
Utility Spent Fuel Transportation Experience

Steven Edwards
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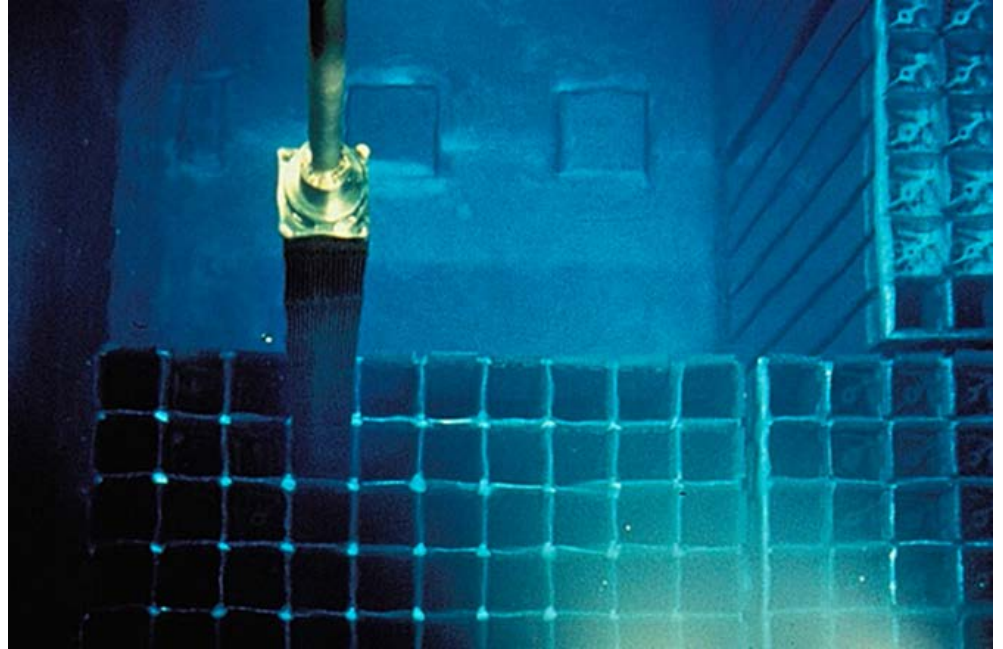


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Discussion Topics

- Background
- Transportation experience
- Lessons learned
- Summary



Background

- Large scale spent fuel transportation campaigns from utility sites have been successfully completed
- These experiences and the lessons learned can be directly applied to planning for future shipments to CIS facilities



Transportation History



- Transportation programs implemented to create space in spent fuel pools to allow continued plant operation
- Initiated before onsite dry fuel storage was a viable option
- Spent fuel moved from older plants with smaller pools to newer plants with more capacity
- Continued as a safe, cost efficient alternative to onsite dry storage
- Discontinued to ensure adequate space preserved at newer plants to support future operations

Duke Power Transportation Experience

- Spent fuel shipments from Oconee to McGuire
 - 300 assemblies shipped between 1981 and 1988
 - Used legal weight truck (LWT) casks (1 PWR/ cask) and overweight truck (OWT) casks (3 PWR/ casks)



CP&L/Progress Energy Transportation Experience

- Spent fuel shipments from Robinson to Brunswick
 - 304 assemblies shipped using rail cask (7 PWR/cask)
- Spent fuel shipments from Brunswick to Harris
 - 4397 assemblies shipped using rail cask (17 BWR/cask)
- Spent fuel shipments from Robinson to Harris
 - 504 assemblies shipped using rail cask (7 PWR/cask)
- Company owned and maintained casks, rail cars, buffer cars and cabooses



CP&L/ Progress Energy/ Duke Transportation Experience



- Shipped over 5500 assemblies (1,500 MTU)
- LWT, OWT and rail casks used
- No safety issues – nuclear or industrial
- No radioactive spills or releases
- No radiation exposure to carrier or general public

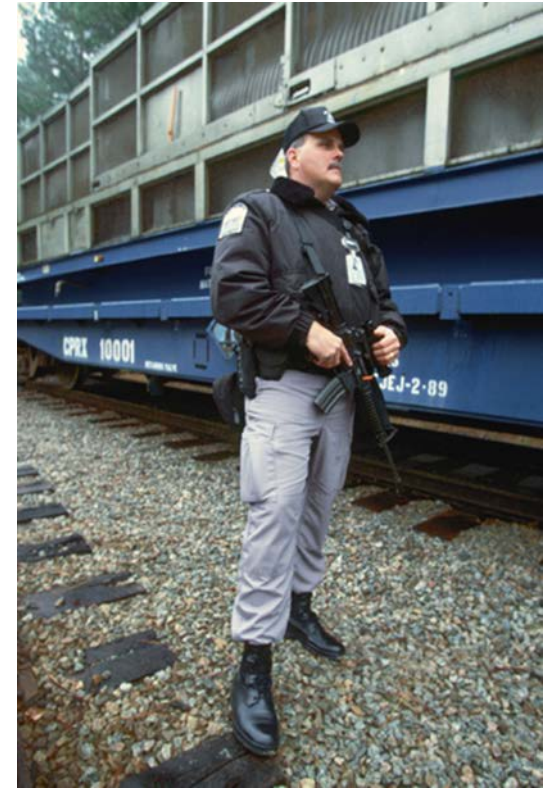
Lessons Learned

- Successful shipping program requires coordination of a number of organizations and agencies
 - Utility
 - NRC
 - Governor's designee
 - State, county and local officials
 - Local law enforcement
 - Emergency preparedness
 - Carrier
- Communication Plan needed
 - Discuss process, equipment design, transportation safety, emergency preparedness, etc.



Lessons Learned (cont.)

- Stakeholder meetings
- Regulatory approvals and notifications
 - Such as route approval, certificate of compliance for transportation cask
- Detailed procedures required
- Equipment maintenance
- Training and preparedness
 - Loading, unloading and shipment personnel
 - First responders, escorts and carrier
- Periodic exercises, drills and tabletops
- Pre-shipment briefings and post-shipment critiques
- Maintain ongoing dialog with Governor's designee in each state



Summary

- Spent Nuclear Fuel can be and has been transported safely and effectively in the US
- Lessons learned from utility transportation experience be applied to future, larger scale transportation efforts



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