



Western Governors' Association Policy Resolution 11-5

Transportation of Radioactive Waste, Radioactive Materials, and Spent Nuclear Fuel

A. **BACKGROUND**

GENERAL PRINCIPLES

1. The Governors have long recognized that large amounts of radioactive waste has and will continue to be transported through Western states both as a result of environmental cleanup of federal sites involved in the development and manufacture of nuclear weapons and for the eventual storage or disposal of spent nuclear fuel used to generate electricity.

There is great uncertainty associated with the nation's plans for ultimate disposition of spent nuclear fuel and high-level waste (HLW). The federal government is responsible for the disposition and storage of this waste under the Nuclear Waste Policy Act (NWPA). Currently more than 65,000 tons of spent fuel is stored at or near nuclear power plants sites and research reactors in 38 states. This amount increases by about 2,000 metric tons each year. Additional spent nuclear fuel and HLW are stored at four U.S. Department of Energy (DOE) sites. The Administration has cancelled the Yucca Mountain project within the Department of Energy, which creates uncertainty around whether the nation will site, license and construct a new repository within the next two decades.

2. The Governors recognize that a comprehensive transportation safety program developed and implemented cooperatively with Western states, such as that used for shipments to the Waste Isolation Pilot Plant (WIPP) in New Mexico for disposal and several other shipping campaigns, provides a template for planning future radioactive material transport campaigns. This would include the transport of commercial spent nuclear fuel as well as highly radioactive defense-generated materials such as vitrified HLW and DOE/commercial Greater-than-Class-C (GTCC) low-level waste. This future planning requires a commitment by the federal government to work cooperatively with the states.
3. To date, the WIPP shipping campaign has demonstrated the safe transportation of transuranic (TRU) waste. In the first twelve years of the shipping campaign, more than 9,600 shipments of TRU waste have travelled over 11.5 million miles for disposal at WIPP. During this time, only a few minor accidents and incidents have occurred while shipments were en route. None have resulted in serious injury or a release of radioactive material into the environment.
4. The success of the WIPP TRU waste transportation campaign is directly attributable to a collaborative partnership and planning effort between the U.S. Department of Energy (DOE) and the Western states to develop and implement the Western Governors' Association (WGA) WIPP Transportation Safety Program. This program consists of stringent standards, principles, and procedures, which have guided and continue to guide every aspect of the transportation safety program, including both accident prevention and

emergency response, with attention also focused on public information, participation and outreach. In addition, the partnership forged between DOE and the Western states has had other benefits, such as fostering public acceptance of the WIPP TRU waste shipping campaign.

5. The analysis by and experience of Western states show that adequate preparations to accommodate large scale shipments require at least three years following the designation of routes and shipping modes and providing technical assistance and funding to corridor states for accident prevention and emergency preparation.
6. The Western Governors have consistently urged the federal government in past years to develop a comprehensive transportation plan for the movement of spent nuclear fuel and high-level waste, including the preparation of contingency plans for events such as the early shipment of waste. Such planning is necessary now given the likely push for consolidating some storage.
7. The Governors are concerned that the Western states have been disproportionately impacted by nuclear waste transportation and disposal activities. As one example, a current environmental study for the disposal of highly radioactive GTCC wastes is evaluating seven sites – six of which are in the West. Since the vast majority of this waste would be generated outside of this region, disposal in the West would significantly add to the transportation risk. Additionally, more than 90 percent of the existing inventory of TRU waste is located in Western states.
8. Malevolent acts against spent fuel shipments are a major technical and societal concern, especially following the September 11, 2001, terrorist attacks on the U.S. In 1979, the U.S. Nuclear Regulatory Commission (NRC) promulgated regulations (10 CFR 73) to safeguard shipments from sabotage and terrorism. The published NRC shipment safeguards regulations have not been significantly revised since the 1980s. Since September 11, 2001, the NRC has revised measures for the safe and secure transportation of spent fuel and other radioactive materials. The NRC has also conducted additional package vulnerability studies for spent fuel transportation containers. However, the results of these studies have not yet been made available to state and local governments.
9. The 2006 National Academy of Sciences National Research Council (NAS) report, “Going the Distance? The Safe Transport of Spent Nuclear Fuel and High-Level Radioactive Waste in the United States”, provides a comprehensive set of findings and recommendation that provide a sound basis for planning future spent fuel and high-level waste shipping campaigns.
10. The 2006 study by the NAS recommended, among other things, an independent examination of the security of spent fuel and HLW shipments be carried out before large quantity shipments to a repository or interim storage site begin. The study also recommended the results of the security studies should be shared with elected officials and the general public.

11. The NRC is proposing to enhance security requirements for the transportation of Radioactive Materials in Quantities of Concern (RAMQC) to ensure that effective security measures are in place to protect these shipments given the post-September 11, 2001 threat environment. RAMQC refers to sixteen types of radioactive materials, including cobalt-60, plutonium, and cesium-137, that are commonly transported in the U.S. for medical, academic, and industrial uses that could pose a threat to people and the environment. NRC's proposed rulemaking in this area applies to its licensees in the U.S., but not to shipments from foreign countries passing through the United States (called "transshipments") to another foreign country, and not to carriers.

B. GOVERNORS' POLICY STATEMENT

GENERAL PRINCIPLES

1. The Governors' objective is the safe and uneventful transport of radioactive, radioactive materials, and spent nuclear fuel which must be paramount in all federal policies regarding such transportation.
2. The Governors support existing federal radioactive waste transport safety requirements designed to protect public health and safety, including the Hazardous Materials Transportation Authorization Act.
3. Early coordination and effective communications with state, tribal, and local governments are essential to the ultimate success of any nuclear waste transportation safety program. The DOE and the NRC need to expand ongoing work with regional cooperative-agreement groups to resolve remaining transportation issues. The Governors support the DOE Office of Environmental Management and its National Transportation Stakeholders Forum as a venue to foster these efforts and encourage the participation of other relevant DOE offices and federal agencies in the Forum.
4. The WIPP Transportation Safety Program Implementation Guide is an excellent model for transportation planning, and a similar guide should be used as a base document for DOE transportation programs to include shipments of spent nuclear fuel, HLW, and/or GTCC waste to any storage and/or disposal facility.
5. If DOE decides to transport spent nuclear fuel, GTCC, TRU, or high-level waste by rail, the federal agencies, working with states to design a transportation system, should receive full commitment and cooperation from the rail industry in implementing best practice transport. Congress or the DOE may need to explicitly address this, in order to provide a firm basis for transportation system design.

TRANSURANIC WASTE AND THE WASTE ISOLATION PILOT PLANT

6. The WGA WIPP Transportation Safety Program is essential to the expeditious cleanup and disposal of TRU waste from the U.S. nuclear weapons complex and the operation of WIPP. The Transportation Safety Program was developed and implemented through a collaborative regional planning process between the Western states and DOE and promotes the safe and uneventful transportation of TRU waste. The Western Governors

expect DOE to fulfill commitments made by the Secretaries of Energy as set forth in Memorandums of Agreement signed in 1995, 2003, and 2009.

7. DOE must continue to comply with both the letter and spirit of all applicable requirements specified in the WIPP Land Withdrawal Act (Public Law 102-579, as amended by P.L. 104-201).
8. The Governors also expect DOE to follow the safety standards, principles, and procedures as contained in the WIPP Transportation Safety Program Implementation Guide, as amended, for the transport of all TRU waste whether to WIPP or to an interim site for storage, characterization and/or repackaging.
9. The Governors expect the Secretary to provide the DOE-Carlsbad Field Office with the resources to implement their charter as the National TRU Waste Program to manage all TRU waste handling and transportation activities.
10. DOE must continue to provide sufficient and timely in-kind, financial, technical and other appropriate assistance to any state or Indian tribe through whose jurisdiction TRU waste will be transported for the purpose of planning, developing and implementing the WGA WIPP Transportation Safety Program.
11. Recognizing the work necessary to prepare a route for shipments, DOE should endeavor to schedule shipments such that once a route is opened from a particular site that it not lapse into a long period of inactivity. If a long period of inactivity becomes necessary, DOE must ensure that states are provided with sufficient resources to maintain basic preparedness along the route and receive adequate notification of intent to resume shipments.

SPENT NUCLEAR FUEL AND HIGH LEVEL WASTE

12. The Governors find that as a result of federal government inaction and delays, and inadequate strategic planning involving stakeholders, a national transportation system for commercial spent nuclear fuel is not presently available. Commercial spent nuclear fuel should remain at the reactor site until:
 - a. A storage/disposal site is operational or reprocessing is deemed viable by an independent review. However, siting of interim storage before deciding on a permanent disposal site(s) signals that interim storage could become a de facto permanent site(s).
 - b. DOE and the nuclear utility companies have worked with the corridor states to implement an acceptable transportation plan for shipping the waste to permanent storage or disposal sites.
 - c. DOE and the nuclear utility companies have put into place adequate infrastructure capacity to handle, store, and dispose of this waste.
 - d. DOE, the U.S. Department of Transportation and the nuclear utility companies have ensured adequate state and local emergency and medical responder training and resources in case of an accident or terrorist attack while shipping this waste.

13. Should any interim storage site begin operations, it will, out of necessity, play a major role in the transportation system for spent nuclear fuel and HLW. Therefore, DOE must include any such sites in its transportation planning. This planning should begin as soon as such site receives a license from the NRC.
14. Any shipment of commercial spent nuclear fuel should follow the framework laid out by the WIPP Transportation Safety Program to prepare for shipments. Specifically, these requirements should:
 - a. Implement policies and procedures to assure that states are fully compensated for all training, preparedness, and response costs associated with spent nuclear fuel and HLW shipments. Assistance to states must not be based on arbitrarily established criteria, but closely linked to state-specific assessments of need;
 - b. Provide for the development and funding of state and tribal plans that identify the minimum elements necessary to ensure safe routine transportation and procedures for dealing with emergency response situations, the current capabilities along each corridor, the activities needed to achieve minimum elements, and performance measures to evaluate programs implemented under the plan.
 - c. Provide annual implementation grants to states and tribes to ensure adequate funding levels and program capabilities among impacted states and tribes.
 - d. Provide flexibility in the expenditure of funds by states and tribes pursuant to the provisions of the state or tribal plans.
 - e. Because of the current uncertainties in the transportation system (e.g., routing, mode, intermodal transfers, schedules, security measures), DOE should refrain from finalizing NWPA Section 180(c) and other funding allocations for annual implementation grants. Once states and tribes have assessed their needs through planning grants provided by DOE, DOE should then consult with states and tribes to determine how to best allocate funds to states and tribes effectively, efficiently and equitably.
15. In order to develop a safe and effective system for accepting commercial spent nuclear fuel and HLW at any facility the following additional policy commitments from a federal agency or any entity provided authority from the federal government must be met:
 - a. Fix the shipping origins and destination points as early as possible;
 - b. Ensure the availability of rail and truck shipping casks;
 - c. Conduct full-scale testing of casks to be used to transport spent nuclear fuel and HLW;
 - d. Prepare a comprehensive transportation plan that includes the analysis of all needed transport-safety activities in a single document;
 - e. Develop responsible criteria for selecting shipping routes;
 - f. Develop a sound methodology for evaluating optional mixes of routes and transportation modes; and
 - g. Conduct a thorough review of the risks of terrorism and sabotage against spent fuel and HLW shipments and work with state governments to assure that adequate safeguards are in place prior to shipments occurring.
16. The Governors believe it is the responsibility of the generators of spent nuclear fuel and HLW and the federal government, not the states and tribes, to pay for all costs associated

with assuring safe transportation, responding effectively to accidents and emergencies that will inevitably occur, and otherwise assuring public health and safety. This includes costs associated with route evaluations and inspecting and escorting shipments

17. In any shipping campaign for spent nuclear fuel or HLW, a federal agency or any entity provided authority from the federal government cannot privatize or delegate to a contractor key transportation responsibilities, including but not limited to:
 - a. Interaction with states and tribes;
 - b. Selection of transportation modes and routes;
 - c. Preparation of environmental impact statements addressing transportation concerns;
 - d. Selection of transportation casks;
 - e. Working with states and tribes to develop acceptable transportation communication, training and security plans; and
 - f. Decisions regarding the provision of adequate technical assistance and funding to states and tribes to prepare for shipments.
18. The Governors acknowledge the work the NRC has done since 2001 to ensure the safety and security of spent fuel shipments. The Governors encourage the NRC to continually re-evaluate the safety and security of these shipments to ensure protective measures stay consistent with the latest intelligence on terrorist threats. These assessments should fully address the consequences of attacks against all components of spent fuel and high-level waste handling and transport systems including:
 - a. attacks against transportation infrastructure, such as loading and offloading equipment, at points of departure and receipt;
 - b. the theft of a shipment, use of high energy explosives against a shipment cask; and
 - c. direct attacks upon a shipment cask using antitank missiles or other armament that could cause a breach of the container
19. NRC should update and revise 10 CFR 73 based on the findings of these assessments and studies to ensure that the regulations assure adequate protection for spent fuel shipments from sabotage and terrorism.
20. The NAS 2006 spent fuel transportation study recognized the conflict between the open sharing of information on spent fuel and HLW shipments, and the security of transportation programs. The study noted that this conflict is impeding effective risk communication, and may reduce public acceptance of shipments. NRC should strengthen its efforts to share information with state and local governments regarding spent fuel shipment vulnerabilities and consequences. State and local governments need this information to make appropriate safety, security and emergency response preparations for spent fuel and HLW shipments. The Governors recognize this sharing of information must be conducted within the framework of preventing the release of sensitive or classified information to individuals without a need to know.

21. Spent nuclear fuel and HLW shippers should address acts of sabotage and terrorism in their NEPA documents, and should incorporate terrorism/sabotage risk management and countermeasures in all transportation plans, protocols, and practices relating to these shipments including liability for costs and damages resulting from terrorism/sabotage attacks against these shipments. The shippers should share security-related information with state and local governments to the maximum extent practicable.
22. The Governors endorse the findings and recommendation of the National Academy of Sciences National Research Council report, “Going the Distance: The Safe Transport of Spent Nuclear Fuel and High-Level Radioactive Waste Transportation in the United States.”

GREATER THAN CLASS C WASTE

23. Any site selection process for disposal of GTCC waste should include an assessment of transportation impacts, including the costs of transportation packaging, operations and emergency response. Given substantial costs required for providing rail access, these should also be factored into cost estimates as appropriate. DOE should also assess the handling and packaging costs at origin sites, and discuss who is expected to pay these costs.
24. Any transportation program for GTCC waste or GTCC-like material should be modeled after the WIPP transportation safety program, which is purposefully extra-regulatory in nature and was developed in cooperation with the states. Additionally, it is expected that any shipments be supported by financial assistance to support states in transportation vehicle inspections, shipment tracking, emergency response training and in carrying out shipment safety protocols.

RADIOACTIVE MATERIALS IN QUANTITIES OF CONCERN

25. All shipments of RAMQC passing through the U.S. should be required to meet the same safety and security requirements, regardless of whether these shipments are domestic or transshipments. The NRC, U.S. Department of Homeland Security and U.S. Department of Transportation (DOT) should cooperate to ensure that this is implemented in practice.
26. RAMQC regulations should fall under NRC’s authority to promote safety and security rather than under its authority to promote common defense and security. Doing so would allow states to participate in enforcing enhanced security regulations, including state inspections of licensees and enforcement of enhanced safety and security requirements.

C. GOVERNORS' MANAGEMENT DIRECTIVES

1. This policy resolution shall be specifically conveyed to the President of the United States, the Secretaries of Energy, Transportation, and Homeland Security, the Administrator of the Environmental Protection Agency (EPA), the chairman of the NRC, members of the Blue Ribbon Commission on America’s Nuclear Future, the Chairman of the Board and the Chief Executive Officer of Private Fuels Storage, LLC, and the appropriate members and committees of Congress.

2. The WGA staff, in cooperation with the Western Interstate Energy Board, shall monitor implementation of this resolution and inform the Governors of progress towards meeting the Governors' policy objectives.
3. In accordance with the policy established by this resolution, the WGA and its WIPP Transportation Technical Advisory Group are directed to work cooperatively with the Congress, DOE, DOT, NRC, and EPA to ensure the safe and uneventful transport of TRU waste to WIPP.
4. The Western Governors' Association (WGA) shall post this resolution to its web site to be referenced and transmitted as necessary.

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