

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of:	)	
	)	Docket No. 72-22-ISFSI
PRIVATE FUEL STORAGE, LLC	)	
(Independent Spent Fuel	)	ASLBP No. 97-732-02-ISFSI
Storage Installation)	)	November 12, 2004

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**STATE OF UTAH'S REQUEST FOR ADMISSION OF LATE-FILED  
CONTENTION UTAH UU (Ramifications of DOE's Refusal  
to Accept Fuel in Welded Canisters from the PFS Site)  
OR IN THE ALTERNATIVE  
PETITION FOR RULEMAKING**

The Director of the Office of National Transportation, Office of Civilian Radioactive Waste Management, U.S. Department of Energy ("DOE"), recently announced that DOE was only obligated to accept bare fuel or fuel packaged in bolted canisters. *See* Exhibits 1 and 2. The exclusive cask that forms the licensing basis of the PFS application is the HI-STORM 100 (Rev. 0) storage cask and the welded multi-purpose canister containing spent nuclear fuel rods. DOE's announcement disrupts the unity of the federal government's integrated high level nuclear waste management system and threatens to disrupt the long term success of the nuclear waste program in this country. DOE's announcement also vitiates the basis, in part, which underpins the final environmental impact statement for the PFS site (FEIS) and undermines PFS's financial plan now that DOE will not collect any welded canisters from the PFS site. This contention is supported by the Declaration of Dr. Dianne R. Nielson, attached hereto as Exhibit 1.

The State meets the late-filed factors and, for the reasons stated below, the State

requests the Board to admit Contention Utah UU. If, however, the Board finds that Contention Utah UU challenges NRC regulations, then the State requests the contention be treated as a petition for rulemaking.

**CONTENTION UTAH UU – Ramifications of DOE’s Refusal to Accept Fuel in Welded Canisters from the PFS Site**

PFS’s license application and NRC’s final environmental impact statement fail to describe or analyze the effect of DOE’s refusal to collect fuel in welded canisters from the PFS site and the concomitant potential to create a dysfunctional national waste management system, and added risks and costs from multiple and unnecessary fuel shipments back and forth across the country. In addition, absent a condition that fuel will only be accepted at PFS’s Skull Valley site if it can be shipped directly from PFS to a permanent repository, PFS must provide reasonable assurance that each and every fuel owner will accept the fuel back for repackaging, and PFS or the fuel owner will place, up-front in an escrow account, sufficient funds to cover the cost of fuel shipment back to the reactor or other facility for repackaging.

**BASIS:**

There is no doubt that PFS will accept fuel for storage that is contained exclusively in welded canisters. As the Commission explained, at the reactor site

[t]he canister lid and a redundant “closure lid” are welded to the canister, which is then drained, dried, and filled with helium. The drain and fill ports are then welded shut, sealing the canister. The sealed canister is then loaded from the transfer cask into a shipping cask and the shipping cask closure is bolted in place. Finally, the canister and shipping cask are then loaded onto the shipment vehicle for rail shipment to the PFS facility.

CLI-04-22, slip op. at 7 (*footnotes omitted*). *See also* PFS LA (Rev. 12) at 1-3.

The Commission has clearly stated that PFS's license application is premised on the proposition that PFS will "completely seal spent fuel inside a canister that is never opened from the time it leaves the power plant until it is deposited into a permanent repository . . ." CLI-04-22, slip op. at 6. The PFS site has no handling capabilities for fuel repackaging, such as a hot cell, and none is required under NRC regulations. *Id.* at 8. The consequence of PFS storing fuel in welded canisters, and having no ability to open the welded canisters or repack the spent fuel rods, is that DOE will not collect fuel from the PFS site. Exh. 1, Nielson Dec. ¶¶ 4, 5. This situation is antipodal to the fundamental licensing basis for the PFS ISFSI – that fuel will be shipped directly from the PFS site to the Yucca Mountain permanent repository. As a consequence, it undermines the cost-benefit analysis in the FEIS and calls for a re-examination of PFS's financial assurance plan.

The costs and benefits of licensing the PFS facility rely on the basic assumption that fuel stored at PFS will eventually be shipped directly from PFS to a permanent repository. This basic assumption, as discussed in PFS's Environmental Report and NRC's FEIS, is destroyed by DOE's latest announcement that fuel stored at PFS in welded canisters will not be accepted at the permanent repository unless repackaged in bolted canisters. *Id.* One of the direct benefits PFS claims for its centralized ISFSI is "to allow for the standardized packaging and staging of spent fuel in a uniform manner prior to its shipment to a federal spent fuel storage facility and/or repository." ER (Rev. 13) at 7.2-1. Similarly, the FEIS claims the dual purpose canister system at PFS would be compatible with DOE's plans for placement in a permanent repository. FEIS at 2-26. Furthermore, PFS claims that if its

centralized ISFSI is not built, “lack of standardization will increase the complexity and cost of preparing and shipping spent fuel to a federal facility and increase the decommissioning burden for utilities with onsite ISFSIs.” ER (Rev. 0) at 8.1-3. Now, PFS and the NRC can no longer claim the foregoing as direct “benefits” from licensing the PFS centralized ISFSI.

Chapter 8 of the FEIS looks at the societal costs and benefits of the proposed action.

In the words of the FEIS:

“Benefits” are estimated as the costs to society that can be avoided by use of the proposed PFS [facility]. These “avoided costs” are estimated by subtracting the costs of storing SNF at the proposed PFS [facility] from the costs of continuing to store SNF at reactor sites (until it can be sent to a permanent repository).

FEIS at 8-2; *see also* CLI-04-22, slip op. at 18-19. The entire framework of FEIS Chapter 8 – costing out the utilities’ avoided costs from storing fuel at PFS, devising fuel throughputs at PFS, and estimating a repository opening date – is premised on the assumption that fuel will be shipped from PFS directly to a permanent repository. Obviously, there is a diminution in “avoided costs” if each and every customer who stores fuel at the PFS site must accept fuel back for repackaging before another national transshipment to the proposed Yucca Mountain permanent repository. In addition, this Licensing Board’s ruling in Utah SS that “the ‘real benefit of the project’ is to act as an ‘insurance policy’ in case the opening of the permanent, geologic repository suffers additional delays”<sup>1</sup> is called into doubt. The “real benefit” evaporates if reactor sites are required to maintain their spent fuel pools in order to repackage fuel rods from welded to bolted canisters.

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<sup>1</sup>As described by the Commission in CLI-04-22, slip op. at 22 (*citing* to Tr. 9214).

The companion to regression in the benefits of PFS's centralized ISFSI storing fuel in welded canisters is a rise in environmental and societal costs from licensing the PFS facility. One significant environmental cost, and unanalyzed risk, is in opening the welded canisters (MPC) and repackaging the fuel after it has been shipped back to a utility from the PFS site. Removal of the fuel from a welded MPC is a no easy task. It likely involves either cutting through the MPC canister and lid plug or somehow removing two sets of welds around the perimeter of the MPC lid. Nielson Dec. ¶ 9. The MPC lid is extremely heavy; it accounts for about 40% (32,000 lbs) of the total weight of a loaded MPC (80,000 lbs). Exhibit 3 (PFS SAR Table 4.2-1 (Rev. 7)); Exhibit 4 (MPC bill of materials). The lid drops 10 inches down into the cavity of the MPC and rests on lifting lugs. Id.; Exhibit 5 (Figs. 1.2.5, 1.2.6 HI-STORM FSAR). The top of the lid is chamfered and a 3/4" thick groove weld between the MPC lid and the MPC shell initially seals the MPC lid to the MPC shell. Exhibit 6 (Drawing 1396, Rev. 12, sheet 1 of 6; Drawing 1402, Rev. 13, sheet 1 of 6; Holtec slide presentation to the NRC, January 9, 2003). A stainless steel closure ring is then welded around the circumference of the lid. Exhibit 7 (HI-STORM FSAR 1.2-4); *see also* Nielson Dec. ¶ 8. If this detrimental cost of storing fuel at the PFS site is not evaluated in the PFS FEIS, it will go unanalyzed, and the other FEIS cooperating agencies, policy makers, and the general public will be ignorant of this environmental consequence of licensing the PFS facility.

Another environmental cost is the re-shipment of up to 4,000 storage casks at the PFS site back to the fuel owner or reactor site (located primarily in the eastern United States). For outbound shipments, the FEIS for the PFS proposed action only evaluates the

impacts of transporting fuel from PFS to the Utah-Nevada border, on the assumption that DOE's Yucca Mountain EIS addresses the national and regional transportation impact of building and operating the permanent repository. PFS FEIS at 5-35. Nothing in the Yucca Mountain EIS assumes fuel will be shipped back and forth across the country. Again, if this detrimental cost of storing fuel at the PFS site is not evaluated in the PFS FEIS, it will go unanalyzed, and the other FEIS cooperating agencies, policy makers, and the general public will be ignorant of this environmental consequence of licensing the PFS facility.

Another serious ramification of NRC proceeding to license the PFS ISFSI without considering the implications its independent actions have on the national waste program is that NRC is essentially preempting DOE's statutory authority to set the policy and standards of shipments to Yucca Mountain. Shipments to PFS are scheduled to occur well ahead of those to Yucca Mountain. PFS could begin shipping fuel in late 2006 or early in 2007. Nielson Dec. ¶ 6; *see also* Exhibit 8. Shipments to DOE, at best, will not occur until 2010. By its licensing action, NRC is either pre-determining waste packaging for Yucca Mountain and thereby preempting DOE's statutory authority,<sup>2</sup> or alternatively creating disruption and added expense to the national waste management and disposal system. Certainly NRC has the authority to license the permanent repository. *See e.g.*, 10 CFR § 63.3. However, it is the applicant, DOE, who proposes the design of the facility, including waste packaging, to the NRC as part of that licensing process. *See e.g.*, 10 CFR § 63.21.

The mere fact that DOE's plans lag behind those of PFS is no reason for NRC to

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<sup>2</sup>*See* Nuclear Waste Policy Act, Subchapter I, 42 USC § 10121, *et seq.*

turn a blind eye to the cross integration of its independent actions with the long term success of the national nuclear waste program.<sup>3</sup> NRC has not sought out DOE's comments on the PFS FEIS even though NEPA demands "the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved." 42 USC 4332(C)(v). DOE is not a cooperating agency with NRC and is not listed as a commenter on the PFS EIS. FEIS App. H. The State recognizes that NEPA is subject to the rule of reason but in fulfilling its NEPA responsibilities NRC should always consider congressional intent and views as expressed by statute, and to a lesser extent, the needs and goals of the applicant.<sup>4</sup> The Findings and Purpose of the NWPA leave no doubt that Congress enacted a comprehensive scheme for the disposal of spent nuclear fuel and high level nuclear waste. In particular, Congress realized that: (a) the accumulation of spent nuclear fuel is a national problem (42 USC § 10131(a)(2)); (b) federal efforts to devise a permanent disposal solution dating back to the 1950s have been inadequate (*id.* (a)(3)); (c) the federal government has the responsibility to provide for the permanent disposal of spent nuclear fuel (*id.* (a)(4)); (d) spent nuclear fuel has become a major subject of public concern (*id.* (a)(7)); (e) the NWPA was enacted to establish a schedule for the siting, construction, and operation of a permanent repository (*id.*

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<sup>3</sup>For example, in conducting its NEPA analysis, NRC may give considerable weight to action taken by another competent and responsible government authority in enforcing an environmental statute. Public Service Co. of Oklahoma (Black Fox Station, Units 1 & 2), LBP-78-28, 8 NRC 281, 282 (1978).

<sup>4</sup>Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 196 (D.C. Cir.), *cert. denied* 502 U.S. 994 (1991).

(b)(1)); and (f) the NWPA was also enacted to define the Federal policy for the disposal of spent nuclear fuel (id. (b)(2)). Now that the State has raised this issue, to fulfill its NEPA responsibilities, the NRC should consider whether its independent action thwarts the policies and goals Congress established in the NWPA.

Turning to financial assurance, neither PFS's service contracts nor any proposed NRC license condition specify that fuel may only be accepted at the PFS Skull Valley site if it can be shipped directly from PFS to a permanent repository. To the contrary, PFS is marketing its facility as one that will prepare fuel for outbound shipment to DOE. Exhibit 8 (PFS advertisement). Now, however, no fuel can be shipped directly from PFS to DOE. While the PFS FEIS may have a statement that the fuel owner will be responsible to take fuel back once the useful life of the PFS facility is over,<sup>5</sup> now, in each and every case, the fuel will need to be transferred back to the fuel owner from the PFS site. The reasonable assurance the Commission found that PFS provided in its financial plan did not involve an evaluation of operating revenue required to ensure that all casks will be shipped back to the fuel owner. Section 72.22(e) states: "the applicant will have the necessary funds available to cover the . . . [e]stimated operating costs over the planned life of the ISFSI." Here, PFS must have operating revenue to cover the costs of shipping each and every cask back to the reactor site. As each cask is shipped off-site, there is a diminution in PFS's operating revenue. To ensure that fuel will not be abandoned at the PFS site, PFS or the fuel owner should place, up-front in an escrow account, sufficient funds to cover the cost of fuel

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<sup>5</sup>FEIS at xxxii.

shipment back to the reactor or other facility for repackaging. Such a requirement is reasonable and parallels a similar NRC requirement for decontamination of storage casks. *Cf* 10 CFR § 72.30.

Before addressing the late filed factors, the State addresses an issue PFS and the NRC Staff are certain to raise: whether Contention Utah UU challenges NRC regulations. First, this is not a challenge to the Waste Confidence Rule. 10 CFR § 51.23; *see also* 10 CFR §§ 51.61, 51.80, 51.97. The Waste Confidence Rule is specific to the Commission's generic determination predicting when a permanent repository will be available for the disposal of spent nuclear fuel and its generic determination that no discussion of the environmental effects of spent fuel storage in an ISFSI beyond the term of the license is required in the Applicant's Environmental Report or the Staff's draft or final environmental impact statement. *Id.* As a corollary to the Waste Confidence Rule, NRC's decommissioning regulations only require the Applicant to provide financial assurance, prior to licensing, that "decommissioning will be carried out after the removal of spent fuel" from the site. 10 CFR § 72.22(e)(3).

But the availability of a repository and PFS's decommissioning plan are not the subject of Contention Utah UU. The State's complaint is specific to the unanalyzed condition that fuel stored at the PFS site in welded canisters will be shipped across the country three times, instead of once, and the lack of assurance that PFS will have sufficient operating revenue or commitments from its customers to pay for and accept the fuel for repackaging.

Generally, the waste confidence provisions "were designed to limit the scope of the

environmental inquiry to exclude looking at long-term effects as if there were no prospect for permanent disposal of waste.” CLI-04-22, slip op. at 27. Those provision, however, “were not designed to prevent the NRC from considering the very benefits for which a facility license is sought.” *Id.* As the Commission explained:

[S]ection 51.23(b) states that ‘no discussion of any environmental impact ... is **required,**’ but it does not expressly prohibit such a discussion. Due to the size of the facility for which PFS seeks a license, and the practical reality of filling up and emptying an ISFSI, this is a unique situation where both the impacts on the physical environment and the potential economic benefits should be considered for the entire period that the fuel could be onsite – that is, longer than the 20-year license term.

*Id.* at 27 (*emphasis in original*). While the discussion above was in terms of whether the Commission may extend its NEPA discussion beyond a 20 year license term, the quoted language clearly shows PFS to be a unique facility and if potential economic benefits should be considered, so too should their costs.

Second, Utah’s call for funds to be placed in an escrow account to ensure cask removal does not challenge NRC’s financial assurance regulations. Section 72.22(e) is worded in broad general terms of an applicant providing “reasonable assurance” that “it will have the necessary funds available” to cover “estimated operating costs.” When it is now known that fuel will not be shipped directly from PFS to Yucca Mountain, escrowing funds fits within the scope of the regulations. However, should the Board find that Contention Utah UU challenges any NRC regulation, the State requests that this contention be treated as a petition for rulemaking.

## **LATE FILED FACTORS**

The State meets the 10 CFR § 2.714(a) late filed factors for Contention Utah UU.

**Good Cause:** On October 14, 2004, Dr. Dianne Nielson, Executive Director, Utah Department of Environmental Quality first learned that DOE would not accept fuel in welded canisters from the PFS site. *See* Exhibit 1, Nielson Dec. ¶¶ 4-5. Dr. Nielson attended a meeting of the United States Nuclear Waste Technical Review Board and learned from a DOE official that DOE would not accept fuel in welded canisters from the PFS site. *See also* Exhibit 9 (comments by Bob Halstead, Nevada Nuclear Waste Project Office, to the NWTRB, at Tr. 435-37, October 14, 2004). An article appeared in the Salt Lake Tribune to the same effect. Exhibit 2. Prior to this time, the State had no knowledge of DOE's non-acceptance of fuel from the PFS site. Accordingly, the State is timely in filing this contention.

The issues raised in Contention Utah UU have implications for both the national waste management program and for the Commission's findings specific to the PFS license application. If the State does not raised this issue with the Board, there is the potential that the Commission will make a decision that creates a dysfunctional national waste management system by failing to assess the effects of its actions with those of DOE. The Board and the Commission must take responsibility for a licensing decision that allows shipment of up to 4,000 casks of spent nuclear fuel in welded canisters to the PFS site that DOE may refuse to accept. Some years hence, the fuel will have to be shipped back to a reactor site, or elsewhere, to be suitably repackaged for acceptance by DOE. This new development by DOE also undercuts NRC's final EIS. Even though these issues have arisen late in the PFS proceeding, their significance raises national concerns. Accordingly, the importance of the issues and the State's recent discovery that DOE will not accept

welded canisters from the PFS site constitutes good cause for the State now raising this issue.

**Development of a Sound Record:** While DOE has not formally developed its plans for waste acceptance at the permanent repository, the stringent NRC contention-filing requirements demand that the State raise this issue now. As the recent Utah K and other hearings indicate, the State has proven that it can assist in developing a sound record. The State is prepared to offer testimony consistent with the contention and its supporting declaration and to acquire any needed expertise should the contention be admitted. Nielson Dec. ¶ 9.

**Availability of Other Means for Protecting the State's Interests:** Fuel shipments to the PFS site (beginning in late 2006 or early 2007) are well ahead of DOE's schedule for shipments to a permanent repository (2010 at the earliest). Therefore, NRC's decision in the PFS proceeding will have profound implications on the State's interest in PFS not becoming a de facto permanent repository. At a minimum, the State has an interest in minimizing the risks to its citizens from the duplicative and unnecessary transportation of spent nuclear fuel to PFS facility, reshipment back to a reactor site for repackaging, and shipment yet again through Utah en route to Yucca Mountain. If the State cannot raise these legitimate State interests in the PFS proceeding, the issue will go unaddressed. Furthermore, while the Commission has accepted PFS's financial assurance, left unaddressed are the owners' responsibility and the adequacy of PFS's revenue stream to address the certainty that fuel will not be shipped directly from the PFS site to Yucca Mountain; it will have to be shipped back to the reactor site (if available) for repackaging and reshipment.

**Representation by Another Party:** The State's position will not be represented by any other party because the State is the only intervenor remaining before the Licensing Board.

**Broadening of Issues or Delay of the Proceeding:** This contention will broaden and may delay the proceeding. However, the importance of a unified national waste policy and NRC's accountability to ensure that its actions do not undermine the national waste management system are too important to sweep aside Utah's concerns on procedural grounds.

## **CONCLUSION**

For the foregoing reasons, Contention Utah UU meets the Commission's standard for late filed contentions and should be admitted. Should the Board reject Contention Utah UU as a challenge to NRC regulations, the State requests the contention and supporting documentation be treated as a petition for rulemaking.

DATED this 12<sup>th</sup> day of November, 2004.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S REQUEST FOR ADMISSION OF LATE-FILED CONTENTION UTAH UU (Ramifications of DOE's Refusal to Accept Fuel in Welded Canisters from the PFS Site) OR IN THE ALTERNATIVE PETITION FOR RULEMAKING was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 12<sup>th</sup> day of November, 2004:

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