The Southern States Energy Board

Radioactive Materials
Transport Update

Radioactive Materials Transportation Committee Meeting
December 10-11, 2014
Safety Compliance Oversight Plan

“SCOP”

Hazardous Materials

Tasks

• Operational Integrity
  Train Crew, Train Dispatchers, etc.

• Emergency Response
  Carrier Emergency Response Plans,
  Personnel Radioactive Awareness
  Training

• Route Infrastructure Integrity
  Track Geometry, Bridge Inspection, etc.
Safety Compliance Oversight Plan “SCOP”

Tasks

• Highway-Rail Grade Crossing Safety
  Highway-rail Grade Crossing Warning Devices

• Security
  Work with Stakeholders on Safety, Security, Safe Havens, etc.

• Miscellaneous
  Encourage FRA State Participation Program, Investigate Complaints Along Routes and Establish FRA SCOP Team
Safety Compliance Oversight Plan
“SCOP”

Most elements of the SCOP are the primary directives of the FRA’s Office of Safety. Federal Inspectors work daily in conjunction with our State Partners with regulatory oversight to assess railroad compliance through the following disciplines,

- Operating Practices Division (OP)
- Track Division
- Motive Power & Equipment
- Hazardous Materials Division
- Highway-Rail Grade Crossing and Trespass Division
- Rail Infrastructure Integrity Division
The SCOP was developed because of the nature of the potential hazards associated with radioactive materials and a high degree of public awareness and concern with safety and integrity of SNF and HLRW shipments by rail. This plan will emphasize and coordinate actions between the FRA, other Federal, State, local and tribal organizations and rail carriers, in order to promote the safe and secure rail transport of these shipments on the Nation’s railroads.
Safety Compliance Oversight Plan “SCOP”

Because of the advancements in technology implemented throughout the rail industry since the introduction of the SCOP in 1998 the plan is being reviewed and applicable revisions will be applied in concert with these implementations.

Some examples of areas of advancement are,

• Positive Train Control
• AAR S-2043 Standards
• Rail Routing Regulations
Safety Compliance Oversight Plan

“SCOP”

Update Status:

Work continues on updating the 1998 version

Slow progress primarily due to other workload associated with crude by rail issues

Plans are to have a draft update completed in 2015

FRA intends to float the draft update to the 4 State groups for comment and feedback
Most Class I Carriers mainline routes are incorporated in the Strategic Rail Corridor Network (STRACNET), system.
Components of Rail Routing from an Infrastructure Perspective

- **Site Infrastructure**
  - Power Plant / ISFSI Site

- **Near Site Carrier Infrastructure**
  - Short Line Railroads

- **Intermediate Carrier Infrastructure**
  - Regional Carriers

- **Line Haul Infrastructure**
  - Class I Carriers

*Note: The possibility of the final leg of the rail routing could include a Regional or Short Line Railroad also!*
Hazardous Materials

Note: A possibility that Interim Storage would be near the U.S. DOE Waste Isolation Pilot Plant facility.
Hazardous Materials

BNSF Railroad Map of New Mexico
Short Line Railroads of Region
Shutdown Reactor Site Visits

Current Shutdown Reactor Sites
Preliminary Evaluations that have been done

Northeast
- Connecticut Yankee
- Maine Yankee
- Yankee Rowe

Midwest
- Big Rock Point
- La Crosse
- Zion 1 and 2
- Kewaunee

West
- Humboldt Bay
- Rancho Seco
- Trojan
Shutdown Reactor Site Visits

Near Future Shutdown Reactor Sites Preliminary Evaluations

Northeast – will not be part of initial evaluations
- Oyster Creek – after current license expires
- Vermont Yankee – shutdown has been announced

South
- Crystal River (FL) - 2015

West
- San Onofre (CA) - 2015

Hazardous Materials
Shutdown Reactor Site Visits

One of the Team’s Preliminary Evaluations

Site Inventory

• Burnup, Enrichment, Age, Number of Assemblies, MTHM (Metric Tons Heavy Metal), Fuel Cladding, Condition of Fuel, etc.

• Dry Storage Cask Design and Manufacturer

• Number of Storage Casks at Site
  • Number of Spent Fuel Storage Casks
  • Number of Greater Than Class C (GTCC) Storage Casks

Hazardous Materials
Shutdown Reactor Site Visits

Hazardous Materials

Rail Transportation Evaluations

Site Infrastructure
- Rail Service
- Rail Infrastructure Condition
- Rail Car Capacities
- Rail Car Loading Capabilities
Shutdown Reactor Site Visits

Hazardous Materials

Rail Transportation Evaluations

Near Site Carrier Infrastructure

• Class I Railroad
• Regional Railroad
• Short Line Railroad
Shutdown Reactor Site Visits

Midwest Site Visits

Zion 1 and 2

- Class I service to facility – Union Pacific Railroad
- Rebuilt facility rail system
- LSA/SCO shipments during decommissioning
Shutdown Reactor Site Visits

Midwest Site Visits

Zion 1 and 2

Four Plant Leads - 100 lbs. Rail
Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

Zion 1 and 2

Concrete Ties on Facility Lead
Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

Zion 1 and 2

Union Pacific Railroad – Mainline Switch
Shutdown Reactor Site Visits

Midwest Site Visits

La Crosse

- Class I service to facility – BNSF Railway Company
- Two rail car siding
- Abandoned facility rail system

Hazardous Materials
Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

La Crosse

BNSF – Mainline Switch
Federal Railroad Administration

Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

La Crosse

Two rail car siding (inside gate)
Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

Big Rock Point

- No direct rail service to facility
- Heavy-Haul (two possible sites)
  - Great Lakes Central Railroad – 13 miles
  - Lake State Railway – 50 miles
Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

Big Rock Point
Great Lakes Central Railroad – Petoskey, MI
FRA Class 1 Track
Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

Big Rock Point
Great Lakes Central Railroad – Petoskey, MI Siding

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Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

Big Rock Point
Lake State Railway - Gaylord, MI
FRA Class 2 Track
Reciprocal Rail Inspections

Created to apply CVSA Level VI procedures to rail applicability

- Achieve maximum reciprocity along rail route
- Utilizing FRA State Rail Safety Participation Program
- Point of Origin, Enroute and Final Destination Inspections

Hazardous Materials
Reciprocal Rail Inspections

Potential Pilot Initiatives

- USEC – Paducah Facility (pending congressional funding)
- Zion 1 and 2 – (ongoing decommissioning project)
- Unit trains of either Crude Oil or Ethanol – (for mechanical not radiological inspection process)
Other Projects

Hazardous Materials

- Dedicated Train Rulemaking - on hold pending progress on actual movements of SNF and HLRW by rail

- Positive Train Control (PTC)

- New regulations in process on crude by rail shipments that could possibly have a bearing on movement of SNF and HLRW by rail in some aspects.
Reciprocal Rail Inspections

Hazardous Materials

Questions?