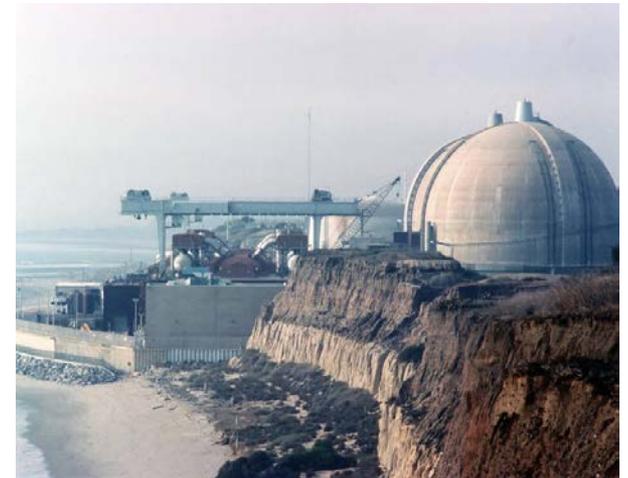


# Radioactive Materials and Hazardous Materials Committee- State of New Mexico



# FRA Regulatory Authority

- FRA only regulates the safety of rail transportation of the radioactive materials (RAM).
- FRA regulations ensure the safety of rail transportation vehicles, track structures, certification of train crews, etc.
- We defer to the Nuclear Regulatory Commission (NRC) and Department of Energy (DOE) for packaging and transportation requirements specific to the RAM being transported

# FRA's Basic Structure

FRA has five operating disciplines that govern safe train movements.

- Operating Practices
- Track
- Signal & Train Control
- Motive Power & Equipment
- Hazardous Materials

\* *There are other very important programs that assist in FRA's safety protocols.*

# Hazardous Materials

FRA is the modal expert for all transportation movements that involve rail transportation.

We inspect fixed facilities, remote rail sidings, large rail yards, short-line railroads, intermodal facilities, warehouse facilities, and we are not limited to any entity who performs an “offeror” function and meets the definition of a “hazardous materials employee,” **and/or** “hazardous materials employer,” as per the regulations.



# Radioactive Materials Locations are not inspected any different that any other HM Shipper

- Hazardous Materials PHMSA Registration
- Training (per 49 CFR Subpart H)
- Facility generated shipping papers for compliance (per 49 CFR Subpart C)
- SOPs (Standard Operating Practices) pertaining to loading rail cars
- Review of OEMs (Owners Equipment Manufacturers) use of equipment such as rail car liner, rail car lids, etc.
- Review of any incidents or abnormal occurrences pertaining to rail shipments. We have some security aspects to consider ( *\*\*do not pick routes but DOT/FRA does require route analysis for risk.*)



# FRA HQ working with both Federal and State rail inspectors

- Over the last two years, Radioactive Materials Specialists in Headquarters have been, and continue to work with both Federal and State certified rail inspectors on non-compliances with low-level radioactive materials (RAM) shipments by rail.
- We routinely respond to questions about RAM inspections from FRA regional inspectors, specialists, and our State partners. We are spending additional time with our field inspectors in TX and NM because of the two facilities that have filed for Consolidated Interim Storage Facility (CISF) licenses with the Nuclear Regulatory Commission (NRC).



FRA – Office of Railroad Safety

10/21/2020



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of Transportation  
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# FRA/State/DOE/NRC



- FRA routinely interacts with four State regional groups and the Tribal caucus involved with moving Spent Nuclear Fuel (SNF) and High Level Radioactive Waste (HLRW).
- These groups include:
  - Northeast Counsel of State Governments
  - Midwest Counsel of State Governments
  - Southern States Energy Board
  - Western Interstate Energy Board
  - Tribal Radioactive Materials Transportation Committee
- FRA is a co-chair for the National Transportation Stakeholders Forum Railroad Ad Hoc Working Group (AHWG)

# FRA/State/DOE/NRC



- FRA attends annual meetings, and participates in conference calls and webinars on rail-related issues.
- FRA works closely with the DOE and NRC as a subject matter expert on rail compliance issues.
- FRA also works with the NRC and Department of Homeland Security (DHS) on a Spent Nuclear Fuel Transportation Security Working Group to ensure uniformity for private sector SNF transportation movements and alignment with governing principles and policies affecting infrastructure security.
- FRA is a member of DOE’s “Preliminary Evaluation of Removing Used Fuel from Shutdown Sites” team reviewing rail/road/water near-site transportation of SNF and HLRW



# FRA inspections of low level radioactive materials shipments



- Low level radioactive materials shipments (also called low specific activity (LSA) shipments) by rail are constantly moving from shutdown reactor sites as part of the dismantling and evaluation of site materials.
- These shipments include building rubble, surface contaminated objects (SCO), loose contaminated soil, turbine parts and other various components from the reactor sites.



# Recent non-compliances found with LSA and SCO shipments



**IMPROPER  
PACKAGING**



Lading classified as a “Solid” but did not meet criteria as a “Solid;” actually a sludge



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# Recent non-compliances found with LSA and SCO shipments



**INCOMPLETE  
HM SHIPPING  
DESCRIPTIONS**

Improper shipping description on carrier train consist, missing radionuclide



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**Recent non-compliances found with LSA  
and SCO shipments**



**Placards  
not placed  
on all sides  
of the  
container**

**Placards missing on the end-to-end containers**



## Recent incidents with LSA and SCO shipments

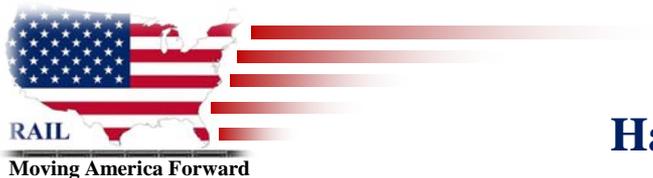


- Radioactive material placarded car was found leaking liquid through a fastener with a missing nut at disposal facility, car was returned to generator without repairs made to fastener. (Leak was later determined to be water.)
- Shipments are made with liners installed and the loose bolt could tear liner causing the shipment not to be “sift proof.”

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## General Geography of Holtec and WCS sites



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# Railroads transporting Spent Nuclear Fuel and High Level Radioactive Waste to the Interim Storage Sites



- BNSF's Mine Subdivision will be the primary rail line into Holtec International – Lea County, NM
- FRA has reviewed the route of the BNSF Mine Subdivision and reviewed the rail/track conditions.



# Private Transportation of Spent Nuclear Fuel vs. a DOE Shipment

How will private shippers of SNF address en route security, route emergency response, State SNF and HRCQ (Highway Route Controlled Quantity) inspections, etc.?



# Private Transportation of Spent Nuclear Fuel vs. a DOE Shipment

- FRA's regulatory and safety oversight would apply equally to private shipping campaigns of SNF as it does to DOE shipments.
- FRA's comprehensive regulatory responsibility includes both pre-transportation preparation of shipments and safety and security of the SNF during rail transportation.

## **FRA conducts Joint Site Infrastructure Evaluations**

Early planning gives railroads time for repairs and upgrades to their infrastructure. In many cases, regional and particularly shortline railroads need time to identify areas of concern, apply for grants or other funding, and contract outside services to perform upgrades.



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# FRA/DOE Joint Site Infrastructure Evaluations

**Early planning must also include -**

- **Utilities**
- **Railroads** (and trade association representatives, including the Association of American Railroads and the American Short Line and Regional Railroad Association)
- **Heavy haul and barge contractors** (when needed)
- **The involvement and interactions of relevant Tribal, State, and Federal governments and agencies**



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## Thoughts?

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## Questions?



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