

# Motor Carrier Challenges in Transporting Radioactive Material

W  
M  
  
2  
0  
1  
5



Presented by  
Salina Savage  
President/Member

**SAVAGE**  
LOGISTICS, LLC



# ABOUT SAVAGE LOGISTICS

- Formation 2007
- Owners; Barbara Stone & Salina Savage
  - Women Owned, SBA 8(a) Certified
- Specialized in Transporting
  - Hazardous Material, including RAM and Mixed Waste
- Equipment
  - Over 90 Commercial Motor Vehicles
- Warehousing
  - Over 35,000 Square Feet
- Major Customers
  - DOE, US Ecology, Seattle Tunnel Partners, Perma-Fix, AREVA, Energy Northwest, Battelle, Lining Precast

# ABOUT SAVAGE LOGISTICS

## Customers with Specialized Services



Seattle Tunnel Partners

AREVA



US Ecology



Department of Energy



Energy Northwest

**SAVAGE**  
LOGISTICS, LLC

# Motor Carrier Challenges in Transporting Radioactive Material

- B-25 Box (IP-1, IP-2, or Type A)



Difficult to Adequately  
Tie-Down for Transport



# Motor Carrier Challenges in Transporting Radioactive Material

- B-25 Box (IP1, IP2, or Type A)
  - Box was Engineered and Designed:
    - Pressure-Strain on Lid, Bottom and Side
    - Drop-Tested
    - Leak Proof
    - Structural Analyzed
    - When Loaded Deformation
  - Lacks Design for Transport

# Motor Carrier Challenges in Transporting Radioactive Material

- Per 49CFR 173.410, General Design Requirements
  - (a) *“Package can be easily handled and properly secured in or on a conveyance during transport”*
- Issues
  - No Tie-Down Points for Transport
  - No D-Rings or Tie-Down Point for Chains or Straps
  - Lid Design Uneven with Sharp Edges

# Motor Carrier Challenges in Transporting Radioactive Material

- Lid has Uneven Sharp Edges, Bolts, and Handles Protruding



Full Size View of Box



Handle on Lid



Lid of Box

# Motor Carrier Challenges in Transporting Radioactive Material

- Savage Logistics Resolution to Cargo Shifting
  - Flexible Rubber or Nylon Edge Protectors
  - Friction Mats
  - Aluminum Blocking Device (a.k.a. – Chuck Stop)



# Motor Carrier Challenges in Transporting Radioactive Material

- Flexible Rubber or Nylon Edge Protectors
- Friction Mat



# Motor Carrier Challenges in Transporting Radioactive Material

- Aluminum Blocking Device (a.k.a. Chuck Stop)



# Motor Carrier Challenges in Transporting Radioactive Material

Secured for Transport



**SAVAGE**  
LOGISTICS, LLC

# Motor Carrier Challenges in Transporting Radioactive Material

Questions ?????

