

# TEXAS TECH UNIVERSITY

Wind Engineering Research Center

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March 8, 2007

Mr. Jim Cravens  
Granger Plastics  
1600 M.A.D.E. Industrial Dr.  
Middletown, OH 45044

Re: Shelter Door Assembly Testing

Dear Mr. Cravens:

On March 8, 2007, tests were conducted on your company's 1/8" aluminum door assembly for below ground storm shelters. FEMA 320 guidelines require the below ground shelter doors inclined less than 30 degrees from the horizontal resist a 15-lb. 2x4 missile propelled at 67 mph. The missile speed correlates to the missile being dropped by a 250 mph ground wind speed tornado.

Congratulations on your shelter door assembly passing the FEMA 320 tests. The Wind Engineering Research Center at Texas Tech University applauds your company's efforts in providing a safe product for the consumer.

Sincerely,



Larry J. Tanner, P.E.  
Research Associate