

# **Spent Nuclear Fuel Transportation Experience**

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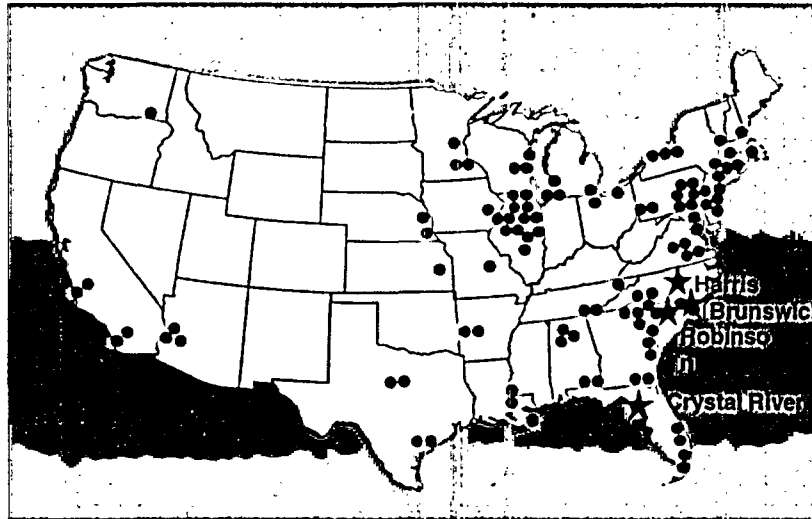


## **Discussion Topics**

- **Progress Energy Transportation History**
- **Shipment Security**
- **Organization and People**
- **Procedures**
- **Coordination and Notification**
- **Emergency Response**
- **Summary**



## Progress Energy Nuclear Plants



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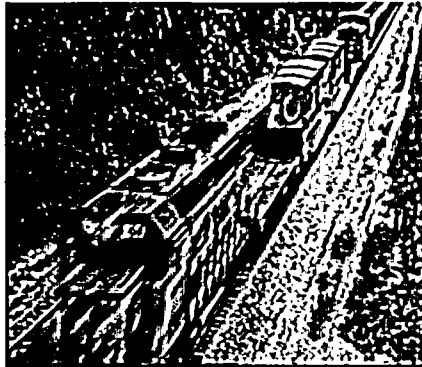
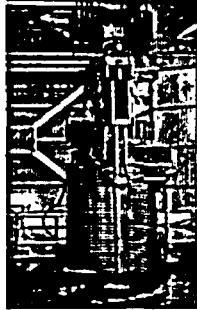
## Spent Fuel Management Strategy

- Maintain operating reserve at all nuclear units
- Spent fuel shipping program to reduce inventories at Brunswick and Robinson
- Maximize use of Harris spent fuel pools



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4

## Transportation Experience

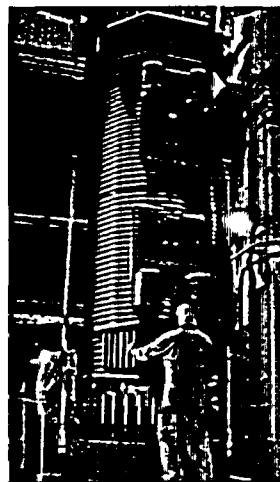


- 173 shipments
- Over 30,000 miles
- 4,000 spent fuel assemblies transported

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## Excellent Operational Record

- No radioactive spills or releases
- No radiation exposure to train personnel or general public
- Increased security since 9/11/01



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## Success Factors




- Nuclear safety focus
- Clearly identified accountabilities
- Continuous improvement culture
- Pre-shipment briefings
- Post-shipment critique and lessons learned

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## Shipment Security

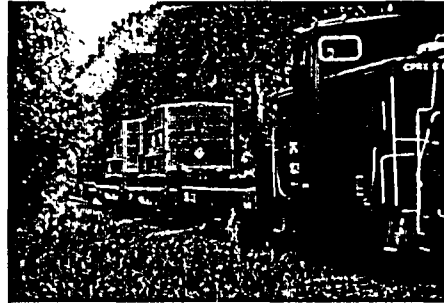
- Dedicated rail shipments
- Time of shipments and specific security provisions are 'safeguards information'
- Continuous, remote monitoring of shipment location



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## Dedicated Train

- Locomotive
- Empty Flatcar
- Cask Car
- Cask Car
- Empty Flatcar
- Caboose



## Shipment Personnel



- Trained and Qualified Personnel
- Proficient core team
  - ◆ At each site
  - ◆ Accompany shipment

## Shipment Organization

- Shipment Manager
- Radiological Escort
- Mechanic Escorts



## Shipment Organization



- Communicators
- Plant Response Coordinator & Team
- Response Manager

## Detailed Procedures



- Site procedures
  - ◆ Loading
  - ◆ Unloading
  - ◆ Shipment Preparations
- Transportation
  - ◆ Routine
  - ◆ Emergency

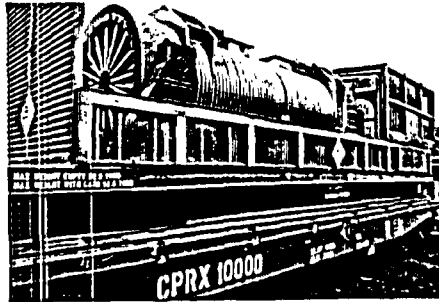
## State and Local Coordination

- Initial meetings with towns and counties
- Periodic exercises with State and County Emergency Personnel
- Ongoing Communication



## Notification of Shipment Status

- Advance Notification
  - State – Governor's designee (7 day)
  - Federal –NRC (10 day)
- State and County updates during shipment



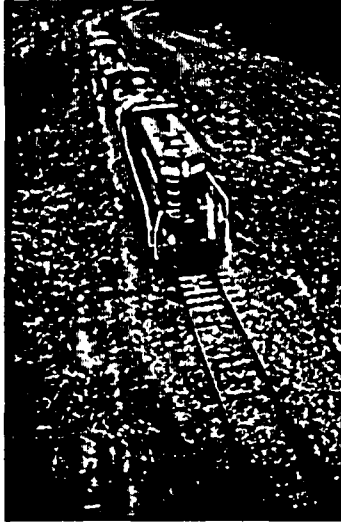
## Emergency Response



- Pre-identified scenarios
- Radiological and hazard information readily available
- Dedicated and trained response personnel



## Summary



- **Successful transportation experience exists**
- **Coordinated effort between Utilities, Federal, State and Local organizations**