



UNITED STATES
 CONSUMER PRODUCT SAFETY COMMISSION
 WASHINGTON, DC 20207

 OS 4516

2001 APR -4 A M 3:11

VOTE SHEET

Date **MAR 30 2001**

TO The Commission
 Sadye E. Dunn, Secretary

FROM Michael S. Solender, General Counsel *MSS*
 Stephen Lemberg, Assistant General Counsel *SL*
 Patricia M. Pollitzer, Attorney *MP*

SUBJECT Petition HP 00-4 requesting ban of baby bath seats

Attached is a briefing package from the staff concerning a petition from the Consumer Federation of America and nine other organizations. The petitioners assert that baby bath seats pose an unreasonable risk of injury or death by drowning and request that the Commission ban bath seats. The staff recommends that the Commission grant the petition and begin a rulemaking proceeding. A draft advance notice of proposed rulemaking ("ANPR") is attached at Tab L.

Please indicate your vote on the following options

I. Grant Petition HP 00-4 and approve the draft ANPR

 Signature Date

II. Grant Petition HP 00-4 and approve the draft ANPR with the following changes (please specify)

 Signature Date

NOTE: This document has not been reviewed or accepted by the Commission.
 Initial SD Date 3/30/01

with Tab I and OTC memo removed
 CPSA 6 (b)(1) Cleared
 3/30/01
 No Mfrs/PrvtLbrs on Products Identified
 Excepted by *Petition*
 Firms Notified,
 Comments Processed

III. Deny Petition HP 00-4 and direct the staff to prepare a letter of denial to the petitioners.

Signature

Date

IV. Defer decision on Petition HP 00-4

Signature

Date

V. Take other action (please specify):

Signature

Date

/

OS#4516

Briefing Package

Petition No. HP 00-4, Request to Ban Baby Bath Seats

NOTE: This document has not been reviewed or accepted by the Commission.
Initial SD Date 3/30/01

with OGC memo & Tab I removed ←

CPSA 6 (b)(1) Cleared
3/30/01
No Mfrs/PrvtLbrs
Products Identified
Excepted by Refin
Firms Notified,
Comments Processed

For Information Contact:

Jacqueline Elder
Office of Hazard Identification and Reduction
(301) 504-0554 ext. 2254

Executive Summary

In July 2000, the Consumer Federation of America and eight additional organizations petitioned the U.S. Consumer Product Safety Commission (CPSC) to ban baby bath seats. In August 2000, an additional organization, U.S. Public Interest Research Group, submitted a letter requesting to be added to the list of petitioners. The original petition, with the additional organization included as a petitioner, was docketed under the Federal Hazardous Substances Act (FHSA) (Petition No. HP 00-4) and was posted in the Federal Register, Vol. 65, No. 163 on Tuesday, August 22, 2000.

The petitioners state that "[B]aby bath seats pose an unreasonable risk of injury and death to children. Each year at least eight babies die as a result of a drowning associated with bath seat use. Drownings typically occur when the infant tips over, climbs out of, or slides through the product." The petitioners also state that the product induces a "false sense of security," which "leads to increased risk-taking behavior among those using the product even when the irresponsible nature of the caregivers is taken into account."

CPSC staff is aware of 69 deaths and 95 non-fatal incidents and complaints from January 1983 through November 2000 involving baby bath rings/seats. The victims involved in the fatal incidents ranged in age from 5 to 20 months old. Sixty-one of the victims were between 5 and 10 months of age. The age of victims most frequently involved in the fatal incidents was 7 months (18 of the 69). Sixty-six of the 69 deaths took place when the victim was left unattended (by the caregiver) in the bathtub.

It is possible to drown in as little as 2 inches of water and even brief submersions of a minute or so can ultimately prove fatal if a child stops breathing and rebreathing is not quickly reestablished either spontaneously or by means of artificial respiration.

Many of the deaths can be attributed not only to parents leaving the children unattended, but also to the mechanical properties of the bath seat. For example, in 22 of the 69 deaths, the bath seat tipped over - generally related to the failure of suction cups to adequately adhere to the tub surface. The product is not designed for use on non-smooth surfaces or surfaces that may be dirty. Additionally, the leg hole openings in the bath seats are large enough to allow a child's body to slip through, but not the shoulders and head, trapping the infant. Three of the 69 deaths involved this scenario.

Manufacturers of this product are faced with the challenge of designing a bath seat that takes into account that caregivers may leave children alone in a bath seat. The foreseeable nature of how the product is to be used and the mechanical problems that the staff has identified with the product, lead the staff to conclude that baby bath seats as currently designed present a risk of drowning that should be addressed. The staff has not determined if it is possible to design a bath seat that can reduce the risk of drowning and continue to provide the utility caregivers need to bathe their children.

CPSC staff recommends granting the petition and publishing an advance notice of proposed rulemaking (ANPR) to initiate a rulemaking proceeding under the authority of the Federal Hazardous Substances Act (FHSA).

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- Tab A Petition HP 00-4 from the Consumer Federation of America, The Drowning Prevention Foundation, et al. to Ban Baby Bath Seats, July 25, 2000.
- Tab B Memorandum from Mary F. Donaldson, Directorate for Economic Analysis, "Baby Bath Seat Petition, HP-00-4," March 30, 2001.
- Tab C Memorandum from Suad W. Nakamura, Ph.D., Physiologist and Sandra E. Inkster, Ph.D., Pharmacologist, Directorate for Health Sciences, "The Pathophysiology of Drowning," December 7, 2000.
- Tab D Memorandum from Debra Sweet, Division of Hazard Analysis, "Hazard Analysis Memorandum for Bath Seat Petition," March 27, 2001
- Tab E Log of Meeting and Emails between Commission staff and Dr. N. Clay Mann
- Tab F Memorandum from Celestine T. Kiss, Division of Human Factors, "Human Factors Response to Bath Rings/Seats Petition (HP-00-04)," January 25, 2001.
- Tab G Memorandum from M. Kumagai, Directorate for Engineering Sciences, "Review of BATH SEAT ASTM STANDARD F1967 and Response to Comments to Petition HP 00-4," March 2, 2001.
- Tab H Memorandum from M. Kumagai, Directorate for Engineering Sciences, "Evaluation of Bath Seat Design," March 2, 2001.
- Tab I RESTRICTED Meeting Log with Inventor
- Tab J Index of 66 Public Comments
- Tab K Comments from Internet opinion website
- Tab L Draft Advance Notice of Proposed Rulemaking (ANPR)

OS#4576



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

MEMORANDUM

DATE: MAR 30 2001

TO : The Commission
Sadye E. Dunn, Secretary

Through: Michael S. Solender, General Counsel *for 7:55*
Pamela Gilbert, Executive Director *PG*

FROM : Ronald L. Medford, Assistant Executive Director, *PLM*
Office of Hazard Identification and Reduction
Celestine T. Kiss, Project Manager, *CK*
Division of Human Factors

SUBJECT: Petition Requesting a Ban of Baby Bath Seats
(HP 00-4)

This briefing package presents the staff analysis of the available data on baby bath seats in response to a petition to ban these products.

I. PETITION (Tab A)

In July 2000, the Consumer Federation of America and eight additional organizations¹ petitioned the U.S. Consumer Product Safety Commission (CPSC) to ban baby bath seats. In August 2000, an additional organization, U.S. Public Interest Research Group, submitted a letter requesting to be added to the list of petitioners. The original petition, with the additional organization included as a petitioner, was docketed under the Federal Hazardous Substances Act (FHSA) (Petition No. HP 00-4) and a notice requesting comments was published in the Federal Register, Vol. 65, No. 163 on Tuesday, August 22, 2000.

The petitioners state that "[B]aby bath seats pose an unreasonable risk of injury and death to children. Each year at least eight babies die as a result of a drowning associated with bath seat use. Drownings typically occur when the infant tips

¹Drowning Prevention Foundation; Danny Foundation for Crib and Child Product Safety; Intermountain Injury Control Research Center; California Coalition for Children's Safety and Health; California Drowning Prevention Network, Contra Costa County Childhood Injury Prevention Coalition; Greater Sacramento SAFE KIDS Coalition; and Kids in Danger.

NOTE: This document has not been reviewed or accepted by the Commission.
Initials / Date 3/30/01

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No Mfrs/Prvtlbrs or Products Identified
TAB I

over, climbs out of, or slides through the product." The petitioners also state that the product induces a "false sense of security," which "leads to increased risk-taking behavior among those using the product even when the irresponsible nature of the caregivers is taken into account."

The petitioners cite 66 incidents of drowning and 37 reports of near drowning as justification for the petition.

II. BACKGROUND

In May 1994, CPSC staff sent a briefing package to the Commission recommending the publication of an advance notice of proposed rulemaking (ANPR) to initiate a rulemaking proceeding to develop performance or other requirements addressing the deaths and near-drownings associated with baby bath rings/seats. On June 15, 1994, the Commission decided, by a two to one vote, against initiating formal rulemaking proceedings.

At the time of the briefing package, staff was aware of 13 deaths associated with baby bath rings/seats between 1983 and October 1993 of infants between 6 and 11 months of age and of one child 15 months of age. In all but two cases, the victims were left unattended while in a bath ring/seat placed in a bathtub or sink. There were six non-fatal incidents reported in which unattended children were injured, with a seventh injury occurring when the attending caregiver was distracted by the victim's sibling who was also being bathed. The injury victims, like the death victims, ranged from 6 to 11 months of age.

The Commission also had reports on approximately 30 additional incidents in which bath rings/seats failed but no injuries occurred. In most of these cases, the suction cups did not function properly and prompt action by caregivers prevented injury or death.

In 1992, sales of bath rings/seats were around 660,000 units with a retail value of \$9 million. Bath rings were used by 28 percent of mothers with infants, with an estimated 1.4 million in use in 1992. Approximately 10 out of 66 firms that manufactured or imported bathing accessories for infants were identified as suppliers of baby bath rings/seats.

In 1994, staff was not aware of any voluntary or mandatory safety standards for bath rings/seats.

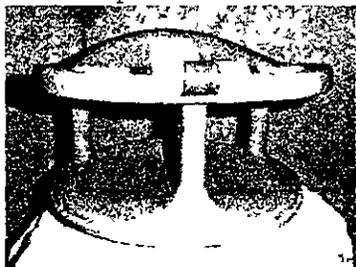
III. DISCUSSION

A. Product Description and Market Information (Tab B)

The subject products are classified as either baby bath rings or bath seats. Bath rings typically consist of a plastic ring with three or four legs equipped with suction cups. The infant sits directly on the bathtub surface or on a fitted sponge

pad within the ring, straddling a bath ring leg. Baby bath seats are similar to bath rings, but provide a molded plastic seat for the infant to sit on (See Figure 1). Suction cups are attached to the underside of the molded plastic seat. One model bath seat had a fold down "T-bar" for easier placement and removal of the infant; this seat is no longer manufactured. Bath seats are not intended to be used with textured or non-skid bathtub surfaces. Textured and non-skid bathtubs represent a substantial portion of the residential tubs sold today.²

Figure 1 - Example of a bath seat



The Juvenile Products Manufacturers Association, a trade association of manufacturers, importers, and distributors of juvenile products, reports that "bath seats and rings are generally not recommended for use until six months of age or when the children can sit upright unassisted. They are usually discontinued in use when a child seeks to escape the confines of the product or can stand up while holding onto other objects. These [sic] products have a useful product life of several months with both lower and upper limits being determined by the development and ability of the child."³ According to the Division of Human Factors, developmental literature indicates that infants begin to pull up on objects around 9 months of age. Based on this information, bath rings/seats are useful with infants from about 6 to 9 months of age.

According to the Directorate for Economic Analysis, at the time of the 1994 Commission briefing there were approximately 10 firms supplying baby bath rings/seats. Currently, however, there is only one manufacturer, Safety 1st, of traditional bath seats (see Figure 1 above) in the U.S. market. Safety 1st also produces a convertible tub/seat and The First Years currently sells a convertible tub/seat. Retail sales of new baby bath seats may range from 700,000 to 1,000,000 annually. Manufacturers that no longer produce baby bath seats include Fisher Price, Gerry, Century, Pansy Ellen, A-Plus, C. Meyer Associates, Illico, Sanitoy Inc., Sassy, and Shelcore. Some of these manufacturers' products are still in use and may be found for sale in the secondhand market.

²Based on staff market review.

³Part of comment received from JPMA in response to solicitation for public comments.

Bath rings and seats are also produced in many other countries, including Canada. However, CPSC is not aware of any of these foreign firms currently exporting to the U.S. market.

Staff estimates that there are between 1.3 and 2 million bath seats available for use in homes with infants. This estimate is based on 1999 survey⁴ results that indicated 33 percent of new mothers own bath seats or rings, census data that shows about 4 million infants born per year in the United States, and an industry estimate of 2 million bath rings/seats in use.

Prices for infant bath seats range from about \$10 to \$16. Seats that convert from an infant bathtub to an infant bath seat sell for about \$20 to \$25. In regards to this petition, convertible tubs are only considered when they are used in the bath seat mode.

Using a statistical value of life of 5 million dollars⁵, the societal "cost" for an average of 8 deaths per year⁶ associated with baby bath seats is around \$40 million annually, or about \$20 per baby bath seat in use per year, assuming there are 2 million baby bath seats in use annually.

B. Health Sciences Evaluation (Tab C)

The hazards associated with bath rings/seats are drowning and near-drowning. The term drowning indicates death within 24 hours of submersion in water. Near-drowning is defined as a submersion incident in which the victim survives for at least 24 hours, irrespective of whether s/he subsequently survives or dies from complications related to the submersion incident (Orlowski, 1987; Fields, 1992; Modell, 1993).

According to the Directorate for Health Sciences, while drowning usually involves complete body submersion, it is not necessary and drowning can occur when just the nose and mouth are covered by water (Byard and Lipsett, 1999). A baby or young child lacking the developmental skills to right his/her self after having fallen can drown in as little as 2 inches of water. Oxygen deprivation of the brain is the primary consequence of drowning. While an immediate opportunity exists to rescue victims of short duration submersions (less than 5 minutes) without lasting effects, parents and caregivers rarely apply appropriate cardiopulmonary resuscitation (CPR) techniques in a timely manner due to initial panic and/or lack of training. Thus, in the absence of rapid resuscitation, severe brain damage or death is a likely outcome for victims who stop breathing and fail to spontaneously rebreathe after bath water submersions that

⁴*Baby Products Tracking Study 2000: Nursery Décor and Accessories*, conducted for American Baby Group, Bruno and Ridgeway Research Associates, Inc, #5861.

⁵A statistical "value of life" of 5 million dollars is consistent with current economic literature.

⁶From 1993 to 1997, the latest 5 years for which CPSC has complete data on deaths, CPSC has reports of 41 deaths, or about 8 deaths per year

can be as short as a minute.

The reliability of the estimated submersion times in the fatal bath ring/seat drownings reported to CPSC is uncertain. Nonetheless, staff's review of fatal bath ring/seat drowning incidents indicates that, in the majority of cases where appropriate intervention might have been successful, the parent or caregiver (like the majority of the general public) did not know how to perform CPR. Some caregivers initially panicked, a few made initial untrained attempts at CPR, but most tried to contact emergency services before initiating any CPR attempts.

C. Epidemiology Evaluation (Tab D)

1. Incident Data

According to the Directorate for Epidemiology's Division of Hazard Analysis (EPHA), CPSC has reports of 69 deaths and 95 non-fatal incidents and complaints associated with baby bath rings or seats between January 1983 and November 2000.⁷

The victims involved in the fatal incidents ranged in age from 5 months old to 20 months old. Sixty-one of the victims were between 5 and 10 months of age. The age of victims most frequently involved in the fatal incidents was 7 months (18 of the 69). Sixty-six of the 69 deaths took place when the victim was left unattended (by the caregiver) in the bathtub. The remaining three deaths occurred while the caregiver was with the child in the bathroom. In two of these cases, the caregivers reportedly turned away momentarily and looked back at the victims to find them face down in the water. In the other case, the caregiver saw the incident occur but panicked briefly.

In 26 of the 69 deaths (38%), the victim was put into the bathtub with another child (or children). However, not all of these other children were still in the bathtub when the drownings occurred.

In almost all of the cases, the infant was reported to have been left unattended for a few minutes or longer. The times that the caregiver was out of the room varied from a reported 2 minutes to over one hour. Some of the reasons stated for leaving the child unattended were to respond to unexpected phone calls or company, to retrieve towels or clothing, or to tend to another child in the home. Some caregivers left the victims unattended for more deliberate reasons such as performing household chores, playing video games, or watching television.

⁷It should be noted that the identified cases do not represent a complete count nor a sample of known probability of selection. The cases do, however, provide information about the types of incidents associated with baby bathing aids.

2. Hazard Scenarios

Table 1 provides a breakdown of the hazard scenarios, the ages of the victims, and the numbers of fatal and non-fatal incidents and complaints.

Table 1. Bath Seat Deaths and Non-Fatal Incidents by Hazard Scenario (1/1983 through 11/2000)

Hazard Scenario	Age Range Of All Victims	Fatalities	Non-Fatal Incidents and Complaints
Tip-Over	5-15 months	22	50
Children Coming Out of the Bath Seat	6-14 months	11	6
Entrapment and Submersion	3-16 months	3	15
Bath Seat Breaking	Unknown	0	7
Children Slumped Over	5-20 months	8	2
Overflowing Bathtub	5-8 months	2	0
Children Found in Water; Bath Seat Position Unknown	5-11 months	16	5
Bath Seat Upright; Child Position Unknown	8 months	2	0
Unknown or Uncertain Circumstances	5-12 months	5	10
Total Incidents	3-20 months	69	95

The hazard scenarios associated with bath seat deaths and incidents can be grouped into three areas: 1) those that involved problems with the bath seat design and materials; 2) those in which the bath seat stayed upright and held the child in the seat; and 3) those in which the circumstances of the incident are unknown or uncertain.

Problems with bath seat design and materials

The design/materials of the bath seats may have contributed to 36 of the 69 fatalities and 78 of the 95 non-fatalities/complaints. The hazards involved: (1) the bath seat tipping over submerging the occupant in the water or allowing the child to escape the confines of the seat; (2) the occupant being found outside the seat (while the seat remained upright), presumably by coming over the top of the seat; (3) the occupant sliding through the leg opening, becoming trapped and submerged in the water; and (4) part of the bath seat breaking creating a potential hazard.

Bath Seat Tipped over

In the incidents in which the seat tipped over, the suction cups may have contributed because they failed to adhere to the tub surface; they adhered but the legs of the seat separated from the suction cups; or the suction cups were missing. CPSC has reports of 22 deaths and 50 non-fatal incidents/complaints involving tip-overs. It does not appear that one manufacturer's products were involved in significantly more fatal tip-over incidents than any other manufacturer's products.

Child came out of seat

The design/materials group of hazard scenarios also includes incidents in which the occupant was found outside the upright seat, presumably by coming over the top of the seat because the seat failed to restrain the infant. For this scenario, 11 fatalities and 6 non-fatal incidents and complaints were reported to the CPSC.

Entrapment and Submersion

The third hazard associated with the design/materials group of hazard scenarios involves the occupant sliding through the leg opening, becoming trapped and submerged in the water. There were 3 deaths and 15 non-fatal incidents and complaints associated with this hazard. In 2 of the fatalities the leg openings on the bath seats were large enough for the infants to fit both legs through one opening but not large enough to allow the shoulders and head to pass through. In the third case, the leg post was broken and the infant slid under the rim. All 3 infants died because their faces were partially or completely submerged in the bath water.

Bath seat breaking

The fourth hazard associated with the design/materials group of hazard scenarios involves the bath seat breaking.

There were 7 complaints related to this hazard but no fatalities. The complaints included bath seat legs breaking or detaching, the rings around the child breaking, mats ripping away from the legs/suction cups and the bath seat cracking.

Bath seat upright and child found in seat

The second grouping of hazard scenarios involves the bath seat staying upright and the infant staying in the bath seat. There were two hazards in this scenario; in one the infant "slumped over" the seat rim, in the other the bathtub overflowed.

Slumped over

There were 8 reported "slumped over" fatalities and 2 non-fatal incidents or complaints. Although the water depth data provided in these cases is limited, water depth would be expected to play a role in these scenarios.

Overflowing water

There were 2 fatalities involving overflowing bath water. One incident involved a 5-month-old child in a laundry tub. The other incident involved an 8-month-old victim in a bathtub.

Unknown or uncertain

There were 23 fatal incidents in which not enough information is known to identify a hazard scenario. The unknown cases involved children being found in the water but the bath seat's position was unknown (16 fatalities/5 non-fatal incidents and complaints). Also, in 2 fatalities the bath seat was found upright but the child's position was unknown. Finally, 5 fatalities and 10 non-fatal incidents and complaints involved unknown or uncertain circumstances.

3. Risk of Drowning in Bath Seat vs. Bathtub

To address the relative risk of children drowning in bathtubs with a bath seat and without a bath seat, staff compared bath seat-related deaths to bathtub-related deaths. CPSC Hazard Analysis staff evaluated data for 1996 and 1997, since CPSC investigated most of the infant bathtub drownings during this time period. In these two years, 16 children 5 to 10 months of age drowned in bath seat-related incidents compared to 28 drownings of children 5 to 10 months in bathtubs without bath seats. For purposes of this analysis, the staff assumed that owners of bath seats used them during baths and non-owners bathed their children in the bathtub without any bath aids. Staff also assumed that the total number of children in the population and the number of bath seat users are uniformly distributed from age 1 day to 1 year. These assumptions were used to calculate a

relative risk of death for bath seat use versus bathtub use for 5 to 10 month-old children in 1996 and 1997 (Table 2).

**Table 2:
Relative Risk of Death for Bath Seats Versus Bath Tubs
5-10 month-old children 1996 and 1997**

Age of Child	# Deaths per 500,000 Bath Seat Users	#Deaths per 500,000 Bathtub Users
5 months-old	4.8	0.0
6 months-old	7.2	3.4
7 months-old	7.2	3.4
8 months-old	7.2	8.0
9 months-old	7.2	8.0
10 months-old	4.8	9.1

Source: CPSC databases (DTHS, IPII, INDP), Baby Products Tracking Study and NCHS data

The data suggest that children 5 to 7 months old are more at risk of death when bathed in a bath seat as opposed to being bathed in the bathtub without other bathing aids. At 8 to 10 months old, the risk of death is greater in a bathtub as opposed to a bath seat. Although the staff does not know the reason why the risk of bath seat drowning is less than bathtub drowning at 8 months of age, one possible explanation may be related to the diminished utility of the product as children reach this age. At this age, children are beginning to stand and are getting "big" for the bath seat. The staff's risk analysis assumes that the number of bath seats being used is constant for 5 through 10 months of age. If, in fact, fewer bath seats are being used by older children, then the risk of bath seat drowning would be greater than that shown in Table 2.

D. Research Reported at the National Congress on Childhood Emergencies Meeting (Tab E)

On March 27, 2000, Dr. N. Clay Mann of the Intermountain Injury Control Research Center at the University of Utah reported findings of a research project, "Infant Seat Bathtub Drowning: Who's to Blame?"⁸ Dr. Mann compared infant drowning deaths in bathtubs with infant drowning deaths in bathing aids in bathtubs. The petitioners refer to two main conclusions from Dr. Mann's paper. The first conclusion relates to the caregiver's decision to leave an infant alone in the bathtub. Dr. Mann concluded that caregivers are more likely to leave a child unattended in the bathtub for conscious, willful decisions if there is a bath seat present in the bathtub. The second conclusion is related to water depth. Dr. Mann's analysis found that the water at the time of the fatal incident was significantly deeper in incidents involving baby bath seats.

⁸ Presented at the National Congress on Childhood Emergencies, Baltimore, MD

CPSC staff analyzed the bath seat and bathtub data Dr. Mann used in his research. Although the staff's analysis yielded slightly different results, the basic conclusions were the same.⁹ CPSC staff found that when a bath seat was involved caregivers were more likely to cite a conscious or willful decision for leaving the child alone than when there was a bathtub drowning with no bath seat involved. Staff also found a slightly higher water depth for those deaths where children were in bath seats.

The reasons for leaving the child unattended in the bathtub with or without a bath ring/seat were classified by Dr. Mann and by CPSC staff as either a willful decision or an impulsive decision. Willful decisions were defined as watching television, performing household chores, and getting clothing for the victim. Impulsive decisions were defined by Dr. Mann as answering the telephone, responding to the doorbell, responding to a distressed child and tending to cooking food. Dr. Mann's finding that consumers leave a child unattended in a bath seat more often for willful reasons than for impulsive reasons agree with the results from a CPSC focus group study conducted in 1993 (see discussion in Section E). The focus group participants indicated that when using a bath seat non-emergency (willful) reasons were more likely to draw them away from the child than emergency (impulsive) reasons.

According to Dr. Mann, as far as the water depth is concerned, the actual water level is not as important as the fact that consumers appear to use more water when a bath seat is in use. According to CPSC staff's analysis of the hazard scenarios, the water depth may be an issue in the situations in which the bath seat is upright and the infant slumps over the seat rim or when the infant comes out over the top of the seat; however, the water depth data was very limited and therefore no conclusions could be made.

E. Human Factors Evaluation (Tab F)

In preparation for the 1994 Commission briefing on bath rings/seats, Human Factors staff worked with a contractor to conduct consumer focus groups¹⁰ to learn more about how consumers use bath rings/seats. The groups provided a variety of information regarding bathing children, bath time supervision habits, and use of bath rings/seats. The following points summarize participants' responses regarding leaving children in the bathtub for a short period of time:

⁹ Commission staff corresponded with Dr. Mann via email and a phone conference to clarify some of his findings. Tab E contains a record of the emails and phone conference.

¹⁰ "A Focus Group Study to Evaluate Consumer Use and Perceptions of Baby Bath Rings/Seats CPSC-R-93-5839" by Shugoll Research

- (1) Despite an intellectual knowledge of the hazard of drowning, and agreement that children should never be left alone in the bath, some participants acknowledged having done so, albeit infrequently, and typically for only a few moments.
- (2) Responses suggested that, although emergency situations occur, they are not the primary reason that caregivers turn away from a child in the bath. Participants reported that practical, non-emergency reasons, such as needing a towel, pajamas, or a diaper were more likely reasons for leaving the child.
- (3) Participants' responses indicated that uneventful experiences with leaving a child unattended in the bath tended to encourage repetition of this behavior.
- (4) In general, participants perceived bath rings as convenience items rather than as safety devices. However, responses suggested that some users gained a sense of security from the rings/seats, and believed the child was safer in a bath ring/seat. These included comments that they believed their child was less likely to stand up or slip around if they were restrained in a bath ring/seat.
- (5) The sturdier, more luxurious-looking bath rings/seats were preferred by most participants, and were perceived to be safer than more basic models.

Human Factors' evaluation indicates that consumers have a perception of increased safety and security when using a bath seat compared with bathing a child in a bathtub. As consumers use the product and the infant sits in the bath seat without an incident, the consumer becomes more relaxed and less vigilant about using the product. When the caregiver makes the decision to leave the infant alone in the bath ring/seat and returns to find the infant "safe", security has been reinforced. The more frequently the consumer successfully leaves the infant alone without an incident the more probable it is that s/he will engage in this behavior again.

F. Existing Standards (Tab G)

At the time of the 1994 briefing package there were no voluntary, mandatory, or international standards to address drowning in baby bath rings/seats. As of the writing of this package, staff is aware of one voluntary standard relating to bath seats, the ASTM F1967-99 Standard Consumer Safety Specification for Infant Bath Seats (first published in June 1999). During August and September 1999, additional requirements for improved performance of suction cups and latching/locking mechanisms were balloted; ASTM estimates that the revised standard will be published by July 2001.

According to the statement of scope in the standard, "This consumer safety specification establishes performance requirements, test methods, and labeling requirements to promote the safe use of infant bath seats." A summary of the major requirements in this standard follows:

Stability

This requirement addresses the bath seat's resistance to tipping over during normal use. This requirement is intended to ensure that new bath seats' suction cups properly attach to the bathtub surface. This requirement does not address suction cup performance over time nor does it address suction cup performance on non-smooth or dirty surfaces.

Restraint System

Bath seats must provide a passive crotch restraint to prevent the occupant from sliding out through the product. For bath seats on the market this requirement is met by a fixed vertical bar between the infant's legs. The standard also specifies that bath seats shall not include additional restraints that require action by the user. The rationale for this requirement was that a redundant system would give the caregiver a false sense of security.

Resistance to Folding

If the bath seat folds, it is required to have a latch or locking mechanism to prevent the unit from unintentionally folding during use.

Labeling

The standard requires a warning label on the product, instructions, and packaging consisting of the safety alert symbol (an equilateral triangle surrounding an exclamation point) and the following exact wording:

⚠ WARNING
Prevent drowning

ALWAYS keep baby within arm's reach

The warning label printed above is the minimum specified size. The warning must be located on the product so that it is visible to the adult caregiver and must be a contrasting color to the background. If the bath seat is not recommended for use on a slip-resistant surface, an additional warning label stating this is required only on the package.

Staff is aware of an ASTM standard for slip-resistant bathtub surfaces. According to the Plumbing Manufacturers Institute (PMI), this standard is used for most enameled-coated steel tubs but not for plastic tubs.

G. Engineering Evaluation (Tab H)

The Directorate for Engineering Sciences staff identified three areas that they believe are not adequately covered in the voluntary standard and that may contribute to the drowning incidents: (1) stability of the seat; (2) suction cup operation; and (3) occupant retention.

The stability of the seat is greatly affected by the performance of the suction cups. If suction cups are missing or detach from the tub surface or the bath seat, there is an increased likelihood that the bath seat will tip over when the occupant leans out over the rail. The stability test in the voluntary standard addresses suction cup performance but it does not address performance over time or on non-smooth or dirty surfaces.

The suction cups operate by creating an air or watertight seal between the bathtub surface and the bottom of the suction cup material. A leak in the seal between the suction cup and bathtub surface would allow air or water to leak under the suction cup resulting in detachment of the suction cup from the tub surface. A rough tub surface would allow such a leak to occur. The suction cups used on bath seats will not adhere to textured bath surfaces or slip resistant surfaces. Dirt or soap scum build up could also degrade the performance of the suction cups. Dissolved or suspended particles in the bath water such as oils and soap should not affect the suction cups' adherence to the tub.

In a closed, proprietary meeting with Commission staff, an inventor presented his idea to address the stability issue with bath seats. His invention increases the base of the seat and does not rely on suction cups. (Restricted Tab I) This illustrates that there may be ways to design bath seats to address some of the hazard scenarios.

The occupant retention system currently required by the ASTM F1967 standard for bath seats is a passive crotch restraint. A center post is the most common form of passive restraint used on bath seats and is intended to prevent the infant from slipping down and out of the bath seat. However, the standard does not have any leg opening size requirements, and staff is aware of three deaths when infants got both legs through a leg opening and became trapped and submerged under water because their shoulders and head could not pass through the opening.

In addition, this type of passive restraint does not prevent the infant from climbing out of the bath seat. To prevent the

occupant from climbing out of the product, the restraint system would have to prevent the infant from lifting his bottom off the bath seat or tub. However, a restraint that retains the infant in the seat would take away from the utility of the product as a bathing aid because it would make it difficult for the caregiver to wash the infant's lower body. Also, the ASTM F1967 bath seat standard does not allow additional user activated restraints because the subcommittee believed that this would provide the caregiver with a false sense of security and could increase the likelihood that a parent might leave a child unattended.

H. Warning Labels

According to the Division of Human Factors, warning labels have limited effectiveness on user behavior when the product is familiar and perceived to be benign. Consumers who have used bath seats over time and have not had any indications that the seat could tip over or that the infant could climb out of or slide under it are led to believe the infant is secure in the seat. In addition, the more often consumers use the product, the less likely they are to notice and read the product labels. They are no longer looking for guidance on how to use the product and therefore, they do not look for and read labels. Thus, staff believes the arm's reach warning label required in the voluntary standard becomes less effective with each use of the product.

The voluntary standard also requires a label on the packaging of the product advising consumers not to use the product on non-skid bathtub surfaces. This label is only required on the packaging, not the product. This label is likely to have limited effectiveness for two reasons. First, it fails to explain to the user the hazards of using the product on a slip-resistant surface (i.e., suction cup failure). The user may not know if the bathtub surface is slip-resistant and may purchase the product anyway. The consumer may try the product to determine if the tub has a slip-resistant surface and if it works the first time, then conclude the surface is okay and continue to use the bath seat. Second, the product's packaging is not likely to remain with the product; therefore, the message is lost to anyone who does not see the packaging. This is the type of product that will likely be handed down to family and friends with young children or sold at garage sales, and if the label is not on the product, the second-time owner will not get the message.

IV. Public Comments (Tab J)

The CPSC received a total of 66 comments from individual consumers and organizations in response to a Federal Register notice (Vol. 65, No. 163/ Tuesday, August 22, 2000/p. 50968).

Of those 66 comments, 45 comments were a form letter expressing the same concerns as those of the petitioner and asking the Commission to support the petition to ban bath seats.

Seventeen other comments also supported the petition and expressed concerns about the hazards involving bath seats. Three comments provided in-depth discussions as to why the CPSC should deny the petition. Finally, one consumer provided information both supporting and opposing the petition.

There were eight primary issues addressed in the comments. Below is staff's response to those issues. The numbers found in parentheses after a comment refer to the commenter number assigned by the Office of the Secretary. The letters "FL" refer to the form letter used by many of the commenters.

Unreasonable Risk

Comment: According to most commenters, 66 deaths from January 1983 to June 2000 and 37 near-drownings are too many. They note that when the Commission first looked into the hazards involving bath seats there had been 13 deaths in 10 years. In the following 6 years, 53 additional deaths occurred. They viewed this as an unreasonable risk because of the "alarming" number of deaths with a product that they stated had a useful life of only 2 months. (FL, #20, 24, 28, 56, 58, 60)

CPSC Staff Response: Staff is also concerned about the number of deaths. CPSC staff is aware of 69 deaths and 95 non-fatal incidents from January 1983 to November 2000.

False Sense of Security

Comment: Many commenters quoted research conducted by Dr. N. Clay Mann that suggests parents and caregivers of infants who use bath seats engage in more risk-taking behavior than non-bath seat users. These commenters argue that bath seats are viewed as safety devices and thereby provide the user with a false sense of security. The petitioners and almost all of the comments from consumers in favor of granting the petition indicated that the product leads the user into believing that the child is "safe" in the bath seat in the water. (FL, #1, 54, 56, 59, 60, 62)

Some commenters stated that the product may not claim to be a "safety device" but it certainly gives the impression it is, especially with the brand name "Safety 1st" on the package. (#13, 16, 28, 40, 64)

One commenter, who opposes the petition, stated that the product doesn't cause a false sense of security, but rather the caregiver undertakes risky behavior because previous behavior resulted in no injury. (#53)

Another commenter, who also opposes the petition, stated, "The unreasonable actions of caregivers who leave infants unattended in bathtubs, whether or not a bath seat or ring is

used, results in the hazards, with tragic consequences. This behavior itself defies the common sense approach used by 99.999% of the population and is unreasonable. As we have noted, the products themselves performed properly and as intended. It was not the normal or even foreseeable misuse of the product that creates the hazard, but rather the unreasonable behavior of the caregiver. No standard, whether mandatory or voluntary, can address this risk." (#63)

CPSC Staff Response: Various sources¹¹ indicate that many consumers purchase the product for safety and convenience reasons. Consumers may not be ready to bathe their infants in a regular size bathtub and, therefore, are looking for a device to help them contain a wet, slippery, squirmy infant. Staff agrees that some caregivers perceive that the product provides a greater degree of safety than it does, and this false sense of security about the product leads to the foreseeable misuse of the product. Staff also believes that the product is not adequately designed to protect children against this foreseeable misuse.

Staff believes that consumers' familiarity with the product may lead to the foreseeable misuse. As a caregiver uses the product and the infant sits in the bath seat without an incident, the caregiver becomes more relaxed about using the product. Then, when a situation occurs in which the caregiver makes the decision to leave the infant and returns to find the infant "safe" in the bath seat, security has been established. The more frequently the caregiver successfully leaves the infant alone without an incident the more probable it is that s/he will engage in this behavior again.

Staff agrees that while bath seats may not be marketed as "safety devices", the manner in which they are sold leads the user to believe that they are. One manufacturer, Safety 1st, sells a number of baby "safety" products and, therefore, consumers may associate their name with "safety" products. In addition, their name appears prominently on the packaging, which makes it look like it is part of the bath seat product name. This could lead the consumer to believe the bath seat is a "safety" device.

Bath Seat Incompatible with Bathtubs

Comment: Several comments pertained to the current voluntary standard, ASTM F 462-79 (reapproved 1999) "Standard Consumer Safety Specification for Slip-Resistant Bathing Facilities." This standard establishes slip-resistance surface requirements to minimize injuries in tubs and showers. The commenters indicated that suction cups that are used to adhere the bath seats to the tub surface do not work on slip-resistant surfaces. (FL, #2, 28,

¹¹ Sources included. CPSC focus groups results, IDIs, consumer opinions on internet website and marketing information

59, 60, 64)

Another commenter, who opposes the petition, stated, "As we have noted, the products themselves performed properly and as intended." However, that same commenter indicated that the data show suction cups on the seats failed on smooth surface bathtubs not just slip-resistant surfaces. (#63)

CPSC Staff Response: According to CPSC Engineering Sciences staff, adherence of the suction cup to the bathtub surface requires an adequate seal between the mating surfaces. Suction cups used on bath seats will not adhere to textured bath surfaces or slip-resistant surfaces. Dirt or soap scum build up could also degrade the performance of the suction cup. However, dissolved or suspended particles in the bath water such as oils and soap should not affect the suction cup adherence to the tub.

Staff disagrees with the commenter's statement that the "products themselves performed properly and as intended." In 22 of the 69 fatalities and 50 reported non-fatalities, the bath seats detached from the tub surface and tipped over. In addition, many consumers reported on an opinion website (Tab K) that they were using the bath seat when all of a sudden, without any warning the seat tipped over and the child was under the water. In some of these incidents the consumers stated that they had used the product a number of times before and occasionally had difficulty removing the suction cups when bath time was over. Other consumers indicated that right from the start they had trouble with the suction cups only working some of the time.

CPSC data are inconclusive about the types of surfaces on which the tip-overs occurred, so CPSC staff is unable to verify the commenter's assertion that data show seats failed on smooth surface tubs. However, there were a number of comments on the Internet in which consumers specifically state that their tubs had smooth surfaces and the suction cups failed.

Labeling - Slip resistant surfaces

Comment: A few commenters stated that the label warning against the use of the bath seat on non-skid tubs should be on the product, not just the box. Due to the short useful life of the product, the bath seat is likely to be passed on to other family members or friends without the box. This makes the label ineffective for these other users. (#2, 59)

CPSC Staff Response: Staff agrees with the comments that a warning label only on the packaging and not on the product is likely to be less effective than a label placed on the product. The effectiveness of this label is limited for two reasons. First, it fails to explain to the user why the product should not be used on non-skid bathtub surfaces (suction cup failure). Second, the product's packaging is not likely to remain with the

product; therefore, the message is lost to anyone who does not see the packaging.

Labeling - Keep child within arm's reach

Comment: In regards to the labeling related to keeping the child within arm's reach, a commenter who is against the petition, referenced information from CPSC focus groups that were conducted in 1993. The commenter states "Almost all of the parents surveyed recalled the warnings on the product, packaging or instructions and view it as an important reminder that the consequences of leaving an infant alone in the bathtub could be drowning. This fact undercuts the Petitioners' argument that the warnings are not noticed and are ineffective." (#63)

CPSC Staff Response: Staff disagrees with the commenter's conclusion that the focus group results which showed that consumers recalled the warning label are evidence that undercuts the arguments that warnings are not noticed and ineffective. According to the focus groups, consumers were able to recall the warning not to leave a child unattended. However, the focus group members also reported situational variables that made them comfortable leaving a child unattended. Those variables include using a bath ring/seat, having an older sibling in the bath, and being able to see and hear the child even though they had physically left the bathroom.¹² Judging from the focus group's comments and the actions of the caregivers in the fatal and non-fatal incident data who left the child alone in bath rings/seats, the warnings are ineffective.

Water Depth

Comment: A couple of commenters expressed the belief that if parents are not given proper guidance they will fill the tub with more water than is necessary. They stated that the bath seats should be marked with a "water line" so caregivers don't fill the water higher than the "safe level", since too much water increases chances of drowning. (#2, 64)

One comment from a consumer against the petition states, "The marker should be set at a point where in case the baby fell out of the seat, he or she would not be in danger of drowning." (#53)

CPSC Staff Response: Staff disagrees with the need for a "waterline" on the product. A waterline suggests that there is a "safe" water level. Since infants have drowned in as little as 2 inches of water, staff believes that the more critical hazard is leaving the child unattended in the bath seat. Therefore, staff

¹² "A Focus Group Study to Evaluate Consumer Use and Perceptions of Baby Bath Rings/Seats CPSC-R-93-5839" by Shugoll Research.

does not support this recommendation.

Bath Seat vs. Bathtub Drownings

Comment: One of the comments against the petition states that on average 4 children per year drown in bath seats while "in excess of 50 infants under one year of age are estimated to drown because caregivers fail to watch infants in bathtubs." This commenter believes that "statistically, it seems that children are safer when caregivers use bath seats compared to when they are not in use." (#63) Another comment, also against the petition, stated that on average there are 9 bath seat drownings and 41 bathtub drownings as a result of the primary caregiver leaving the child alone. (#61)

CPSC Staff Response: According to CPSC data, from 1993 to 1997, the latest 5 years for which CPSC has complete data on deaths, 41 deaths occurred or about 8 deaths per year in baby bath seats. The cited 50 deaths per year include deaths in bathtubs with other products, including bath seats.

Information regarding the relative risk of drowning in a bath seat versus a bathtub suggests that for those children within the younger age range for whom the manufacturers' recommend bath seat use, the risk of drowning is greater in a bath seat. A full discussion on the relative risk analysis for bath seat verses bathtub drownings can be found in Section C 3 on page 8 of this briefing package.

Current Bath Seat Voluntary Standard

Comment: Three of the comments supporting the petition stated that the current ASTM F1967-99 "Standard Consumer Safety Specification for Infant Bath Seats" is ineffective in addressing the hazard of bath seat drownings. One consumer called the standard a "performance" standard rather than a "safety" standard. (#40) Another stated that the standard failed to adequately address the leg opening problem, the efficacy of suction cups, the lack of a water line, and the failure to label the product regarding non-skid surfaces. (#2) The third consumer felt the standard was inadequate because it called for "no significant structural changes to existing bath seat designs." (#54)

One comment against the petition states that "the voluntary standard addressed most of all of the CPSC staff recommendations." (#63)

CPSC Staff Response: Staff agrees with the comments about the inadequacy of the voluntary standard. Staff believes that the intent of the standard is conflicting. The voluntary standard identifies incidents of infants drowning after being left

unattended by their caregiver and the standard was developed based on those scenarios. However, the introduction of the standard states that the intent of the standard is not to address incidents where the caregiver left the infant unattended in the bath seat.

The current voluntary standard does not address leg-opening requirements. According to the Division of Hazard Analysis, CPSC is aware of 3 fatalities and 15 non-fatalities in which infants slipped partially through the leg opening and became trapped and submerged under water.

The standard does have requirements for testing the stability of the seat, but the test is performed using a new bath seat on a simulated bathtub surface. This test does not address suction cup performance over time nor does it address suction cup performance on non-smooth or dirty surfaces. CPSC data show there were 22 fatalities and 50 non-fatalities when the seat tipped over. In most of these cases the suction cups played a part in the tip-over by either failing to adhere to the tub surface; adhering to the surface but separating from the seat legs; or from being missing.

The standard does not require a water line, but CPSC staff agrees with this. There is no "safe" water level and therefore, it would be misleading to consumers to put a water line mark on the product.

The standard requires a label only on the packaging if the particular bath seat should not be used on a non-skid surface. Staff believes this is inadequate because once the packaging is discarded, so is the warning. However, even with this warning on the product, the label has limited effectiveness because it fails to warn of the hazard and it is only relevant to a first time user who needs to determine what type of bathtub surface s/he has.

The staff recommendations that were provided to the voluntary standards' working group were intended to make bath rings/seats less dangerous. The staff's position as reported in the May 1994 briefing package stated: "Based on current research, labeling is known to have limited effect on user behavior, particularly when the product is familiar and perceived to be benign. Judging from the IDIs, the effectiveness of the current label is questionable, but for the sake of those who may read and heed it, a more specific and direct warning such as 'Stay in arm's reach of baby in bath seat...' was recommended." Also, staff recommended leg-opening requirements that were not included in the standard.

V. Options Available to Commission

A. Grant Petition

If the Commission determines that baby bath rings/seats may pose unreasonable risks of injury and death, and that mandatory action may be needed to address the risk, the Commission may grant the petition and direct the staff to develop an advance notice of proposed rulemaking (ANPR) that would initiate a rulemaking proceeding under the authority of the Federal Hazardous Substances Act (FHSA).

B. Deny Petition

If the Commission determines that it lacks sufficient information showing that baby bath rings/seats may pose unreasonable risks of injury and death, or that mandatory action may be necessary, the Commission may deny the petition.

C. Defer Decision on Petition

If the Commission determines that additional information is necessary to decide whether to grant or deny the petition, it could defer the decision on the petition until that information is available.

VI. Staff Conclusions and Recommendation

CPSC staff believes that baby bath rings/seats may pose unreasonable risks of injury and death, and that mandatory action is needed to address the risk. The staff recommends granting the petition and publishing an advance notice of proposed rulemaking (ANPR) to initiate a rulemaking proceeding under the authority of the Federal Hazardous Substances Act. A draft ANPR is included at Tab L.

CPSC staff is aware of 69 deaths and 95 non-fatal incidents and complaints from January 1983 through November 2000 involving baby bath seats. Many of the deaths can be attributed to the mechanical properties of the bath seat. For example, in 22 of the 69 deaths, the bath seat tipped over - generally related to the failure of suction cups to adequately adhere to the tub surface. The product is not designed for use on non-smooth surfaces or surfaces that may be dirty.

Bath seat manufacturers include information with their product that it should not be used on a textured or non-skid bathtub. However, these bathtubs have been used extensively in residences for many years. Consumers may not know if their tub is a non-skid type or the consequences of using a bath seat on a non-skid tub.

Additionally, the leg hole openings in the bath seats are large enough to allow a child's body to slip through but not the shoulders and head, trapping the infant. Three of the 69 deaths involved this scenario.

The staff believes that the available data demonstrate that leaving a child alone in the bath seat is a foreseeable use or misuse of the product in spite of the warnings that are on the product not to leave children unattended. Most, but not all, of the drowning deaths that occurred with the use of baby bath seats took place when a caregiver left the child unattended in a bath seat.

The available data also suggest that parents are more likely to intentionally leave their young children alone in a bath seat than they are in a bathtub alone. Information regarding the relative risk of drowning in a bath seat versus a bathtub suggests that for those children within the younger age range for whom the manufacturers recommend bath seat use, the risk of drowning is greater in a bath seat.

Today there are only two United States manufacturers remaining in the bath seat industry. Approximately ten manufacturers have left the business. Manufacturers of this product are faced with the challenge of designing a bath seat that takes into account that caregivers may leave children alone in a bath seat. The foreseeable nature of how the product may be used and the mechanical problems that the staff has identified with the product, lead the staff to conclude that baby bath seats as currently designed present a risk of drowning that should be addressed. The staff has not determined if it is possible to design a bath seat that can reduce the risk of drowning and continue to provide the utility caregivers need to bathe their children.

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TAB A



Consumer Federation of America

July 25, 2000

Ms Sadye Dunn
Secretary
U.S. Consumer Product Safety Commission
4330 East West Highway
Suite 502
Bethesda, MD 20814

Dear Ms Dunn

Enclosed for filing please find a petition being submitted by Consumer Federation of America and eight additional petitioners concerning baby bath seats

Thank you for your attention to this document

Sincerely,

Mary Ellen R. Fise
General Counsel

In the United States of America
Before the Consumer Product Safety Commission

**In the Matter of the Petition of
Consumer Federation of America,
The Drowning Prevention
Foundation, et. al.
to Ban Baby Bath Seats**

No. _____

Pursuant to the Administrative Procedures Act, 5 U S C section 553 (e) and regulations of the Consumer Product Safety Commission (CPSC), 16 C F R. sections 1051 and 1500 201, Consumer Federation of America, The Drowning Prevention Foundation, The Danny Foundation, Intermountain Injury Control Research Center, California Coalition for Children's Safety and Health, California Drowning Prevention Network, Contra Costa County Childhood Injury Prevention Coalition, Greater Sacramento SAFE KIDS Coalition, and Kids in Danger, hereby petition the CPSC to determine, under section 3 (e) of the Federal Hazardous Substances Act (FHSA), 15 U S C section 1262, that baby bath seats intended for use by children present a mechanical hazard and, therefore, pursuant to section 2 (f) (1) (D) of the FHSA, 15 U S C section 1261, are hazardous substances. Accordingly, pursuant to section 2 (q) (1) (A) of the FHSA, 15 U S C section 1261, these baby bath seats are banned hazardous substances.

I.

Interest of Petitioners

This petition is brought by nine organizations on behalf of their members and all children and their families affected by baby bath seats.

Consumer Federation of America (CFA) is the nation's largest consumer advocacy organization representing over 260 state, local, and national consumer organizations and over 50 million consumers.

The Drowning Prevention Foundation is a nonprofit foundation established to prevent drowning of infants and young children in or around the home or in residential swimming pools.

The Danny Foundation for Crib and Child Product Safety is a non-profit public charity established in 1986 to prevent injury and death from unsafe cribs and other nursery related products.

The Intermountain Injury Control Research Center is a private and federally funded center dedicated to the reduction of injury morbidity and mortality in Public Health Service Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming).

The California Coalition for Children's Safety and Health is a statewide organization committed to the prevention of unintentional traumatic brain injury among children.

The California Drowning Prevention Network is a California statewide organization of injury prevention specialists whose mission is to reduce toddler drowning and near drowning through policy change and public education

The Contra Costa County Childhood Injury Prevention Coalition, founded in 1987, is a multi-disciplined coalition of 20 public and private agencies working to reduce childhood injuries in Contra Costa County, California

Greater Sacramento SAFE KIDS Coalition is a local chapter of the National SAFE KIDS Campaign, which is dedicated to the prevention of trauma injuries to children

Kids in Danger is a non-profit organization dedicated to protecting children by improving product safety Kids in Danger educates the public, advocates for children, and promotes the development of safer children's products

II. --

The Product

Baby bath seats (or infant bath seats or bath rings as they are also known) are consumer products intended to assist in bathing infants by holding the infant in a sitting position in a full size bathtub These products usually have suction cups to hold them in place in the bathtub and a plastic seat with leg openings to secure the infant in a sitting position being bathed With a bath ring (used for the same purpose), the infant sits directly on the tub surface or on a mat attached to the legs of the bath ring

Baby bath seats have very limited utility They are not recommended for use until 6 months of age and when the child can sit upright unassisted Once an infant can pull up or attempt to stand while holding onto objects, baby bath seats should be discontinued, since the infant could climb from the seat The current standard for childhood development (i.e., the Denver Developmental Screening Test) indicates that infants begin attempts to pull themselves up to a standing position between 7 and 9 months of age This time interval indicates that bath seats have a useful product life of approximately 2 months

III.

Hazards Presented by Baby Bath Seats

Baby bath seats pose an unreasonable risk of injury and death to children Each year at least eight babies die as a result of a drowning associated with bath seat use Additionally, infants who experience "near miss" incidents may experience traumatic injuries Drownings typically occur when the infant tips over, climbs out of, or slides through the product In cases where the bath seat tips over with the child in the product, it is believed that the seat may contribute to the drowning because the child is unable to get free of the seat and/or the parent or caregiver is unable to extricate the child from the seat¹ Two deaths were reported where the caregiver witnessed the event but was unable to free the child from the seat²

¹ See "The Role of Bathtub Seats and Rings in Infant Drowning Deaths, Rauchschalbe, Brenner and Smith, Pediatrics, vol 100, No 4, October 1997, page 5-electronic copy (See Appendix to this Petition)

² Id

A. Previous Consideration by the Consumer Product Safety Commission¹¹

The Commission previously considered rulemaking as well as other options to address bath seat hazards as part of a staff generated briefing package, OS#5348, May 17, 1994. At that time 14 deaths and 7 near-drowning incidents had been identified. On June 15, 1994, the Commission decided by a two to one vote (Commissioners Gail and Jones-Smith in the majority and Chairman Brown in the minority) against initiating formal rulemaking proceedings and instead to work with industry to initiate a public information campaign focusing on the risks taken by parents and other caregivers that leave children unattended in bathtubs.

Events since 1994 have demonstrated that this decision has not been effective and that the Commission must re-examine this product and its decision in light of additional deaths and new information identified in this petition.

B. Additional bath seat drownings and near drownings

There are currently 66 incidents of drowning and 37 reports of near drowning identified by CPSC staff. There have been an additional 52 documented deaths reported in the six years since the Commission made their decision in 1994. This is more than four times the number of deaths identified at the time of the previous decision. In the first six months of 2000 alone, five babies have died in bath seat incidents. This large number of additional drowning deaths (since the 1994 CPSC decision) alone justifies re-examination of this issue.

C. False Sense of Security and New Research

Parents or caregivers who suffer the tragic loss of a child in a bath seat-related drowning are thought to have ignored the warning label printed directly on the product, which warns against leaving a child unattended while using a bath seat. This argument indicts the parent or caregiver for their irresponsible actions and absolves the product of having any causal role in the drowning incidents. However, recent research findings suggest that the inherent design of bath seat products induce a "false sense of security" among users that may over-shadow the message printed on warning labels. This "sense of security" leads to increased risk-taking behavior among those using the product even when the irresponsible nature of caregivers is taken into account. Thus, not only product design but commonly held perceptions among users must be considered when assessing the safety of this consumer product.³

³ Previous research conducted by CPSC found, among other things, that

- "[A]lthough parents acknowledge intellectually the hazards involved, they do not truly believe something bad will happen to their child (if left alone in a bath seat). Lack of a direct personal experience with a drowning seems to increase the chance that a parent might engage in high risk behavior."
- "Successful experiences with leaving a child unattended in the bath tend to encourage parents to repeat the high risk behavior."
- "The sturdier, more luxury looking baby bath ring/seat models are preferred by parents and perceived to be safer than the more basic models. Parents indicated that if they were to leave their child unattended in the bathtub they would feel more confident in leaving if the child was in one of the luxury models. Therefore, certain models, more so than some others, potentially make parents feel over-confident that their children will be safe in the bath while using these particular baby bath rings/seats." "A Focus Group Study to Evaluate Consumers Use and Perceptions of Baby Bath Rings/Seats, CPSC-R-93-5839, prepared for CPSC by Shugoll Research (Included in Appendix to this Petition)

The recent research was conducted under the auspices of the Intermountain Injury Control Research Center at the University of Utah. Dr. Clay Mann reported those findings at the National Congress on Childhood Emergencies meeting in Baltimore, MD on March 27, 2000.⁴

The research compared 32 drowning incidents with a baby bath seat to 32 drowning incidents without any bath seat. Two statistically significant differences were found between these two groups.

- 1 **Water Depth:** The water was significantly deeper in the incidents involving baby bath seats. Median depth in baby bath seat incidents was 7.0 inches and 4.5 inches among incidents with no bath seat involvement.
- 2 **Willful versus Impulsive Decision to Leave an Infant Alone:** Dr. Mann reported that 75% of the incidents involving baby bath seats resulted from willful decisions to leave the infant unattended, while only 45% of the incidents without bath seats involved willful decisions. Willful decisions were those considered to be premeditated or thought out in advance by the caregiver (e.g., perform household chores, watch television). While the preponderance of infant drownings with no bath seat involvement were judged to result from impulsive decisions, (25% with bath seat and 55% no bath seat). Impulsive decisions were those judged to be sudden interruptions of the infant's bath, (i.e., answer telephone, and respond to another distressed child).

This research demonstrates that parents and caregivers of infants that use baby bath seats engage in more risk taking behavior than parents and caregivers not using baby bath seats. Caregivers using bath seats prepare baths with deeper water and are more likely to leave a child unattended in the bath for conscious, willful reasons (e.g., to perform household chores). This study demonstrates that enhanced risk taking behavior persists even when the irresponsible nature of caregivers is taken into account. There is a false sense of safety that is propagated by having a mechanical aid to "help" to hold a slippery baby upright. This "sense of security" promotes the idea that a child could be left alone in the bath for "just a minute."

D Drowning is a Silent and Speedy Event

By age six months, an infant's lungs are well developed, and a baby gives tremendous volume to his or her cries when injured or frightened. Parents and other infant caregivers immediately respond to these high volume cries and rely upon them to signal any danger. Absent any cry from the baby, a parent or caregiver is likely to continue attending to other tasks.

Most parents and infant caregivers expect that they will be alerted to any drowning danger by the baby's distress cries. Most people believe that they will be alerted to someone drowning by cries for help or splashing and gasping by the victim. This is not true for drowning incidents involving infants and toddlers. Water in the airway blocks any effective sound from being heard and can cause tracheal constriction, which fully blocks the airway, and incapacitates the infant. Within moments, brain damage occurs followed by death after 4-5 minutes. Drowning is truly a silent and speedy event.

⁴ "Infant Seat Bathtub Drownings: Who's to Blame?" NC Mann, R. Rauchschalbe, L. Olson, NZ Cvijanovich, Intermountain Injury Control Research Center, University of Utah, Salt Lake City, UT and U.S. Consumer Product Safety Commission, Washington, DC (Abstract included in Appendix to this Petition)

IV.

Voluntary Standards Are Inadequate to Address the Drowning Risk Associated with Bath Seats

A. ASTM Voluntary Standard, Infant Bath Seats, F 1967-99

An American Society for Testing & Materials (ASTM) voluntary standard was recently established for baby bath seats⁵

Although published last year, this standard has been under development for more than five years. Despite knowledge of drowning deaths in bath seats relating back to at least the early 1990s, no changes to products made yet have resulted in decreased number of deaths associated with this product. Instead, the number of deaths has increased during this period.

Additionally, concerns over the adequacy of this standard continue. For example, ongoing concerns include the size of leg openings and submarining incidents, the efficacy of draft requirements for suction cups, the fact that the warning regarding when product should not be used on a slip-resistant surface is on package only and not on the product, the manufacturers' refusal to mark the product with a water depth line to guide consumers and reduce likelihood of filling bath with more water than needed, and a proposal to delete a requirement that the warning be "readable" when tested for permanence.

Perhaps of greatest concern is the incompatibility of bath seat products currently being sold with their use in bathtubs with textured, non-skid surfaces (see discussion below).

Even if changes were made to the voluntary standard to address the above and any other concerns, we do not believe that the risk of drowning would be eliminated. Others share this concern. "Finally, no design modification can address the major issue that leads to most of the drowning deaths, namely that the child was left unattended, apparently because the care giver thought that it was safe to do so. If anything, making the product more robust may only increase the perception that the child will be safe if left alone for a few moments."⁶

B. ASTM Voluntary Standard for Slip-Resistant Bathing Facilities, F 462-79

In 1979, ASTM published a standard for Slip-Resistant Bathing Facilities.⁷ This standard was re-approved in 1994. Virtually all new homes and homes with remodeled baths will have the benefit of this slip resistant feature in the bathtub basin. It is expected that this standard will be (and has been) effective in reducing fall injuries in bathrooms, which is a very serious injury problem to the general population and even a more serious injury problem to vulnerable populations, (i.e. elderly, disabled, infants and young children). Specifically, the standard states that it is intended to "reduce accidents to persons, especially children and the aged, resulting from the use of bathing facilities."⁸

Although this is a performance standard, it is our understanding that most if not all of the leading manufacturers of bathtubs choose to use textured surfaces to meet the performance requirements.

⁵ F 1967-99, Standard Consumer Safety Specification for Infant Bath Seats, American Society for Testing and Materials

⁶ Rauchschalbe et al, Pediatrics. 8 (electronic copy)

⁷ F 462-79, Standard Consumer Safety Specification for Slip-Resistant Bathing Facilities, American Society for Testing and Materials

⁸ See section 1.3, F 462-79

The baby bath seat products currently being marketed contain warnings on their packaging and printed instruction sheets (but not on the products) that the seat is "not for use on textured, non-skid surfaces." One manufacturer, in its instruction sheet, also warns against use of the product on a surface that has decals or mats attached. However, it may not be obvious to all consumers that their bath surface is textured even if they see, read and understand the warning accompanying the product. Some of the complying bathtub surfaces have a very subtle texture that would be considered smooth by many people. Furthermore, use of the product by the non-original owner (such as a friend or family member who was loaned the product, or a second purchaser through a used good sale) would be without benefit of this warning since the original box and instruction sheet are almost never kept and passed on to subsequent users. Even an original user may experience the incompatibility problem if using the product away from home (on a bathtub with textured surface) or with a second child after the family's move to a new home.

The incompatible combination of the bath seat and slip resistant standards in application creates a lethal situation for bath seat use.

V.

Action Requested

For the reasons enumerated above, the Petitioners request that the Consumer Product Safety Commission ban baby bath seats under section 3 (e) of the Federal Hazardous Substances Act (FHSA), 15 U S C section 1262, finding that baby bath seats intended for use by children present a mechanical hazard and, therefore, pursuant to section 2 (f) (1) (D) of the FHSA, 15 U S C section 1261, are hazardous substances and accordingly, pursuant to section 2 (q) (1) (A) of the FHSA, 15 U S C section 1261, these baby bath seats are banned hazardous substance. Specifically, the Petitioners request that CPSC issue a rule that states

Under the authority of section 2 (f) (1) (D) of Federal Hazardous Substances Act and pursuant to provisions of section 3 (e) of the act, the Commission has determined that baby bath seats (including bath rings) intended for use by children present a mechanical hazard within the meaning of section 2 (s) of the Act because in normal use, or when subject to reasonably foreseeable damage or abuse, the design or manufacture presents an unreasonable risk of personal injury or illness, and therefore are banned under section 2 (q) (1) (A) of the Act.

Respectfully submitted,

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Appendix

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ELECTRONIC ARTICLE:

The Role of Bathtub Seats and Rings in Infant Drowning Deaths

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ABSTRACT

Objective. To describe deaths due to drowning that involve the use of an infant bathtub seat or ring

Design. Case series, cases reported to the US Consumer Product Safety Commission data systems

Setting. United States, 1983-1995

Main Outcome Measures Death in which an infant bathtub seat or ring was in use at the time of death and the primary cause of death was drowning

Results. Thirty-two drowning deaths involving bath seats/rings were identified and investigated by the Consumer Product Safety Commission over a 13-year period. The majority of deaths (84%) occurred from 1991-1995, with more than 50% occurring in the 2 most recent years. The victims' ages at the time of the incident ranged from 5 to 15 months with a mean and median age of 8 months. In more

than 90% of incidents there was a reported lapse in adult supervision, with a mean reported lapse of 6 minutes and a median lapse of 4 minutes. Focus groups with parents found that while making bathing somewhat easier, bath seats/rings are useful for a relatively short time period, as the child rapidly outgrows the product. They also suggested that care givers are more likely to leave a child unattended in the tub if one of these products is in use.

Conclusion. Bath seats/rings are associated with an increasing number of reported infant drowning deaths. The use of such products may increase the risk of drowning among infants by increasing the likelihood that an infant will be left alone in the tub. However, in the absence of exposure data in a suitable comparison group it is difficult to assess the overall risk inherent in their use. Educational efforts reinforcing the need for continuous adult supervision of infants and children around all bodies of water should now also include a reminder that bath seats/rings are not safety items and are not a substitute for adult supervision. Infants and toddlers should never be left in the bathtub unsupervised, even for brief moments.

Key words drowning, submersion, infant, bathtub

INTRODUCTION ■

Drowning is the third leading cause of unintentional-injury death among children in the United States.¹ Young children under the age of 5 are at particularly increased risk of drowning, with drowning rates peaking among children ages 1 to 2 years.² Since the 1970s drowning rates have decreased markedly in most age groups with the exception of toddlers, where rates have remained fairly stable, and infants, where rates may have actually increased.³ For the 12-year period from 1983-1994, 1219 infants drowned (2.60/100 000 infants), of which 1036 (85%) were coded as unintentional intent.⁶ In contrast to toddlers, who are likely to drown in residential swimming pools,^{3,7} more than 50% of unintentional infant drowning deaths occur in the bathtub.⁶ As part of our ongoing investigation of infant and toddler drownings, we became aware of a number of incidents in which a bath seat or a bath ring was in use at the time of the drowning event.

According to the first major US manufacturer, bath rings were developed by a pharmaceutical company in Johannesburg, South Africa, where they sold for 7 years before introduction into the US market in 1981 (Consumer Product Safety Commission [CPSC], unpublished report, 1983). The intended use of these products is as a bathing aid, supporting the infant in the sitting position while in the bath. The bath ring typically consists of a plastic ring and three or four attached legs, 6 to 8 inches in length. The infant sits directly on the tub surface or on a rubber mat attached to the legs. There is usually a discernible front and the infant's legs are meant to straddle a particular bath ring leg. In 1991 a modification, the bath seat, was introduced (Fig 1). Similar to the bath ring, the seat contains the infant within a plastic ring and has plastic legs for straddling, but the bath seat also provides a molded plastic seat for the infant to sit on. Both the bath seat and the bath ring are attached to the bathtub surface via suction cups during use.



Fig. 1. Eight-month-old infant in bath seat showing one possible sequence of events

[\[View Larger Version of this Image \(48K GIF file\)\]](#)

Currently, there are four major manufacturers with bath seats/rings on the US market. With a price range of about \$8 to \$16 dollars, these products are affordable for most families. Although precise data are not available on the total number of seats/rings sold per year, estimates from leading manufacturers indicate sales, since 1991, to be about 1 million units per year, or about 1 unit for every 4 live births. In addition, as with other child products that are developmentally appropriate for only a short time period in the child's life, these seats/rings may be passed down to younger friends or relatives, or resold.

Review of the medical literature found no previous reports of drownings involving the use of bathtub seats or rings. Because of the increasing number of drowning deaths associated with these relatively new products, we reviewed all deaths, reported to the US CPSC, which involved the use of a bathtub seat or ring (hereafter referred to collectively as bath seats).

MATERIALS AND METHODS

Data were obtained from the US CPSC on drownings involving bath seats. To obtain reports of product-related injuries or deaths, the CPSC has multiple surveillance systems including contracts with newspaper clipping services, a toll-free 800 line for consumer complaints and reports of hazardous products (1-800-638-CPSC), an emergency room-based injury surveillance system (National Electronic Injury Surveillance System or NEISS), both a voluntary and paid Medical Examiner's and Coroner's Alert Program that solicits reports of product-related deaths, and agreements with each of the 50 states, New York City, and Washington, DC for obtaining copies of death certificates for certain types of unintentional injury deaths, including drownings. Once a drowning involving a bathtub seat is identified through one of the above mentioned sources, CPSC staff complete an in-depth investigation. These investigations may include reviews of medical and police records as well as interviews with care givers, medical professionals, social workers, and/or police officials.

In this case series, information from in-depth investigations was abstracted for incidents that occurred on or before December 31, 1995. To be eligible for inclusion, a bath seat had to be in use at the time of death or injury *and* the underlying cause of death had to be due to drowning. Details are provided only on those cases occurring in the United States. Independent variables ascertained from the in-depth investigations included age, sex and race of the victim, date of the incident, position of the victim and position of the product at the time of discovery, initiation of resuscitation by the care giver, person responsible for the victim at the time of the incident, the reason for leaving the child unattended, and the duration of the lapse in supervision. In instances where a range was reported (eg,

lapse in supervision) the midpoint of the reported range was used in calculations

To investigate further the utility and limitations of bath seats, the CPSC contracted with a private research group to conduct three focus groups with a planned size of 8 to 10 participants per group. The focus groups were conducted by a private contractor (Shugoll Research, Bethesda, MD) and were held at a neutral location. To qualify for participation, respondents were required to have at least one child living at home who was between the ages of 6 and 16 months and the respondent had to be primarily responsible or share equally in the responsibility for bathing the child. In addition, several respondents were required to have a second child between 17 months and 4 1/2 years old. At least 8 of 12 potential participants per panel had to currently use, or have previously used, a bath seat.

RESULTS

- Thirty-six deaths involving bath seats were identified by the CPSC over a 13-year period. Of these 36 incidents, 2 drowning deaths occurred in Canada and 1 in Sweden, these are excluded from further analysis. Also excluded is 1 death involving thermal burns from scalding water, turned on by the child while using the bath seat. The findings from the remaining 32 in-depth investigations of US drownings are summarized in this report.

The age at the time of the incident ranged from 5 to 15 months, with a mean and median age of 8 months (Fig 2). Females accounted for nineteen (60%) deaths. Twenty-five (78%) of the victims were white, 6 of whom were of Hispanic ethnicity, 6 (19%) were black, and 1 (3%) was Asian. The majority of reported deaths (84%) occurred from 1991 through 1995 with more than 50% occurring in the 2 most recent years (Fig 3).

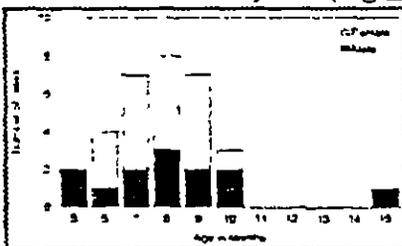


Fig. 2. Age and gender distribution of bathtub submersion victims (all were using a bathtub seat or ring at the time of the event)

[View Larger Version of this Image (32K GIF file)]

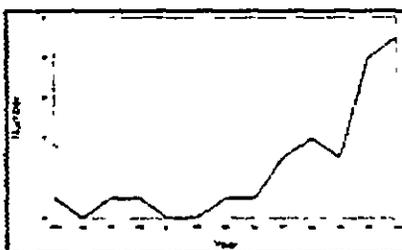


Fig. 3. Number of reported drownings involving the use of an infant bath seat or ring, by year of incident

[View Larger Version of this Image (7K GIF file)]

The care giver at the time of the incident was most often the mother of the child. There was a reported

lapse in adult supervision in 29 (91%) of the incidents. For cases in which an estimate of the duration of the lapse was available ($n = 24$), the reported range was 1 to 35 minutes with a mean and median lapse of 6 and 4 minutes, respectively. Eleven infants were left in the tub with an older sibling, 1 was left with a child of the same age, and 17 were left alone. Common reasons for leaving included answering the phone or making a phone call (24%), attending to other children (24%), retrieving something such as a towel or clothes for the child (17%), and attending to household chores (17%). In 2 drowning deaths there was no reported lapse in adult supervision and in 1 incident there was not enough detail provided in the investigative report to make a determination. For both of the witnessed fatal incidents, the care giver reported difficulty removing the infant from the device after submersion. In one case, the seat tipped sideways with a 6-month-old infant in it, and in the other, a 15-month-old infant slid down and became wedged between two legs of the ring. Apparently, in these incidents, the care giver was neither able to remove the infant from the seat nor to remove the device, with the infant in it, from the bathtub in a timely fashion.

Although most (90%) of the events were unwitnessed, the probable sequence of events that led to the submersion could be inferred from the position of the product and the position of the infant at the time of discovery. This information was available for 23 (72%) of the cases. Presumably, infants found submerged and trapped under the rim of an upright product slid under the rim, those found separated from an upright product climbed out, and those found either within or separated from a tipped product became submerged when the product tipped over. Based on these assumptions, 9 infants climbed out of the product, 9 tipped over, and 2 slid under the rim of an upright product. In two incidents the water in the tub was left running and the infant was found slumped over in an upright seat with his/her face in the water and in one case a latching T-bar was found in the open position, apparently allowing the infant to fall forward out of the upright product.

A warning label advising against leaving the child unattended in the tub was present on 28 (88%) of the bath seats. In the remaining four cases it could not be determined whether or not a warning statement was present. One or more suction cups were missing or defective in 10 (31%) of the incidents and in one case the front leg of the seat was broken.

It was not possible to evaluate fully the quality of resuscitative efforts of bystanders from the information provided in the in-depth investigations. However, it was apparent that at least 6 victims (19%) were not resuscitated until emergency personnel arrived and several other victims received attention only after the care giver ran to get help from neighbors. Furthermore, even when resuscitative efforts were initiated immediately, it was often evident that the care giver had no training in cardiopulmonary resuscitation (CPR). A death certificate or report from the coroner or medical examiner with a ruling on intent was available for 25 of the incidents. Of these 25 incidents, 3 were classified as undetermined intent while the rest were unintentional. Of note, neither of the witnessed events was among the 3 events classified as undetermined intent.

Parents' perceptions of the advantages and disadvantages of bath seats were evaluated qualitatively through analyses of focus group data. A total of 25 respondents, 22 female and 3 male, participated in

three focus groups held in November of 1993. Due to the screening qualifications for the focus group, most participants were familiar with bath seats and identified them as the primary bath aid they used for supporting their young children in the tub. Nineteen respondents currently used a bath seat when bathing their child(ren). In addition, 2 of the participants had used 1 in the past but were not using one at the time that the focus group was conducted. A major stated advantage for using a bath seat was that, by supporting the infant, it frees the bathers hands so that the infant can be bathed more easily. Other advantages included safety issues (eg, "to make sure that she wouldn't fall over accidentally and hit her head on the tub") or to give the child greater freedom in the water. Stated disadvantages included the following: the suction cups do not attach firmly to all tub surfaces, it is difficult to thoroughly clean the infant while in the bath seat, and the seat has an extremely limited lifespan, as the child rapidly outgrows the product. Participants reported that they would feel more comfortable leaving a child unattended for a moment in the bath if the infant was contained within a bath seat, if the child was in viewing and hearing range, or if there was an older child present. Respondents were generally aware that warning labels are present on bath seats but stated that these labels have become so common on childhood products that they are often ignored.

DISCUSSION

In the United States, drowning continues to be an important cause of injury death in early childhood. Although much attention has focused on risk factors and strategies to prevent drowning deaths in residential swimming pools (eg, mandatory four-sided fencing),^{4,10} research addressing risk factors and prevention strategies for infant bathtub drownings has been limited. The bath seat, in particular, has not been reported as a potential risk factor for unintentional bathtub drownings among infants. Previous studies indicate that there is usually a history of leaving the infant unattended or in the care of another child.¹⁵ In most cases, the adult reports leaving the child, for a short time, to answer the phone or attend to household chores.^{18,19} In some instances, the drowning appears to be due to homicide or abuse.¹⁹ Although no deaths in this case series were classified as homicide and only 3 were classified as undetermined intent, it is possible that 1 or more of the cases may have been intentional. It is often difficult to determine intent for drowning deaths, particularly in this young age group.

The infant bath seat is apparently intended to aid the adult bathing the infant by containing and supporting the infant in a sitting position within the product, thus freeing both of the adult's hands. Based on comments made by care givers, both in focus groups and in postevent investigations, there is little doubt that these products give a false sense of security that an infant can be left in the tub alone for short periods of time. In the past, use of words such as safe, safety, or sitter in product advertisements may have amplified this perception by leading parents to believe that the ring or seat was a safety device rather than a convenience product. (Recently, manufacturers have begun to limit use of these words.) Although most of the products contained warning labels advising not to leave the infant unattended, these labels appear to be ineffective in changing behavior. As stated by focus group

participants, these labels have become so common on childhood products that they are often ignored

Limitations on use of infant bath seats may be based on the developmental stage of the infant. Manufacturers have correctly identified the lower limit of the age range as 6 months, the age at which, on average, infants can sit unsupported.²³ The upper limit may be based on the age at which children begin to pull themselves to a stand (about 8 to 9 months), giving only a 2- to 3-month period during which the product could be appropriately used. In most of the incidents involving infants more than 8 months old, the victim was found separated from the seat, indicating that he/she probably climbed out of the product. With the rapid, and often variable, development that occurs during the first year of life, parents may underestimate their infant's motor skills, although further research is needed in this area.

It is important to put these deaths involving bathtub seats in perspective. Since 1991 (when sales of bath seats began to increase dramatically) an average of 5 deaths have been reported each year and, the number appears to be increasing with more than 50% of deaths occurring in the 2 most recent years. However, the passive reporting mechanisms used in this study to identify these incidents likely lead to an underestimate of the true number of events. Figures from the National Center for Health Statistics indicate that about 90 unintentional drowning deaths occur annually among those under age 1, of which approximately 52% are coded as occurring in the bathtub.⁶ Additional details, such as the use of a bath seat, are not available in national datasets. Although it appears that the number of bath seat related incidents is increasing, the reliance on a passive reporting system for case identification makes it difficult to interpret temporal trends.

Although bath seats are involved in drowning deaths it is not certain that use of these products increases the risk of drowning. Some may even argue that the products are protective, ie, given that a child is left alone in the tub, the seat may make it less likely that the infant will become submerged. However, infants should never be left alone in the tub and, based on statements made by care givers during in-depth investigations as well as statements from care givers who participated in focus groups, these products appear to increase the likelihood of this occurring. In addition, in those cases where the infant tips over while contained in the seat, the seat may actually contribute to the drowning both by encumbering the infant and by making it difficult for the care giver to remove the submerged child from the water. Likewise, in those cases where the infant slips under the rim of an upright seat, the child may become entrapped underwater by the ring. We report 2 deaths where the care giver indicated that he/she witnessed the event but was unable to free the child from the bath seat. To assess the risk that these products present, future research should compare the proportion of bath drownings involving a bath seat to the proportion of infants using a bath seat in a noninjured but otherwise comparable control group.

Since 1987 the CPSC has requested that manufacturers make several modifications, including placement of permanent warnings on both the product and packaging with illustrations showing an adult in attendance with the infant, elimination of the word "safety" from product packaging and names, inclusion of an upper age limit or weight/height limit for users, and modification of the product

to provide quick-release tabs for suction cups. In June 1994, CPSC staff recommended the initiation of formal rulemaking proceedings for infant bath seats. These proceedings are generally initiated when the Commission considers a product ban or regulation. However, in this case, the Commissioners voted 2 to 1 against initiating formal rulemaking. The majority opinion was that the design and manufacture of bath seats does not present a mechanical hazard or an unreasonable risk of injury to consumers. Industry representatives are currently working on a voluntary standard for bath seats. Although this voluntary standard may address some product design issues (eg, problems noted with detachable or defective suction cups), safety experts from the CPSC were unable to offer a design change that would effectively address all incidents associated with these products. The use of an occupant restraint system (a feature included on one brand) may prevent the infant from slipping or climbing out of the product, however, it does not prevent incidents where the product tips over. Also, care givers must actively use the restraint system every time they use the product for it to be effective. Finally, no design modification can address the major issue that leads to most of the drowning deaths, namely that the child was left unattended, apparently because the care giver thought that it was safe to do so. If anything, making the product more robust may only increase the perception that the child will be safe if left alone for a few moments.

In an effort to educate the public about the potential hazards of leaving children unattended in bath seats, the CPSC has issued both press releases and safety alerts. Still, primary prevention efforts fall largely on the shoulders of care givers and those who can inform them. Educational efforts must reinforce the need for continuous adult supervision of infants and children around all bodies of water^{17,19}. If possible, the telephone should be brought into the bathroom and all necessary bathing items (soap, washcloths, towels, etc) should be assembled before placing the infant in the tub. Parents and care givers should be trained in basic CPR techniques, as the sooner that CPR is initiated, the greater the chance of intact survival^{24,25}. In addition, health care professionals should remind parents and care givers that bath seats/rings are not safety items and are not a substitute for adult supervision. Infants and toddlers should never be left in the bathtub unsupervised, even for brief moments.

FOOTNOTES ■

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ABBREVIATIONS ■

US, United States CPSC, Consumer Product Safety Commission CPR, cardiopulmonary resuscitation

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**A FOCUS GROUP STUDY TO EVALUATE CONSUMER USE
 AND PERCEPTIONS OF BABY BATH RINGS/SEATS
 CPSC-R-93-5839**

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1.0 OVERVIEW

Consumer Product Safety Commission (CPSC) contracted with Shugoll Research to conduct a focus group study to obtain consumer reactions to baby bath rings/seats. The results of the study will be used by CPSC to determine what measures need to be taken to protect consumers from the risks associated with use of this product.

1.1 Objectives

The specific objectives of the focus group study are as follows:

- Examine general bathing practices for children
- Examine consumer knowledge and use of baby bath rings/seats
- Examine behavior patterns during bath time
- Obtain reactions to labeling of baby bath rings/seats
- Obtain reactions to select baby bath rings/seats

1.2 Methodology

The focus group technique was selected to accomplish the objectives of the study. A focus group is a panel discussion with 8 to 10 representatives of a selected target market for a particular product, service, or idea. The technique is especially useful for gathering in-depth information on a topic or target market reactions to specific products. The discussion is led by a moderator who is trained in consumer behavior theories and marketing principles. Participants in the group are encouraged to relate to each other, share attitudes and provide candid opinions regarding the topics presented to them by the moderator or generated by the dynamics of the group. Consensus is not sought. The moderator is not supposed to proselytize or educate respondents. Rather, he or she uses his or her skills to question, probe and clarify responses as well as control the flow of the conversation to cover all areas of interest to the client.

1.3 Study Procedures

Shugoll Research and CPSC met to fine-tune and prioritize the study objectives and criteria to be used for respondent recruitment. It was decided that three focus groups would be conducted in Bethesda, Maryland. The first two groups were held on November 17, 1993 at 6 00 p.m. and 8:00 p.m., and the third group was held on November 18, 1993 at 6:00 p.m.

Shugoll Research designed a recruitment screener (see Appendix A) to identify and screen consumers for study participation. The screener was submitted to the CPSC for approval prior to the start of respondent recruitment. To qualify for participation in the groups, respondents had to meet the following criteria:

- For occupational security reasons, neither they nor anyone in their family can work for an advertising agency, a public relations firm or a market research firm. Moreover, neither they nor a family member can be employed at a federal government agency or work for a manufacturer of or retail store that sells baby equipment. Finally, respondents and members of their family cannot work in the medical field, in a doctor's office, in a hospital, in a clinic or as a health care volunteer.
- They must have at least one child living at home who is between 6 months and 16 months old.
- They must be primarily responsible or share equally in the responsibility for bathing their child who is between 6 months and 16 months old.
- They must not have participated in a focus group discussion within the past 6 months.

In addition, several respondents in each group were required to have another child between 17 months and 4 ½ years of age, and at least 8 out of 12 respondents per group must currently use or have previously used a bath seat. Use of car seats and high chairs also was captured so that respondents would not immediately know that bath rings/seats were the only focus of the study. In addition to these quotas, a mix of respondents by age, race, and income was recruited for each group.

Respondents were recruited from Shugoll Research's computerized data bank, from referrals and from the telephone directory. Once a potential respondent was screened and it was determined that he or she qualified, a cash honorarium of \$40 was offered to encourage participation in the study and to help guarantee a show of 8 to 10 respondents. When a respondent agreed to participate in one of the group sessions, a confirmation letter was sent out. The letter confirmed the group session time, date, location and promised honorarium, and provided detailed directions to the focus group facility. The day before each group session, all respondents were reconfirmed by telephone.

Shugoll Research designed a topic guide (see Appendix B) to be used by the focus group moderator when leading the discussion groups. The guide was designed to meet the study objectives. Each session began with introductory remarks and respondent introductions. The groups then proceeded with discussions on the following:

- General bathing practices for children (bath frequency and length, individuals responsible for bathing, number of children bathed together and under what circumstances, amount of water typically used, and type of bathtub typically used)
- Consumer knowledge and use of baby bath rings/seats
- Description of bath aid used (size, shape, brand name, specific features, enclosed consumer information)
- Reasons for using bath rings/seats and how the product was obtained
- Age appropriateness for baby bath rings/seats
- Likes and dislikes about bath rings/seats
- Problems and difficulties using baby bath rings/seats and effects on usage
- Confidence in bath rings/seats in case bather has to momentarily leave bathroom due to an interruption or emergency
- Frequency of leaving children in the bath and the reasons/circumstances

for doing so (real and imagined)

- Comfort level of leaving children in the bathtub
- Factors that impact a parent's decision to leave/not leave a child in the bathtub
- Minimum age of child parents have left or would leave in the bath
- Amount of time spent away from a child in the bath (real and imagined)
- Means of restraining a child in the bathtub
- Position of child upon a bather's return to the bathroom (real and imagined) and his/her reaction to it
- Awareness and recall of product safety information accompanying baby bath rings/seats (content and location)
- Reactions to and suggestions for the labeling of baby bath rings/seats
- Reactions to four different models of baby bath rings/seats without packaging (awareness, current/previous usage, differences between these models and the one they use, likes and dislikes, opinions regarding which one model is most/least safe and the one that they think they are most/least likely to buy and why)
- Advice parents should be given about using baby bath rings/seats

The topic guide was submitted to the CPSC for approval prior to the focus group sessions. Client comments and suggestions were integrated into the moderator's guide prior to the discussion groups.

The focus groups were held in a specially designed research facility. Representatives of the CPSC observed each focus group session from behind a one-way mirror. Each group was audiotaped and videotaped, and the tapes have been made available to the CPSC.

1.4 Study Limitations

A qualitative research methodology seeks to develop directions rather than quantitatively precise or absolute measures. Because of the limited number of respondents involved in this type of research, the study should be regarded as exploratory in nature, and the results used to generate hypotheses for marketing decision making and further testing. The non-statistical nature of qualitative research means the results cannot be generalized to the population under study with a known level of statistical precision.

1.5 Analysis

The CPSC contracted with Shugoll Research for a topline report. Shugoll Research's topline reports differ from its full reports in that full reports include extensive verbatims from study participants and in-depth interpretation of study findings. Topline reports, in contrast, are designed to summarize key findings in a bulleted format for ease of use by management. Verbatims are used only to highlight key study findings. Conclusive statements and recommendations included in the report are based on study findings as well as the interpretation of the moderator/project analyst who is knowledgeable in the area of consumer behavior. Since representatives of the CPSC observed each focus group session from behind a one-way mirror, Shugoll Research is hopeful that the subtle nuances so important to qualitative research will be recalled when reading this report.

1.6 Respondent Profile

A total of 25 respondents participated in the three focus groups. Characteristics of the participants are as follows:

- Twenty-two of the respondents are women and 3 are men.
- Nineteen study participants are white and 6 are black.
- Respondents represent a mix of income levels. Four have household incomes of less than \$30,000, 5 report a household income of between \$30,000 and \$49,999, 6 say that they earn \$50,000 to \$69,999, 4 have household incomes of

\$70,000 to \$79,999, 5 report incomes of between \$80,000 and \$99,999, and 1 respondent has a total household income of \$100,000 or more.

- Two participants are under the age of 25, 16 are between 25 and 34 years old, and 7 report being 35 to 44 years of age.
- Along with their child(ren) who is (are) between 6 months and 16 months old, 12 respondents have at least one child who is 2 to 4 and one half years old and 5 have at least one child who is 5 years of age or older.
- Nineteen respondents report that they currently use a bath seat for their child(ren). Of the 6 participants who do not utilize one now, 2 say that they at one time used a bath seat.
- All respondents for this study (25) currently use car seats for their child(ren). Twenty-one study participants currently use a high chair for their child(ren). Of the 4 who do not presently use one, 1 respondent claims to have previously used a high chair.
- Seventeen participants report that they are primarily responsible for bathing their child who is 6 months to 16 months old whereas the other 8 say that they share this responsibility equally with someone else.

2.0 SUMMARY OF MAJOR FINDINGS

This section highlights the study findings. Findings appear under their appropriate objective, and are presented in a bulleted format. Results are supported by key verbatim quotations from the study participants.

2.1 Examine General Bathing Practices for Children

This objective was met by asking parents to describe the typical bathing patterns they follow for their children under 2 years of age and their children 2 to 5 years of age. Specifically, parents were asked how frequently they bathe their children, who ordinarily bathes their children, the length of the typical bath, the level of water usually used in the bath, whether or not siblings bathe separately or together and to describe the type of bathtub in which their children bathe.

- Bathing frequency varies based on a variety of criteria including age of the child, condition of the child's skin, and season of the year. Most parents report that they bathe their 2 to 5 year olds daily and more often than their under 2 year olds because the older children tend to get dirtier and more sweaty because they engage in a higher level of activity. Children under 2 are sometimes sponge bathed in-between tub baths which typically are given every other day. Parents explain their bathing practices by reporting that pediatricians do not recommend that infants or any child with dry or delicate skin be bathed daily. Parents also indicate that bathing frequency often changes by season. In summertime, baths are given more frequently (generally daily) because children play outside more often and, therefore, get dirtier and perspire more readily.

"When they are younger it's less and when they're older it's more. They don't get particularly so dirty as babies. And I have sensitive skin and my children have sensitive skin. And just water washes are plenty, it doesn't even have to be very often. That's what the doctor had said when I had the first one. Just once a week is all you need because of the skin and they don't need the lotions and all that other stuff."

"I think when they are younger they don't need it as much. ... She wasn't as active so she didn't get dirty as much.... Crawling and walking, then they

start working up a sweat and then they get into stuff and their hands get dirty. So you really have to try to keep them clean."

"When mine were newborn their skin was almost scaly, a lot of scaly parts. You'd bathe him less then, but now he's getting more active and more into food."

"In the summertime you'll bathe them like every day because they are out playing and sweating and playing in the mud. Whereas in the wintertime maybe it's every other day depending on what they've done that day."

- Female respondents report that they are the primary bather of their children. Some of these women, however, say that their spouses help, but tend not to share equally in the responsibility. Male participants concur saying that they generally share bathing responsibilities, but not always equally, with their wives. Interestingly, respondents suggest that males are more likely to bathe the 2 to 5 year olds than the under 2 year olds because they are more comfortable handling older children. Occasionally, a babysitter, grandparent or sibling will bathe the children but respondents report that this does not occur frequently.

"I love to play with him in the bath. That's really why I do it every day, because it's so much fun. But my husband, if he is home, he helps. He gets him all undressed and brings him in to me and then I bathe him and then I hand him out. And occasionally he will get in the tub with him too, but it's usually just easier for me to do it."

"We split it, but my wife does it much more than I do."

"Sometimes when I'm tired or I would call her from work and say, 'Please give her a bath.' (nanny or babysitter) But I like to do it myself. Since I work full time I want to be part of that. She probably does it no more than once a week."

"My girls do. They will take turns to bathe her and they will also bring her in the tub when they are taking a bath. I would say on an average maybe once a week."

- Parents indicate that baths for their under 2 year olds last anywhere from about 15 minutes to up to a half hour. However, their 2 to 5 year olds are in the bath longer, generally from a half hour to 45 minutes or so.

"No longer than a half hour. My older one might get a little extra time so I can take the baby out."

"They get in at the same time. They play for twenty minutes or so, then I take the baby out and dry him and diaper him and dress him and then get the other one out. Anywhere from twenty to forty minutes total."

"If my son could stay in 45 minutes to an hour, he would. Usually he tries to push it to 45 minutes. And then the baby, by the time I wash him and let him play, it's about 15 minutes on the average."

"My younger son, the 14 month old, probably 15-20 minutes. And my three year old probably a half an hour."

- The amount of bath water parents use varies depending on who is in the bath. It is not unusual for a parent, particularly the mother, to bathe with their under 2 year olds especially if the child is an only child. When this occurs, the parent is holding the young child and the bath water is filled to a level that is comfortable for the adult. When a parent joins their child in the bath, it is typically for child safety and the parent's own physical comfort. This is because it is difficult to handle a young child who is slipping around while the parent is leaning over the bathtub. When there is an older sibling in the household, the bath water is also higher than when a child under 2 is bathing alone. When a child under 2 is bathing without a sibling or adult, parents report that the water is typically filled up to the navel or just high enough so the child can play or have fun splashing in the water.

"If I'm in there with her, normally I run the regular bath water. Because I'm in there."

"I'm often in the tub with the kids so it's a lot of water. If it's primarily for my infant, then it's just four inches and he sits up and I bathe the top of

him. If we are talking the baby seat and my other child, 2-1/2 year old, it's higher."

"If it was just the six month old, just a little bit of water, if he is there by himself. But that doesn't happen that often."

"The waistline sitting down."

"Just to the navel."

"You have to make it fun. Swimming."

- Children who have no siblings and who are under 2 years of age often bathe with one of their parents, as previously reported. However, young children who have older siblings are frequently bathed with their siblings instead of with a parent. Respondents refer to bath time as "family time" and "transition time". Therefore, they report that their children take baths to have fun and because parents feel the bath helps relax children in preparation for bedtime. Parents also report that it is more efficient and more economical to bathe their children together when possible. Bathing siblings together subsides as older siblings begin to reach adolescence. Parents say they generally do not depend on older siblings to supervise younger ones in the bath. However, they do feel safer when their children bathe together. Respondents say that unless the older sibling is significantly older (e.g., over 6 years of age) or otherwise very mature, they do not typically trust a 5 or 6 year old to supervise a younger sibling in the bathtub. Interestingly, parents tend to trust older siblings at a younger age to supervise their young children in situations outside the bath. In other words, they intellectually acknowledge the dangers of leaving their young children in the bath without adult supervision. However, in reality, parents do not consistently exercise good judgment regarding sibling supervision in the bath.

"He wants to get in there with his big brother."

"That's how the boys got so close together. They are connected by their bath time."

"We do all of ours together. We usually have the three older ones in there either simultaneously or in shifts. We have a big bathtub, an old fashioned big long one. But then we often will take one out to add the fourth one -- the baby. And he gets in there and as everybody said it's fun to be in there and be with everybody and do all that splashing and all that fun stuff. Last night, in fact, there were all four of them in there."

"I try to get him in with the baby too, and then they play. They do play together."

"Play time for us."

"With my older children it's a nightly routine. It calms them down, they enjoy doing it whether they are dirty or not dirty. ... I almost use it as a schedule... a transition."

"Not any more. I have an eight and a twelve year old. It's been a while. They're boys. It's been quite a while. Four, five years ago. [not in with little one?] No, no."

"My ten year old could do it (supervise)."

"A six year old is getting there."

"It (capable age to supervise) depends on the child."

- A considerable number of respondents report that their bathtubs are made of porcelain and are extremely slippery. Many report that they use bath mats, towels, adhesive appliqués or foam pads in the tub since this prevents their children from slipping around on the surface of the tub. Those few who have the fiberglass tubs realize their tubs have a surface that prevents their children from slipping and describe the bottom of their tub as having an off-white, rough finish. It is worth noting that consumers do not use the words skid or skid-free to describe their tub surfaces. In fact, after respondents described their tub surfaces and the moderator tried to clarify whether or not the surfaces were skid-free, respondents continued to use the words slippery or not slippery when talking about the tubs.

"It has little bumps on the bottom. I guess it's supposed to be non-slip."

"It does have almost a cloth-like square in there that kind of replaces the bath mat..."

2.2 Examine Consumer Knowledge and Use of Bath Rings/Seats

This objective was met by asking respondents how they typically restrain their children during bath time. Due to the screening specifications, most respondents were familiar with and had used a baby bath ring/seat. Respondents were asked to describe the rings/seats they have, how they got them and to explain their reasons for using the rings/seats. Respondents were also asked how else they restrain their child in the bath, for what age child they use the rings/seats, and what they dislike about the rings/seats. Finally, respondents were asked what, if any, specific problems or difficulties they have had with the product.

- Other than supporting their children themselves by holding on to them or by bathing with them, or having an older sibling do it, parents report that baby bath rings/seats are the primary bath aid they use for supporting and restraining their younger children in the bathtub. A few people mentioned that they use bath mats on the bottom of their tubs to prevent their children from slipping around and others mentioned that when their children were first born they used small plastic tubs within the bathtub or sink as support tools.

"We use a mat on the bottom of ours too."

"It has a little foam pad so that he doesn't slide."

- Respondents use a variety of different types of baby bath rings/seats. A few mentioned that they have the [REDACTED] model that was tested in the focus groups while individual respondents report having the [REDACTED] model and the [REDACTED] model. Interestingly, most respondents could not remember or state with confidence the name of the manufacturer or model ring they owned.

"It's got some little rings on the bottom. It's kind of fancy. But it doesn't have a sponge, and that's why I picked it. ... But this one is kind of neat

because it has a lock where you can keep it straight or you can unlock it and it swivels around so you can turn the baby around. ... The suction is pretty good, once I get it situated "

"Mine is yellow. It doesn't pivot. It has got the large circle that it's attached to, like a seat. But it doesn't have any of the play things on it. It has just got a little pad where he can sit back or lean forward and play. I think it's [REDACTED], but I'm not sure."

"Ours is white. I think it's made by [REDACTED] It has little toys like a turning wheel on it. It doesn't pivot and you can either lift up the arm from the right or the left. Green suction cups on the bottom."

"I don't know who made it, but it's blue and it's got multi-colored things on the side."

- Parents report getting their baby bath rings/seats in a number of ways. A few got their ring as a hand-me-down from a friend or relative, others got their ring as a gift, but most respondents who had the product had gone out to purchase the ring/seat. Interestingly, some respondents who had received their ring/seat as a hand-me-down or gift actually went out to purchase another one because they did not think the model they had received worked well enough for them.

"I went to Toys-R-Us. There was a couple of different ones... I had actually seen it in a magazine too with a write-up... Actually the main thing was the write-up. Because it was the safety, it's [REDACTED], and they [the magazine] were describing it as the safest one."

"I'd seen it in catalogs and advertisements. I bought it myself thinking of course that this is one of the essentials."

"It [the model respondent purchased] has got some little rings in the bottom. It's kind of fancy. But it doesn't have a sponge, and that's why I picked it. Because my sister had given me just a sponge with a ring and that was not going to cut it... I just knew it wasn't going to work. That sponge wasn't sinking down enough to stay down, it was floating up and coming off."

- Parents cite several reasons for using the baby bath rings/seats. One of the major reasons is that it allows the bather to have both hands free to bathe their child more easily. Parents find the rings/seats makes bathing more convenient and comfortable for them while it gives the child a sense of independence. Others feel that their children are safer in the bath when they are in the rings/seats because they are less likely to stand up or slip around if they are being restrained. Another major reason parents think the ring/seat is a good idea is that it gives the child some freedom to move around and play with toys and with the water. Finally, parents say the rings/seats save them time because, when used, they do not have to get in the bath with their children.

"I didn't think about safety. I didn't have one with my first one, but with the second one I thought my back was tired of holding up the child and washing. I thought this would be great. I could have both hands free. When you're trying to hold them and wash them, I found that it was just so tiring. It worked really well but only for a short period of time. They outgrew it too fast, too quickly. It's good for the time, but then it's no good anymore."

"They squirm so much and they slide and if you are leaning over the tub -- and I'm short, so when I'm leaning over I'm going into the tub -- and I've got to make sure I've got him gripped real well if I'm washing him. This way they are sitting up and you can wash them."

"It gives me hands to play or wash or whatever."

"To get him used to being in the tub by himself."

"The child safely anchored in the middle of the bathtub. Head above water."

"To just make sure that she wouldn't fall over accidentally and hit her head on the tub, or get water in her lungs. The water was the main thing."

"Just thinking of being outside of the bathtub and trying to hold her with one hand. To make sure she is safe when I'm not holding her. When I'm in the tub with her I'm holding her or I'm right there. But if I'm outside the tub, it's harder for me to reach in and grab her. So it's (ring/seat) kind of like my second hands or my security blanket..."

"Safety to me is to keep them from standing up while I'm watching them..."

"To give him more freedom. Because right now he is just kind of confined. He doesn't have much water to play with. And he doesn't have much movement either because he is really big. And he takes up that whole bathtub. ... [more freedom] to play with the water and to move about and to sit up. He likes to sit up."

"I didn't use the tub so I was either showering or bathing with my baby. So the seat allowed me to bathe my baby independently. My infant, I either showered or bathed with my baby and held her. So when I got the seat, I didn't have to be in the tub. It meant I didn't have to bathe with my baby. And it meant less time, because I didn't have to get dressed too. And I could do it anytime I wanted to."

- Parents report that baby bath rings/seats are typically appropriate for a child starting at the age of 6 months and up to about 18 months old. Their knowledge of age appropriateness comes from the packaging of the product or enclosed literature. For most parents, the ring becomes useful when the child begins to sit up independently and becomes useless once the child is standing up or begins to walk.

"Six to 18 months is what my box said."

"They say six months beginning, I think."

"Ours says up to 18 months, but again, my son is 27 pounds and he's 10 months now. He fits in it great now. There is no way if he continues to grow... he is going to be out of it in a couple of months."

"I'm just now being successful with it, now that he can sit up by himself. Before I felt much safer holding him. ... But when I tried to put him in there before he would slip down in it. And that was really scary. Now he can hold onto it. So now it's becoming a little more useful." (6 month old child)

- Most parents initially believe that the bath ring/seat will be very convenient because as previously stated, it will give them both their hands to bathe their child. However, parents indicate that the bath ring/seat has an extremely limited life span. Parents believe this is one of the greatest drawbacks of the aid. They suggest that as soon as children begin wanting to stand up, the child becomes unhappy in the ring/seat and the product becomes useless.

"I used to use it for my son, but he comes out of it now. Fourteen months. He hates it, he doesn't want to stay in it."

"We gave up on the ring after about two weeks. We still try now and then, but it just doesn't work for us. They want to dive over it and the edges – maybe I just got too cheap of a one -- but the edges are too sharp with the plastic and I felt awkward getting around it. I don't think they really play as much." (8 month old child)

"The security end of it that's great, but then they get in it and they go, 'Get me out of here!'"

- Another major thing parents do not like about the baby bath ring/seat is that the suction cups on most models do not work very well. Parents report that the suction cups frequently come up from the bottom of the tub and then the ring bounces up toward the head of the child.

"If you don't really get that thing down here and make sure all the cups are sticking even if they're not big -- my children are on the small side but from the beginning very strong and very active -- you could push it over. Even when I thought the suction was as tight as could be, with enough rocking back and forth and leaning toward the faucet and the knob and trying to grab the soap with this hand, I do remember it falling over one time and that's when I decided I would just put it away at that point."

"Suction cups on the bottom only cater to a certain type of tub like a porcelain that's not fiberglass.

"The problem I have with the rings/seats is they give you a sponge that the baby can sit on. If the baby moves at all, the sponge ends up coming up.

Then they are sitting in the tub and with the surface that I have in the fiberglass tub, when you try to hunker it down with the suction cups... it's better in a porcelain tub... The suction cups come loose and it's floating up. ... So you just say forget it and hold onto her."

"If she leans forward, I'm afraid that the suction cups aren't going to hold her there."

- Parents also complain that some models can injure their child because the leg openings aren't wide enough to permit easy use and that some of the edges on the ring are too rough and can scratch the baby.

"I stopped using mine when I couldn't get the legs comfortably through. ... Even if he could sit up well, I didn't mind him in it, I just felt extra safety and he had fun playing... But once I really had to work his legs to get through... Enough of this."

"My son felt it was too confining. He's in high chairs and booster seats, this is just one more thing to confine him in. I was always scraping them or stand them up and set them over, they get there legs down... it had three legs and try to get their legs down in there."

"By the third time I was irritated. When I took her out it scraped the legs and I don't know about any of you but I don't like it when my little girl has scrapes on her. I had one of those mats anyway for when I showered so you don't slip. I just put the plug in and filled the tub up... She more or less just laid on her stomach."

- Parents also complain that it is difficult to thoroughly clean all body parts when the baby is in the ring/seat.

"You can't really clean her when she's in the ring. But I used to when we were in our old home, I had a bath mat, but with this house, you can't... those bath mats don't really stick to that bumpy texture so I use wash cloths, real abrasive."

"She liked it for a while, but it's kind of tough to wash her while she's in there. It's kind of high. [when started using?] When she was about six months. We probably used it for a couple months."

"The awkwardness of not being really able to get around him and really washing or getting him really clean. When they're free they turn over on their stomachs and you can wash their backs and turn them on their backs and get their fronts. But in there you have to lift them up to get underneath them."

- Individual respondents also mention that they were concerned the ring/seat could tip over because their child wants to stand up in it or because the child wants to reach for a toy in the water

"He can crawl out of it... He can slide down through it and reach over around it. And we had one near topple over the top... He reached up like this and reached for a toy... The seat did not move, but the baby slid. He reached so that... he didn't go completely over because I saw what was going on, but he could have, it seems to me. He could have landed on the rim with his waist and it would have been the decision of which was heavier, the top or the bottom. And I think he could have gotten stuck with his legs underneath the seat or his body hanging over the top and his face in the water or some sort of situation."

2.3 Examine Behavior Patterns During Bath Time

This objective was met first by asking respondents how often they have had to turn away from or leave their children in the bath even for just a moment. Then respondents were asked the circumstances under which they have had to leave their children in the bath or to imagine circumstances under which this behavior might occur. Finally, respondents were asked at what age they might leave the child unattended, to specify how long they were away from their child, and if a successful experience leads to future occurrences.

- Some parents admit that there have been occasions where they have either had to turn away from their child in the bath or leave their child in the bath

unattended for a few moments. However, they indicate that these occasions are rare. On some of these occasions, the bath ring/seat was in use.

"She was like 12-13 months and she was just sitting there and I would run and run back. So I have left her."

"I've even come back to find my 11 month old -- and it was again like two steps across the hall and you can hear them and see them, all those good excuses I was using for having left him for a second -- and he was standing up in the tub. ... No seat. I don't use a seat. As I said, I always take the baby right out as soon as I leave the room and never leave him in there, but I realize in retrospect that that's not true. I have left him there."

- In general, parents report that they would never, under any circumstances, leave a young child alone in the bath. Typically, the parents who are so adamant about not leaving a young child alone in the bath personally know someone who has drowned in water or have read or heard a story about accidents that have occurred because of children being left unattended near water.

"You never leave them I don't care what's going on. You take the child out of the tub. Never leave them."

"I know of a family where the mother ran to the phone and came back and the baby was face down. So I have that in my head constantly. ... If the phone rings I grab a towel and take her with me."

"I never do. My brothers' baby drowned so I'm very conscious -- not in a tub."

- Reasons typically given for having turned away or for having left the bathroom during bath time are minor and include going for a towel, diaper, sleepwear, or a portable telephone. Some parents do say they have left to prevent their older children from engaging in high risk behavior (e.g., responding to the door bell without an adult) or to prevent an emergency (e.g., removing something from the stove). It is worth noting, however, that parents seem more likely to leave their children in the bath for minor reasons than for household emergencies.