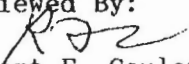
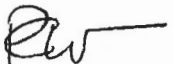


MATERIALS & RESEARCH DIVISION

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RESEARCH UPDATE

Number U91-17

RECYCLED TRAFFIC CONES

HISTORY: Traffic cones made by Utility Plastic Corp. of Brooklyn, NY, of 100% recycled plastic, were presented to the Materials and Research Division for testing by the Purchasing Division of the Vermont Department of General Services.

TESTING: On October 23, 1991 preliminary testing was performed. One 28" tall recycled cone and one standard cone from stock were subjected to impact testing with a pickup truck. Eight impacts were made at speeds ranging from 15 MPH to 45 MPH. At 15 MPH both cones were caught beneath the truck and dragged 75 feet. Damage was limited to abrasion from the pavement surface.

On the second impact at 30 MPH both cones were caught and dragged 100 feet. A 1/4" puncture was made in the recycled cone but no material was lost.

On the third impact, at 40 MPH, the standard cone was caught and dragged 200' while the recycled cone was propelled away about 3 feet.

On the fourth impact at 45 MPH the standard cone was dragged again while the recycled cone was thrust to the side.

On the fifth and sixth impacts at 45 MPH, the standard cone was knocked 50' and 100' away, while the softer recycled cone bounced only 10' each time.

On the eighth impact, which was a repeat at 30 MPH, the standard cone flew 60' while the recycled cone was knocked over but stayed essentially in place.

On the ninth test no impact was made but the truck was driven within inches of both cones. Neither was disturbed by the wind of motion.

The weights of two standard cones were 9.5 lbs and 9.4 lbs while the two recycled cones weighed 7.3 lbs apiece. The recycled cones are softer and can be collapsed with hand pressure while the stiffer standard cones cannot. Both cones were dirtied by the scuffing and tire marks. The recycled cones are a lighter but brighter orange.

The standard cones displayed a marked tendency to fly away from the vehicle which could be a danger to workmen. The softer recycled cones tend to absorb some of the impact energy, bouncing shorter distances.

FOLLOW UP: Further testing in cold weather is planned for later this year. Cost information will be included at that time.

PRELIMINARY CONCLUSION: Based on the limited testing conducted nothing has been found which would prevent the use of the recycled cones. It should be noted that as they arrived with no reflective bands, they would be suitable only for daytime use under the requirements of the MUTCD.

DIST A,B,C,D,E,F