

CPS 6 (b)(1) Cleared
ASTA

LOG OF MEETING
DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: Meeting with 3M on Retroreflective Materials for
Bicycle Helmets

DATE OF MEETING: February 22, 1995

PLACE: CPSC Headquarters
Bethesda, MD

LOG ENTRY SOURCE: Scott Heh, ESME, *SH*

DATE OF ENTRY: March 14, 1995

COMMISSION ATTENDEES: Scott Heh-ESME, Celestine Trainor-EPHF,
Deborah Tinsworth-EPHA, Harleigh Ewell-GCRA, Mark Kumagai-ESME,
Suad Nakamura-HS, George Sushinsky-LSEL, Greg Rodgers-EC

NON-COMMISSION ATTENDEES: Larry Buckley-3M, David Engler-3M,
Randy Swart-Bicycle Helmet Safety
Institute

SUMMARY OF MEETING

Mr. Buckley and Mr. Engler of 3M promoted the idea of adding a provision to the CPSC bike helmet standard that requires retroreflective material on the outer shell of bike helmets. They recommended that bike helmets conform to ASTM standard E1501-Nighttime Photometric Performance of Retroreflective Pedestrian Marking for Visibility Enhancement. 3M's position is that any measure that adds to a bicyclist's conspicuity will provide increased safety. While it is not practically feasible to mandate retroreflective clothing for bicyclists, 3M feels that a requirement for helmets may be reasonable.

The ASTM E1501 standard requires minimum retroreflective performance at 15 degree increments all around the helmet. Mr. Engler discussed the European standard for retroreflective performance requirements for occupational wearing apparel (EN-471). This standard uses an approach that differs somewhat from the ASTM E1501 standard. EN-471 specifies a certain grade of retroreflective material and a location and minimum surface area on the piece of apparel that must be covered by retroreflective material.

Randy Swart said that some bike helmets currently on the market have a small amount of retroreflective tape. This is often a retroreflective logo decal or a thin strip of tape that covers the shell/liner joint. These helmets would almost certainly not conform to the ASTM standard. Mr. Swart said that he feels there is a problem with some helmets that have retroreflective "looking" tape that is not retroreflective. This is misleading to consumers.

The question of how much cost would be added to a helmet if it was required to meet ASTM E1501 was discussed. Mr. Buckley said that they currently do not have a good estimation on the amount or type of reflective material that would be required to meet the standard. Bike helmet retroreflective material would have to exhibit good angularity characteristics since a rider's head may be in a wide range of positions while bicycling. Issues related to helmet styling and design were also briefly discussed. Mr. Buckley and Mr. Engler said they plan to "mock up" a couple of helmets with retroreflective material to meet ASTM E1501. They will then be able to make an estimate of the costs involved and will also be able to evaluate if there are any major restrictions to current helmet design and/or styling.

cc:

Celestine Trainor-EPHF, Deborah Tinsworth-EPHA, Harleigh Ewell-GCRA, Mark Kumagai-ESME, Suad Nakamura-HS, George Sushinsky-LSEL, Greg Rodgers-EC, Terry Karels-EC

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