



NRIC National Reactor
Innovation Center

Transportation at Idaho National Laboratory

Onsite and Offsite


Mary Baeza and Nick Adams

7/9/2024



Agenda

- MFC Inter Facility Transfers and Intra-INL Transportation – Onsite Transportation
 - SAR/TSR-413
 - Existing containers/payloads – potential for adding new
 - Limitations & Considerations
- INL Packaging and Transportation – Offsite Transportation
 - NRC/DOT regulations
 - Safety Analysis Report for Packaging (SARP)
 - Considerations



MFC Transportation Operations

- MFC Transportation Operations Resources
 - Nuclear Facility Manager
 - Shift Supervisor
 - Staff Support
 - Nuclear Safety Analyst
 - Heavy Equipment Operators
- Supports transportation of Less Than Hazard Category 3 (LTHC3) quantities
 - Within MFC
- Supports transportation of HC3 and greater quantities
 - Within MFC
 - Across the INL site
- Reactors or reactor fuels are generally expected to be HC2 quantities



Onsite Transportation

- Benefits of onsite transportation
 - Hazards are more controlled
 - Public can be excluded
 - Exemptions for some requirements may be available due to the controlled environment
- SAR-413 covers current onsite transportation needs
 - Exemptions from some DOT requirements provided equivalent safety is demonstrated
 - Transport SAR covers a number of transport activities across INL
- Generally, transport of reactors will be covered under individual reactor SARs

Casks Available at MFC/INL

- Casks available for transporting material and waste between INL facilities
 - HFEF-5 cask
 - HFEF-6 cask
 - HFEF-14 cask
 - HFEF-15 cask
 - Outpack cask
 - BRR casks
 - GE-100 cask
- Several others available that are used less frequently
- New containers/payloads can be used provided the appropriate analysis is completed and demonstrates compliance with requirements



HFEF-14 Cask on Forklift



HFEF-5 Cask on Trailer



INL Packaging and Transportation

- INL Packaging and Transportation Resources
 - Program Manager
 - Packaging Engineer
 - Staff Specialist
 - DOT and FMCSA Subject Matter Expert
 - Certified DOT HAZMAT Shippers
- Supports transport of LTHC3 quantities:
 - Across the INL site
- Supports transport of HC3 and greater quantities:
 - Offsite

Offsite Transportation

- Compliance with 10 CFR 71
- DOT and NRC shipping authorization
- Two options:
 - Use of container that is approved and meets established controls (SARP)
 - Develop a new container configuration and work through DOT and NRC SARP approval
- Waste Packaging Considerations
 - All waste packages are required to be compliant with disposal facility requirements
 - Waste is typically classified as Type A or Type B depending on quantities
- Transportation includes many variables – it is a best practice to include the transportation groups and considerations early in the process.





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