



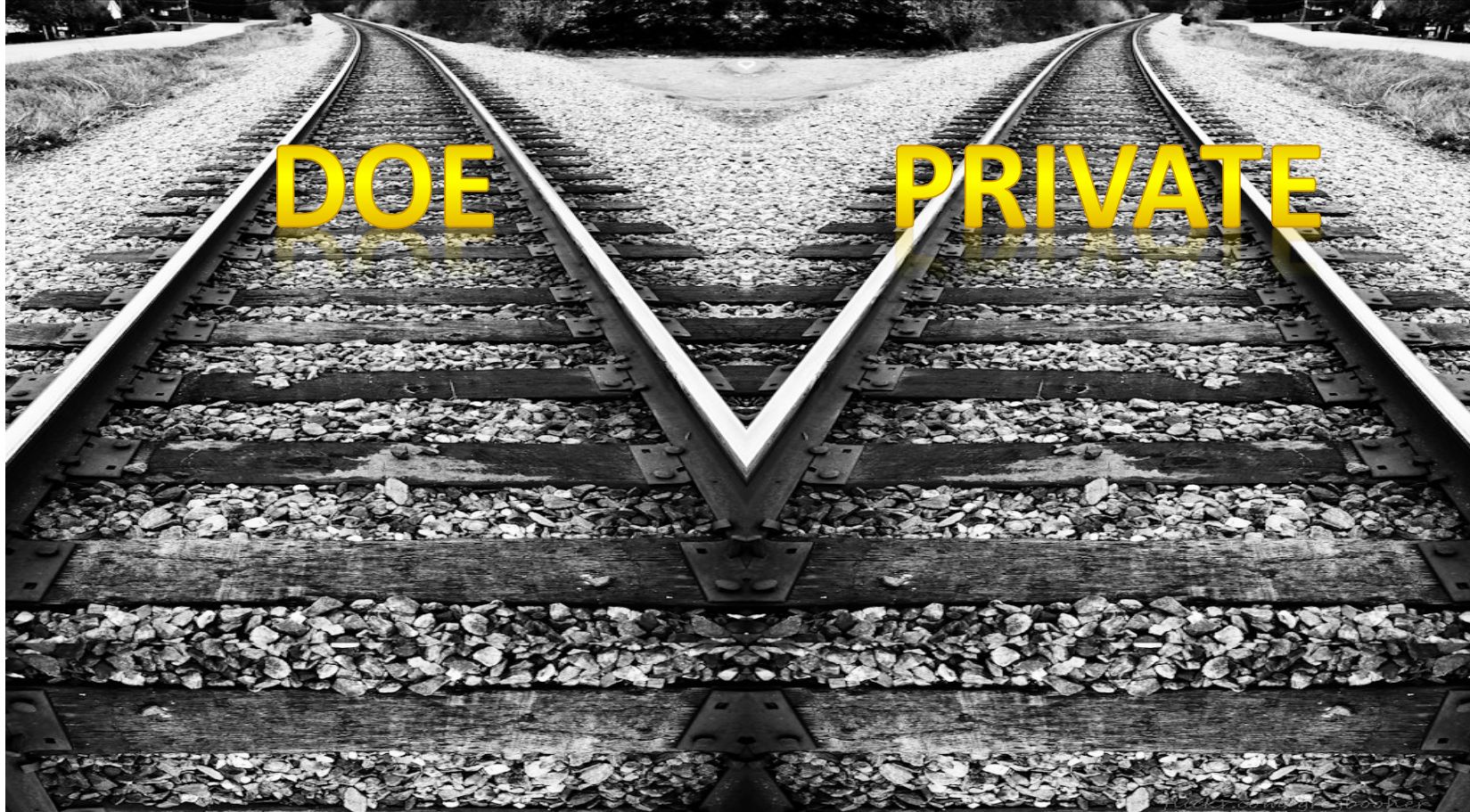
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# A Regional Readiness Perspective on Spent Nuclear Fuel Shipments by 2023

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# Pick a Path Forward



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# 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\*

## Licensee Shipments

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

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

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



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# 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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