

# Course NP 658: Use of Certified Type B and Fissile Packages



## Course Description

- This course consists of in-person classroom and hands-on instruction on the compliant use of certified Type B and fissile packages. The course provides overviews of US Code of Federal Regulations, Department of Energy (DOE) Orders, packaging certificates of compliance, and Safety Analysis Reports for Packaging. Also included are systematic approaches for characterizing radioactive materials and selecting the appropriate packaging and guidelines for generating packaging procedures that meet applicable nuclear facility and shipping regulations. Course objectives are reinforced with practical exercises with various Type B and Type AF trainer units and multiple student activities.
- Taught by staff from Los Alamos National Laboratory, this week-long course can be held at other sites depending on student and host site interest.
- This course is part of the Packaging University sponsored by the DOE Packaging Certification Program.
- Additionally, the course is part of the accredited Graduate Certificate in Nuclear Packaging offered by the University of Nevada, Reno (UNR). Students enrolled with the UNR can use the course as credit for the certificate.



Students participate in a practical exercise with the Model 9977 Type B(M)F packaging during a class conducted at the Savannah River Site.

## Recommended Participants

- Shippers and receivers of certified Type B and fissile packages.
- Personnel who evaluate contents for shipment in these packages.
- Personnel who develop procedures for packing/unpacking operations.
- Personnel who write operational requirements for certified Type B and fissile packages.
- Managers, Design Authorities, and Regulators who oversee the use of these packages.

## Reasons to Take the Course

- Gain a thorough understanding of the US regulatory requirements for proper use of Type B and fissile packages.
- Obtain an overview of nuclear facility regulatory requirements that affect packaging operations.
- Get tools for selecting the right packaging, evaluating contents, and writing packaging procedures.
- Develop a network with other professionals from nuclear industries and laboratories across the country.
- Get credit towards the UNR's Graduate Certificate in Nuclear Packaging.

## Course Instructor: Doug Thacker

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U.S. DEPARTMENT *of* ENERGY

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## Pre-Requisite Knowledge

- Familiarity with the US Department of Transportation (DOT) regulations governing shipments of classes 1-9 hazardous materials.
- Specific knowledge of DOT shipping requirements for class 7 radioactive materials.

## Instructor Background

Mr. Doug Thacker has bachelor's and master's degrees in Mechanical Engineering and his Professional Engineering license in this field. With over 31 years at Los Alamos National Laboratory, including 11 years in his current role as a Packaging Engineer, he has ensured that a wide variety of radioactive materials were shipped compliantly, developed procedures for use of multiple packaging types and models, and worked with the Design Authority and Regulatory Authority to include new contents in Type B and fissile packagings. He is also a retired military veteran with 21 years of service as a Naval Engineer in the US Navy Reserve. Feel free to contact Mr. Thacker about the course content and scheduled classes.

## Testimonials

"The Packaging User Course offers students a unique opportunity to learn from a highly skilled end-user. This course effectively prepares the next generation of packaging and transportation workforce to become proficient end-users and empowers them to tackle the growing demands of future DOE/NNSA missions."

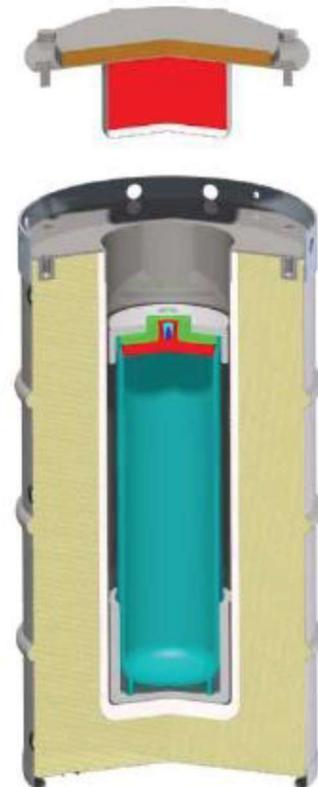
—Lynh Nguyen, Savannah River National Laboratory, Design Authority for the Model 9977 Type B(M)F Packaging

"Doug provides an enthusiastic and engaging approach to teaching this course. The learning objectives, reinforced by case studies and interactive exercises, are crucial to any organization seeking to comply with packaging and transportation regulatory requirements."

—Andrew Escobar, Savannah River Site, Transportation Safety Basis Regulatory Authority



Model 9979 Type AF Packaging



Model 9977 Type B(M)F Packaging

**Typical packaging models used for hands-on student activities.**