U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

1200 New Jersey Ave, SE
Washington, D.C. 20590

OCT 13 2010

Mr. George Marshall
American Nuclear Portable Gauge Association
15105 Bitterroot Way
Rockville, MD 20853

Ref. No. 10-0121

Dear Mr. Marshall:

This responds to your May 28, 2010 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to Class 7 (radioactive) material packages. Specifically, you ask if a lock is a sufficient feature on a Type A packaging to satisfy the requirement to seal a Type A packaging in accordance with § 173.412.

The answer is yes. Section 173.412(a) requires the outside of a Type A packaging to incorporate a feature, such as a seal, that is not readily breakable; and while intact, is evidence that the package has not been opened. A similar requirement exists in the International Atomic Energy Agency (IAEA) Safety Standards, *Regulations for the Safe Transport of Radioactive Material* (TS-R-1; *see* Paragraph 635). IAEA Safety Standards, *Advisory Material for the Safe Transport of Radioactive Material* (TS-G-1.1), a companion guide for TS-R-1, states:

"There are many methods of sealing but the following are typical of those used on packages for radioactive material: ... padlocks may be used on timber boxes and also for lead/steel packages. A feature such as a drilled pillar may be incorporated into the box or packaging design so that when the padlock is fitted through the drilled hole it is not possible to gain entry into the package." [Paragraph 635.3(c)]

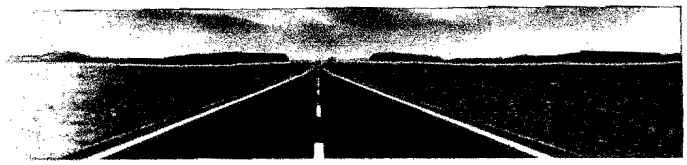
PHMSA agrees with the guidance in TS-G-1.1. The intent of a seal on a Type A package is to limit access in transportation to authorized persons. A padlock ensures that only authorized persons may access the package. Any damage to the padlock will provide evidence of package opening by unauthorized persons. Thus, it is the opinion of this office that a lock, that is not readily breakable and that is placed in the locked position on a Type A packaging, may be used as a feature to satisfy the requirement to seal a Type A packaging in accordance with § 173.412.

I hope this information is helpful. If you have further questions, please contact this office.

Sincerely,

Ben Supko
Acting Chief, Standards Development
Office of Hazardous Materials Standards

APNGA
AMERICAN PORTABLE NUCLEAR GAUGE ASSOCIATION



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§173.412
Packages
10-0121

May 28, 2010

U.S. DOT
PHMSA Office of Hazardous Materials Standards
Attn: PHH – 10
East Building
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

Re: Request for Interpretation

49 CFR 173.412 – Additional Design Requirements for Type "A" Packages

Question: Is a lock a sufficient "feature" to provide evidence that a Type "A" Package containing a portable nuclear gauge (or the lock on the outside of a closed transport vehicle containing the gauge) has not been tampered with?

173.412 states "The outside of the package incorporates a feature, such as a seal, that is not readily breakable, and that, while intact, is evidence that the package has not been opened. In the case of packages shipped in closed transport vehicles in exclusive use, the cargo department, instead of the individual packages, may be sealed".

Background

The general view amongst gauge licensees and regulatory agencies is that a lock provides sufficient evidence that, if broken, indicates that the gauge may have been accessed. The term "seal" was used as an example for meeting the requirement and not to be viewed as an exclusive requirement. Up until 2002 a lock was used by the industry and accepted by regulatory bodies and overwhelmingly that view continues today. However, in 2002, one of the gauge manufacturers interpreted the rule to mean that a separate seal must be provided (the manufacturer also conveniently coincided this interpretation with the release of a serialized, relatively costly, cable tie type closing device). This announcement, along with their inclusion of their interpretation into their training materials, has caused confusion in the portable nuclear gauge industry and even amongst the regulatory bodies. No other density gauge manufacturer asserts that a separate seal is required.

An interpretation by PHMSA (99-0139) specifically states that an identification mark (serial number) is not required. It also states that the point of the requirement is to provide assurance to the *receiver* that the package has not been

opened or tampered with while in transportation. This infers to me that the *shipper* is an intermediary party, a party that does not typically have access to the keys of a package lock, leaving breakage of the lock as their only means of entry.

The majority of gauge transports occur when a private carrier/licensee is transports a gauge from the licensed permanent storage area to a worksite. In this case there is no intermediary party delivering the gauge to a 3rd party *receiver.* The control of the gauge stays with the private carrier.

Today, in light of the NRC's Regulatory Issue Summary (RIS) 2007-28, regulators require gauges to have a minimum of *two* independent physical controls (locks or locked chains or cables) that on one hand form multiple tangible barriers to theft while also provide further evidence if an unauthorized access to a gauge occurred.

In practical use, a lock provides both access evidence *and* control of a gauge. When gauges are in use operators may be taking measurements at numerous sites during a day. For example, some asphalt jobs require the gauge operator to take a density measurement every couple hundred feet, and this may require the transporter to pull onto open public use roads to reach each subsequent measurement location. Others travel to various construction sites for like measurements. If separate seals are indeed required, the transporter would be affixing and breaking seals numerous times throughout the day for a gauge that is doubly locked and under constant surveillance.

The primary purpose for this interpretation request is to provide clarity for the approximate 5,000 gauge licensees transporting 20,000 – 25,000 gauges on a daily basis and for many of the regulatory agencies that oversee these licensees.

Thank you for your consideration.

George Marshall - Director
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