Hazardous Materials

The Council of State Governments Midwestern

Radioactive Materials

Transportation Committee Meeting

Fall 2013
Safety Compliance Oversight Plan
“SCOP”

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

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

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.
Shutdown Reactor Site Visits

Hazardous Materials

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

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

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
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

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

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
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
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)
Reciprocal Rail Inspections

Federal Railroad Administration

Hazardous Materials

Questions?