

# Coordination & Transportation Security for Spent Nuclear Fuel

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# The Agencies: Who Does What?



**The U.S. Nuclear Regulatory Commission (NRC)** is an independent agency created by Congress. Its mission is to license and regulate the nation's civilian use of radioactive materials in a way that protects public health and safety and the environment and promote the common defense and security. The NRC also regulates packaging for the transport, storage, and disposal of nuclear materials and waste, and licenses the export and import of radioactive materials.



**The U.S. Department of Transportation (DOT)** coordinates with the NRC to set rules for the packaging of nuclear materials. DOT also works with the NRC and affected States to regulate their transport. DOT regulates carriers, sets standards for routes, and is responsible for international agreements on the transport of all hazardous materials.



**The U.S. Department of Energy (DOE)** is responsible by law for disposal of spent fuel from the nation's nuclear power reactors.



# The Agencies: Who Does What?



**The U.S. Department of Homeland Security (DHS)** Missions include preventing terrorism and enhancing security; managing our borders; administering immigration laws; securing cyberspace; and ensuring disaster resilience.



## **Mission:**

The mission of the United States Coast Guard is to ensure our Nation's maritime safety, security and stewardship.

- Ports, Waterways & Coastal Security
- Aids to Navigation (ATON: including maintaining the nation's Marine Safety)
- Law Enforcement

# The Agencies: Who Does What?



**The U.S. Department of  
Transportation (DOT)**

## **The Federal Railroad Administration (FRA)**

### **Mission**



The Federal Railroad Administration's mission is to enable the safe, reliable, and efficient movement of people and goods for a strong America, now and in the future.

# The Agencies: Who Does What?



## The U.S. Department of Transportation (DOT)

### The Pipeline and Hazardous Materials Safety Administration

#### Mission



PHMSA's mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives. To do this, the agency establishes national policy, sets and enforces standards, educates, and conducts research to prevent incidents.

# The Agencies: Who Does What?



**The U.S. Department of  
Transportation (DOT)**

## **The Federal Aviation Administration (FAA)**

### **Mission**

Our continuing mission is to provide the safest, most efficient aerospace system in the world.





# Increased Coordination: NRC, DOT & DHS MOU 2015

NRC, DOT and DHS signed a Memorandum of Understanding for increased cooperation in transportation security.

*DOE is not a signatory, but a welcome and valued participant.*

- Risk Assessments.
- Strategic Planning.
- Standards, Regulations, Guidelines, Advisories, Orders, and Directives.
- Inspections and Enforcement.
- Technical Support.
- Sharing Information During an Emergency Response.
- Legislative Matters.
- Budget.
- Communication.
- Intelligence and Information Sharing.
- Background Investigations.
- Cooperative Research Programs.



# Increased Coordination NRC, DOT & DHS MOU 2015

The MOU may be accessed through NRC's webpage [www.nrc.gov] through the Agencywide Document Management System (ADAMS)

## Accession Numbers

- ML15057A336 - MOU
- ML13240A347 - TOPICAL AREAS
- ML13240A350 - Points of contact for the Memorandum of Understanding

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 U.S. NUCLEAR REGULATORY COMMISSION Chairman Allison Macfarlane	12/20/13 Date
 DEPARTMENT OF HOMELAND SECURITY Secretary	1/17/15 Date
 DEPARTMENT OF TRANSPORTATION Secretary	5-24-14 Date

## Security 10 CFR 73.37

# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.



### **§ 73.37(a) (1) *Performance objectives.***

- i. Minimize the potential for theft, diversion, or radiological sabotage of spent nuclear fuel shipments;
- ii. Facilitate the location and recovery of spent nuclear fuel shipments that may have come under the control of unauthorized persons.



# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.



## **§ 73.37(a) (2) *Performance objectives.***

To achieve these objectives, the physical protection system shall:

- (i) Provide for early detection and assessment of attempts to gain unauthorized access to, or control over, spent nuclear fuel shipments;
- (ii) Delay and impede attempts at theft, diversion, or radiological sabotage of spent nuclear fuel shipments; and
- (iii) Provide for notification to the appropriate response forces of any attempts at theft, diversion, or radiological sabotage of a spent nuclear fuel shipment.



# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.

## **§ 73.37(b) General requirements.**

General requirements for physical protection of irradiated reactor fuel in transit.

- *Preplan and coordinate spent nuclear fuel shipments.*
- *Advance notifications.*
- *Transportation physical protection program.*
- *Contingency and response procedures.*



# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.

## § 73.37(b) *General requirements*

**(1)** Preplan and coordinate spent nuclear fuel shipments.

Preplan and coordinate shipment information **no later than 2** weeks prior to the shipment or prior to the first shipment of a series of shipments in order to:

- (A) Minimize intermediate stops and delays;
- (B) Arrange for State law enforcement escorts;
- (C) Arrange for positional information sharing when requested;
- (D) Develop route information, including the identification of safe havens.
- (E) Arrange w/ Local Law Enforcement for Response/Assistance



# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.



## **§ 73.37(b)** *General requirements*

**(2)** Advance notifications to NRC (**§ 73.72**) and (**§ 71.97**) Tribes and States

**§ 71.97** *Advance notification of shipment of irradiated reactor fuel...*

(2) As specified in paragraphs (b), (c), and (d) of this section, each licensee shall provide advance notification to the **Tribal official of participating Tribes** referenced in paragraph (c)(3)(iii) of this section, or the official's designee, of the shipment of licensed material, **within or across the boundary of the Tribe's reservation**, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.



# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.



**§ 73.37(b)(3)** Transportation **physical protection** program.

Rail & Road (Partial List)

- Armed officers.
- Redundant communication abilities.
- Telemetric position monitoring system.
- Response procedures.





# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.

## § 73.37(b)(3) Transportation **physical protection** program.

### Maritime

- Two armed escorts stationed on board the shipment vessel, or stationed on the dock at a location that will permit observation of the shipment vessel.



# Requirements for Physical Protection of Irradiated Reactor Fuel in Transit.

## § 73.37(b)(4) Contingency and Response Procedures





**THE SINGLE BIGGEST PROBLEM IN  
COMMUNICATION**

**IS THE ILLUSION IT HAS TAKEN PLACE**

**- GEORGE BERNARD SHAW**



# Questions?



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