the ANPR. The low end of the

range provided by the Lighter Association may be more accurate if the additional material and labor costs are significantly less than estimated above.

The increased cost of manufacturing multi-purpose lighters will, for the most part, ultimately be borne by consumers. Generally, the increased cost of production will be passed on to the consumer in the form of higher prices. Assuming a 100% markup over the incremental cost to manufacturers (estimated at \$0.48/unit) the rule may be expected to increase the retail price of multi-purpose lighters by \$0.96 per unit. However, some manufacturers may be unable to pass all of the incremental costs directly to the consumers. This may be especially true in the case of the up-front research and development costs. In these cases, the costs may be indirectly borne by consumers in such forms as generally higher prices on the range of products produced by the manufacturer. The retail prices for high-end and micro-torch multi-purpose lighters will probably increase by more than \$0.96 per unit, since their costs per unit are greater. However, since the high-end and micro-torch lighters comprise such a small portion of the market, this should not significantly affect the average cost of producing multi-purpose lighters.

#### Net Benefits



As previously discussed, the rule is expected to produce a gross societal benefit of \$1.82 per lighter and to increase the cost to consumers by about \$0.96 per unit. Therefore, the expected net benefit of the rule is \$0.86 per multi-purpose lighter sold ( $\$1.82 - \$0.96$ ). Since annual sales of multi-purpose lighters exceed 20 million units, the rule should result in net societal benefits of at least \$17.2 million annually ( $\$0.86 \times 20 \text{ million} = \$17.2 \text{ million}$ ). As discussed previously, the actual net benefits may differ from the estimates if some of the assumptions used in computing the estimates prove inaccurate.

#### Other Impacts of the Rule

Stockpiling. The rule contains anti-stockpiling provisions, authorized by section 9(g)(2) of the CPSA, to prohibit excessive production or importation of noncomplying lighters during the 12-month period between the publication date and the effective date of the rule. The provision would limit the production or importation of noncomplying products to 120% of the amount produced or imported in the most recent calendar year before the issuance of the final rule.

While the anti-stockpiling provision should have little impact on the market as a whole, it may adversely impact any small importers or manufacturers that were just entering the market. Such firms may have had low sales volume in their first year or two of operation, and thus their base volume

would be low. In the absence of the anti-stockpiling provisions, they may have been able to increase their sales volume by a greater proportion than would be allowed under the anti-stockpiling provision. There is no limit on the number of child-resistant multi-purpose lighters that may be imported, manufactured, or sold during this period.

#### Effects on Competition and International Trade

The rule is not likely to have a significant adverse impact on competition. Scripto-Tokai Corporation introduced multi-purpose lighters in 1985 and for many years maintained a market share of 90% or more. Although Scripto-Tokai is still the dominant manufacturer, its market share has dropped in the face of increased competition from other manufacturers and importers. BIC has already introduced a multi-purpose lighter that meets the requirements of the rule. Moreover, the Commission is aware of several other manufacturers, including some small firms that are actively developing child-resistant multi-purpose lighters. These multi-purpose lighters are expected to be on the market by the time the rule becomes effective.

#### Impact on Small Business

CPSC has identified about 40 manufacturers, importers, and private labelers of multi-purpose lighters. Although the dominant firms are not small, a significant number of the remaining firms are considered to be small businesses

according to guidelines established by the Small Business Administration (SBA). The rule may have a significant impact on some of the small firms.

The small businesses that are most likely to be impacted by the rule are those that market multi-purpose lighters to which they have proprietary or exclusive rights. These firms will likely have to bear the up-front costs of developing the child-resistant features, as well as the retooling and certification costs. As noted, these costs could exceed \$100,000 even if few problems are encountered. If problems are encountered (e.g., designs that infringe upon patents held by others or initial designs that fail the certification tests) the costs could exceed \$2 million.

Of the small firms known to the Commission, seven have proprietary or exclusive rights to particular multi-purpose lighter models. Some of these firms are actively developing child-resistant models, and one is already marketing a multi-purpose lighter that it believes to be child-resistant (although it has not been tested). Thus the added burden is not insurmountable by small firms. However, some small firms may decide that the added costs are too great and cease marketing their proprietary designs. Other small businesses that currently market multi-purpose lighters and micro-torches do not have proprietary or exclusive rights to any multi-purpose lighter model. These companies either

import or privately label lighters produced by other firms. In these cases, the manufacturer or firm that actually owns the design will likely bear most of the research, development, retooling, and certification costs. Since these manufacturers often supply product to more than one importer or private labeler, the costs are likely spread over a higher production volume. Moreover, multi-purpose lighters usually account for only a small percentage of many of the importers' and private labelers' sales. Therefore, even if a small importer or private labeler stopped importing or distributing multi-purpose lighters, it is not likely to suffer a significant adverse effect if multi-purpose lighters accounted for a small percentage of its total sales.

Although there will be adverse effects on some small businesses, these effects are justified by the greater safety benefits expected from the rule.

#### Impact on Utility to the Consumer

The rule may reduce the utility that consumers receive from multi-purpose lighters if child-resistant multi-purpose lighters are more difficult to operate than are non-child-resistant models. This could result in some consumers switching to substitute products, such as cigarette lighters or matches. However, as was the case with child-resistant cigarette lighters, manufacturers are likely

to develop child-resistant multi-purpose lighters that are at most only slightly more difficult for adults to operate than are non-child-resistant lighters. Therefore, the number of consumers who stop using multi-purpose lighters because of the child-resistant mechanisms is expected to be small. Moreover, even if some consumers do switch to other products, the risk of fire is not expected to increase significantly. Most cigarette lighters must already meet the same child-resistance standard that multi-purpose lighters will have to meet. Although consumers that switch to matches (as opposed to using child-resistant cigarette or multi-purpose lighters) may increase the risk of child-play fires from matches somewhat, matches are inherently more child-resistant than non-child-resistant multi-purpose lighters. 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 multi-purpose lighters.

Some manufacturers of micro-torches may respond to the rule by no longer offering micro-torches that have internal ignition mechanisms. The consumer would, therefore, have to use an external ignition source to light the torch. Although this option could decrease manufacturing costs, it could reduce the convenience and utility of the multi-purpose lighters. Consumers will have to provide external ignition

sources, such as matches, to ignite the torches. It will also take more time to ignite such a torch, since both hands will be required and the worker or consumer will have to put down what they were working with to pick up the ignition source.

#### Alternatives Considered to the Rule

The Commission considered several possible alternatives to the rule. These alternatives included (1) not taking any action and relying on voluntary efforts, (2) issuing labeling requirements instead of performance requirements, and (3) narrowing the scope of the rule. The Commission also considered different effective dates and some alternatives aimed at reducing the burden on certain small businesses.

No Action/Rely on Voluntary Efforts. The Commission considered the impact of taking no action to reduce the occurrence of fires started by children playing with multi-purpose lighters. If no mandatory rule is issued, some manufacturers may still introduce child-resistant multi-purpose lighters. While these manufacturers can emphasize the safety of their product, they would be at a competitive price disadvantage compared to manufacturers who continued to sell non-child-resistant lighters. This would result in a lower level of benefits than would be obtained with the rule.

Although the portion of the market that would be captured by manufacturers of child-resistant lighters is not known, it is reasonable to assume it would be substantially less than 100%. Thus, the benefits to society of taking no action or relying on voluntary efforts would be lower than they would be under a mandatory rule.

Currently, there is no voluntary standard for child-resistant multi-purpose lighters, and no apparent industry interest in adopting one. The Commission potentially could work with appropriate standards-setting organizations to try to develop such a standard, but it is not clear that an acceptable voluntary standard could be developed with sufficient speed, or that conformance would be adequate.

#### Labeling Requirements

The Commission considered the impact of not issuing a performance standard, but to instead require additional warning labels on multi-purpose lighters. However, the FHSA already requires multi-purpose lighters to be labeled "Keep out of reach of children." The effectiveness of additional labeling would be low.

#### Narrowing the Scope

The Commission considered the impact of exempting the more expensive multi-purpose lighters from the rule. This would have been analogous to the exemption in the cigarette

lighter standard for the more expensive non-novelty cigarette lighters. In that case, however, there was little evidence of involvement of those expensive lighters in child-play fires.

There are 3 firms that are known to market high-end multi-purpose lighters; all 3 of these firms have fewer than 100 employees and are considered to be small businesses. (One firm claims that its multi-purpose lighter has features that should make it child-resistant.) Of the 6 firms that are known to distribute micro-torches, 3 have fewer than 100 employees and are considered to be small businesses.

For the reasons given in the response to comments on the proposal, Section E of this notice, the Commission believes that the more expensive multi-purpose lighters are as likely to be involved in child-play fires as are the less expensive models and should not be excluded.

The Commission also considered the impact of excluding micro-torches from the rule. As noted, the Commission received several comments from the lighter industry, in response to the NPR, encouraging the Commission to exclude micro-torches. For the reasons given in the response to comments in Section E of this notice, the Commission believes that micro-torches will be stored around the home in the same way that multi-purpose lighters are. Therefore,



they will be accessible to small children and should not be excluded from the standard.

The Commission is aware of one incident involving a fire started by a child under the age of 5 with a micro-torch-type lighter. The lighter was being used to light the pilot light of a gas furnace, a use more characteristic of multi-purpose lighters than of torches. However, micro-torch lighters represent only a small portion of the multi-purpose lighters in use. Micro-torches probably account for significantly less than 5% of sales of multi-purpose lighters. Therefore, the lack of other incidents involving micro-torches may be related to the low number of these products in use.

#### Alternatives to Reduce the Burden on Small Businesses

The Commission considered several exemptions or special provisions to reduce the regulatory burden on certain small businesses. These provisions would have applied only to businesses that met the SBA definition of a small business and were not owned by or a subsidiary of a larger company, unless the combined employment would still meet the SBA criteria.

Alternative Effective Date. The Commission considered establishing an effective date of more than the proposed 12 months after the date of publication of the final rule in the **Federal Register**, for some small manufacturers. The

intent of such an extension would be to reduce the burden of the rule on small firms by giving them extra time to develop child-resistant lighters and bring them to market. However, for the reasons given in Section E of this notice, the Commission decided that an effective date exceeding 1 year from the rule's publication was not in the public interest.

Exemption from testing. The Commission considered exempting some small businesses from the requirement to conduct the child-panel certification tests, if the firm had a reasonable basis to believe that the multi-purpose lighter would pass the tests if they were conducted. However, the Commission concluded that conducting these tests is necessary to ensure that the lighter is child-resistant. The actual child-panel tests are a small part of the entire cost of designing and bringing a child-resistant lighter to market. Although the average cost of this testing per model may be about \$25,000, the costs may vary among firms. On the low end, the costs may be as low as \$10,000 if surrogates do not have to be designed, only one panel of children is required, and the company can conduct much of the testing internally. On the other hand, the costs could exceed \$40,000 if the company has to design surrogates, use more than one child-panel for the tests or has to redesign the lighter because it fails the test. If a manufacturer is confident that its design is child-resistant, it should also

be confident that the cost of the certification testing will be on the low side of the estimated range of costs.

Furthermore, the testing is a one-time cost. Once a design passes the qualification test, it does not have to be tested again for child-resistance.

If certain small firms were exempted from the testing, and one of their models was later found not to be child-resistant, the cost to the manufacturer of a recall could exceed the cost of the testing. Moreover, if an exemption from testing were granted and a lighter model were in fact not child-resistant, it could lead to hundreds of thousands, or even millions, of non-child-resistant multi-purpose lighters being introduced into commerce. Just one additional child-play fire incident associated such a lighter could result in societal costs that greatly exceed the cost of the certification testing. Therefore, the Commission does not believe that it is in the public interest to exempt small firms from the testing requirements of the rule.

#### **I. Final Regulatory Flexibility Analysis**

When an agency undertakes a rulemaking proceeding, the Regulatory Flexibility Act (RFA), 5 U.S.C. 601 et seq., generally requires the agency to prepare initial and final regulatory flexibility analyses describing the impact of the rule on small businesses and other small entities. The

purpose of the RFA, as stated in § 2(b) (5 U.S.C. 602 note), is to require agencies, consistent with their objectives, to fit the requirements of regulations to the scale of the businesses, organizations, and governmental jurisdictions subject to the regulations.<sup>4</sup> The Commission's initial regulatory flexibility analysis (IRFA) was published with the proposed rule.

The final regulatory flexibility analysis (FRFA) is to contain:

(1) a succinct statement of the need for, and objectives of, the rule;

(2) a summary of the significant issues raised by public comments in response to the initial regulatory flexibility analysis, a summary of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;

(3) a description of, and an estimate of the number of, the small entities to which the rule will apply or an explanation of why no such estimate is available;

(4) a description of the projected reporting, recordkeeping, and other compliance requirements of the rule, including an estimate of the classes of small entities

---

<sup>4</sup>The Regulatory Flexibility Act provides that an agency is not required to prepare a regulatory flexibility analysis if the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. 5 U.S.C. 605.

that will be subject to the requirement and a description of the type of professional skills necessary for preparation of the report or record; and

(5) a description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

#### The Need for and Objectives of the Rule

The rule addresses the risk of death and injury from residential fires started by young children under the age of 5 playing with multi-purpose lighters. Since 1988, the Commission has identified 237 fires that were started by children under age 5 who were playing with multi-purpose lighters. These fires resulted in a total of 45 deaths and 103 injuries. Because these are only the incidents known to the CPSC, the actual numbers may be higher. The societal cost of these fires is about \$48.6 million annually. Requiring that multi-purpose lighters be child-resistant, as defined in the rule, will significantly reduce the number of fires started by children under the age of 5.

#### Firms Subject to the Rule

The rule covers manufacturers, importers, private labelers, distributors, and retailers of multi-purpose lighters, including micro-torches, intended for sale to consumers. All firms that manufacture or import multi-purpose lighters will have to certify that their multi-purpose lighters are child-resistant. These firms will also be subject to the reporting and recordkeeping requirements in the rule.

The number of firms that manufacture, import, or privately label these lighters is increasing. While about 40 firms have been identified, there may be other companies that have not been identified. Except for two manufacturers (one large and one small), all firms are believed to be importers rather than domestic manufacturers. Several of the importers are subsidiaries of larger firms or foreign manufacturers. Although the dominant firms are not small, as many as 20 of the remaining firms may be considered to be small businesses according to the SBA.

The small businesses that are most likely to be substantially impacted by the rule are those that have proprietary or exclusive rights to specific multi-purpose lighter models. These firms will likely have to bear the up-front costs of developing the child-resistant features, retooling, and certification. These costs could exceed \$100,000, even if few problems are encountered. The costs

could be as high as \$2 million if problems are encountered, such as designs that infringe upon patents held by others or initial designs that fail the certification tests.

Of the small firms known to the Commission, seven are believed to have proprietary or exclusive rights to particular multi-purpose lighter models. Some of these firms are actively working on developing child-resistant models. One is already marketing a multi-purpose lighter that it believes to be child-resistant, although it has not been certified in accordance with the requirements of the rule. Thus, although the rule will impose costs on small firms, this burden is not insurmountable, and some small firms with proprietary designs should be able to compete successfully after the rule goes into effect. However, some firms may decide that the added costs are too great and cease marketing their proprietary non-child-resistant designs.

Many of the small businesses that market multi-purpose lighters and micro-torches do not have proprietary or exclusive rights to any multi-purpose lighter model. These companies either import or privately label lighters produced by other firms. The impact on these companies is not likely to be significant. The manufacturers or firms that actually own the designs will likely bear most of the research, development, retooling, and certification costs. Since these manufacturers often supply product to more than one importer

or private labeler, the costs are likely spread over a higher production volume. Furthermore, even if a small importer or private labeler stopped importing or distributing multi-purpose lighters, it is not likely to suffer a significant adverse effect if multi-purpose lighters account for a small percentage of its total sales, as is thought to be the case with many of the importers.

Some small importers may experience some disruption in their supply of multi-purpose lighters if some of the foreign suppliers opt not to develop child-resistant multi-purpose lighters. However, the 12-month period between the publication of the final rule and its effective date should allow time for most importers to take action to ensure that they have a source for child-resistant multi-purpose lighters.

#### Issues Raised by the Public Comments on the IRFA

Several issues were raised in the public comments on issues relating to the IRFA. These issues include: the proposed requirement for multiple operations, money for legal counsel and testing, that CPSC should mandate a specific design, that the effective date should be longer, that the cost of certification testing is excessive, and alternatives to be considered to the proposed rule. The Commission's responses to these comments are given in Section E of this notice.



### Reporting and Recordkeeping Requirements

All manufacturers and importers of multi-purpose lighters will be required to keep certain records regarding the certification testing and production (quality control) testing of their multi-purpose lighters. The preparation of the records should not require any skills that would not typically be possessed by or available to a manufacturer or importer. For example, the production testing is very similar to the quality control testing that most manufacturers undertake routinely. There are also independent quality control and engineering laboratories and other professional consultants with which firms can contract for these services.

In order to perform the certification tests, the manufacturers will have to supply at least 6 empty surrogates. Most manufacturers will probably be able to use empty production lighters for the surrogates (if the lighter makes an audible "click" when the ignition mechanism is operated properly). Other manufacturers may have to develop surrogates for use in the certification tests that produce an audible or visual signal when the ignition mechanism is successfully operated. This may involve technical knowledge of miniature electronics that some small firms may not have in-house. However, there are independent engineering firms with this expertise with which small firms may contract.

Conducting the certification tests and preparing the supporting documentation does not require any special technical skill or extensive training. Manufacturers could conduct the conformance tests with in-house personnel, but it is likely that many will employ private consulting or testing services. The records of the testing would likely be compiled by the firm conducting the testing and maintained by the manufacturer or importer. Manufacturers or importers would keep copies of other reports or certification records.

The rule also allows importers to rely on testing by or for a foreign manufacturer to support the rule's certification and reporting requirements, provided that the records (1) are in English, (2) are complete, (3) can be provided to the Commission within a reasonable time, if requested, and (4) provide reasonable assurance the multi-purpose lighters are child-resistant. This provision may reduce the testing burden on some small importers (indeed, on any importer), to the extent manufacturers supply lighters to more than one importer.

At least 30 days before it first imports or distributes a multi-purpose lighter model, the manufacturer or importer must provide written notice to the CPSC. Among other things, this report is to include basic identifying information as to the manufacturer or importer, a description of the lighter model and its child-resistance features, a

description and summary of the certification testing, and the location where the other required records will be kept. The manufacturer or importer must also supply the CPSC with a prototype or production unit of the lighter model.

The reporting requirements of the rule are necessary for the CPSC to monitor compliance. The Commission is not aware of any method by which the reporting burden on small businesses could be reduced while still accomplishing the purpose of the rule. The estimated reporting burden, however, is low—less than 100 hours per model in the initial production year (including the certification testing) and significantly less than this in subsequent years.

Assuming that approximately 20 manufacturers, with 1 to 2 models each, introduce child-resistant multi-purpose lighters during the first year after the publication of the final rule, the total paperwork and reporting burden for all manufacturers will be 2,000 to 4,000 hours. In subsequent years, the total paperwork and reporting burdens should be significantly less. For example, if three new models are introduced annually, the total burden will be approximately 300 hours.

#### Other Alternatives Considered

The Commission considered four basic alternatives to certain elements of the rule. Specifically, the Commission considered (1) narrowing the scope to exclude high-end

and/or micro-torch multi-purpose lighters, (2) requiring only additional labeling, (3) taking no action and relying on voluntary efforts, and (4) alternative effective dates. These alternatives were rejected for the reasons given in the Commission's Regulatory Analysis in Section H of this notice.

#### Summary and Conclusions

The rule will affect all manufacturers and importers of multi-purpose lighters, including a number of manufacturers and importers that are small businesses. The small firms that import or manufacture multi-purpose lighters will be impacted by the rule's performance, certification, recordkeeping, and reporting requirements. The higher costs of manufacturing child-resistant lighters that their suppliers incur will likely be passed on to these firms as well. Some of the firms may have temporary disruptions in their supply of multi-purpose lighters because of the rule. However, it is unlikely that any of these effects would be significant.

In addition to the small importers, there are a few small firms that manufacture their own multi-purpose lighters or have their own proprietary designs manufactured for them. The rule may have a more significant impact on these firms since they will likely bear most of the cost of

developing and certifying the child-resistant mechanisms for their multi-purpose lighters.

The Commission considered some alternatives to the rule that might have reduced the burden on small manufacturers. However, these alternatives were rejected since the level of safety that would be achieved was lower under these alternatives than under the rule. These alternatives included taking no action, requiring additional labeling only, exempting the high-end multi-purpose lighters from the scope of the rule, and extending the effective date.

#### **J. Effects on the Elderly and Handicapped**

Section 9(e) of the CPSA requires that, in promulgating a consumer product safety rule, "the Commission shall also consider and take into account the special needs of elderly and handicapped persons to determine the extent to which such persons may be adversely affected by such rule." 15 U.S.C. 2058(e). The following discussion examines the potential effect of the rule on elderly and handicapped persons.

The rule is unlikely to have a significant impact on the elderly or handicapped who can operate non-child-resistant multi-purpose lighters. The lighter industry now has several years experience in the design of child-resistant mechanisms for cigarette lighters, and it is reasonable to expect that this experience will be applied to

child-resistant devices for multi-purpose lighters. Early designs for cigarette lighters were somewhat cumbersome and often inconvenient to use, leading to customer complaints and to intentional defeat of some types of child-resistant mechanisms by some persons. Since the Safety Standard for Cigarette Lighters became effective, child-resistant mechanisms have evolved. Although some types are less than ideal, others are transparent, or nearly so, to the user.

Current multi-purpose lighters typically are operated by a trigger (operated with the forefinger) or a button (operated with the thumb), and are easy to use with one hand. Child-resistant versions of these lighters will probably require some additional action or force, and thus may be at least somewhat more complex or less convenient to operate than non-child-resistant lighters. However, because ease of use is critical to consumer acceptance, it is likely that multi-purpose lighters will continue to be operable with one hand, and that the child-resistant devices will not be overly difficult to use.

The staff reviewed three child-resistant multi-purpose lighter designs. The child-resistant device on each product is a latch that blocks the operating mechanism. Two have trigger-style operating mechanisms. These have devices built into the top side of the handle, in line with the expected placement of the user's thumb. One trigger-style lighter

requires that the user apply a force of 1.25 kg or 2.75 kg (depending on placement) with the thumb to unlatch the operating mechanism. This requires both knowledge of how the device works and a level of strength below the average for a tested sample of subjects aged 60 to 89 years of age for a similar task (Imrhan, 1989). The other requires the user to first slide a button backward (toward the palm) approximately 1/8 inch before pulling the trigger. The latter requires only knowledge, because the action of sliding the button backwards is counter to the normal motion when holding and operating the lighter, but requires only nominal force and dexterity.

The third lighter has a slide-button operating mechanism positioned on the top of the handle. It requires that a second slide latch on the reverse side of the handle be pushed sideways before the lighter can be operated. Although simple in principle, this third lighter does not fit the user's hand, and requires coordination to operate. Provided clear instructions are included on the packaging, the first two types should be usable by handicapped and elderly persons who can operate current non-child-resistant lighters. The third is likely to be difficult for users in general. Competitive forces should ensure that elderly and handicapped consumers will find one or more products they are able to use.

## **K. Paperwork Reduction Act**

As explained above, the standard and the certification provisions will require manufacturers and importers of multi-purpose lighters to test surrogate and production lighters, maintain records, and report data to the Commission relating to the multi-purpose lighters that they produce or import. For this reason, the rule published below contains "collection of information requirements," as that term is used in the Paperwork Reduction Act, 44 U.S.C. 3501-3520. Therefore, the proposed rule was submitted to the Office of Management and Budget (OMB) in accordance with 44 U.S.C. 3507(d) and implementing regulations codified at 5 CFR 1320.11.

Based on estimates made in the course of developing the cigarette lighter standard and on information obtained from industry sources, the Commission estimates that complying with the testing, recordkeeping, and reporting requirements of the rule will require approximately 100 hours per model for the first year, and substantially less in subsequent years. The time required for testing is expected to average about 80 hours per model. The time required for recordkeeping and reporting is expected to be about 10 hours for each model per year. The exact number of manufacturers and importers is not known. However, the number of manufacturers and importers appears to be increasing.



Currently, the Commission believes that there may be as many as 40 different models of multi-purpose lighters on the market. With a few exceptions, most manufacturers and importers have only one model. Therefore, the total amount of time that will be required for complying with the testing, recordkeeping, and reporting requirements of the rule is approximately 4,000 hours in its initial year or so, and substantially less in later years.

#### **L. Executive Orders**

This rule has been evaluated in accordance with Executive Order No. 13,132, and the rule has no substantial federalism implications.

Executive Order No. 12,988 requires agencies to state the preemptive effect, if any, to be given to the regulation. The preemptive effect of this rule is established by 15 U.S.C. 2075(a), which states:

(a) Whenever a consumer product safety standard under the CPSA applies to a risk of injury associated with a consumer product, no State or political subdivision of a State shall have any authority either to establish or continue in effect any provision of a safety standard or regulation which prescribed any requirements as to the performance, composition, contents, design,

finish, construction, packaging, or labeling of such products which are designed to deal with the same risk of injury associated with such consumer product, unless such requirements are identical to the requirements of the Federal standard.

Subsection (b) of 15 U.S.C. 2075 provides a circumstance under which subsection (a) does not prevent the Federal Government or the government of any State or political subdivision of a State from establishing or continuing in effect a safety standard applicable to a consumer product for its own [governmental] use, and which is not identical to the consumer product safety standard applicable to the product under the CPSA. This occurs if the Federal, State, or political subdivision requirement provides a higher degree of protection from such risk of injury than the consumer product safety standard.

Subsection (c) of 15 U.S.C. 2075 authorizes a State or a political subdivision of a State to request an exemption from the preemptive effect of a consumer product safety standard. The Commission may grant such a request, by rule, where the standard or regulation of the State or political subdivision (1) provides a significantly higher degree of protection from such risk of injury than does the consumer

product safety standard and (2) does not unduly burden interstate commerce.

List of subjects in 16 CFR Part 1212.

Consumer protection, Fire prevention, Hazardous materials, Infants and children, Labeling, Packaging and containers, Reporting and recordkeeping requirements, Multi-purpose lighters.

For the reasons set out in the preamble, the Commission amends Title 16, Chapter II, Subchapter B, of the Code of Federal Regulations as set forth below.

1. A new Part 1212 is added to read as follows:

PART 1212--Safety Standard for Multi-purpose lighters

Subpart A--Requirements for Child-Resistance

Sec.

1212.1 Scope and application.

1212.2 Definitions.

1212.3 Requirements for multi-purpose lighters.

1212.4 Test protocol.

1212.5 Findings.

Authority: 15 U.S.C. 2056, 2058, 2079(d).

Subpart B--Certification Requirements

Sec.

1212.11 General.

1212.12 Certificate of compliance.

1212.13 Certification tests.

1212.14 Qualification testing.

1212.15 Specifications.

1212.16 Production testing.

1212.17 Recordkeeping and reporting.

1212.18 Refusal of importation.

Authority: 15 U.S.C. 2063, 2065(b), 2066(g), 2076(e), 2079(d).