

# **RIC 2005**

## **Session T-B1**

### **Spent Fuel Management**

#### **SNF Transportation – State Program Issues**

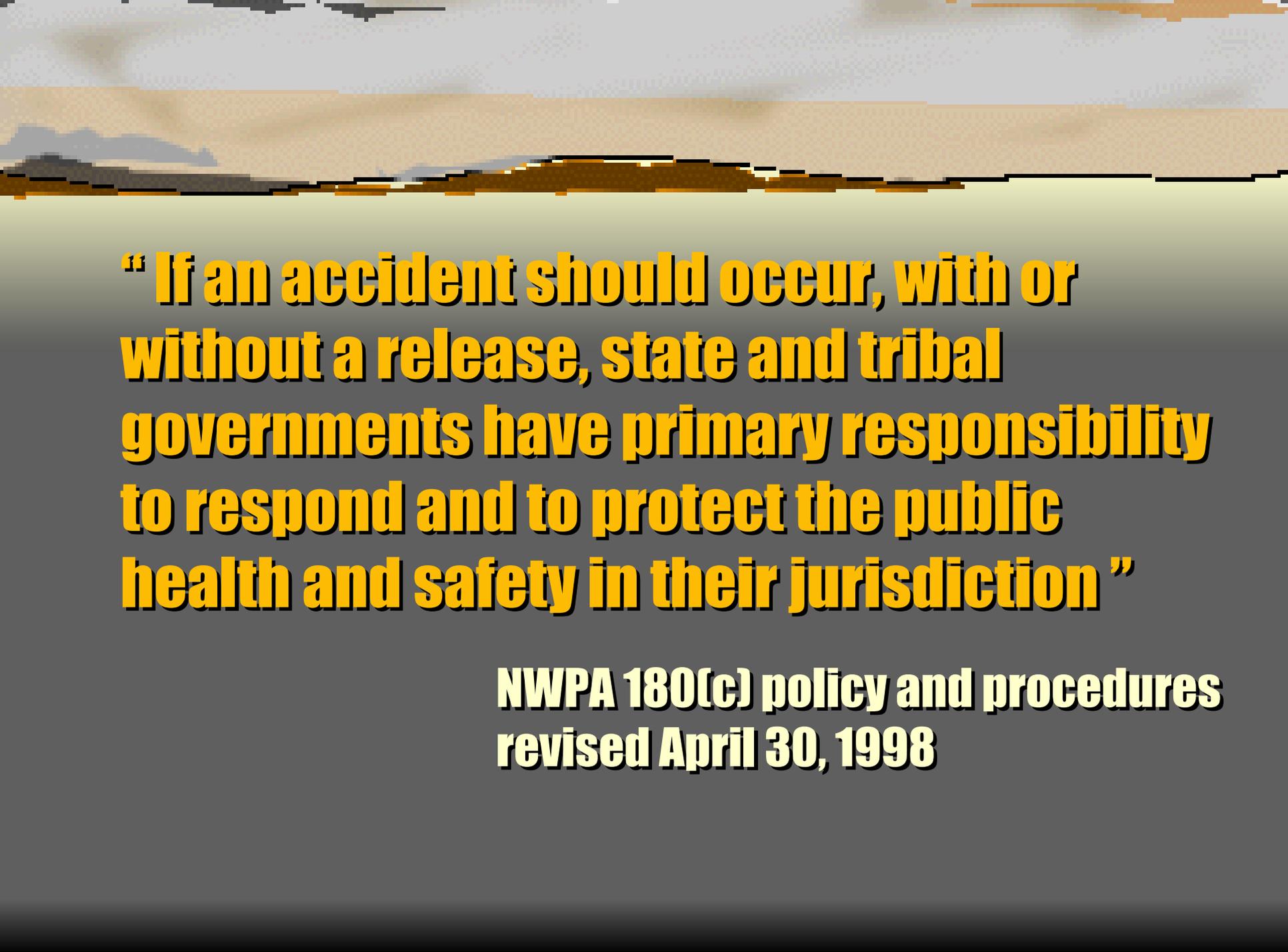
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**“ If an accident should occur, with or without a release, state and tribal governments have primary responsibility to respond and to protect the public health and safety in their jurisdiction ”**

**NWPA 180(c) policy and procedures  
revised April 30, 1998**

# **Midwestern States approach emergency preparedness and response for RAM transportation in a variety of ways.**

- ⇒ Provide annual training to all local responders along transportation corridors (IN).
- ⇒ Provide training *and* instrumentation at the local level (OH).
- ⇒ Provide local training and but rely on regional HAZMAT teams for response expertise (IA).
- ⇒ Provide security/response escorts for all shipments (IL).

**In the early 1980's IDNS developed a unique program to enhance the safety of spent nuclear fuel shipments moving on Illinois highways and railroads.**



# **IEMA/DNS and the participating Illinois agencies provide inspections and escorts for highway and rail movements of:**

- ⇒ Commercial/DOE spent nuclear fuel
- ⇒ Transuranic Waste (TRU)
- ⇒ High-level Waste
- ⇒ Highway Route Controlled Quantities of Radioactive Materials

**ORANGE**

# **The IEMA/DNS inspection and escort program provides:**

- ⇒ inspection for compliance with USDOT and USNRC radioactive materials shipping regulations
- ⇒ inspection for compliance with USDOT motor carrier safety regulations
- ⇒ security escorts for compliance with NRC ICM's and ASM's
- ⇒ on-scene emergency response expertise in the event of an accident

**Since the inception of the program IEMA/DNS teams have inspected and escorted both highway and rail shipments including:**



*Rail shipments from  
TMI  
(7/86 - 4/90)  
22 Shipments*

*Truck shipments to  
and from General  
Electric's spent fuel  
storage facility in  
Morris, Illinois*



*University research  
reactor  
shipments...*

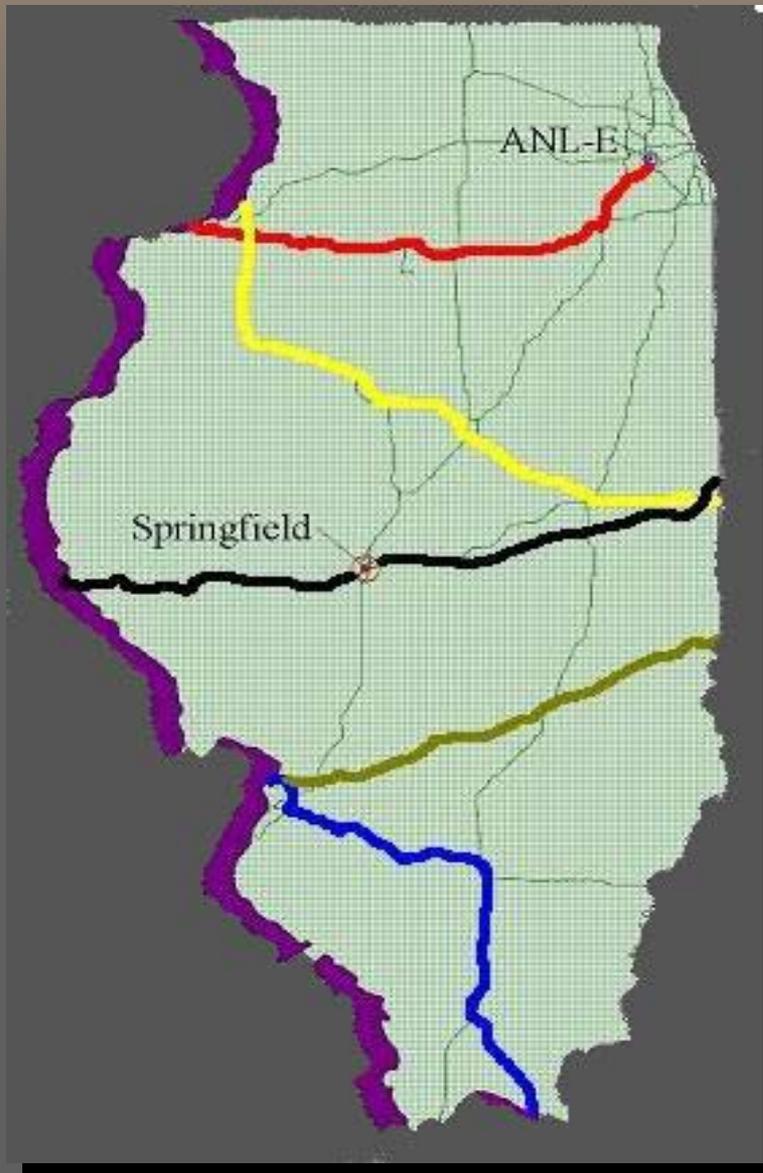




*Transuranic waste shipments destined for DOE's Waste Isolation Pilot Plant and....*

*Shipments from many other DOE and commercial campaigns.*





- ⇒ Red - ANL-E TRU.
- ⇒ Yellow - Battelle Columbus TRU.
- ⇒ Blue - Foreign SNF from SRS and University shipments.
- ⇒ Black – SNF rail shipment from WVDP.
- ⇒ Green – HRCQ shipments.

# After 9-11 Illinois added highway route controlled quantities (HRCQ) RAM to the type of shipments being escorted:

- ⇒ ICM's issued by the NRC require licensee's to implement additional security measures.
- ⇒ ICM's and more recent ASM's give States the option to provide security escorts.



# The I&E Program is activated when the Governor's designee receives Safeguards or other unclassified – sensitive notifications.

- ⇒ DNS distributes information on a need-to-know basis following SAFEGUARDS protocols.
- ⇒ Port of entry or origin inspections are scheduled with the shipper and carrier.



# ISP conducts MCS inspections using a national i standard developed by the Commercial Vehicle Safety Alliance (CVSA).

*Officers inspect brakes, lights, exhaust systems and confirm operation of other safety equipment.*



# **IEMA/DNS inspectors review packaging and shipping papers checking for compliance with USDOT regulations relative to:**

- ⇒ *Proper shipping descriptions*
- ⇒ *Package marking and labeling*
- ⇒ *Placarding*
- ⇒ *Route plans*
- ⇒ *Driver training*
- ⇒ *Emergency Procedures*



# IEMA/DNS inspectors measure external gamma radiation levels.



- ⇒ *At the surface of the cask.*
- ⇒ *At one meter from the cask (T.I.)*
- ⇒ *At two meters from the edge of the trailer.*

**Inspectors also check casks and equipment for removable surface contamination.**



# For rail movements FRA certified State inspectors from the ICC perform:

- ⇒ *High-rail track inspections within 24-hours prior to movement.*
- ⇒ *Inspections of way bills and consists.*
- ⇒ *Inspections of brakes and rail safety systems.*



# Once the inspection is completed the escort phase of the operation begins.



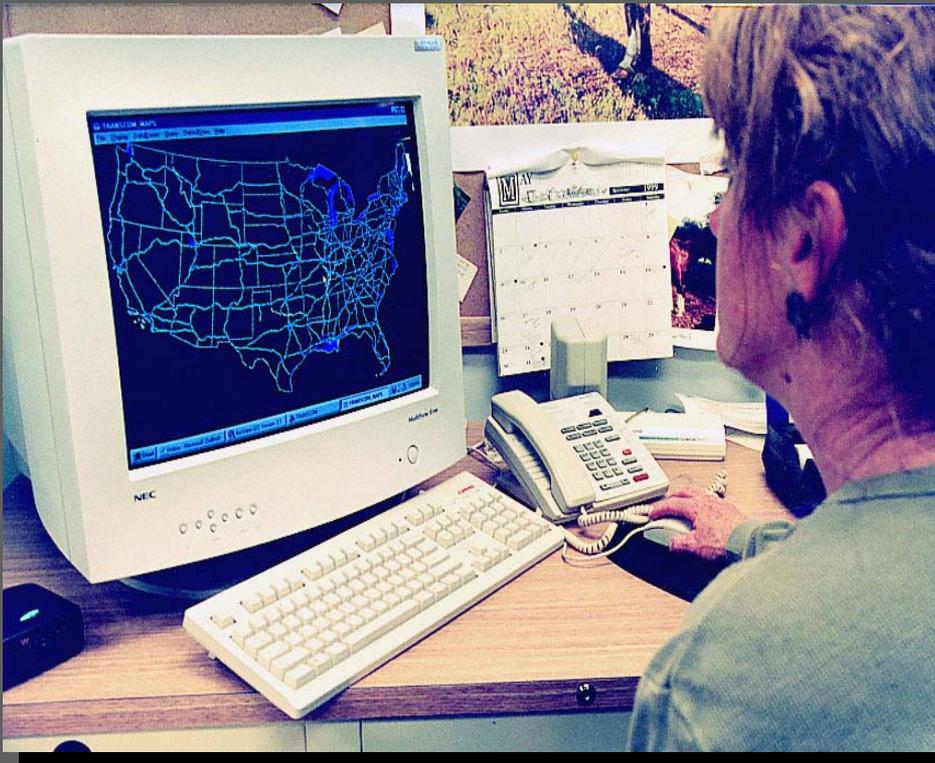
- ⇒ ISP troopers follow the shipment maintaining visual contact at all times.
- ⇒ DNS health physicists follow at a reasonable distance, making frequent visual observations.

## **During the escort phase DNS inspectors contact the IEMA dispatch center to:**

- ⇒ *Report time and checkpoint numbers for the predetermined system of checkpoints.*
- ⇒ *Report shipment status including start and stop times for any scheduled stops.*
- ⇒ *Report any non-routine situation or events.*



# In addition to escorts IEMA/DNS uses Transcom - a secure DOE tracking system - that provides:



- ⇒ real time satellite tracking and shipment status.
- ⇒ On-line messaging
- ⇒ on-line bill of lading information.
- ⇒ emergency contact information.

# Midwestern issues:

- ⇒ NRC regulation of OCRWM's shipments –
  - NWPA limits NRC oversight to package certification and advance notification.
  - DOE's Radioactive Material Transportation Practices Manual and other documents commit to compliance with other NRC regulations (e.g., route approval).
  - NRC safeguards requirements work for private shipments and states are familiar with them. OCRWM should not reinvent the wheel.

# Midwestern issues...cont.

⇒ Section 180(c) of the NWPA –

- OCRWM's approach should give states ample latitude.  
*A one-size fits all approach will not work.*
- The Midwest has proposed an approach that combines a risk-based formula with state needs assessments.
- Several unresolved issues remain, such as the treatment of state fees, the states' need for funding to cover operational activities, and financial assistance in connection with shipments to PFS.

# Midwestern issues...cont.

## ⇒ Route identification

- Routes are the big driver in assessing training needs under Section 180(c).
- OCRWM needs to specify routes in its contracts with carriers.
- The Midwestern regional group will propose to OCRWM an acceptable set of regional routes for consideration.
- Rail routes present a real challenge to OCRWM and the states.

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