A Regional Readiness Perspective on Spent Nuclear Fuel Shipments by 2023

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Pick a Path Forward
Test the Process

• Nuclear Energy Institute’s Used Nuclear Fuel Table Top Exercise
  • May 2019
  • Private shipment model
  • Objectives

• CSG – Midwest Spent Nuclear Fuel Transportation Workshop
  • November 2019
  • DOE shipment model
  • Objectives
DOE Shipments under the NWPA*

- TEPP training: **DOE**
- Public outreach: **DOE**
- Funds for training: **NWPA Section 180(c)**
- State Regional Group coordination: **DOE**
- Curfews/key dates to avoid: **States**
- DOE has their own dedicated tracking system: **TRANSCOM**
- Additional carrier/driver requirements: **DOE**
- Route sharing: 5 years in advance; **DOE**
- Licensee provides properly loaded SNF packages to DOE at the site boundary
- Standard Contract applies
- DOE approval of routes

*DOE has agreed to meet and/or exceed all NRC and U.S. DOT regulations

Licensee Shipments

- Security: **NRC**
- Overweight permits: **States**
- Inspection requirements: **States**
- Route designation (highway): **States**
- Preplan and coordinate with states: **NRC**
- Route identification (rail): **DOT-PHMSA, NRC**
- Route identification (highway): **DOT-FMCSA, NRC**
- Safety Compliance Oversight Plan (SCOP): **DOT-FRA**
- Escort requirements (security, safety): **DOE, NRC, States**
- Notification to Canada of shipment affecting the Great Lakes: **Great Lakes Water Quality Agreement, Article 6**
- CVSA Level VI Inspection (truck): **DOT-FMCSA**
- Required to have tracking system: **DOE, NRC**
- Continuous monitoring: **NRC, DOE**
- Advance notification: **NRC**
- State fees: **States**
- S-2043 railcar will be used: **AAR**
- Route sharing: 2 weeks in advance; **NRC**
- Not required to share entire route(s) with states
- Aiming for 2023 shipments, pending CISF approval
- Licensee is fully responsible throughout shipment
- Standard Contract doesn’t apply
- NRC approval of routes
Lessons Learned

• Potentially within industry’s shipping window
  • Stakeholder engagement has begun
  • State level hesitation until license actions are decided

• May never reach DOE’s shipping window
  • stakeholder engagement continues

• Rail routing
  • Each rail carrier must do its own rail route risk analysis
  • DOE will defer to the rail industry per DOE regulations

• Rail industry will only accept the use of S-2043 compliant railcars for SNF shipments

• Real time testing with a pilot SNF or surrogate shipment

• Training should be conscientiously administered and commensurate with responsibilities
Action Items

• States must take proactive measures to ensure readiness
  • regulatory and procedural review needed
  • need to understand implementation of the Standard Contract
• Clarifications on security regulations
• Route assessment training (START) needed
• USDOT-FRA Safety Compliance Oversight Plan
• Pilot scale implementation
• Continue to build relationships and understanding
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