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**National  
Technical  
Systems, Inc.**

DOT/RSPA/OHMS  
EXEMPTIONS & APPROVALS

National Ordnance, Munitions, and  
Environmental Test Center  
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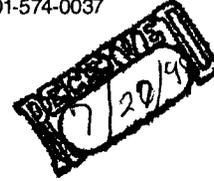
July 13, 1995

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SF:95-064

Department of Transportation  
Approvals Branch, DHM-32  
400 Seventh Street, SW  
Washington, D.C. 20590

177751  
RSPA-1995-126TB-1



Attention: Bill Gramer

Subject: VIBRATION TESTING OF INTERMEDIATE BULK CONTAINERS

Reference: SA-9407003 (+BQ)

Dear Bill:

National Technical Systems (NTS) recently conducted Performance-Oriented Testing of an Intermediate Bulk Container (IBC). This was the first IBC testing NTS has performed.

The IBC NTS tested was a large steel vessel used to transport vanadium pentoxide, Class 6.1, UN2862, a Packing Group II poison.

49 CFR, §178.819, Vibration Test, requires that the IBC, when vibrated, be free to move vertically, bounce and rotate. NTS takes exception to this requirement. The IBC recently tested had a maximum permissible gross shipping weight of 6,000 pounds. This IBC is 48 inches in diameter and is 85 inches in height. As you can see in the enclosed photograph, this IBC dwarfs NTS' bounce machine. During the one hour duration vibration test, I had to repeatedly stop the test and reposition the IBC to prevent it damaging the bounce machine. This type of IBC can only be shipped on an open trailer and must be chained in position to prevent it falling off the trailer. It is not conceivable that this type of container would or could be shipped without restraint.

NTS suggests that §178.819 be modified to permit restraining IBCs that would only be shipped while restrained.

If you have any questions regarding this matter, please contact the undersigned.

Sincerely,

NATIONAL TECHNICAL SYSTEMS  
Camden Division

Stephen E. Farrar  
manager, Ordnance Programs,  
Environmental, Health & Safety

Enclosures

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