Southern States Energy Board

Radioactive Materials

Transportation Committee Meeting

December 2013
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”

Hazardous Materials

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”

Hazardous Materials

Because of the advancements in technology implemented throughout the rail industry and regulatory changes since the introduction of the SCOP in 1998 the plan is being reviewed for appropriate revisions and updates.

Some examples of areas of advancement are:

- Positive Train Control
- AAR S-2043 Standards
- Rail Routing Regulations
FRA intends to commence revision of the existing SCOP in 2014.

Timeline to revise the SCOP is flexible given time, manpower and budget considerations.

FRA intends to allow interested industry and external stakeholder groups the opportunity to provide feedback into the SCOP revision process.
Hazardous Materials

Most Class I Carriers mainline routes are incorporated in the Strategic Rail Corridor Network (STRACNET), system.
Hazardous Materials

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!
For shipments of used nuclear fuel, this could be the initial leg (departure from the reactor) or the final leg (arrival at the repository or interim storage facility).

SJ M, 11/20/2013
Rail Routing

FRA has conducted rail routing audits of all Class 1 railroads in 2013 for compliance with the existing rail routing regulations in 49 CFR.

With the exception of minor issues that were addressed, the audits showed overall compliance with the rail routing regulations of 49 CFR.
Hazardous Materials

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

Hazardous Materials

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

Current Shutdown Reactor Sites

Preliminary Evaluations

Northeast
- Connecticut Yankee
- Maine Yankee
- Yankee Rowe

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

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

Hazardous Materials

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

Midwest
• Kewaunee

West
• San Onofre
Shutdown Reactor Site Visits

Hazardous Materials

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
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

Hazardous Materials

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

Hazardous Materials

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

Hazardous Materials

Midwest Site Visits

La Crosse

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

Hazardous Materials

Midwest Site Visits

La Crosse

BNSF – Mainline Switch
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
Shutdown Reactor Site Visits

Hazardous Materials

Midwest Site Visits

Big Rock Point
Lake State Railway – Gaylord, MI
FRA Class 2 Track
I thought that the tracks near Gaylord were in such bad condition that it was Excepted.

Sj M, 11/20/2013
Reciprocal Rail Inspections Project

Hazardous Materials

Created to assess applying similar 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
Reciprocal Rail Inspections

Hazardous Materials

Potential Pilot Initiatives

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

- Project is currently on a “hold” status due to inability to currently justify the need for such a rulemaking to OST and OPM given that there are very few actual movements of HLRW or SNF by rail.

- FRA has a Notice of Proposed Rulemaking (NPRM) drafted and “on the shelf”.

- FRA will monitor future progress on the waste storage issue as it applies to SNF and HLRW that will indicate actual increases in the rail transport of this material.

- At such time as progress is made on this issue FRA will take the project off hold status, review and revise the draft NPRM as needed and again commence the rulemaking process.
Hazardous Materials

Questions?