UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Memorandum

Date: AUG 22 2005

TO : The Commission
Todd A. Stevenson, Secretary

THROUGH: Page Faulk, General Counsel
Patricia Semple, Executive Director

FROM : Jacqueline Elder, Assistant Executive Director for Hazard Identification and Reduction
Elizabeth W. Leland, Economic Analysis, Project Manager, 301-504-7706

SUBJECT : CPSC Staff Response to Follow-up Questions from Commissioner Thomas H. Moore Regarding CP-02-4/HP-02-1: Petition Requesting Ban of All-Terrain Vehicles Sold for Use by Children Under 16 Years Old

Introduction

On May 22, 2005, the U.S. Consumer Product Safety Commission (CPSC) staff briefed the Commission on CP-02-4/HP-02-1: *Petition Requesting Ban of All-Terrain Vehicles Sold for Use by Children Under 16 Years Old.* After the briefing, Commissioner Thomas Moore sent follow-up questions to the staff. The following is the staff response to those questions.

Questions for CPSC Office of Hazard Identification and Reduction

1. Are ATV dealers required to give prospective buyers the reasoning behind the age recommendations, or are buyers told whatever the sales person decides to tell them as to why children under 16 should not ride adult-sized ATVs? What death and injury data, with regard to child riders under the age of 16, are dealers required to provide to prospective buyers of ATVs, if any.

Response:

ATV dealers are not required to give the reasoning behind the age recommendations, although they often do. The major ATV distributors and manufacturers affix warning labels that notify potential purchasers of the risk of injury or death. In addition, those distributors and manufacturers who have entered into the Voluntary Action Plans provide dealers with safety alert bulletins, which include ATV-related injury and death data. Some dealers may then incorporate injury and death data from the bulletins into packaging materials that accompany the ATV.

2. Do we have any idea how insurance companies would respond, with respect to providing coverage for accidents involving children under 16 driving adult-sized ATVs, if there were a federal sales ban in effect?

NOTE: This document has not been reviewed or accepted by the Commission.
Initial ____ **Date** 8/22/05

Response:

The staff does not know how insurance companies would respond to such a ban. The staff intends to investigate insurance issues in connection with the ATV review recently undertaken by the staff.

3. The agency has a long-standing position that no passengers should be carried on ATVs. What do we know about any fundamental design changes that have been made to the ATVs that are being sold as "two-up" models that would ease our concerns on this issue? We have seen many cases of ATVs attempting to go up an incline and flipping over backwards onto a driver or a passenger. It would seem that additional weight on the back of the ATV exacerbates the tendency to flip over backwards on an incline. Is staff planning on looking at these two-up ATVs as part of its voluntary standards work?

Response:

ATVs designed for two tandem riders are longer than single person ATVs. The extended chassis keeps the passenger center of gravity ahead of the rear axle. The increased chassis length of a tandem ATV and its greater weight actually improve stability in terms of pitch (tendency to flip forward or backward) and, to a lesser degree, in terms of roll over. Tilt table tests performed by manufacturers of tandem ATVs indicate that tandem ATVs have superior pitch stability (in a static test) and equal or better lateral stability (in a static test) than single person ATVs.[1]

Since May 2004, CPSC staff has participated in the canvass process for developing ANSI/I2AMA-1-XXXX *Draft American Standard for Four Wheel, Two Person Tandem, All-Terrain Vehicles -- Equipment, Configuration, Performance, Safety Information and Training Requirements*, sponsored by the International 2-Up ATV Manufacturers Association (I2AMA). The I2AMA circulated drafts of a 2Up-ATV standard, and CPSC staff reviewed and commented on the draft proposals. The latest draft incorporated CPSC staff comments regarding retention of lateral stability requirements and was sent for canvass in March 2005. Staff intends to further review issues related to 2-Up ATVs and related safety standards as part of its overall review of possible ATV safety strategies.

Note: there are no questions numbered "4" and "5".

6. Is there a recommended helmet for ATV riders? If so, how much impact force can this helmet withstand? If a 300- or 400- or 800-pound ATV overturned and landed on the head of an appropriately-helmeted rider, how likely is it that the helmet would protect him from serious injury or death?

Response:

CPSC, as well as the ATV Safety Institute, recommends that ATV riders use motorcycle and other motorized sports helmets that are certified by the U.S. Department of Transportation (DOT) and/or The Snell Memorial Foundation (Snell). The "Federal Motor Vehicle Safety Standard 218, Motorcycle Helmets (FMVSS 218)" is commonly known as the DOT standard. The Snell M2005 "Standard for Protective Headgear for Use with Motorcycles and Other Motorized Vehicles" is the most current Snell helmet standard for motorcycles and other motorized sports.

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[1] Telephone conversation between Caroleene Paul, CPSC ES, and Bud Christopherson, Secretary, I2AMA, March 2004.

Both the DOT and Snell standards establish minimum performance requirements that are intended to reduce deaths and injuries resulting from the user's head impacting an object such as a rock, curb, tree, or the ground. Helmets are designed to absorb the energy of an impact which reduces the amount of energy transferred to the brain. Studies[2] have shown that helmets can prevent or reduce the severity of nonfatal head injuries, and this depends largely on the type of head injury that results from different incident scenarios and hazard patterns. The helmet is not designed to withstand a 300, 400, or 800 pound ATV impacting the helmet. In such a scenario, the helmet could be crushed. In addition, the helmet would not prevent massive trauma injuries to the rest of the body. Because of an ATV's heavy weight, it is also likely, when an ATV overturns on a driver, that there will be life-threatening injuries to other organs in the abdominal or thoracic cavities or to the spinal cord; even asphyxiation can sometimes result.

7. Has staff made recommendations to SVIA to address the flaws that staff has noted in the current speed limiting devices on youth model ATVs? If so, what response has staff gotten?
Response:

In March 2002, CPSC staff expressed concerns to the Specialty Vehicle Institute of America (SVIA) regarding discrepancies in certain provisions of ANSI/SVIA-1-2001 *American National Standard for Four Wheel All-Terrain Vehicles -- Equipment, Configuration, and Performance Requirements*. Specifically, staff noted that "a number of companies that sell Y-category (youth) ATVs employ speed limiting devices that do not work. When these devices are set to limit the maximum speed as required, the engine does not produce enough power to move the vehicle." This issue was raised again during a conference call between CPSC staff and SVIA representatives in September 2002. CPSC staff has not received a response from SVIA on the issue.

8. On page 138 of the briefing package, staff states that children in the 9 to 12 year old category "generally do not possess enough skills to successfully balance and steer vehicles moving faster than 10 mph." While the youth models do have a factory set speed limit of 10 mph for the 50 and 70cc models and of 15 mph for the 90cc model, the speed can be adjusted upward to 20 mph for the 50cc model, to 26 mph for the 70cc model and to 30 mph for the 90cc model (on one youth ATV where this information was given on their web site). I assume this is true for the other youth models. These speeds would appear to be excessive for children's abilities. If youth-sized ATVs were built in sizes that actually accommodated the weight and size of children in the 13 to 15 year old range, having the ability to set a speed of more than 10 mph for the 90cc models might make sense. What is staff's position on the upward speed adjustments which are available on current youth model ATVs?
Response:

The ANSI/SVIA voluntary standard for ATVs requires that Y-6 ATVs (intended for ages 6 through 11) have devices that are capable of limiting the speed to no more than 10 miles per hour (mph) and that require the use of tools for any adjustment up to a maximum unrestricted speed of 15 mph. Y-12 ATVs (intended for ages 12 and up) have similar requirements to limit speed to at least 15 mph and allow adjustment upwards to a maximum unrestricted speed of 30 mph.

[2] See, for example, the references listed at the end of this document.

Although the CPSC staff's age guidelines[3] state that vehicles for children ages 9 through 11 generally should be limited to 10 mph, the 10 to 15 mph range allows for increasing the speed as the child develops coordination and skills. CPSC staff worked closely with the ANSI committee to develop the speed limits in the standard. CPSC staff feels that these speed limits, if properly implemented mechanically and controlled by the parents, allow children to develop skills over time while being restricted to the maximum speed that youth are capable of handling. Older, experienced teens (under 16) may be able to handle speeds higher than 10 to 15 mph, but should remain limited to 30 mph.

9. Why is there resistance by manufacturers to putting the same warning and labeling requirements that are in the Action Plans, into the voluntary standard?

Response:

In a letter dated May 26, 1999, the SVIA Advisory Panel, which collectively represents the "ATV Companies",[4] responded to a request from CPSC staff to include the warning and labeling requirements from the Action Plans into the voluntary standard. The Advisory Panel stated that "[P]roduct innovations, changes in accident trends, or other events may require modifications to current labeling, warning, and training practices, whether on the part of an individual company or the industry generally. Each ATV company must retain the ability to respond to new conditions efficiently and effectively."

It should be noted that Commissioner Nord has met recently with most of the ATV companies who have Action Plans with CPSC. During those meetings, the companies have indicated interest in revising the voluntary standard to include provisions from the Action Plans, such as those for warning and labeling. A review of the voluntary standard by ANSI and SVIA is due to begin in 2006.

10. The 12 to 15 year old driver age group experienced a large increase in injuries between 1997 and 2001, yet did not experience much increase in exposure by either exposure measure. What do we think is going on here: A more blasé approach to putting these children on adult-sized ATVs, for instance?

Response:

Between 1997 and 2001, there was a large increase in the estimated number of injuries associated with 12 to 15 year-old drivers. The increase in injuries exceeded the increase in two corresponding exposure measures for these drivers: the number of drivers and the number of driving hours. A slightly lower percentage of these drivers used youth ATVs, i.e., ATVs with engine sizes less than or equal to 90cc, in 2001 versus 1997. This may account for some of the increase in the risk for these drivers. However, it is likely that other factors, in addition to engine size, play a role. Based on available data, staff has not determined what these factors are, but they may include aspects of rider experience, behavior, and usage. Risk among drivers 16 years and older also increased between the two years.

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[3] J.A. Therrell, P.S. Brown, J.A. Sutterby, and C.D. Thornton, *Age determination guidelines; Relating children's ages to toy characteristics and play behavior* (T. P. Smith, editor), U.S. Consumer Product Safety Commission, Washington, D.C., 2002.

[4] The "ATV Companies" mentioned here include those companies which have agreed to abide by the Voluntary Action Plans. They represent about 90 percent of the domestic ATV market. In general, the term "ATV Companies" does not include foreign entrants into the market during the past few years.

11. On page 160 of the briefing package, there is a comparison of the fatality and injury rates on ATVs, motorcycles, passenger cars and light trucks per 100,000 vehicles. Do these comparisons take into account the number of hours each type of vehicle is likely to be ridden in a year? If this were factored in, how would it likely affect the ATV fatality and injury rates?

Response:

The comparisons on page 160 of the briefing package do not take into account the number of hours each vehicle is ridden or driven per year. We are not aware of any published rates of injury or death on motorcycles, passenger cars or light trucks per usage hour. The statistics for these vehicles presented in the briefing package are from *Traffic Safety Facts 2002*, published by the National Highway Traffic Safety Administration (NHTSA). NHTSA collects its data from police reports of traffic accidents that do not contain information, for example, on the number of hours a car has been driven. In fact, we are not aware of any data source for statistics on usage hours for these vehicles.

Question for CPSC Office of Compliance

1. If we were to put a sales ban in place and we found a dealer in violation of the ban, how would we proceed and what would our options be with regard to sanctions? Besides sending a letter to the manufacturers, what do we do now? Do the manufacturers report back to us as to what actions they have taken against the dealers we have reported?

Response:

If a sales ban were put in place, we would probably approach violations much as we do violations of other mandatory standards. Both civil and criminal penalties would potentially be available. In either case, we would have to prove that the violation was "knowing." This could be particularly difficult in the case of a partial sales ban.

Currently, when Compliance finds a dealer in violation of the age guidelines, Compliance sends a letter to the distributor with the dealer's name, salesperson's name, date of visit, and information about the ATV that was recommended by the salesperson. The distributors then report back to Compliance regarding the actions they have undertaken in response. These actions include training, a letter to the dealership, and follow-up undercover inspection. CPSC staff rarely encounters repeat violators after the distributor has taken such an action. In such cases, dealership terminations may be undertaken to the extent authorized by state laws.

Note: Restricted memoranda containing the staff response to Question 2 for the Office of Compliance and to all of the questions for the Office of the General Counsel will be sent to the Commission under separate cover.

Helmet Study References (Question 6, above):

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Sauter C, S Zhu, Allen S, Hargarten S. Layde PM. Increased risk of death or disability in unhelmeted Wisconsin motorcyclists. Wisconsin Medical Journal. 2005 Feb; 104(2):39-44.

Thompson RS, Rivara FP, Thompson DC. A case control study of the effectiveness of bicycle safety helmets. 1989; NEJM 320:1361-1367.

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Ytterstad, B. The Harstad injury prevention study: the epidemiology of sports injuries. An 8 year study. Br J Sports Med, 1996, 30:64-68.