Secure Radioactive Material Packaging and Transportation — LANL Capabilities and Training Applications

Description/Capabilities

- Provides instruction and best practices on secure transport of radioactive materials meeting or exceeding that of USDOT 49CFR, USNRC 10CFR Part 61, and IAEA SSR-6.
- Provides tailored modules for managers, as well as for scientists, technicians, and engineers, who work with packaging and transporting radioactive materials around the globe.
- Provides structured analysis approach. Participants will be able to:
  - Understand various transportation security measures
    - GPS Tracking
    - Tamper Indicating Devices (Passive/Active)
    - Vehicle Security Features
    - Carrier/Driver Security
  - Identify appropriate and compliant packages (Type A and Type B)
  - Identify proper package labeling (may vary locally)
  - Understand the basics of a transportation security plan
  - Understand the process of alerts and notifications upon incident while in transport.
- Provides instruction in the form of classroom lectures, discussions, group exercises, case studies, and demonstrations.

Basic Elements of a Transportation Security Plan

- Material to be Shipped
- Consigner/Consignee Information
- Route Plans
- Communication Routes
- Driver/Carrier Information
- Procedural Notifications
- Emergency Notifications
- Transportation Security Equipment Procedures

Increased Physical Security for Transport

Passive vs Active Tamper Indicating Devices
Secure Radioactive Material Packaging and Transportation — LANL Capabilities and Training Applications

**Stolen/Lost Material Case Studies**

- **Texas, September 2012** – Cat3 Am241 well-logging source lost.
- **Mexico, December 2013** – Cat1 Co60 irradiator stolen in transit.
- **Oklahoma, July 2015** – Cat 2 Ir192 radiography truck stolen.

**Increased Transport Security Measures**

- Physical Security Measures
- Transportation Security Plan
- Driver/Consignee Background Checks
- Local Government/Law Enforcement Notifications

**US and International Laws and Standards**

Course includes in-depth discussion on US and international laws and standards for safety and secure transport of radioactive materials.

**Shipping Containers**

Several categories of shipping containers may be used with different requirements depending on isotope and activity.

**Cargo Labeling**

Appropriate/Compliant labeling dependent on activity, Type/Form of material, and container dose rate.