

Exhibit Number: 3

The following exhibit is several assorted documents that exceeds the 10-page limit therefore it cannot be scanned. A small portion has been scanned to aid in your research for information. The exhibit is on file at the Montana Historical Society and can be viewed there.

I am delighted to have the opportunity to talk with you. My name is George Manning, I'm a Mechanical Engineer by training, and I spent the last 26 years involved with Louisville Slugger. Louisville has been making wood bats for over 120 years and has been involved in making aluminum bats for over 25 years. Hopefully, it is obvious to you that the good of the game is important to our success. If it is perceived to be an unsafe game, that is not good for anyone involved with it. Certainly, I am sure all of you are deeply interested, or you wouldn't be studying the present state of the game.

My desire today is to give you some information that I believe is relevant to you. First, I will give you an overview, but I also will provide you backup information that you can review at your leisure in support of my viewpoints.

1. The NCAA, the National Federation of High Schools, and the United States Consumer Product Safety Commission have all reviewed the safety of the game played with aluminum bats. Their conclusion is that there are inherent risks associated with participation in any sport, but there is no data that clearly shows the risks have increased over the last 20 years with aluminum bats. Baseball remains one of the safest intercollegiate sports.
2. Little League and other amateur youth baseball associations report that injury rates have decreased over the last many years. This has been reflected in insurance rate decreases for their participants.
3. In the last 5 years, both the NCAA and NFHS, in order to better balance the offense and defense of baseball, have passed performance limits on baseball bats. In this test, the aluminum bats that meet the BESR limits cannot out hit in exhibit speed the top performing wood bats. Press releases from both the NCAA and NFHS state they are very happy with the state of their game and feel there is no increase in risk to participants.
4. Originally, the independent tester for the NCAA and NFHS reported that he felt there was a "loophole" in the testing and some bats that met the BESR test would perform differently in the field. However, Dr. Johnson, a college physicist and a member of NCAA's Baseball Research Panel studied the situation and concluded that the difference in the test and on the field would be very small. This is because both the "effective" mass of the bat and the swing speed of the bat are both important in the ball exit speed resulting from impact. He wrote a paper on this and convinced the independent tester, Dr. Sherwood, that he was wrong in his concern.
5. A field study was done by Dr. Crisco and Dr. Greenwald of Brown University comparing performance of wood and aluminum bats in high school, college and pro players' hands. The result was before the BESR test came into existence, but it showed that aluminum bats with the -3 ounce limit only hit a couple of mile per hour higher than wood bats.
6. Researchers have studied reactions for response times of players. Nearly all have concluded that there is much variation from time to time with the same player and great

differences from player to player. They've also concluded that a difference of a few mile per hour in exit velocity is not significant in whether a player can avoid being struck or not.

7. Study done by a major league trainer of incidents of pitchers being struck by a batted ball in major leagues where wood bats are used exclusively show a higher frequency of pitchers being struck than occur in Division 1 college baseball.
8. Aluminum bats have the weight distributed differently than do solid wood bats. For the smaller stature player, this is an important attribute because he can control the bat better and potentially get it around somewhat quicker. It can mean the difference of the player enjoying the game and continuing to participate or giving up the game and going elsewhere.
9. Massachusetts High School Athletic Association banned aluminum bats in tournament play a few years back. After study by competent researchers and medical groups, this decision was revoked and players now have the right to use bats of any material.

Thanks again for the opportunity to meet with you and present this information. If there is need for further clarification of any points, I can be reached by email at george.manning@slugger.com.



U.S. CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Tel: 301-504-0800 ext 1239
Fax: 301-504-0127
Email: cpsc-cs@cpsc.gov

Todd Stevenson
Secretary
Office of the Secretary
Consumer Product Safety Commission

April 5, 2002

J.W. MacKay, Jr.
Route 9, Box 185, Highway 49
Mt. Pleasant, Texas 75455

Dear Mr. MacKay:

The Commission has considered your petition, CP 00-1, requesting that the Commission issue a rule requiring that all non-wood baseball bats perform like wood bats. The Commission considered the information that you provided, comments on the petition by interested persons, and a package of written materials prepared by the staff. Based on its review of these materials, and for the reasons discussed below, the Commission voted to deny the petition.

As you know, the Commission's regulations specify that any person may file a petition requesting that the Commission initiate a proceeding to issue a regulation under any of the statutes administered by the Commission. 16 C.F.R. § 1051.2(a). These regulations also set out factors for the Commission to consider in determining whether to grant or deny a petition. Three of the factors are applicable here: (1) whether the product presents an unreasonable risk of injury; (2) whether a rule is reasonably necessary to eliminate the risk of injury; and (3) whether failure to initiate rulemaking would unreasonably expose the petitioner or other consumers to the risk of injury alleged by the petition. 16 C.F.R. § 1051.9(a). Based on consideration of these factors, the Commission voted to deny the petition.

For the Commission to issue a safety standard under the Consumer Product Safety Act, the Commission must find that the rule is "reasonably necessary to eliminate or reduce an unreasonable risk of injury" associated with the product at issue. 15 U.S.C. § 2058(f)(3)(A). Thus, the principal finding that the Commission would have to make before issuing a final rule mandating a safety standard for non-wood bats is that non-wood bats pose an unreasonable risk of injury and that a mandatory standard is necessary to address that risk. A determination of unreasonable risk involves balancing the likelihood and severity of injury with any harm that a regulation could impose on manufacturers and consumers. See Southland Mower v. Consumer 619 F. 2d 499 (D.C. Cir. 1980).

Whether the product presents an unreasonable risk of injury. In considering whether a product presents an unreasonable risk of injury, the Commission looks at the likelihood and severity of injury. Your petition claims that in the 1990's manufacturers created non-wood bats with greatly increased performance and that this increased performance poses an unreasonable risk of injury to pitchers. However, available incident data are not adequate to show increasing injuries to pitchers over the period of time that bat performance increased. Much of the data is not detailed enough to determine injuries to pitchers from batted balls. Overall, data reported through the National Injury Surveillance System ("NEISS") showed a significant decrease in injuries associated with baseball and softball during the 1990's. Data concerning deaths indicate that non-wood bats have been involved in deaths. Of 51 deaths due to ball impact from January 1991 to January 2001, 17 were identified as being due to impact with a batted ball. Of those 17, 8 were reported to have involved non-wood bats. But, deaths also occurred involving wood bats (2) and thrown balls (18 deaths). In many of the deaths the circumstances are not clear (in 16 cases it is not known whether the ball was thrown or batted, and in 7 of the cases involving batted-ball impact the type of bat is not known).

Data from other sources are also not clear or detailed enough to determine that an increase in injuries has occurred with an increase in bat performance. Injury reports from the National Collegiate Athletic Association ("NCAA") are not complete, but the data that do exist do not show a significant increase in injuries to pitchers during the 1990's. The Little League does not keep track of injuries as such, but rather of secondary medical insurance claims. This information may or may not reflect actual injuries. But, Little League reports those claims have actually decreased 76% from 1992 to 2000. Information included with the petition indicates that injuries can occur with balls batted from non-wood bats. But, this information is not a statistical sample, so one cannot draw conclusions about any trends in injuries during the years when bat performance apparently was increasing.

Thus, available incident data are not sufficient to indicate that non-wood bats may pose an unreasonable risk of injury.

In addition to incident data, the Commission also considered the question of a pitcher's reaction time being too short to avoid injury from a ball batted with a non-wood bat. The Commission considered studies by Dr. Richard Brandt and JJ Crisco. These studies indicate that some non-wood bats in some test conditions may produce speeds near a pitcher's limit to react. However, this does not translate directly to information on frequency and severity of injury with non-wood bats. The fact that, in theory, a ball batted off a non-wood bat may come at a speed near a pitcher's reaction time does not necessarily mean a pitcher will sustain injury. Factors other than reaction time may also determine whether a pitcher is injured.

As for severity of injury, being struck by any batted ball can produce serious injury. You have provided no information, nor is the Commission aware of any, indicating that injuries produced by balls batted with non-wood bats are more severe than those involving wood bats.

Whether a rule is reasonably necessary to address an unreasonable risk of injury. A key aspect be able to address

Mr. J.W. MacKay

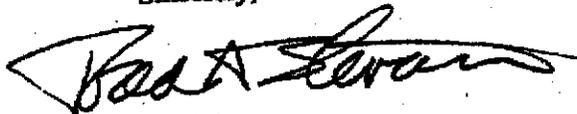
Page 3

the risk at issue. Developing requirements for non-wood bats would be a complex matter. Essentially, the Commission would need to determine what is an unsafe level of play and what performance requirements for bats are necessary to bring them to a safe level. Current data and information are not sufficient for this task. Any bat, wood or non-wood can produce injuries or death. The Commission cannot simply decree that non-wood bats must perform like wood bats. It cannot presume that wood bats are safe and non-wood bats are unsafe. Rather, it would have to show that performance requirements are necessary to change bat performance from some unreasonable level to an acceptable level. The Commission does not have information to determine where that line should be drawn.

Whether failure to issue a rule would unreasonably expose petitioners and others to unreasonable risk. As discussed above, indicate that non-wood bats pose an unreasonable risk of injury. Clearly, bats can pose some risk of injury. However, it appears that the NCAA, ASTM, the Amateur Softball Association and the National Federation of State High School Associations are actively involved in evaluating the performance of non-wood bats and their possible impact on safety. The Commission cannot say at this time that their efforts are insufficient. The Commission is asking the staff to continue monitoring bat performance and bat-related incidents and the measures taken by these organizations to address the safety of non-wood bats.

Conclusion. Based on its review of all the available information, the Commission concluded that a mandatory standard is not reasonably necessary to address an unreasonable risk of injury posed by non-wood bats. Thank you for bringing this safety issue to the Commission's attention. The staff will be monitoring bat-related incidents and the actions of the organizations mentioned above.

Sincerely,



Todd Stevenson
Secretary



UNITED STATES
 CONSUMER PRODUCT SAFETY COMMISSION
 WASHINGTON, DC 20207

Memorandum

Date: DEC 28 2001

TO : The Commission
 Todd A. Stevenson, Secretary

THROUGH: Alan Shakin, Acting General Counsel *AS for AES*
 Thomas W. Murr, Jr., Acting Executive Director *Thomas W. Murr, Jr.*

FROM : Jacqueline Elder, Acting Assistant Executive Director
 Office of Hazard Identification and Reduction
 Erlinda M. Edwards, Project Manager, Directorate for Engineering Sciences *JME*

SUBJECT : Petition CP 00-1, Non-Wood Baseball Bats

I INTRODUCTION

On April 20, 2000, a submission from Mr. J. W. Mackay, Jr. of Mount Pleasant, Texas was docketed under the Consumer Product Safety Act as Petition CP 00-1. The petitioner requests that the U.S. Consumer Product Safety Commission (CPSC) issue a rule to require that all non-wood bats perform like wood bats because he believes that non-wood bats substantially increase a player's risk of being struck by a batted ball. The petitioner submitted numerous exhibits, including newspaper clippings, correspondence, copies of emails, videotapes, and information on injuries and deaths. Tab A contains the petition and a list of exhibits. The exhibits are available from CPSC's Office of the Secretary.

The petitioner essentially argues that the level of risk with wood bats is acceptable, but the level of risk with non-wood bats is unreasonable. He makes two sub-arguments: (1) the performance of non-wood bats has been increasing and they therefore pose an unreasonable risk of injury to pitchers; and (2) high performance non-wood bats allow the ball to come off the bat at such a speed that the pitcher does not have sufficient time to react and the bats therefore pose an unreasonable risk. The staff reviewed available data and information to determine the degree to which it supports the petitioner's arguments.

II THE PRODUCT AND PLAYERS (Economic Analysis, Tab B)

Non-wood bats, which are constructed of aluminum and other metal alloys, were introduced in the late 1960s as a substitute for wooden bats. Non-wood bats were considered a cost-saving alternative to wood bats due to their greater durability. According to bat

NOTE: This document has not been reviewed for acceptance by the Commission. CPSC Hotline: 1-800-638-CPSC(2772) CPSC's Web Site: <http://www.cpsc.gov>
 Initial *TE* Date *12/28/01*

CPSA 6 (b)(1) Cleared *[Signature]*
 12/28/01
 No Miss/Pick/Ubrs or
 Products Identified
 [Signature]

manufacturers, non-wood bats are now purchased primarily because of enhanced batter performance; they enable players to hit balls faster, farther, and into play more often than wood bats.

In 1972, the organizations that govern high school and college athletics allowed the use of non-wood bats for the first time. In that year, non-wood bats represented 10 percent or less of bat sales. In 1999, non-wood bats represented 90 percent of bat sales. Annual sales of non-wood bats are now estimated at 4 million. If it is assumed that a bat's useful life is two to three years, there are 8-12 million non-wood bats in use in any given season.

Non-wood bats are somewhat more expensive than wooden bats. The average purchase price of wood bats is about \$20 each, compared to about \$38 each for non-wood bats. However, certain types of non-wood bats can cost many times that of wood bats. Industry sources reported that because of the inherent durability of non-wood bats, they are not as likely as wood bats to be replaced due to catastrophic failure. However, manufacturers have reported that such non-wood bats are often replaced after a year's service by major college programs.

According to the *Sports Participation Survey* sponsored by the Sporting Goods Manufacturers Association (SGMA), the industry trade group, an estimated 19 million people played baseball in some form in 1998, with about 5 million people playing baseball in organized form. While players range in age from 4 to over 70, Little League Baseball, Inc. reports that 98 percent of players are under the age of 18.

III. INCIDENT DATA (Hazard Analysis, Tab C)

The staff reviewed available data on deaths and injuries associated with batted baseballs. This data came from several sources, including CPSC files, information and published reports from the National Collegiate Athletic Association (NCAA), information from Little League Baseball, Inc., and information submitted by the petitioner and commenters.

The CPSC staff is aware of 51 deaths due to ball impact from January 1991 to January 2001. These include all types of circumstances, not just organized baseball or softball activity such as games or practices. Of these 51 deaths, 17 were identified as being due to batted-ball impact, 18 deaths were related to thrown-ball impact, and in the remaining 16 cases it is unknown whether the ball was thrown or batted. Of the 17 batted-ball impact deaths, 8 were reported to have involved non-wood bats, 2 involved wood bats, and in 7 cases the type of bat was unknown.

The petitioner states that in the 1990s, manufacturers designed non-wood bats with greatly increased performance, particularly when they used new alloys in 1995 and 1999 (page 55 of petition). Available data are inadequate to determine whether any corresponding change in injuries to pitchers has occurred. Overall, the number of emergency room-treated injuries reported through the National Electronic Injury Surveillance System (NEISS) in association with baseball and softball during the nine-year period 1991-1999 showed a significant decrease. The participant-based rate of injuries also decreased significantly during this time period, as did head

injury rates. There was no significant trend in the percentage of injuries that were treated and released from the emergency rooms for all injuries or for injuries to the head region. The NEISS data do not provide information about player position or sufficient information to be able to determine how many injuries may have involved a batted ball.

Reports from the NCAA Injury Surveillance System (ISS) state that between 1992 and 1998, the percentage of injuries due to the pitcher being impacted with a batted ball ranged between 2 and 4 percent of all NCAA baseball injuries. However, these reports are not complete. They apparently report only game-related injuries to pitchers from batted balls, do not include practice-related injuries, and provide no detail about these injuries. In 1998, 1999 and 2000, the NCAA conducted a survey of pitchers hit by batted balls in Division I member schools. This survey attempted to determine the number of times a pitcher was hit by a batted ball, regardless of whether the incident caused an injury as defined in the ISS. Results from this survey indicated that 13 percent of NCAA Division I schools (36/273) showed no significant increase in injuries to pitchers between 1998 and 1999. (Summaries of the data from 2000 were not included.) However, this sample was not chosen in a manner that allows conclusions to be drawn about the remaining 87 percent of NCAA Division I schools.

Little League Baseball, Inc. issued a statement that "there has been a 76 percent decrease in reported injuries to pitchers as a result of batted balls over the eight-season period beginning in 1992." The Little League data are actually based on secondary medical insurance claims rather than an independent record of injuries. Thus, it is difficult to draw firm conclusions about Little League injuries because the decrease in claims might be due to other factors such as a change in the number of players whose primary medical insurance covered the entire cost of the injury, for example. Without further information, it is impossible to determine what the cause of the decrease is. However, there is no indication that Little League injuries have increased over the period of time that the petitioner asserts non-wood bat performance has markedly increased. Little League has stated that it has had no deaths of a pitcher struck by a ball batted by a non-wood bat, but three pitchers have been fatally injured when wood bats were used (1/8/99 letter from Little League to H&B in comments).

Data provided by the petitioner support the assertion that injuries and deaths have occurred due to pitchers being hit by balls batted with high performance non-wood bats. However, these data do not constitute a statistical sample or a complete count of all such injuries and, therefore, cannot be used to determine whether any trends exist in the number or severity of these injuries. In addition, the petitioner's recounting of injuries does not provide a basis for comparing non-wood to wood bat-related injuries.

Based on currently available data, CPSC staff cannot determine whether injuries to pitchers are increasing as bat performance characteristics change. Available information indicates that overall, the numbers of injuries are declining and that the overall rate of injury is steady or declining. The data are not sufficiently detailed or complete to definitively determine whether pitchers may be experiencing more injuries or more severe injuries from balls batted with non-wood bats.

IV. PHYSIOLOGY (Health Sciences Analysis, Tab D)

Batted balls have the potential to produce a variety of injuries from bruises, abrasions, and lacerations, to more serious injuries, such as cardiac injury, head and neck injury, ocular and other facial trauma, and fractures.

A CPSC staff report (Kyle, 1996) found that catastrophic injuries in baseball and softball occur most often when a player is struck in the chest or head. Ball impact with the chest is the most frequent cause of baseball-related fatalities in players under age 15. Young persons may be more susceptible to fatal chest trauma than adults since a young person's breastbone, which is close to the heart, is not fully matured and hardened. Impacts to the skull have the potential to cause concussion, skull fractures (which can result in penetrating damage to the brain), and intracranial hemorrhaging. Even with prompt medical attention, intracranial hemorrhaging has the potential to cause permanent brain injury, coma, or death.

Small increases in the velocity with which a ball is hit will have dramatic effects on the kinetic energy of the ball, since kinetic energy is proportional to the square of the velocity. Given the demonstrated dependency of injury severity on the kinetic energy of the object that impacts with a subject, under similar conditions (i.e., if the type and trajectory of the ball, and body part impacted are held constant), it can generally be assumed that as the kinetic energy of the ball increases, so would the severity of injuries resulting from impact with the ball.

Batted balls have the capability to produce a variety of injuries, the most severe of which may lead to death. If the properties of a non-wood bat enable the user to hit a pitched ball more consistently than is possible with a wood bat, the likelihood of someone being hit by the batted ball would be expected to increase. If the ball is also hit with greater velocity using a non-wood bat, its increased kinetic energy would be expected to produce more severe injuries. However, the relative frequencies, types, and severities of injuries associated with players being struck by wood vs. non-wood batted balls cannot be assessed from the CPSC injury databases, nor was this information provided by the petitioner.

V. COLLEGE PITCHER RESPONSE TIMES (Human Factors Analysis, Tab E)

In the game of baseball, the pitcher's distance to the batter is shorter than for any other infielder, giving the pitcher the least amount of time in which to respond to a batted ball. The staff reviewed scientific literature on human response times to estimate the time a pitcher requires to avoid being struck by a batted baseball that is on a collision course with him. The focus of the human factors analysis was on men's college baseball players, who are generally more capable than less skilled players of generating high batted-ball speeds, and thus shorter flight times to which a pitcher must respond.

Of the available literature, the most pertinent study is one conducted by Dr. Richard Brandt, a professor of physics at New York University. In this study of men's college baseball players, baseballs were randomly shot at subjects who attempted to deflect the ball with their gloves before being struck by it. All balls with flight times greater than 0.368 seconds were