

# Radiation Exposure Limits for Transporting Radioactive Materials

- On packages shipped as non-exclusive use (173-441 (a))
  - At any point on surface - 200 mrem/hr
  - At one meter from package surface-10 mrem/hr
- On packages & vehicles shipped as exclusive use (173.441 (b) & 10 CFR71.47)
  - At any point on package surface-200 mrem/hr, except for a closed transport vehicle only-1000 mrem/hr
  - At two meters (6.6 ft.) from lateral surfaces of vehicle-10 mrem/hr
  - At all external surfaces of vehicle-200 mrem/hr
  - In occupied area of vehicle-2 mrem/hr
- [Note: the radiation level at one meter from the surface of a package is referred to as the transport index (173.403 (b))]

# Main Headings of DOT's 49 CFR "Hazardous Materials Regulations"

- 49 CFR 106 Rulemaking Procedures
- 49 CFR 107 Hazardous Material Program Procedures
- 49 CFR 171 General Information, Regulations and Definitions
- 49 CFR 172 Hazardous Materials Tables, Communications & Emergency Response Information Requirements
- 49 CFR 173 Shippers-General Requirements for shipping & Packaging
- 49 CFR 174 Carriage by Rail
- 49 CFR 175 Carriage by Aircraft
- 49 CFR 176 Carriage by Vessel
- 49 CFR 177 Carriage by Public highway
- 49 CFR 178 Shipping Container Specifications

# Who Regulates Radioactive Material Transportation?

- Nuclear Regulatory Commission
  - Regulates users of radioactive material (in conjunction with Agreement States) and the design, construction, use and maintenance of shipping packages for more hazardous radioactive material shipments
- U.S. Department of Transportation
  - Regulates shippers and carriers of radioactive material and the conditions of transport (such as routing, tie-downs, vehicle requirements, handling and storage)
- State of Utah
  - Highway Patrol and Department of Transportation enforce federal highway and motor carrier rules.
  - Division of Radiation Control inspects shipments of waste at Envirocare.

# Statutory Basis of DOT & NRC Packaging and Transport Regulations

- DOT - Dept. of Transportation Act of 1967, P.L. 89-670
- DOT - Transportation Safety Act of 1974, P.L. 93-633
- DOT - Hazardous Materials Transportation Uniform Safety Act of 1990
- NRC - Atomic Energy Act of 1954, P. L. 83-703
- NRC - Energy Reorganization Act 42 U.S.C. 5841