

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:)	Docket No. 72-22-ISFSI
)	
PRIVATE FUEL STORAGE, LLC)	ASLBP No. 97-732-02-ISFSI
(Independent Spent Fuel)	
Storage Installation))	October 4, 1999

STATE OF UTAH'S REQUEST FOR ADMISSION OF
LATE-FILED AMENDED UTAH CONTENTION V

Introduction

Pursuant to 10 C.F.R. § 2.714, the State of Utah hereby seeks the admission of late-filed Amended Contention V.¹ The amended contention seeks reconsideration of a 1998 ruling in which the Licensing Board denied admission of the issue of the adequacy of Table S-4 of 10 C.F.R. Part 51, as relied on by the Applicant in its Environmental Report ("ER"), to support the evaluation of the regional impacts of spent fuel transportation, including impacts of a severe accident in Salt Lake City.

Private Fuel Storage (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, aff'd on other grounds, CLI-98-13, 48 NRC 26 (1998).

The State seeks reconsideration of the ruling, in light of recent determinations by the Commission in NUREG-1437, Addendum 1, Generic Environmental Impact

¹ This Amended Contention V is supported by the attached Declaration of Dr. Marvin Resnikoff.

Statement for License Renewal of Nuclear Plants at 3, A1-8 (August 1999) ("Final GEIS"). In particular, the Commission found that Table S-4 is inadequate to address the impacts of the convergence of many shipments of spent fuel on a Nevada repository, thus implicitly questioning the adequacy of Table S-4 to address the impacts of the convergence of fuel on Salt Lake City and the PFS facility. *Id.* at 3. In addition, the Commission specifically stated that the impacts of spent fuel transportation through Salt Lake City are to be considered in the environmental review for the Private Fuel Storage facility. *Id.* at A1-8.

As demonstrated below, this amended contention is admissible, and also meets the Commission's standard for late filing of contentions.

AMENDED CONTENTION V: The ER for the PFS facility fails to give adequate consideration to the transportation-related environmental impacts of the proposed independent spent fuel storage installation ("ISFSI") in that it relies on Table S-4, which neglects to consider the impacts of converging many spent fuel shipments on the Wasatch Front region, including the impact of a severe and foreseeable accident on Salt Lake City and its environments, and including economic as well as physical impacts. Therefore, the ER is inadequate to satisfy 10 C.F.R. § 72.108. The impacts on the Wasatch Front must also be considered cumulatively with the impacts on high population areas in Nevada, such as Las Vegas.

BASIS: The ER for the PFS facility addresses the transportation-related impacts of the facility in Sections 4.7 and 5.2. According to the ER, the environmental impacts of spent fuel transportation are addressed in 10 C.F.R. § 51.52 and in the accompanying Summary Table S-4. ER at 4.7-1 and 5.2-1. The ER uses the numerical values in Table S-4 for its evaluation of the transportation-related environmental impacts of the proposed ISFSI, claiming that these values are conservative with respect to the scope of activities of the PFS facility. *Id.* Table S-4 relies in turn on WASH-1238, a transportation risk study performed in 1972 by the NRC's predecessor agency, the Atomic Energy Commission.

In Contention V, the State challenged the Applicant's reliance on Table S-4 in a number of respects. State of Utah's Contentions on the Construction and Operating License Application by Private Fuel Storage, L.L.C. for an Independent Spent Fuel Storage Facility at 144-161 (November 23, 1997) ("State's Contentions"). As reworded by the Licensing Board in LBP-98-7, subpart 4.g. of the contention states that:

4. New information shows that Table S-4 grossly underestimates transportation impacts in that:

g. WASH-1238 does not address specific regional characteristics of impacts on the environment from transportation and therefore is inadequate to satisfy 10 C.F.R. § 72.108.

47 NRC at 200. The basis for this part of the contention also stated that:

WASH-1238 does not separately estimate the consequences of an accident in a specific location; or even limit the analysis to an urban or rural area. It is a generic calculation. (p.3) Thus, it is inadequate to satisfy the requirement of 10

CFR § 72.108, that the EIS must take regional characteristics into account. For example, it fails to estimate the consequences of a severe rail accident in Salt Lake City, a high population area.

State's Contentions at 158-159.

The Applicant opposed the admission of the contention, on the ground that the Commission's generic evaluation of the environmental impacts of spent fuel transportation "is equally applicable regardless of destination." Applicant's Answer to Petitioner's Contentions at 298 (December 24, 1997). The NRC Staff also argued that "to the extent that an applicant's anticipated transportation of spent fuel falls within the parameters of Table S-4, the applicant may reasonably cite that Table's generic assessment of environmental impacts." NRC Staff's Response to Contentions Filed by (1) the State of Utah, (2) the Skull Valley Band of Goshute Indians, (3) Ohngo Gaudadeh Devia, (4) Castle Rock Land and Livestock L.C., et al., and (5) the Confederated Tribes of the Goshute Reservation and David Pete at 60 (December 24, 1997).

The Licensing Board rejected paragraph 4 and several other paragraphs of Contention V, ruling that they:

fail to establish with specificity any genuine dispute; impermissibly challenge the applicable Commission regulations or rulemaking-associated generic determinations, including 10 C.F.R. §§ 51.52, 72.108, and "Environmental Survey of Transportation of Radioactive Materials to and from Nuclear Power Plants," WASH-1238 (Dec. 1972), as supplemented, NUREG-75/038 (Supp. 1 Apr. 1975); lack adequate factual or expert opinion support; and/or fail properly to challenge the PFS application.

LBP-98-7, 47 NRC at 201. The Board did not explain how it applied this ruling to the specific claims of paragraph 4.g.

Recently, the NRC issued an amendment to 10 C.F.R. Part 51 which affirms the adequacy of Table S-4 for the consideration of environmental impacts of transportation of spent fuel in license renewal cases, with respect to shipments to and from a licensed repository in Nevada. In the proposed rule, the Commission proposed to expand the generic findings that are currently codified in Part 51 to include the environmental impacts of transporting spent fuel to the proposed repository at Yucca Mountain, Nevada, and account for the environmental impacts of transportation attributable to the use of higher enriched fuel and higher burnup during the renewal term. 64 Fed. Reg. 9884 (1999). The proposed rulemaking was accompanied by a Draft Addendum 1 to the GEIS for license renewal, NUREG-1437.²

The Draft GEIS acknowledged that Table S-4 "does not explicitly take into account the cumulative environmental impacts of the convergence of high-level waste shipments on a proposed repository at Yucca Mountain," and stated that the Addendum to NUREG-1437 "provides that explicit consideration." *Id.* at 1. Thus, the Draft GEIS included an analysis of the impacts of transportation through Nevada, including impacts on the highly populated Las Vegas area. Using the RADTRAN program, this analysis included an evaluation of the risks associated with severe

²No date of issuance is given on the cover of the Draft GEIS.

radiological accident involving the release of radioactivity from a small truck cask containing 4 PWR fuel assemblies. This truck cask is much smaller and lighter than the proposed HI STAR and TRANSTOR train casks.

On April 27, 1999, the State of Utah submitted comments on the rulemaking and the Draft GEIS. Comments by the State of Utah on Proposed Rulemaking: Changes to Requirements for Environmental Review for Renewal of Nuclear Power Plant Operating Licenses. The State commented, among other things, that because the spent fuel may be shipped through Utah to and from the PFS facility, the cumulative impacts analysis in the GEIS should include consideration of spent fuel shipments through the Wasatch Front, including Salt Lake City and its environs:

A study similar to the one conducted for Las Vegas and Clark County must be conducted for the cumulative impacts along the Wasatch Front. The State should be given the opportunity to review and comment upon a draft of the proposed study. Our request is based on the following considerations. First, the cumulative impacts will be comparable and in addition to those in Las Vegas. Similar to Las Vegas, the Wasatch Front will be burdened by the cumulative transportation impacts of transporting irradiated fuel. Fuel in large transportation casks, primarily from east coast reactor sites, will be transported on routes that run along the Wasatch Front. These routes will merge as they enter and pass through the heart of Salt Lake City on their way to Skull Valley, 45 miles west of Salt Lake City.

The proposed Private Fuel Storage facility would accommodate 40,000 tons of commercial irradiated fuel, or ½ the nation's commercial fuel. But unlike the Yucca Mountain waste repository, the PFS facility is intended to be temporary. That is, irradiated fuel would be transported into and out of the PFS facility. Consequently, irradiated fuel will be transported a second time along the Wasatch Front as the fuel makes its way from PFS to Yucca Mountain. Thus, the impact on the Wasatch Front, including Salt lake City, is comparable to that on Las Vegas. But more importantly, the likely environmental impacts are

in addition to those estimated in NUREG-1437, since any shipments into and out of the Skull Valley, Utah dry storage facility will also go through Las Vegas. Further, at some later time, depending on the national picture, PFS may apply for a license amendment to accept more than 40,000 tons of irradiated fuel. The impacts may be further exacerbated by recent Union Pacific rail routing congestion and scheduling problems¹; irradiated fuel may sit in railyards or sidings in the metropolitan Salt Lake City area and along the side of Interstate 80 before being transported to the PFS intermodal transfer facility near Rowley Junction, Utah. In addition, queuing and on-site storage will likely occur at the intermodal transfer facility before casks are loaded onto heavy-haul road trailers and transported 24 miles to the PFS facility.

The State opposes the licensing of the PFS facility, and is challenging the PFS license before the NRC's Licensing Board. Nevertheless, it must be recognized that there is a serious possibility that the PFS facility will be licensed without an adequate transportation analysis. Therefore, transportation of up to half the nation's spent fuel to the PFS Utah facility must be included in any environmental analysis of the overall impacts of spent fuel transportation.

The full environmental impact of this Utah storage operation must be considered by the Commission. If the Commission fails to consider the cumulative impacts through Salt Lake City, each utility applying for a reactor license extension, would individually have to reconsider the applicability of Table S-4 to its continued operation and the cumulative impact on Salt Lake City. This is exactly the process the Commission was hoping to avoid by the introduction of Table S-4 and consideration of the cumulative impacts on Las Vegas. Further, if Yucca Mountain experiences additional delays or does not go forward, it is even more likely that the Skull Valley storage facility will proceed.

To bound the transportation impacts of reactor license extension, Table S-4 should estimate occupational and public exposures and economic costs under the following likely transportation scenario:

- (i) Loading and sealing irradiated fuel canisters containing 24 or 32 PWR or 68 BWR fuel assemblies at reactor sites and loading sealed canisters into a transportation overpack;
- (ii) At reactors without sufficient crane capacity², trans-shipping individual fuel assemblies to another reactor fuel pool, followed by step (i);
- (iii) For utilities without rail access, transportation by heavy-haul truck to the

- nearest railhead and transfer to a rail car;
- (iv) Transportation by rail along the Wasatch Front to the intermodal transfer facility located west of Interstate 80 and Rowley Junction;
 - (v) Intermodal transfer from a railcar to a heavy-haul trailer and transportation by heavy-haul truck 24 miles along Skull Valley road to the PFS facility;
 - (vi) When the Yucca Mountain repository is available, step (v). would be reversed,
 - (vii) Transportation by rail to Las Vegas and transfer to a heavy-haul trailer, and
 - (viii) Transportation by heavy-haul truck to the Yucca Mountain repository.

While NRC contractors suspected that the public and occupational exposures would be greater if all irradiated fuel were shipped by truck, this may, in fact, not be the case. Besides, the all-truck mode is not the likely scenario. As seen in the RADTRAN printout³, the greatest exposures are to the truck crew, not the public, under incident-free conditions. It is quite likely, due to the amount of handling and the slow movement of heavy-haul trucks, that incident-free exposures will be much greater under the rail transport scenario. This is a matter that should be decided by direct calculation, not by mere speculation. A rail scenario likely involves heavy-haul transport at each end of irradiated fuel movement both to and out of Utah. The slow heavy-haul speeds increase the dose to the crew and the public. The intermodal transfer operations increase the dose to handlers at each end. If fuel is stored in Utah, two additional intermodal transfers take place, and two additional trips by heavy-haul truck. Consequently, this rulemaking is deficient because it relies on the original Table S-4 and WASH-1238 analyses, which envisioned single fuel assembly truck transportation to a fuel reprocessing plant and do not account for up to four heavy-haul trips and four intermodal transfers, which are associated with the proposed PFS facility.

¹ In addition, in the past year, two multi-car freight train derailments on Union Pacific tracks occurred along the transportation routes that would be used to carry spent fuel to the proposed PFS facility. One derailment occurred at Woods Cross, the other at Echo Junction.

² At reactors with bays too small to accommodate Maxson-type flatbed railroad cars, casks would have to be moved outside the reactor bays to the flatbed cars.

³NUREG-1437, p. 39.

Id. at 2-4.

In issuing the Final GEIS, the Commission decided to focus only on impacts of fuel shipments in Nevada, and rejected the State of Utah's request that it consider impacts in Utah. The Commission explained its determination as follows:

The State of Utah maintains that a study similar to the one conducted for Las Vegas and Clark County must be conducted for the cumulative impacts along the Wasatch Front that would originate from the proposed Private Fuel Storage Facility to be located at Skull Valley, Utah. Such an analysis is beyond the scope of this generic rulemaking because the Commission directed that cumulative impacts attributed to transportation be analyzed only in the vicinity of Yucca Mountain. However, the NRC is currently reviewing a site-specific application for construction and operation of the proposed Private Fuel Storage Facility at Skull Valley in a separate regulatory action. A site-specific study of the cumulative impacts of transportation is part of that review. The study will be reported in a draft Environmental Impact Statement to be published for public comment. Its availability will be noticed in the Federal Register.

NUREG-1437 at A1-8 (emphasis added).

It is now clear from NUREG-1437 that the Commission does not consider Table S-4 to constitute an adequate analysis of spent fuel transportation impacts involving convergence of a large number of shipments on a single site; and that it contemplates that these issues will be addressed in the instant licensing proceeding. In effect, after having been sent by the Board to a generic proceeding, the State has now been returned to the Board for resolution of this issue. Accordingly, the State is seeking reconsideration of the Licensing Board's previous decision rejecting the contention. The State's comments on the proposed GEIS, cited above, provide

additional basis for this contention.³

In addition, because the Commission has now made it clear that it does not intend to address the cumulative impacts of spent fuel shipments through high population zones in both Utah and Nevada, they should be addressed in the ER for the PFS facility. Even if the NRC does not conclude that the impacts of shipments through either area are significant, they must be considered together to determine whether the combined impacts may be mitigated by selecting other alternatives, such as leaving spent fuel onsite until a permanent repository is available. This consideration of impacts must be thorough, including both primary impacts and secondary impacts such as economic effects.

Satisfaction of Late Filed Factors:

The State meets the 10 CFR § 2.714(a) late filed factors for amending its contention.

Good Cause: First, the State has good cause for the late filing. The State attempted to raise its concern regarding the adequacy of Table S-4 to address regional impacts when it submitted its original contentions. The Board rejected these claims, in

³ The State wishes to emphasize that by focusing on this narrow aspect of Table S-4, it does not intend in any way to imply that any of its other concerns regarding the inadequacy of Table S-4 are now resolved as a result of Addendum 1 to NUREG-1437. The State continues to believe that Table S-4 is grossly inadequate to support the NEPA review for the PFS facility.

part because it viewed them as impermissible challenges to the Commission's generic determinations. When the Commission re-opened the generic proceeding, the State sought to raise its concerns there. However, the Commission has now determined that these issues are more appropriately addressed in the environmental review for the PFS facility licensing proceeding. As a practical matter, the Commission has bounced the State back into the Licensing Board's court. If the Licensing Board does not take up the issues raised by the State, they will not be addressed at all, even though the Commission has recognized that Table S-4 is not adequate to address the impacts of large spent fuel shipments focused on a single area.

The Federal Register notice regarding the publication of NUREG-1437 was issued on September 3, 1999, at 64 Fed. Reg. 48,496.⁴ This request is being submitted within 30 days of the Federal Register notice. Thirty days is a reasonable amount of time, especially given the State's other obligations in this proceeding, in which to review the materials, consult with the State's expert, and prepare this request.

Development of a Sound Record: The State will assist in the development of sound record regarding the issues it has raised in this proceeding. The State will present testimony by Dr. Marvin Resnikoff, who has extensive experience in the areas of spent nuclear fuel transportation, storage, and disposal, and is qualified to testify on all of the issues raised in Amended Contention V. Dr. Resnikoff's resume was

⁴A copy of the Federal Register notice was served on the Board and parties under cover of a September 9, 1999, letter from NRC Staff counsel Sherwin E. Turk.

submitted as an exhibit to the State's Contentions.

Availability of Other Means for Protecting The State's Interests: There is no other forum in which the State can raise its concerns regarding the inadequacy of Table S-4 to address the environmental impacts of spent fuel transportation to and from the PFS facility. The Commission has also given the clear instruction that the issues raised by the State regarding Table S-4's consideration of impacts on the Wasatch Front are to be considered in the environmental review for this proceeding.

Representation by Another Party: The State's interests in this matter are not represented by any other party.

Broadening of Issues or Delay of the Proceeding: Litigation of this issue may somewhat broaden the proceeding, but is unlikely to delay it. NEPA issues are included in Group III, which is not scheduled for hearing until sometime in 2001. Thus, the addition of this issue to Group III is not likely to delay that process. Even if the proceeding is broadened or delayed somewhat by the litigation of Amended Contention V, such an effect is warranted given the environmental significance of the issues being raised.

Conclusion

For the foregoing reasons, Amended Contention V is both admissible and meets the Commission's standard for late filed contentions. Accordingly, it should be admitted.

DATED this 4th day of October, 1999.

Respectfully submitted,

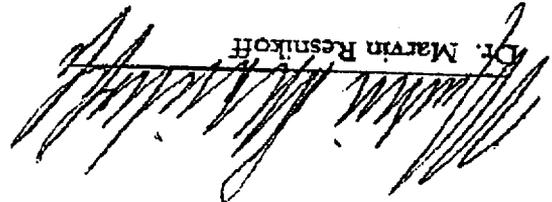


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III

October 4, 1999

Dr. Marvin Resnikoff



CERTIFICATE OF SERVICE

I hereby certify that copies of STATE OF UTAH'S REQUEST FOR ADMISSION OF LATE-FILED AMENDED UTAH CONTENTION V, NOTICE OF WITHDRAWAL, and NOTICE OF CHANGE OF ADDRESS were served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 4th day of October, 1999:

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