Every year, approximately three million shipments containing radioactive materials are transported within the U.S. Shipping radioactive materials is highly regulated. These heightened regulations are in place to keep drivers, the public and the environment safe.

Most radioactive materials are shipped on the highway. The term "highway route controlled quantity (HRCQ) of radioactive material" means the radioactive materials transported exceed a specific activity for the radionuclides designated by the federal government. There are specific requirements for the highway routing of such shipments.

When transporting HRCQ of radioactive materials, shipping routes are selected and planned very carefully in accordance with federal and state regulations. Some states and tribal governments of the U.S. have restricted roads and designated highway routes for the transportation of HRCQ of Class 7 radioactive materials and non-radioactive hazardous materials. Those routes are listed in the Federal Motor Carrier Safety Administration's National Hazardous Materials Route Registry.

The Commercial Vehicle Safety Alliance is a nonprofit association comprised of local, state, provincial, territorial and federal commercial motor vehicle safety officials and industry representatives. The Alliance aims to achieve uniformity, compatibility and reciprocity of commercial motor vehicle inspections and enforcement by certified inspectors dedicated to driver and vehicle safety. Our mission is to improve commercial motor vehicle safety and uniformity throughout Canada, Mexico and the United States by providing guidance and education to enforcement, industry and policy makers. For more information, visit **www.cvsa.org.**

Understanding the North American Standard Level VI Inspection Program

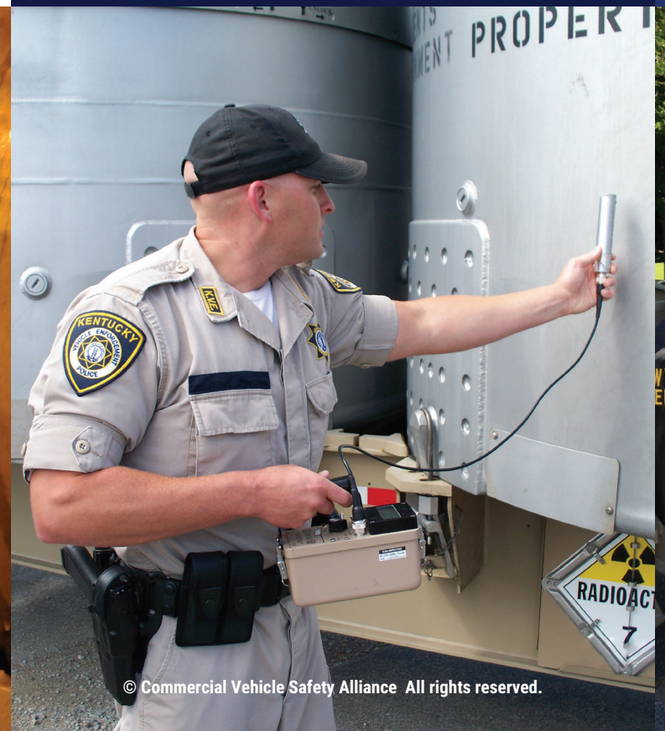
and the Transportation of Transuranic Waste and Radioactive Materials

Motor carriers whose drivers transport radioactive materials are specially trained in basic radiation science and emergency safety as well as federal regulations for Class 7 (radioactive) materials.

Radioactive materials subject to the CVSA Level VI Inspection Program are shipped in Type B packages, which are specially designed and constructed to pass a series of tests that simulate severe incident conditions in order to maintain the integrity of the package and isolate the contents. As such, Type B packages must withstand the following four tests conducted in sequence to simulate hypothetical incident conditions:

- A free drop from 30 feet onto a rigid surface
- A 40-inch free drop onto a 6-inch diameter steel rod that is at least 8 inches long
- Exposure of the entire package to 1,475 degrees Fahrenheit for 30 minutes
- Immersion of the package under 50 feet of water for at least eight hours

Furthermore, special package markings and labeling are required for the transportation of radioactive materials. There are strict rules in place to ensure the materials transported are safely packaged and stored so they cannot harm workers, the public or the environment.



What is a Level VI Inspection?

A Level VI Inspection is a strict inspection standard that must be met for shipments of spent nuclear fuel, high-level radioactive waste HRCQ of Class 7 materials and other Class 7 materials that meet the U.S. Department of Energy's (DOE) definition of transuranic waste. The Level VI Inspection includes all the requirements of the Commercial Vehicle Safety Alliance's (CVSA) North American Standard Level I Inspection; however, a Level VI Inspection is a higher and stricter inspection standard due to the materials being transported.

A Level VI Inspection is conducted at the point of origin before the driver is permitted to start travel. The vehicle, driver and cargo must all be free of defects to pass inspection and be allowed to proceed on their route.

En route, the North American Standard Level VI Out-of-Service Criteria is applicable. The out-of-service criteria identifies critical vehicle inspection items that may prohibit a motor carrier or driver from operating a commercial motor vehicle for a specified period of time or until the condition is corrected.

All vehicles and carriers transporting HRCQ of radioactive materials as defined by Title 49 Code of Federal Regulations § 173.403 are regulated by the U.S. Department of Transportation and required to pass the North American Standard Level VI Inspection.

Who conducts Level VI Inspections?

Level VI Inspections are conducted by commercial motor vehicle law enforcement personnel specially trained and certified by CVSA.

To conduct Level VI Inspections, an inspector must earn and maintain certificates of proficiency to conduct North American Standard Level I Inspections and North American Standard Hazardous Materials/ Dangerous Goods Inspections, and successfully complete the CVSA-approved North American Standard Level VI Inspection Program for Transuranic Waste and HRCQ of Radioactive Materials.

To maintain Level VI Inspection certification, inspectors must maintain certifications in North American Standard Level I Inspection and General Hazardous Materials/Dangerous Goods Inspection, as well as complete eight-hour refresher training, designated by CVSA, every 24 months.

What happens when a vehicle fails the Level VI Inspection?

If defects are found during a Level VI Inspection, that vehicle will not be permitted to start its route. The vehicle must be defect-free before it will be permitted to travel.

What happens when a vehicle passes the Level VI Inspection?

Vehicles that meet the Level VI Inspection standards will receive a special Level VI decal affixed at the point of origin of the shipment and removed at the point of destination.

When a vehicle and/or vehicle combination passes a Level VI Inspection, the inspector will place the CVSA Level VI decal on the passenger-side edge of the windshield, near the top. You may refer to Title 49 Code of Federal Regulations § 393.60 (e) (1) and (2) for official windshield decal placement instructions.

The CVSA Level VI decal is hole-punched with the year, month and day the Level VI Inspection was completed. It is valid for only one trip and it is the driver's responsibility to remove the Level VI decal at the conclusion of the trip.

En route, the North American Standard Level VI Out-of-Service Criteria is applicable. Any vehicle and/or vehicle combination in violation of the Level VI Out-of-Service Criteria will be placed out of service and the CVSA Level VI decal will be removed.

History of the Level VI Inspection Program

In 1986, the U.S. Department of Energy's Office of Civilian Radioactive Waste Management asked CVSA to develop an inspection standard for shipments of spent nuclear fuel and high-level radioactive waste. The goal was to ensure the protection and safety of people and the environment by setting and enforcing rigid inspection standards and safeguards for the transportation of radioactive materials.

CVSA brought together a wide range of officials to develop the Level VI Inspection standards. Four committees – research, design, inspection, and training and data analysis – were established to conduct the research and development process. The committees consisted of CVSA members from U.S. states and Canadian provinces, industry personnel, nuclear industry control officials, government officials, representatives from a reputable research firm and CVSA staff.

Although the Level VI Inspection standards were originally developed for specific Office of Civilian Radioactive Waste Management shipments, upon conclusion of the pilot test of the procedures and standards, it was determined that the Level VI Inspection was appropriate for all shipments of HRCQ of radioactive materials and transuranics. This determination had the concurrence and support of the DOE and an overwhelming majority of the affected states, regional organizations and motor carrier radioactive materials transporters.

In 1999, CVSA adopted the use of the Level VI Inspection procedures and the out-of-service criteria on all shipments of HRCQ of radioactive materials as defined by Title 49 Code of Federal Regulations § 173.403. And as of 2005, all vehicles and carriers transporting HRCQ of radioactive materials are required to pass the CVSA North American Standard Level VI Inspection.

COMMERCIAL VEHICLE SAFETY ALLIANCE
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