Security for the Transportation of
Spent Nuclear Fuel - Role of NRC Licensees

Institute of Nuclear Materials Management
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Paradigm Shift

Definition:
• *formal*

: an important change that happens when the usual way of thinking about or doing something is replaced by a new and different way.

• This change will bring about a paradigm shift in our understanding of spent fuel transport.
SNF Transport: Evolution

- **Historically:** NRC and DOE planned under the assumption that only DOE would move SNF to a Geological Repository under §180 of the NWPA.

- **Industry:** NorthStar purchased Vermont Yankee. Holtec purchasing Big Rock Pt, Oyster Creek, Palisades, Pilgrim, Indian Point & joint venture w/SONGS to manage SNF.

Indications point to industry moving SNF to a Consolidated Interim Storage Facility (CISF) *before or concurrently* to Department of Energy (DOE) taking title and moving SNF.
Current Model Vs New Concept

**Current Model:**
- DOE will move SNF IAW NWPA* by taking title.
- DOE will provide funding under 180C section of NWPA.
- NRC will be a valued partner, advisor, no/little authority over DOE.
- NRC will conduct route review as requested.
- NRC willing to corporate as much as possible in supporting courtesy point of origin “inspections”.
- NTSF is a coordination program.

**New Concept:**
- Industry will move SNF Outside of the NWPA*.
- DOE (currently) will NOT provide funding under section 180C NWPA.
- NRC is the regulatory authority, along with DOT, USCG etc.
- NRC will conduct route review as required.
- NRC authority to inspect/ examine any & all aspects of the entire process for the movement of SNF.
- NO NTSF.

* Nuclear Waste Policy Act
Regulations:

- Transport security for spent nuclear fuel will either follow 10 CFR 73.37 or 10 CFR 73.20, 25, 26 and 27.

- Shipments of SNF, (as defined) will follow 10 CFR 73.37 for transport security.

- Some SNF shipments may fall under 10 CFR 73.20/25/26/27 for transport security due to Pu in growth:
  - > 2 kg Pu in a SNF cask as a result from change of U-238 to Pu during nuclear reactor operations and cooling (aka Pu in growth).
  - Exact number of “Cat I SSNM” unidentified at this time.
Next Steps:

- NRC is working with Federal Family to identify Federal regulatory oversight for various modes of SNF transport.
  - Federal Rail Administration for Rail movement;
  - USCG for Maritime Movement;
  - DHS/TSA, DHS/CBP;
  - DOT/PHMSA, DOT/FMCSA;
  - DOE, DOE/NNSA;
  - FBI.

- NRC with CISA*/DHS is working to establish a Transportation working group under the Nuclear Government Coordinating Councils (GCC).

*DHS Cybersecurity and Infrastructure Security Agency
Questions?

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• **Sector Coordinating Councils (SCCs)** are self-organized and -governed entities of private sector critical infrastructure owners and operators and affiliated trade association representatives. **SCCs** serve as the federal government’s principal point of entry into the critical infrastructure sectors they represent for policy, coordination and planning, and a range of related sector-specific security and resilience activities.

• **Government Coordinating Councils (GCCs)** serve as the government counterpart to the SCCs and focus on maximizing interagency coordination and information sharing.