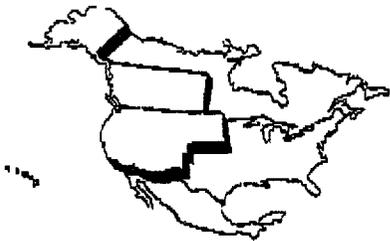


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# Western Interstate Energy Board/ WINB



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Mr. David L. Meyer  
 Rules and Directive Branch  
 Mail Stop T-6D-59  
 U.S. Nuclear Regulatory Commission  
 Washington, D.C.  
 20555-0001

John Nunley  
 Chairman

Douglas C. Larson  
 Executive Director

Dear Mr. Meyer:

Attached are comments of the The Western Interstate Energy Board's (WIEB) High-Level Radioactive Waste Committee concerning the *Draft Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah* (DEIS). (NUREG-1714. June, 2000). WIEB, which is composed of energy advisors to the governors of twelve western states, created the High-Level Radioactive Waste Committee 17 years ago in recognition of the possibility that spent nuclear fuel and high-level radioactive waste (SNF/HLW) might be stored or disposed of at a facility in the West. The Committee consists of nuclear waste transportation experts from state energy, public safety, and environmental agencies from Arizona, California, Colorado, Idaho, Nebraska, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

In its past work with the Department of Energy on the Nuclear Waste Policy Act transportation program, the Committee and the Western Governors' Association have identified key elements that are necessary for the safe and uneventful shipment of spent nuclear fuel. These include evaluation of alternative shipping modes and routes and assessment and mitigation of risks to corridor communities.

The Committee appreciates having the opportunity to review the DEIS. However, western states are extremely concerned with the lack of in-depth transportation analysis contained in this document. Of greatest concern to western states are: 1) the DEIS fails to establish any credible criteria for the selection of shipping routes and transportation modes; 2) in view of the fact that there is currently no licensed federal repository for the permanent disposal of spent nuclear fuel and high-level radioactive waste, the DEIS fails

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to appropriately explain why the "no-action" alternative was not selected as the preferred alternative; and 3) the DEIS fails to adequately address terrorism and sabotage threats as well as full scale transportation cask testing concerns.

The Committee asks that the NRC staff revise the draft EIS to address these shortcomings. The Committee also asks the NRC staff to: 1) acknowledge that western states acting through the Western Governors' Association have established a clear policy that "a private interim storage facility shall not be located within the geographic boundaries of a western state without the written consent of the governor," (WGA Resolution 00-031); and 2) consider the fact that the no action alternative is the most sensible and logical option offered by the DEIS at this time.

Additionally, the DEIS clearly needs to provide more analysis and information to support a variety of its assumptions. In its present form, the document does not adequately address western stakeholder concerns with regard to ensuring the safe and uneventful transportation of spent nuclear fuel and high-level radioactive waste.

Sincerely,



Captain Allan Turner, Co-chair  
WIEB High-Level Radioactive Waste Committee

**Comments of the High-Level Radioactive Waste Committee of the Western Interstate Energy Board (WIEB) on the Draft Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah (DEIS)**

Following are comments of the Western Interstate Energy Board's High-Level Radioactive Waste Committee (the Committee) on the *Draft Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah (DEIS)*. (NUREG-1714. June, 2000)

For the reasons stated below, the current DEIS fails to meet the minimum requirements as outlined by western states through past Committee comments to the federal government and through resolutions of the Western Governors' Association. The Committee does not believe that the DEIS, as currently written, is sufficient to satisfy the requirements of the National Environmental Policy Act. The Committee therefore requests that the DEIS be revised to reflect the concerns of western states, and that the revised DEIS be released for further comment and stakeholder review.

These comments build upon the June 19, 1998 comments submitted to the Nuclear Regulatory Commission by the Committee on the scope of the Private Fuel Storage, L.L.C. (PFS) Environmental Impact Statement. In its 1998 comments, the Committee provided a listing of the minimum elements which western states believe must be included in the PFS DEIS. Those minimum elements include:

- An analysis of alternative transportation modes and routes. This analysis of routes should include not only the traditional assessment of distance, population exposure and time in transit, but should also examine factors which could (a) threaten the integrity of the cask, (b) pose problems in the recovery from an accident which did not result in a release of radioactive materials, and (c) cause delays in transit or impede interstate commerce. The analysis of modes and routes should take into account recent work by the U.S. Department of Transportation under the Hazardous Materials Transportation Uniform Safety Act.<sup>1</sup>

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<sup>1</sup> In the Nuclear Waste Policy Act program, DOE has committed to conduct such an analysis as part of a repository EIS. In Volume III of the Yucca Mountain Environmental Assessment, which was conducted in 1986, DOE stated that, "[t]he DOE believes that the general methods and national average data used are adequate for this stage of the repository-siting process. Route-specific analyses and an evaluation of the impacts on host States and States along transportation corridors will be included in the environmental impact statement. The route-specific analyses to be performed in the future will proceed in the following sequence: (1) define important parameters; (2) gather data; (3) develop models as required; (4) perform analysis; (5) consider mitigating measures; (6) report results." At a minimum, the PFS EIS should incorporate the same analysis as was committed to by DOE for NWPA shipments in the Yucca Mountain Environmental Assessment.

- An analysis of alternative operating protocols. For example, the EIS should consider the impacts of using special train protocols (dedicated trains traveling a maximum of 35 mph with one train stopping when another train passes).
- An analysis of the level of emergency preparedness along the likely shipping routes.
- An analysis of the impact of alternative shipping casks on shipment numbers and safety.
- An analysis of requisite coordination and communications with DOE's Civilian Radioactive Waste Management Program and with affected states and tribes.
- An analysis of the impacts from moving the spent fuel after its storage period (believed to be 20 years, or possibly 40 years, under the contract) either back to its origin or to a repository. Such an analysis would include: a) the effects of fuel decay and degradation; and b) an examination of where the fuel would be shipped if, after 20-40 years, the reactor site where the fuel originated has been decommissioned.
- An analysis comparing the impacts of extended at-reactor SNF storage versus transport to a centralized interim SNF storage facility.

The DEIS fails to meet these minimum requirements as outlined by western states.

### **Analysis of Transportation Routes**

As the Committee has stated in the past, the unprecedented volume of spent fuel to be shipped under the PFS proposal (40,000 metric tons initially with possibly another 40,000 metric tons later) is of a similar magnitude as proposed shipments under the NWPA (70,000 metric tons). In both cases, the magnitude of shipments resulting from the operation of the proposed storage facility will be many times greater than has previously been experienced in the history of nuclear waste transportation in the United States. We also note that, even under the DEIS assumption that shipments would travel by rail, a number of reactors likely to ship under the PFS proposal do not have rail access and may require truck shipment or intermodal transfer. If the SNF is shipped by truck, the number of individual shipments would increase substantially beyond PFS's projections. A shipping campaign of such magnitude demands that the DEIS establish responsible criteria for selecting shipping routes and that a sound methodology for evaluating optional mixes of routes and transportation modes be developed.

The DEIS fails to establish any credible criteria for the selection of shipping routes and transportation modes. Instead, the DEIS states only that "[f]or the purposes of this study, a representative route was chosen for analysis rather than analyzing all routes between every

reactor and the Skull Valley site." (DEIS, page C-2) The DEIS further explains that this route was selected "...because it is one of the most distant reactors from the proposed PFSF." (DEIS, page C-2), and because "[u]sing this cross-country route in the transportation analysis results in a conservative estimate of the national transportation impacts of the proposed action" (DEIS, page 5-39).

Such an explanation represents an inadequate level of analysis especially in view of the magnitude, scope and duration of the nuclear waste shipping campaign in question under the PFS proposal. The DEIS appears to assume that distance and time in transit are the only important factors in determining the safety of a transportation route and that using the longest transportation route necessarily provides a bounding of the highest transportation and radiological health risks which could potentially threaten the public from the proposed PFS shipping campaign. While distance and time in transit are important factors to consider, they do not take into account numerous additional factors which western states believe are critical to determining the safest route for spent nuclear fuel shipments. Such factors include hazards such as elevated roadways, bridges, tunnels, and steep grades which could threaten the integrity of a transportation cask and/or cask transporter in the event of an incident or accident, or the existence of rivers or other bodies of water near transportation routes which could pose serious difficulties in the recovery of a spent fuel cask. The "representative" route used in the DEIS does not take into account any such factors in its analysis, and is therefore an ineffective means of bounding the potential impacts of shipping spent nuclear fuel under the PFS proposal.

Western states believe that reliance on current highway routing regulations and historical rail routing practices to determine spent nuclear fuel transportation routes will jeopardize the health and safety of its citizens and would promote higher costs and reduced efficiency. Current Department of Transportation highway routing regulations, for example, would allow the use of virtually the entire Interstate highway system for nuclear waste shipments. Especially when shipments cover long distances, as would be the case with shipments to the PFS facility, multiple combinations of Interstate highways would be allowable under the DOT regulations. Forcing states and tribes to prepare for nuclear waste shipments along multiple routes would be extremely costly and inefficient and could hinder the effectiveness of emergency response or evacuation efforts in the event of a transportation accident.

With regard to rail routing, the historical route selection practices of railroads are primarily based on commercial needs and not necessarily on safety concerns. For example, in order to maximize revenues, it is standard industry practice for an originating railroad to maximize the distance a shipment will travel on its system before transferring the shipment to the next railroad. Western states do not believe that reliance on such practices will necessarily result in the safest routes being selected.

Nor does the DEIS include any analysis that provides a sound methodology for evaluating optional mixes of routes (and transportation modes). The Committee's approach to selecting shipping routes for shipments under the Nuclear Waste Policy Act (NWPA) is based on three goals:

1. Promote public acceptance of the selected route by eliminating the carrier's role in selecting routes and substituting defensible route-specific analyses and appropriate mitigation measures;
2. Allow resources (inspections, emergency response, etc.) to be focused by limiting shipments to as few routes as possible; and
3. Give states and communities sufficient time to prepare for shipments by eliminating the uncertainty regarding which routes will be used well before shipments begin.

On a related note, the importance of reducing the total number of routes which can be utilized for shipments under the Nuclear Waste Policy Act has also been recognized by the Committee's counterparts from across the country, including the Council of State Governments' Midwestern High-Level Radioactive Waste Committee and Northeastern High-Level Radioactive Waste Transportation Task Force; and the Southern States Energy Board's Advisory Committee on Radioactive Materials Transportation and Transuranic Waste Transportation Working Group. Together these groups include radioactive waste transportation experts representing more than forty states.

The regional groups sent a consensus letter in 1998 to the Department of Energy stating that "the multiplicity of available routes, coupled with the scarcity of resources for training state and local personnel, makes it imperative that the Department adopt a more coordinated approach to selecting the routes for these shipments." The letter also outlined a routing approach that is aimed at achieving three primary goals, including: 1) making the federal government (the shipper), rather than a private carrier, ultimately accountable for route selection; 2) permitting the most efficient use of federal and state training resources by reducing the total number of routes; and 3) providing states and communities sufficient time to prepare for shipments by identifying national routes well before shipments begin. The letter is available on the Internet at <http://www.westgov.org/wieb/reports/consens.htm>.

Because the size and scope of the proposed PFS shipping campaign is similar to that of a potential NWPA campaign, the Committee therefore asks that the DEIS be amended to: 1) include the development of a sound methodology for evaluating optional mixes of routes (and transportation modes); 2) provide route-specific analyses and a specific evaluation of the impacts on states along transportation corridors; and 3) identify preferred routes from each potential reactor shipping site to the proposed PFS facility. The Committee recommends that the NRC work together with western states and tribes to develop an acceptable methodology for evaluating routes.

### **Analysis of Transportation Modes**

The draft EIS also fails to appropriately analyze and select a preferred transportation mode for NWPA shipments. The DEIS states that "[b]ecause of the size and weight of the SNF shipping casks included in the PFS license application, shipment by rail is the only viable cross-country transportation option. Therefore, the focus of the cross-country transportation analysis in this chapter is on rail transportation." (DEIS, page 5-1) While the Committee agrees that there

may be several advantages to shipping spent nuclear fuel by rail (including reducing the overall number of shipments), this level of modal analysis in the DEIS is inadequate to ensure that other viable transportation alternatives have been properly considered.

For example, the DEIS fails to examine the fact that rail transportation accidents could occur at higher speeds than spent nuclear fuel truck accidents and that rail accidents involve physical forces many times greater than those involved in a truck accident. Each of these factors could pose significantly higher risks of breaching a spent nuclear fuel transportation cask and should therefore be properly examined in the DEIS. Modal selection also fundamentally affects the choice of routes which will be used and populations affected. For instance, in many cases the West's major urban areas grew around rail centers. If rail is selected as the mode of choice, it is likely that thousands of nuclear waste shipments will pass through some of the region's most heavily populated areas, with limited alternatives for avoiding these areas.

Nor does the EIS adequately address the details of how rail transportation of spent nuclear fuel to the PFS facility would be conducted. In particular, the DEIS does not adequately address how environmental and human health impacts would be altered by the use of dedicated versus general service trains to ship spent fuel to the proposed PFS facility.

The Committee therefore requests that the DEIS be revised to reflect and address the above concerns.

### No Action Alternative

The Committee does not believe that adequate explanation or analysis is provided in the DEIS for failing to choose the "no action alternative" as the preferred alternative of the DEIS. For instance, the DEIS states that the no-action alternative would allow for only two options with regard to the continued storage of spent nuclear fuel: 1) expand or construct new at-reactor storage, or 2) shut down reactors when storage capacity is reached. (DEIS, page 6-43) However, other options exist for some licensees, including the storage of excess spent nuclear fuel at other reactor sites. Such an option offers the advantage of shipping the spent fuel to a reactor site which occupies a more central location than Utah for the spent fuel to be shipped under the PFS proposal. A centrally located site would also greatly reduce potential transportation, environmental and human health impacts of the spent fuel shipments in question. The availability of such options for the PFS participants should be fully evaluated in the DEIS.

With regard to the use of at-reactor storage, in testimony submitted on February 10, 1999 before the U.S. House of Representatives Commerce Committee's Subcommittee on Energy and Power, NRC Chairman Dr. Shirley Ann Jackson stated that such storage continues to be a viable option for the nation's nuclear utilities. According to Jackson, "[a]s an interim measure, the NRC considers available technologies for wet and dry storage of spent fuel at reactor sites to be safe, but we view dry storage as the preferred method for supplementary storage of spent fuel at operating plants. Continued at-reactor storage, for an interim period, will continue to protect public health and safety." As the DEIS itself points out, the NRC has examined the environmental impacts of at-reactor spent nuclear fuel storage and found that "[t]he Commission

has made a general determination that, if necessary, spent fuel generated in any reactor can be stored **without significant environmental impacts** [*emphasis added*] for at least 30 years beyond the licensed life for operation of that reactor at on-site or off-site ISFIs." (DEIS, page 6-44) In fact in Chapter 6 the DEIS clearly finds that use of expanded on-site storage facilities would have no significant impacts on human health, ecological resources, cultural resources, air quality, water resources, noise, scenic qualities, or recreation.

Western states fail to understand the logic behind preferring shipments to occur to an interim storage facility when there is no operating repository and when there are numerous significant concerns which could prevent the Yucca Mountain site from ever being licensed to store the nation's high-level nuclear waste. If the proposed repository at Yucca Mountain does not open, then presumably the spent fuel shipped to the proposed PFS facility would need to be shipped back through corridor communities to another site designated by the SNF owner or to the originating reactor site. If by that time reactor owners have decommissioned their reactors and have released their sites for other uses, there could very well be no place to safely store the spent nuclear fuel at the proposed PFS facility at the end of its maximum 40 year license term. Even if the reactor sites were able to reclaim their spent fuel at the end of the 40 year term, this would require a second shipping campaign which would inflict a second set of unnecessary risks involving transportation accidents and potential radiological exposures to western citizens.

In view of the fact that a permanent nuclear waste repository is not currently available and that the NRC has already determined spent nuclear fuel can be stored safely at current reactor sites, western states find no compelling argument in the DEIS for selecting any alternative other than the "no action alternative." Considering also the fact that western governors are opposed to the siting of any private interim nuclear waste storage facility in a state without the consent of the host state's governor, the Committee believes that significant additional analysis and explanation is required in the DEIS to justify why the no action alternative was not selected as the preferred alternative.<sup>2</sup>

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<sup>2</sup> Western Governors' Association Resolution 00-031 states that, "A private interim storage facility shall not be located within the geographic boundaries of a western state without the written consent of the governor." The resolution also states that commercial spent nuclear fuel should remain at the reactor site until:

- a. A permanent storage/disposal site is operational.
- 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 the resources in case of an accident or mishap while shipping this waste.

The resolution is available on the Internet at: <http://www.westgov.org/wga/policy/00/00031.htm>

## **Terrorism/Sabotage**

The DEIS cites the security requirements currently found in 10 CFR 73.37 and finds that, "[t]he extensive security measures required by the NRC regulations make sabotage events extremely unlikely," and that "...if a sabotage event that results in releases did occur, it is the judgement of the NRC staff that the consequences would not be unacceptable large." (DEIS, page 5-53) However, as stated in Resolution 98-008 of the Western Governors' Association, "...the increasing lethality of terrorist attacks in the United States such as the World Trade Center and Oklahoma City bombings, argue for a new, more comprehensive assessment of the risk of terrorism and sabotage against repository shipments." The resolution also finds that changes in spent nuclear fuel shipping cask designs, and improvements in the capabilities of weapons available to potential adversaries render less meaningful the NRC's previous assessments of terrorism risks to spent nuclear fuel shipments.

Western states therefore find that the analysis of terrorism/sabotage threats in the DEIS is inadequate, and that:

1) The NRC should reexamine the issue of terrorism and sabotage against spent nuclear fuel and high-level radioactive waste shipments, in order to determine the adequacy of the current physical protection regulations under 10 CFR 73, and in order to assist in the preparation of a legally sufficient environmental impact statement as part of the NRC licensing process for a geologic repository or an interim storage facility.

2) The NRC should conduct a comprehensive assessment of the consequences of attacks that have the potential for radiological sabotage, including attacks against transportation infrastructure used by nuclear waste shipments, attacks involving capture of a nuclear waste shipment and use of high energy explosives against the cask, and direct attacks upon a nuclear waste shipping cask using antitank missiles.

3) The NRC should conduct the comprehensive reassessment of terrorism/sabotage consequences in a forum conducive to meaningful participation by all affected stakeholders, including the creation of a stakeholder advisory group to assist the NRC in this task, and publish a full report on all unclassified findings of its consequence reassessment.

The text of WGA Resolution 98-008 is available on the Internet at:  
<http://www.westgov.org/wga/policy/98008.htm> .

### **Full-Scale Cask Testing**

Western governors have repeatedly called on the federal government to conduct full-scale destructive testing of spent nuclear fuel and high-level radioactive waste shipping casks. (See WGA Resolution 99-014 at <http://www.westgov.org/wga/policy/99/99014.htm>). The DEIS, however, states that, "[t]ransportation of nuclear materials, including SNF is regulated by both the U.S. Department of Transportation (DOT) and the NRC. The safety of SNF shipments with respect to radiological impacts, especially in the event of a transportation accident, is ensured, in large measure, by the casks that contain the SNF. These casks must meet performance requirements specified in 10 CFR Part 71 and their design must be certified by the NRC."

Western states are not assured that the performance requirements provided in 10 CFR Part 71 are adequate to ensure that the casks which would be used to transport spent fuel to the proposed PFS facility will prevent the release of radionuclides that could threaten the health and safety of western citizens in the event of a serious transportation accident. The Committee therefore requests the NRC to require that full scale cask testing be conducted and to include the results of such testing in a revised PFS DEIS.

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## COMMENTS:

Attached are comments on the Draft Private Fuel Storage EIS.