



U.S. Department
of Transportation

**Federal Highway
Administration**

400 Seventh St., SW.
Washington, D.C. 20590

JUL 18 1990

Refer to: HSA-CC64A

Mr. Albert Unrath, Sr.
Albert W. Unrath, Inc.
P. O. Box 63 1
Colmar, PA 18915-1272

Dear Mr. Unrath:

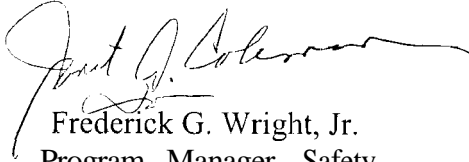
In your July 11 letter, you requested that the Federal Highway Administration (FHWA) modify its March 30, 2000 acceptance (acceptance letter CC-64) of your U-MAD 100K Truck Mounted Attenuator (TMA) by removing the restriction that the support vehicle used should be "...no heavier than the 8613-kg truck used for the test." You believe that this condition of acceptance is limiting sales of your TMA due to legal concerns in several State transportation agencies.

Members of my staff review formal requests for hardware acceptance by comparing the test results with the acceptance criteria contained in the National Cooperative Research Program (NCHRP) Report 350. In some cases, subjective decisions can be made, but generally the analysis is quite straightforward. Regarding the weight of the support vehicle used in a TMA test, Report 350 states in section 2.4.1.3 that "the truck or supporting vehicle to which an attenuator or crash cushion is attached should be representative of the type and mass (including typical cargo) of the vehicle commonly used in service. If different types and masses of vehicles are used, consideration should be given to conducting the recommended test series...using a vehicle at both the lower and upper extremes in terms of mass. In the absence of a common support vehicle, it is recommended that TMA tests be conducted with a support vehicle having a test inertial mass of 9000 kg (with a plus/minus tolerance of) 450 kg." The reasoning behind this condition is obvious; too light a support vehicle (such as a pickup truck) would endanger the driver of the support vehicle and result in unacceptable intrusion into the work area. The use of a significantly heavier support vehicle would limit roll-ahead and would be likely to result in unacceptable ridedown accelerations for occupants of the impacting vehicle.

In re-reading my original U-MAD 100K TMA acceptance letter, I can agree that the specific wording used appears absolute and could be considered unnecessarily restrictive. In subsequent TMA acceptance letters, I have used, and will continue to use in future letters, the terms "similar in weight" and not "significantly lighter or heavier" to define the weight of support vehicles acceptable for use in service as compared to the vehicles used in the crash testing. **Although not explicitly stated in earlier letters, this restriction on the support vehicle weight applies equally to all TMAs that have been accepted for use on the National Highway System.** It was not my intent to limit the support vehicle weight to the nearest kilogram, but to provide general guidance from which State transportation agencies can set their own limits.

I hope that this letter will alleviate your concerns and serve to level the playing field once again.
Thank you for bringing this issue to my attention.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Fred G. Wright, Jr.", with a long, sweeping horizontal flourish extending to the right.

Frederick G. Wright, Jr.
Program Manager, Safety