



Department of Energy
Washington, DC 20585

August 15, 2017

MEMORANDUM FOR DISTRIBUTION

FROM:

A handwritten signature in blue ink that reads "James M. Shuler".

DR. JAMES M. SHULER
MANAGER, DOE PACKAGING CERTIFICATION PROGRAM
OFFICE OF PACKAGING AND TRANSPORTATION

SUBJECT:

Guidance for 7A Type A Package Test Documentation, Revision 1

Based on recent discussions with industry professionals, they are seeing recurring issues when shippers rely solely on test documentation from Type A packaging fabricators. The purpose of this memorandum is to remind DOE elements and persons working under contract to DOE elements (i.e., DOE contractors) of the test documentation requirements for shippers of 7A Type A packages, also known as self-certified packages, by reviewing the following guidance from page 34 of Department of Transportation, *Radioactive Material Regulations Review*, which is available on the RAMPAC website (https://rampac.energy.gov/docs/default-source/dotinfo/dot_ramreg1.pdf) or from DOT (https://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/RAM_Regulations_Review_12-2008.pdf). This guidance is dated (c. 2008), but it is the latest published guidance from DOT; therefore, I have noted the differences between the guidance and the current Hazardous Materials Regulations (HMR) in this memorandum.

Essentially, the only authorized Type A package in the DOT regulations is the DOT specification 7A (see §178.350), which is based totally on performance test conditions rather than on hardware or design requirements. Using any of the methods authorized in §173.461, each shipper of a DOT-7A package must determine if the design meets the performance requirements in §§173.412 and 173.465, and then must document and maintain this evaluation or "self-certification" on file for at least one year after the latest shipment, per §173.415(a).

Note – In 2014, §173.415(a) was revised to extend the retention period, after January 1, 2017, for Type A package documentation from one year to two years after the offeror's latest shipment, to correspond to the minimum period for which an offeror is currently required to retain copies of shipping papers, and also after January 1, 2017, to include more detailed language describing the kinds of information expected to be included as part of the Type A package documentation. See §173.415(a)(1) for the latest Type A package documentation requirement.

Consequently, each design must be specifically certified as meeting the DOT-7A requirements. Each time the contents or packaging components change, the performance capability of the modified package must be re-evaluated with respect to the requirements before the Type A designation may be assigned.

Shippers are cautioned that often, additional documentation beyond that provided by the packaging supplier is needed to fulfill all of the requirements for a particular shipment; most importantly that the contents to be shipped have been evaluated for compatibility with the packaging and that their characteristics have been bounded by the simulated contents used in qualification testing (see §173.461). To satisfy the documentation requirements of §173.415(a), each shipper must maintain complete documentation of tests and an engineering evaluation or comparative data showing that the construction methods, packaging design, and materials of construction comply with the 7A specification. It is recommended that the documentation identify each requirement and state how each is met. The statements can contain references to supporting documentation, such as engineering evaluations. The documentation shall be provided to DOT upon request.

Note – Use of non-radioactive substitute contents (a.k.a., simulated contents) is addressed in §173.461(a)(1). In 2014, §173.415(a) was revised, effective after January 1, 2017, to include more detailed language describing the kinds of information expected to be included as part of the Type A package documentation. See §173.415(a)(1) for the latest Type A package documentation requirement.

DOT-7A designs do not require the approval of either DOT or NRC, for domestic shipment or for international transportation of non-fissile radioactive material. Type A quantities may also be shipped in certified fissile or Type B packaging or in foreign-made Type A packaging which meets IAEA TS-R-1 requirements. If foreign-made packages are to be used for domestic shipments, the domestic shipper must obtain and maintain on file the applicable Type A evaluation and documentation performed by the foreign package designer.

Each packaging built to DOT Specification 7A Type A must be marked on the outside as “USA DOT 7A Type A” and also in accordance with the marking requirements in §178.3. Section 178.350 (c) requires that the package also be marked with the name and address of the person certifying that the package (including the contents) meets the applicable requirements. This may be the shipper, if the packaging supplier has not tested for contents comparable to what is being shipped.

Note – In 2014, DOT revised §178.350 (c) to clarify that a DOT Specification 7A Type A package must satisfy the requirements of §178.2, *Applicability and responsibility*, as well as the marking requirements of §178.3. See §178.2 for the additional DOT requirements.

If you have any questions, please contact me at (301) 903-5513.