RAS 4078

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 (Independent Spent Fuel Storage Installation)	)	ASLBP No. 97-732-02-ISFSI
	)	February 11, 2002

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

Pursuant to 10 CFR § 2.714(b)(2)(iii), the State of Utah hereby seeks the admission of late-filed Contention Utah SS. In June 2000 the U.S. Nuclear Regulatory Commission ("NRC") and other co-operating agencies issued a Draft Environmental Impact Statement ("DEIS")[1] for the Private Fuel Storage, LLC ("PFS") project. Utah timely submitted comments on the DEIS, including comments relating to the period of time on which a cost-benefit analysis must be based; the necessity of conducting a breakeven analysis; and the date on which ISFSI operations will commence.[2] The Final Environmental Impact Statement, NUREG1714 ("FEIS") was issued in December 2001. Contention Utah SS challenges the revised cost-benefit analysis for the Applicant's project that is presented for the first time in

[1]NUREG-714, Draft Environmental Impact Statement for the Construction and Operation of the 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, December 2001.

[2]*See* Comments Submitted by the State of Utah, dated September 20, 2000, on the DEIS; and Comments Submitted by the State of Utah, September 27, 2000 on the NRC Staff's DEIS Cost Benefit Analysis in Light of Staff's Reliance on ERI'S Mathematical Modeling of the Market for the Proposed PFS Facility.

Template = SECY-041

SECY-02

Chapter 8 of the FEIS in response to Utah's comments on the DEIS.

The contention is supported by the Declaration of Dr. Michael S. Sheehan, attached hereto as Exhibit 1.

CONTENTION UTAH SS - Revised Cost-Benefit Analysis:

The Final Environmental Impact Statement, NUREG1714, fails to properly analyze the costs and benefits of the Applicant's proposed ISFSI project based on three new assumptions presented for the first time in Chapter 8 of the FEIS and therefore does not comply with National Environmental Policy Act ("NEPA") or 10 CFR § 51.91

BASIS:

NRC regulations, 10 CFR § 51.91, states in relevant part:

> (c) The final environmental impact statement will state how the alternatives considered in it and decisions based on it will or will not achieve the requirements of section 101 and 102(1) of NEPA and of any other relevant and applicable environmental laws and policies.
>
> (d) The final environmental impact statement will be a final analysis and a final recommendation on the action to be taken.

The FEIS does not comply with NEPA or 10 CFR § 51.91 in the following respects.

20 Year License Period. The first new assumption used in the FEIS in the revised cost-benefit analysis is that 'the benefits and cost of the proposed action" must be "based on a 20-year license term." FEIS, App. G-424. This is an appropriate and legally necessary assumption given that NRC's regulations provide that "the license term for an ISFSI must not exceed 20 years from the date of issuance." 10 CFR § 72.42(a). Unfortunately, while the revised cost-benefit analysis properly restricts the receipt of spent nuclear fuel ("SNF") at the Applicant's

proposed facility to the license term of 20 years, it quite improperly assumes that SNF may nonetheless be stored at the facility for 40 years. Exhibit 1, Sheehan Dec ¶ 7. Thus, while the FEIS states that the analysis is to be "based on a 20-year license term," it assumes, for storage purposes, that the license will be renewed for another 20 years, contrary to the NRC's regulations. *See* FEIS, App. G-424. This improper assumption of a 40 year storage period--in which the benefits from the proposed project can accumulate twice as long as under a 20-year license--obviously skews the FEIS's analysis heavily in favor of the proposed project and makes the analysis worthless to the NRC as a true reflection of the costs and benefits of the Applicant 's proposal. Exhibit 1, Sheehan Dec ¶ 31-34. Put simply, for the NRC to make a proper decision about whether to issue the 20-year license that the Applicant seeks, it must know the true costs and benefits of a 20-year project, not a project involving a 40-year storage period. The NRC must know whether the project can stand, from a cost-benefit perspective, on a 20-year footing.

For the cost-benefit analysis to be done correctly, it must be based on a storage period that is consistent with the 20-year license term. Utah understands that even with a 20-year license, SNF may be stored at the Applicant's project for some small period of time beyond 20 years while it is being removed as part of the decommissioning process. However, the FEIS itself states that "the regulations require completion of decommissioning, under most circumstances, within 24

months of NRC approval of the final decommissioning plan." FEIS, App. G.[3]

When the cost-benefit analysis is limited, as it must be, to a 20-year license period plus a two year period for decommissioning, "[t]he result is that all four of the scenarios presented in the FEIS revised Chapter 8, Tables 8.2 and 8.3, involving throughputs of 27,000 MTU and 38,000 MTU are infeasible." Exhibit 1, Sheehan Dec. ¶ 31. *See also* id. ¶¶ 10-16 and 21-28. As Dr. Sheehan explains further

> While the data is not available to show exactly what the correct numbers should be, the analysis presented in Attachment, Tables MFS-1 through MFS-8 indicates that were the analysis underlying FEIS Table 8.2 corrected, the net benefit figures shown in that table would be very substantially lower. Moreover, given the sensitivity of those very figures to throughput changes, as noted on FEIS p. 8-6, some or all of those figures would be substantially negative.

Id. ¶. 27.

Utah raised the issue of the proper period of time on which to base the cost-benefit analysis in its comments on the DEIS. *See* Exhibit 2, Letter from Denise Chancellor, State of Utah, to David L. Meyer, NRC with attached non-proprietary copy of State's proprietary comments submitted on September 27, 2000. As summarized in Appendix G to the FEIS, Utah pointed out that the "DEIS fails to reflect that the application is for a 20-year license because it incorrectly uses a 40-year accumulation of net benefits." FEIS, App. G-422. The DEIS improperly assumed, in calculating the costs and benefits of the proposed project, that the

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[3]The decommissioning period, of whatever length, is not the same as an extra storage period for the licensee. On a practical level, a significant portion of the decommissioning period must be devoted to decontamination of the facility, an activity that can only take place after all of the SNF has been removed.

20-year license PFS is seeking would be renewed for an additional 20 year term, thus giving PFS's proposed project a 40 year life. Utah urged that the analysis be "revised to reflect the fact that the action being considered here is for a 20-year license," adding "that there is the possibility of a subsequent 20-year license, but that [the subsequent] license is not at issue here, nor is it automatic." Id. Utah asserted that "any subsequent license issuance would depend on data not available in this proceeding," and that NRC could not therefore base its analysis of the proposed project's costs and benefits on an assumption that any such license would be automatically renewed for an additional 20 years. Id.

In response to Utah's comments, the FEIS states that the "NRC revised the benefits and costs analysis in Chapter 8 of the FEIS in response to the comment. The analysis more conservatively now presents the costs associated with a single, 20-year operating license period." Id. The FEIS further states that "the NRC staff reanalyzed the benefits and cost of the proposed action based on a 20-year license term;" that "the benefits and costs analysis is based on the receipt of SNF at the proposed PFSF only during an initial 20-year license term;" and that "the NRC revised the scenarios analyzed in Chapter 8 to include the consideration of a 20-year license for the facility as suggested by the comment." FEIS, App. G-424; FEIS at 8-1; FEIS, App. G-425.

Having agreed that the cost-benefit analysis should be "based on a 20-year license term," the NRC staff nonetheless failed to revise its analysis accordingly, thus providing the NRC with an inaccurate (and highly favorable) picture of the costs and

benefits of what the Applicant is proposing to do. As such, the State requests the Board to find that to comply with NEPA and 10 CFR § 51.91, the FEIS analysis must be redone based on a storage assumption of 20-years plus a two year (or otherwise reasonable) decommissioning period.

Breakeven Analysis. The second new assumption used in the FEIS in the revised cost-benefit analysis that is violative of NEPA and 10 CFR § 51.91 is the "breakeven capacity" of the proposed project. FEIS, App. G-425. That breakeven analysis, which is an important part of the cost-benefit analysis and which is presented in the FEIS for the first time, is flawed for the same reason as the cost-benefit analysis itself–it assumes a 40 year storage period. Exhibit 1, Sheehan Dec. ¶¶ 29-30. Accordingly, the breakeven analysis must also be redone based on a storage assumption of 20 years plus a two year (or otherwise reasonable) decommissioning period in order for the NRC to have an accurate picture of the costs and benefits of the Applicant's project.

As summarized in Appendix G to the FEIS, Utah, in commenting on the DEIS, stated that "Chapter 8 of the DEIS eliminates consideration of the small throughput scenario for the proposed PFSF," and that "the small throughput scenario ... is one of the applicant's most likely scenarios, and it is arbitrary and capricious to delete it from consideration." FEIS, App. G-424 and 425. Utah urged "that the DEIS be rewritten to include an analysis of a small throughput scenario based on the volume capacity under the proposed license condition." Id.

In response to Utah's comments, the FEIS states that "the NRC revised

Chapter 8 of this FEIS to present the 'breakeven' capacity of the proposed PFSF, in lieu of presenting or revisiting the small throughput scenario." FEIS, App. G-425. The FEIS states further that "the differences between the current analysis and the DEIS analysis result primarily from" ... "5. The inclusion of a 'break-even' analysis for the capacity and throughput of the proposed facility." FEIS, at 8-1 and 8-2. The FEIS then uses the breakeven analysis to determine the point at which "the proposed facility would not be economically cost beneficial from an overall industry perspective (*i.e.*, the proposed PFSF would result in greater cost than the no action alternative.)" FEIS at 8-11.

Having recognized the importance of a breakeven analysis, the NRC staff nonetheless failed to perform it in a way that correctly identifies the true breakeven point. As explained in Exhibit 1, the true breakeven point is considerably different when the proper storage period for a 20-year license is used. Exhibit 1, Sheehan Dec. ¶¶ 29-30. As a result, the Board must find that to comply with NEPA and 10 CFR § 51.91 the analysis be redone based on a storage period of 20 years plus a two year (or otherwise reasonable) decommissioning period.

Start of Operations. The third new assumption used in the FEIS in the revised cost-benefit analysis that is violative of NEPA and 10 CFR § 51.91 is the date on which commercial operations will start at the Applicant's proposed project. The NRC staff used a date–2003–that is plainly in error and that produces an inaccurate (and favorable) picture of the benefits of the proposed project. Exhibit 1, Sheehan Dec. ¶ 28. Again, to comply with NEPA and 10 CFR § 51.91, the Board

should find that the analysis be redone using a realistic date for the start of operations.

As summarized in Appendix G to the FEIS, Utah, in commenting on the DEIS, stated "that the DEIS did not analyze the potential for delay [in the start of operations]. If the proposed PFSF is delayed by even two years, the commenter asserts that the net benefit of the proposed PFSF would be greatly reduced." FEIS, App. G-423.

In response to Utah's comments, the FEIS states that "the NRC staff agrees that a two-year delay in the proposed PFSF would potentially reduce its net benefits. The NRC updated the analysis of net benefits calculated in Section 8 of this FEIS to reflect that the proposed PFSF would begin operations in 2003, instead of 2002 (as assumed in the analyses presented in section 8 of the DEIS). The effect of this assumption is implicit in the benefits and costs that are presented in the Tables 8.2 and 8.3 in this FEIS." FEIS, App. G-424. Further, the FEIS states that "the differences between the current analysis and the DEIS analysis result primarily from" ... "3. moving the planned start of operation for the proposed PFSF from 2002 to the middle of 2003." FEIS at 8-1.

Having recognized the significance of the operations start date in calculating the costs and benefits of the proposed project, the NRC staff nonetheless used a date–2003–that is plainly in error and that skews the analysis in favor of the Applicant. Exhibit 1, Sheehan Dec. ¶ 31. Under the Board's current schedule, the

absolute earliest a license could be issued to the Applicant is in September 2002.[4] The Applicant has stated it will take it will take 22 months to get the project ready for "commercial operations." FEIS at 2-18. Thus, even when giving the Applicant every benefit of the doubt, the earliest credible start date would be July 2004, not 2003. This is yet another basis on which the Board should find that the FEIS does not comply with NEPA and 10 CFR § 51.91 unless and until the analysis is redone using at a minimum the July 2004 operations start date so that the cost-benefit analysis will be a reliable document on which to base the licensing decision.

LATE FILED FACTORS

The State satisfies the 10 CFR § 2.714(a) factors necessary to justify the late filing of Contention Utah SS.

Good Cause: The State has good cause for the late-filing Contention Utah SS. "On issues arising under the National Environmental Policy Act," the NRC's rules provide that a petitioner may "file new contentions if there are data or conclusions in the ... final environmental impact statement ... that differ significantly from the data or conclusions in the applicant's" environmental report. 10 CFR 2.714(b)(2)(iii). As explained above, the FEIS presented a revised cost-benefit analysis based on three new assumptions, assumptions that were not part of the

[4]However, the State does not concede that a license will or should be issued in September; under the current litigation schedule, which does not take into account a hearing period extending into May 2002, the Licensing Board's final initial decision is proposed to be issued on September 9, 2002. After this time, the Commission must review the record before deciding whether or not to issue a license to PFS.

analysis previously prepared by the Applicant or included in its environmental report. Utah is, therefore, entitled by rule to file Contention SS, as it challenges data and conclusions in the FEIS that differ significantly from the data and conclusions in the environmental report.

Utah's Contention SS is also timely-filed. The Board's June 29, 1998 Memorandum and Order specifically provides that "late-filed contentions based on the ... FEIS should be submitted no later than thirty days after [the FEIS is] made available to the public." Order at 5. In respect of that Order, Utah filed on January 16, 2001 a Motion for an Extension of Time to File New or Modified Contentions Based on the Final EIS. In that Motion, Utah requested an extension of time until February 11, 2002 to file any FEIS-based contentions. At the pre-hearing video conference held on January 17, 2002 in Rockville, Maryland and in Salt Lake City, Utah, the Board granted Utah's Motion.

Development of a Sound Record: The NRC staff has admitted the necessity of basing the cost-benefit analysis on a 20-year license term and of using an accurate operations start date. Admitting Utah's contention that challenges with specificity why the FEIS does not comply with NEPA and 10 CFR § 51.91 and noting the changes that must be made obviously contributes to the development of a sound record. Not making the changes will leave the cost-benefit analysis seriously flawed and skewed in Applicant's favor.

Furthermore, the State's expert, Dr. Sheehan, who is supporting Contention Utah SS, has extensive knowledge of the PFS project from his preparation for and

testimony during hearings in June 2000 with respect to Utah E, Financial Assurance and Utah S, Decommissioning. Exhibit 1, Sheehan Dec. ¶ 5. Dr. Sheehan's attached declaration is specific as to the flaws in the FEIS. He is prepared to offer testimony consistent with his declaration. Id. ¶ 35.

Availability of Other Means for Protecting The State's Interests: The State has no means, other than this proceeding, for protecting its interest. A cost-benefit analysis is an important part of an FEIS and must be done right in connection with the FEIS process or it will not be done at all. 40 CFR 1505.23

Representation by Another Party: The State's position will not be represented by any other party, as there is no other party in this proceeding who has an admitted contention relating to the revised cost-benefit analysis in the FEIS..

Broadening of Issues or Delay of the Proceeding: The admission of Contention SS may not broaden the ISFSI proceeding. A cost-benefit analysis of the Applicant's proposed project is already a part of the licensing proceeding and therefore revising it should not introduce new issues to the proceeding. The changes that must be made in the cost-benefit analysis are straightforward and based on already available data. Not making the changes could raise serious questions about whether the FEIS complies with NEPA. In the long run, a flawed FEIS would delay the proceeding more so than making the changes based on already available data.

CONCLUSION

For the foregoing reasons, Utah's Contention SS meets the Commission's standard for late filed contentions and should be admitted.

DATED this 11th day of February, 2002.

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 SS was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 11th day of February, 2002:

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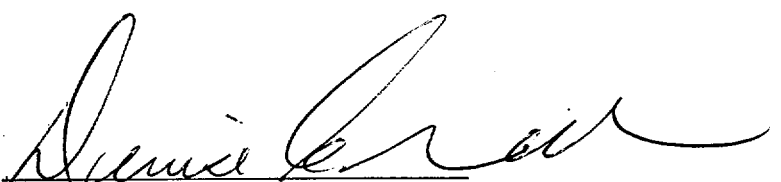

Denise Chancellor
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State of Utah

EXHIBIT 1

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 (Independent Spent Fuel Storage Installation)	)	ASLBP No. 97-732-02-ISFSI
	)	February 11, 2002

DECLARATION OF MICHAEL F. SHEEHAN, Ph.D. IN SUPPORT OF STATE OF UTAH'S REQUEST FOR ADMISSION OF LATE-FILED CONTENTION UTAH SS

I, MICHAEL F. SHEEHAN, Ph.D., hereby declare under penalty of perjury and pursuant to 28 U.S.C. § 1746, that:

1. I am the managing partner of Osterberg and Sheehan, Public Utility Economists, a private consulting firm specializing in regulatory policy, economics and finance. My curriculum vitae listing my qualifications, experience, training, and publications has already been filed in this proceeding. *See* State's Hearing Exhibit 9.

2. I hold B.S., M.A. and Ph.D. degrees in economics from the University of California at Riverside. I have taught project analysis, quantitative economics, and operations research, as well as basic, intermediate, and graduate courses in economic theory and policy at the Graduate School of Administration at the University of California at Riverside; at California State College, San Bernardino; and in the Graduate Program at Chapman College. In 1979 I joined the Graduate Program in Urban and Regional Planning at the University of Iowa, where I taught courses in environmental policy and planning, public utility policy and planning, planning economics, local energy planning, and state and local development finance. I have published a substantial number of articles in scholarly journals and a number of chapters in books.

3. Much of my practice over the last twenty years has been involved with the economics and finance of project planning and regulation. This has included high and low level radioactive waste issues in the west and midwest, the economics of power supply in the event of early closure of nuclear plants, financial

qualifications and other issues in the context of the nuclear fuel enrichment, and uranium mining involving issues of financial qualification, cost-benefit analysis and NEPA. In addition, I have testified before public service commissions in more than a dozen different states on utility planning, rate design, cost allocation, and other aspects of utility regulation.

4. From about 1982 I have been involved in several studies involving the economics of utility franchises. I was a member of the Iowa City, Iowa Franchise Review Committee in 1983-4, and I am co-author of an article in the *Urban Lawyer* on utility franchise fees. I have been an economic consultant on issues related to municipal solid waste disposal to METRO, the regional government for the three counties around Portland, Oregon, and I am currently chairman of the Solid Waste Advisory Committee for Columbia County, Oregon. I have served on the Rate Advisory Committee and the Resource Acquisition Council of the Columbia River PUD, the Research Advisory Committee of NRRI and the National Consumer Advisory Panel to AT&T.

5. I am familiar with the circumstances and materials in this case generally, and specifically as they relate to financial assurance and both the DEIS and FEIS. I am familiar with PFS's License Application in this proceeding. I have previously sponsored testimony in this proceeding on Utah Contentions E and S. I am familiar with and have reviewed the documents that PFS has provided to the State of Utah concerning Utah E; PFS's responses to Discovery Requests submitted by the State; PFS's responses to the NRC Staff's Requests for Additional Information; NRC Staff's Position Concerning Contention E; the NRC Staff's original and reissued Safety Evaluation Report, Chapter 17 - Financial Qualifications and Decommissioning Funding (December 1999, January 2000), and its final Safety Evaluation Report (September 2000); and NUREG -1714, *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*, June 2000, and Appendix G, the new section 6.7.10 (Economic Costs of No Action), and the new Chapter 8 all in the FEIS

I. INTRODUCTION

6. The federal action in this case is the issuance of a 20-year license. The benefits and costs from the operation of PFS during these 20 years are the necessary focus of the cost benefit analysis. The DEIS went astray in its cost benefit analysis when it based its determination of the costs and benefits of issuing this 20-year license by calculating the costs and benefits of two back-to-back license periods totaling

40 years.

7. The Staff in its comments and in the new chapter 8 of the FEIS appears to concede that this was an error and has provided a new analysis in the FEIS based on a 20-year license.

> "The following analysis differs from that of the DEIS in order to reflect several changes in assumptions." FEIS 8-1.

The change to reflect a single 20-year license period is dealt with directly:

> "the benefits and costs analysis is based on the receipt of SNF at the proposed PFSF only during an initial 20-year license term." FEIS 8-1 (See also the Staff's response to comments at G-422).

Corresponding to the "receipt" of SNF "only during an initial 20-year license term" is an apparent parallel change in the storage term away from the previous inappropriate 40-year scenarios.

> "the storage (but not receipt) of SNF at the proposed PFSF after the 20-year license term is a possibility until decommissioning is completed." FEIS 8-1.

However, and notably, in fact the actual analysis appears to be based on a 40-year period where PFS continues to function and operate its storage and transport operations notwithstanding the expiration of its license and for an indefinite period past the normal 2-year decommissioning. See EIS RAI No.3, p.2.

8. Staff has assumed that decommissioning would take two years. G-77. Thus the new cost benefit analysis should reflect a maximum 20-year period for construction and operation of PFS facility including receipt of SNF and no more than a 22-year period for the storage of SNF, i.e. a 20 year license period plus a 2 year decommissioning period. ("20+2").

Analytically, to determine the costs and benefits of the availability of PFS versus the no action alternative, the analysis has to reflect the removal of all stored MTU from the site no later than the end of the 22nd year with the termination of the normal decommissioning period.

9. I have reviewed the new cost benefit analysis presented in the FEIS' revised

Chapter 8. I have specifically reviewed the scenarios I through IV presented in new Tables 8.2 and 8.3. The analysis presented in these tables substantially overstates the net benefits by its failure to limit the net benefits to those generated within the license period in question and the number of MTU that can be received, stored **and disposed of** in that limited period.

II. NONE OF THE FOUR SCENARIOS PRESENTED IN FEIS TABLE 8.2 ARE FEASIBLE WITHIN THE TERM OF A 20-YEAR LICENSE PERIOD

10. None of the four scenarios presented in Table 8.2 are feasible given a single 20-year license term. Using the SNF handling rates employed by PFS consultant ERI in its modeling and the geologic repository (GR) intake rates also assumed by ERI, it is impossible to remove the 27,000 MTU throughput specified in Table 8.2 scenarios I and II, much less the 38,000 MTU throughput in scenarios III and IV, before the end of the 20-year license period. This is so even assuming that the 2-year decommissioning period itself would be available for moving SNF off-site, and further assuming that PFS' maximum handling capacity of 2,000 MTU per year would be available up until the last day of the dismantling and decommissioning period.

11. This can be illustrated in the four tables MFS-1 through MFS-4 (corresponding to Scenarios I-IV presented in FEIS Tables 8.2 and 8.3) provided in the Attachment to this declaration. Notice that in Table MFS-1/Scenario I of the Attachment (27,000 MTU; GR= 2015; 9 GR shipping yrs) while PFS could receive all 27,000 MTU in the best case (*i.e.* with no further delays), it could only ship out about 9,000 MTU to the GR within the time allowed. This means that on the day that decommissioning is complete there would still be approximately 18,000 MTU remaining on site and undisposed of.

12. Table MFS-2 on the Attachment presents the Scenario II case (27,000 MTU; GR=2010; 14 GR shipping yrs). Given these parameters, while PFS could receive 27,000 MTU from utilities, it would only be able to ship approximately 16,000 MTU to the GR before the end of decommissioning. This would leave more than 11,000 MTU on-site undisposed of.

13. Table MFS-3 on the Attachment presents the Scenario III case (38,000 MTU; GR=2015; 9 GR shipping yrs). Here there is an additional structural problem with the FEIS analysis. By the end of the 20th year of the license only a maximum of 36,000 tons can have been shipped in given the 2,000 MTU/year handling capacity of PFS. It is simply not possible to get all 38,000 MTUS into PFS.

Adding to the problem is the fact that the FEIS scenarios all assume a 2003 operations date for PFS, even though the Staff also acknowledges a September 2002 license, plus 18 months to construct, plus another 4 months to get commercial. FEIS 2-18. This puts PFS' first receipt of SNF in ***summer 2004 and not mid-2003***.

14. Table MFS-4 on the Attachment presents the Scenario IV case (38,000 MTU; GR=2010; 14 GR shipping yrs). In this scenario as well, the maximum amount that can be shipped into PFS is 36,000 MTU, assuming no delays in licensing, construction or meeting license conditions. Given 14 GR shipping years, a little less than 16,000 MTU can be shipped to the GR. This leaves 20,000 MTU still on-site at the end of the decommissioning period.

15. Tables MFS-5 and MFS-6 on the Attachment are also attached to show the situation with a 2025 repository. Notice that in both cases the repository comes on line after the end of PFS' licensing period plus decommissioning. Thus none of the SNF stored at PFS can be shipped to the repository in either of these scenarios, and 100% of it would still be on-site at the completion of decommissioning.

16. Table MFS-7 on the Attachment provides a summary of the first six tables. None of the four scenarios presented in the FEIS's new Table 8.2 are feasible for the reasons set forth above. The maximum amount of tonnage that PFS could take in and still expect to be able to ship out by the end of the decommissioning period is 15,523 MTU given a 2010 repository date, and a little over 9,000 MTU for a 2015 date. The corresponding figure for a 2025 repository date is zero MTU, since the repository will not come on line until after the decommissioning of PFS. All figures are for throughput.

III. LICENSE CONDITION 17-1

17. Since the FEIS now accepts the 20-year license period as the relevant time span for the conduct of its cost/benefit analysis, it is also essential to note that FEIS Scenarios I and III have maximum throughput levels that are inconsistent with the terms of license condition 17-1 (a capacity of 9,600 MTU and a throughput of 13,856 MTU, as stated approximately at FEIS 8-2). The Scenario I and III levels reach only approximately 9,000 MTU throughput, well short of the 13,856 MTU figure cited in the FEIS. *See* Attachment, Table MFS-7.

18. The fact that the Scenarios II and IV (GR = 2010) appear to be viable (15,523 MTU) relative to LC 17-2 is an illusion. Scenarios II and IV show inbound

shipping to PFS in the period between 2004 and September 2009 at 10,000 MTU. Decisions about shipping this tonnage to PFS will have to be made before it will be known for a business certainty when the repository will be commercial. In addition, since LC 17-1 requires that decisions about shipping and payments be made before PFS can even be constructed, this means that utility decisions will have to be made even earlier and well before the actual opening date of the GR will be known. The prudent course for most reactor owners will be to assume a 2015 GR date–given the high costs of banking on a 2010 GR and then having it not happen until 2015, *i.e.* having to take back substantial tonnages of SNF. Moreover, even ERI has said an operational GR will not begin to receive SNF before 2015. And PFS also appears to agree. FEIS § 8.1, last paragraph.

19. The result is that while with a 2010 repository date it might be physically possible handle a throughput of 15,500 MTU, it is unreasonable to assume that the amount sent to PFS under these conditions would reach 15,500 MTU, given that the shipments made during the pre-2010 years would probably not come close to the (pre-2010) 10,000 MTU levels for the reasons set forth above. *See* Attachment, Tables MFS-2 and MFS-4. Even relatively small reductions in the throughput would reduce these scenarios below the FEIS's low usage case (13,856 MTU throughput) and implicate license condition LC 17-1. FEIS § 8.1, ¶¶ 4 and 5.

20. In sum, none of the four scenarios presented in FEIS Table 8-2 or the variations on those scenarios presented in Table 8-3 are feasible for the reasons described above. This means that the positive values–some large, some small–in Table 8.2 are not valid. For the same reason the values in Table 8.3--some large, some small, some negative–are also not valid. Moreover, given the character of the error in the assumptions used in calculating the FEIS scenarios, all the net benefit values involved are going to be biased in the upward direction. The amount of this upward bias will be substantial, because the error in the magnitude of feasible throughputs is substantial.

IV. IMPACT ON COSTS AND BENEFITS

21. As noted, the FEIS's new cost/benefit analysis relies on a 20-year "receipt-of-SNF" period, but a 40-year storage period. This has the result of exaggerating the net benefits for each scenario relative to a true 20-year license period with two years for decommissioning. And while there is insufficient data available in the FEIS to permit a numerical recalculation of net benefits based on a genuine 20-year license period, certain conclusions can be reached about the impact of correcting the analysis on the level of net benefits.

22. The FEIS characterizes the new FEIS Table 8.2 as showing,

> "that the net economic benefits of the proposed PFSF are very sensitive to the discount rate, the size of the proposed PFSF, and whether the permanent repository opens in 2010 or 2015." FEIS 8-6 (last ¶).

In addition, the outcome is also sensitive to the commercial start date for PFS relative to the license date.

23. Attachment, Table MFS-7 shows that though the cost benefit analysis was based on throughputs of either 27,000 MTU or 38,000 MTU, the actual MTU throughput in the best case (*i.e.* no delays) scenario are 15,523 MTU and 9,073 MTU for GR opening dates of 2010 and 2015, respectively. 15,523 MTU is a reduction of 43% from 27,000 MTU and 60% from 38,000 MTU; 9,073 MTU is a 67% reduction from 27,000 MTU and a 77% reduction from 38,000 MTU.

24. Attachment, Table MFS-8 is based on data taken from FEIS Table 8.2. The top panel shows the analysis based on the 7% discount factor in the right hand column of Table 8.2, while the bottom panel provides the same analysis based on Table 8.2's 3.8% discount factor column. The purpose of Table MFS-8 is to point out what happens to net benefits in each of four cases (a high and a low discount rate varying by GR dates of 2015 and 2010).

25. Notice in the upper left hand panel of MFS-8 (GR = 2015; DR = 7%) that when tonnage is reduced from 38,000 MTU to 27,000 MTU, a percent decrease of 29%, net benefits fall disproportionately by 72%. In the upper right panel (GR = 2010; DR = 7%) a 29% reduction in throughput results in a 91% reduction in net benefits. In the lower left panel (GR = 2015; DR = 3.8%) a 29% reduction in throughput results in a 58% reduction in net benefits. Finally, in the lower right panel the same 29% reduction in throughput results in a 73% reduction in net benefits when GR = 2010 and DR = 3.8%.

26. The point of this is to note the very substantial reductions in net benefits which occur with a 29% reduction in throughput from 38,000 MTU to 27,000 MTU. The actual reductions in throughput based on the analysis presented in Attachment, Tables MFS-1 through MFS-4 (*see* ¶22a above and Attachment) run from 43% to 77%. These percentage reductions in net benefits are much greater than the reduction from 38,000 MTU to 27,000 MTU in Tables 8.2 and 8.3. A reasonable conclusion from this is that if a reduction from 38,000 MTU to 27,000 MTU throughput results in the very substantial net benefit reductions shown in

Table 8.2, then the much larger reductions in throughput summarized in Table MFS-7 will produce even more dramatic reductions in net benefits.

27. While the data is not available to show exactly what the correct numbers should be, the analysis presented in Attachment, Tables MFS-1 through MFS-8 indicates that were the analysis underlying FEIS Table 8.2 corrected, the net benefit figures shown in that table would be very substantially lower. Moreover, given the sensitivity of those very figures to throughput changes, as noted on FEIS p.8-6, some or all of those figures would be substantially negative. This possibility is supported by the FEIS' own sensitivity analysis in Table 8.3, where relatively small changes in the analysis have produced negative net benefit figures in the Scenario II row.

28. It should also be noted that the FEIS was changed to respond to a comment about the inappropriateness of using a 2002 date for the first receipt of SNF at PFS (commercial opening). This change is noted on FEIS § 8.1, ¶ 2, Item 3. The change that was made embodies an obvious error. Instead of altering the date from 2002 "to the middle of 2003" the change should be from 2002 to September 2002 plus 18 months of construction 4 months or more (FEIS 2-18). This would move the date of the first receipt of SNF at PFS to June or July of 2004, or approximately a year further into the license period. This entails a one year change in the period during which PFS is able to receive and dispose of SNF and has a significant impact on throughput and net benefits.

V. THE FEIS's NEW BREAKEVEN ANALYSIS

29. The FEIS also presents a new "breakeven analysis" at FEIS 8-10 and 8-11. This analysis reports that for a GR of 2015 the breakeven throughput is about 15,500 MTU, while for a GR of 2010 the breakeven throughput is 18,000 MTU. The FEIS at the top of page 8-11 notes that, "in addition to the SNF capacity, this analysis is sensitive to several key assumptions as discussed in earlier sections of this chapter."

30. Compare these breakeven figures to the maximum feasible throughput figures set forth in Attachment Table MFS-7. For a 2015 repository date the maximum throughput is 9,073 MTU, 42% short of the breakeven figure for 2015 of 15,500 MTU. For the 2010 repository date the maximum is 15,523 MTU, 14% short of the breakeven figure for 2010 of 18,000 MTU.

IV. CONCLUSIONS

31. There are a number of errors in the FEIS's revised cost benefit and breakeven analyses. The most substantial of these is the failure to limit the costs and benefits to those arising during the 20-year license period at issue here with its associated standard 2-year decommissioning period. The result is that all four of the scenarios presented in FEIS revised Chapter 8, Tables 8.2 and 8.3, involving throughputs of 27,000 MTU and 38,000 MTU are infeasible. Those MTU volumes cannot be processed through the proposed facility within the 20 plus 2 year license plus decommissioning period at issue in this proceeding. Maximum throughputs within 20 plus 2-year period range from 9,000 MTU to 15,500 MTU, depending on the repository date. These much lower maximum throughputs mean very significantly lower and probably negative net benefit levels.

32. These very much lower maximum throughput levels will also run afoul of license condition LC 17-1, certainly for 2015 repository levels, and probably for the 2010 scenarios as well (for the reasons explained above).

33. The FEIS's new breakeven analysis is also incorrect. Changing the assumption to limit the benefits to those that arise during the 20+2-year license plus decommissioning period shows that the maximum feasible throughputs (Attachment, Table MFS-7) are both substantially below the net benefit breakeven levels established at FEIS 8-10.

34. In sum, the new cost benefit analysis presented in Chapter 8 of the FEIS is defective and needs to be redone to reflect a genuine 20-year license scenario and to correct certain other significant errors as noted above.

35. I am prepared to offer testimony consistent with this Declaration and the pleadings which it supports.

DATED this February 11, 2002.

Michael F. Sheehan, Ph.D.

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34. In sum, the new cost benefit analysis presented in Chapter 8 of the FEIS is defective and needs to be redone to reflect a genuine 20-year license scenario and to correct certain other significant errors as noted above.

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DATED this February 11, 2002.

Michael F. Sheehan, Ph.D.

ATTACHMENT

TO

DECLARATION OF MICHAEL F. SHEEHAN, ph.D.
IN SUPPORT OF STATE OF UTAH'S REQUEST FOR
ADMISSION OF LATE-FILED CONTENTION UTAH SS

Dated February 11, 2001

Consisting of :

TABLE MFS-1
TABLE MFS-2
TABLE MFS-3
TABLE MFS-4
TABLE MFS-5
TABLE MFS-6
TABLE MFS-7
TABLE MFS-8

	A	B	C	D	E	F	G
1	**TABLE MFS-1**						2/11/02 11:47
2	**Scenario I**						
3							
4	**20-YEAR; 27,000 MTU; GR 2015**						
5	PFS Open to Receive First SNF Sept-2004						
6							
7	PFS of GR:	0.43					
8							
9					All-Sources	Cumulative	
10	Permit Yr.	Date		Incoming	GR	at 43%	
11	Complete	(Sept)	In to PFS	Cumulative	Acceptances	GR from PFS	Notes
12		2002					Sept License
13	1	2003					
14	2	2004					Sept PFS Commercial
15	3	2005	2,000	2,000			By 9-2005 2000 MTU
16	4	2006	2,000	4,000			
17	5	2007	2,000	6,000			
18	6	2008	2,000	8,000			
19	7	2009	2,000	10,000			
20	8	2010	2,000	12,000			
21	9	2011	2,000	14,000			
22	10	2012	2,000	16,000			
23	11	2013	2,000	18,000			
24	12	2014	2,000	20,000			
25	13	**2015**	2,000	22,000			**GR Start**
26	14	2016	2,000	24,000	1,200	516	By 9-2011 516 MTU Out
27	15	2017	2,000	26,000	1,200	1,032	
28	16	2018	1,000	27,000	2,000	1,892	
29	17	2019			2,000	2,752	
30	18	2020			2,700	3,913	
31	19	2021			3,000	5,203	
32	20	2022			3,000	6,493	
33	Decomm	2023			3,000	7,783	
34	Decomm	2024			3,000	9,073	Shipping Total
35					**Remaining:**	**17,927**	
36					**% Remaining:**	**66%**	
37							
38							
39							
40	Source for GR Acceptances: Utah Comments on DEIS, September 27, 2000,						
41	p.7, Table 2, as drawn from ERI.						
42							
43	ASSUMPTIONS:						
44	Two years to decommission						
45	18 month construction + 4 months to open.						
46	Assumes optimistically that PFS can continue to ship at the 2,000 MTU rate						
47	throughout the period of dismantling and decommissioning.						
48	Assumes for simplicity that the GR begins to accept SNF from PFS in						
49	September of the year it opens.						
50							
51	2c:\Utah\Feb 5 FEIS Ch 8.xls			W'27-2015			2/11/02 11:47

	A	B	C	D	E	F	G
1	**TABLE MFS-2**						2/11/02 11:47
2	**Scenario II**						
3							
4	**20-YEAR; 27,000 MTU; GR 2010**						
5	PFS Open to Receive First SNF Sept-2004						
6							
7	PFS of GR:	0.43					
8							
9					All-Sources	Cumulative	
10	Permit Yr.	Date		Incoming	GR	at 43%	
11	Complete	(Sept)	In to PFS	Cumulative	Acceptances	GR from PFS	Notes
12		2002					Sept License
13	1	2003					
14	2	2004					Sept PFS Commercial
15	3	2005	2,000	2,000			By 9-2005 2000 MTU
16	4	2006	2,000	4,000			
17	5	2007	2,000	6,000			
18	6	2008	2,000	8,000			
19	7	2009	2,000	10,000			
20	8	**2010**	2,000	12,000			**GR Start**
21	9	2011	2,000	14,000	1,200	516	By 9-2011 516 MTU Out
22	10	2012	2,000	16,000	1,200	1,032	
23	11	2013	2,000	18,000	2,000	1,892	
24	12	2014	2,000	20,000	2,000	2,752	
25	13	2015	2,000	22,000	2,700	3,913	
26	14	2016	2,000	24,000	3,000	5,203	
27	15	2017	2,000	26,000	3,000	6,493	
28	16	2018	1,000	27,000	3,000	7,783	
29	17	2019			3,000	9,073	
30	18	2020			3,000	10,363	
31	19	2021			3,000	11,653	
32	20	2022			3,000	12,943	
33	Decomm	2023			3,000	14,233	
34	Decomm	2024			3,000	15,523	Shipping Total
35					**Remaining:**	**11,477**	
36					**% Remaining:**	**43%**	
37							
38							
39							
40	Source for GR Acceptances: Utah Comments on DEIS, September 27, 2000,						
41	p.7, Table 2, as drawn from ERI.						
42							
43	ASSUMPTIONS:						
44	Two years to decommission						
45	18 month construction + 4 additional months to open.						
46	Assumes optimistically that PFS can continue to ship at the 2,000 MTU rate						
47	throughout the period of dismantling and decommissioning.						
48	Assumes for simplicity that the GR begins to accept SNF from PFS in						
49	September of the year it opens.						
50							
51	2c:\Utah\Feb 5 FEIS Ch 8.xls			W27-2010			

	A	B	C	D	E	F	G
1	**TABLE MFS-3**						2/11/02 11:47
2	**Scenario III**						
3							
4	**20-YEAR; 38,000 MTU; GR 2015**						
5	PFS Open to Receive First SNF Sept-2004						
6							
7	PFS of GR:	0.43					
8							
9					All-Sources	Cumulative	
10	Permit Yr.	Date		Incoming	GR	at 43%	
11	Complete	(Sept)	In to PFS	Cumulative	Acceptances	GR from PFS	Notes
12		2002					Sept License
13	1	2003					
14	2	2004					Sept PFS Commercial
15	3	2005	2,000	2,000			By 9-2005 2000 MTU
16	4	2006	2,000	4,000			
17	5	2007	2,000	6,000			
18	6	2008	2,000	8,000			
19	7	2009	2,000	10,000			
20	8	2010	2,000	12,000			
21	9	2011	2,000	14,000			
22	10	2012	2,000	16,000			
23	11	2013	2,000	18,000			
24	12	2014	2,000	20,000			
25	13	**2015**	2,000	22,000			**GR Start**
26	14	2016	2,000	24,000	1,200	516	By 9-2011 516 MTU Out
27	15	2017	2,000	26,000	1,200	1,032	
28	16	2018	2,000	28,000	2,000	1,892	
29	17	2019	2,000	30,000	2,000	2,752	
30	18	2020	2,000	32,000	2,700	3,913	
31	19	2021	2,000	34,000	3,000	5,203	
32	20	2022	2,000	36,000	3,000	6,493	
33	Decomm	2023	0		3,000	7,783	
34	Decomm	2024	0		3,000	9,073	Shipping Total
35					**Remaining:**	**26,927**	
36					**% Remaining:**	**75%**	
37							
38							
39							
40	Source for GR Acceptances: Utah Comments on DEIS, September 27, 2000,						
41	p.7, Table 2, as drawn from ERI.						
42							
43	ASSUMPTIONS:						
44	Two years to decommission						
45	18 month construction + 4 additional months to open.						
46	Assumes optimistically that PFS can continue to ship at the 2,000 MTU rate						
47	throughout the period of dismantling and decommissioning.						
48	Assumes for simplicity that the GR begins to accept SNF from PFS in						
49	September of the year it opens.						
50							
51	2c:\Utah\Feb 5 FEIS Ch 8.xls			W38-2015			

	A	B	C	D	E	F	G
1	**TABLE MFS-4**						2/11/02 11:47
2	**Scenario IV**						
3							
4	**20-YEAR; 38,000 MTU; GR 2010**						
5	PFS Open to Receive First SNF Sept-2004						
6							
7	PFS of GR:	0.43					
8							
9					All-Sources	Cumulative	
10	Permit Yr.	Date		Incoming	GR	at 43%	
11	Complete	(Sept)	In to PFS	Cumulative	Acceptances	GR from PFS	Notes
12		2002					Sept License
13	1	2003					
14	2	2004					Sept PFS Commercial
15	3	2005	2,000	2,000			By 9-2005 2000 MTU
16	4	2006	2,000	4,000			
17	5	2007	2,000	6,000			
18	6	2008	2,000	8,000			
19	7	2009	2,000	10,000			
20	8	**2010**	2,000	12,000			**GR Start**
21	9	2011	2,000	14,000	1,200	516	By 9-2011 516 MTU Out
22	10	2012	2,000	16,000	1,200	1,032	
23	11	2013	2,000	18,000	2,000	1,892	
24	12	2014	2,000	20,000	2,000	2,752	
25	13	2015	2,000	22,000	2,700	3,913	
26	14	2016	2,000	24,000	3,000	5,203	
27	15	2017	2,000	26,000	3,000	6,493	
28	16	2018	2,000	28,000	3,000	7,783	
29	17	2019	2,000	30,000	3,000	9,073	
30	18	2020	2,000	32,000	3,000	10,363	
31	19	2021	2,000	34,000	3,000	11,653	
32	20	2022	2,000	36,000	3,000	12,943	
33	Decomm	2023	0		3,000	14,233	
34	Decomm	2024	0		3,000	15,523	Shipping Total
35					**Remaining:**	**20,477**	
36					**% Remaining:**	**57%**	
37							
38							
39							
40	Source for GR Acceptances: Utah Comments on DEIS, September 27, 2000,						
41	p.7, Table 2, as drawn from ERI.						
42							
43	ASSUMPTIONS:						
44	Two years to decommission						
45	18 month construction + 4 additional months to open.						
46	Assumes optimistically that PFS can continue to ship at the 2,000 MTU rate						
47	throughout the period of dismantling and decommissioning.						
48	Assumes for simplicity that the GR begins to accept SNF from PFS in						
49	September of the year it opens.						
50							
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	A	B	C	D	E	F	G
1	**TABLE MFS-5**						2/11/02 11:47
2							
3							
4	**20-YEAR; 27,000 MTU; GR 2025**						
5	PFS Open to Receive First SNF Sept-2004						
6							
7	PFS of GR:	0.43					
8							
9					All-Sources	Cumulative	
10	Permit Yr.	Date		Incoming	GR	at 43%	
11	Complete	(Sept)	In to PFS	Cumulative	Acceptances	GR from PFS	Notes
12		2002					Sept License
13	1	2003					
14	2	2004					Sept PFS Commercial
15	3	2005	2,000	2,000			By 9-2005 2000 MTU
16	4	2006	2,000	4,000			
17	5	2007	2,000	6,000			
18	6	2008	2,000	8,000			
19	7	2009	2,000	10,000			
20	8	**2010**	2,000	12,000			
21	9	2011	2,000	14,000			
22	10	2012	2,000	16,000			
23	11	2013	2,000	18,000			
24	12	2014	2,000	20,000			
25	13	2015	2,000	22,000			
26	14	2016	2,000	24,000			
27	15	2017	2,000	26,000			
28	16	2018	1,000	27,000			
29	17	2019					
30	18	2020					
31	19	2021					
32	20	2022					
33	Decomm	2023					No new MTU
34	Decomm	2024					No new MTU
35		**2025**					**GR Start**
36						0	Shipping Total
37							
38							
39							
40							
41	Source for GR Acceptances: Utah Comments on DEIS, September 27, 2000,						
42	p.7, Table 2, as drawn from ERI.						
43							
44	ASSUMPTIONS:						
45	Two years to decommission						
46	18 month construction + 4 additional months to open.						
47	Assumes optimistically that PFS can continue to ship at the 2,000 MTU rate						
48	throughout the period of dismantling and decommissioning.						
49							
50							
51	2c:\Utah\Feb 5 FEIS Ch 8.xls			W'27-2025			

	A	B	C	D	E	F	G
1	**TABLE MFS-6**						2/11/02 11:47
2							
3							
4	**20-YEAR; 38,000 MTU; GR 2025**						
5	PFS Open to Receive First SNF Sept-2004						
6							
7	PFS of GR:	0.43					
8							
9					All-Sources	Cumulative	
10	Permit Yr.	Date		Incoming	GR	at 43%	
11	Complete	(Sept)	In to PFS	Cumulative	Acceptances	GR from PFS	Notes
12		2002					Sept License
13	1	2003					
14	2	2004					Sept PFS Commercial
15	3	2005	2,000	2,000			By 9-2005 2000 MTU
16	4	2006	2,000	4,000			
17	5	2007	2,000	6,000			
18	6	2008	2,000	8,000			
19	7	2009	2,000	10,000			
20	8	**2010**	2,000	12,000			
21	9	2011	2,000	14,000			
22	10	2012	2,000	16,000			
23	11	2013	2,000	18,000			
24	12	2014	2,000	20,000			
25	13	2015	2,000	22,000			
26	14	2016	2,000	24,000			
27	15	2017	2,000	26,000			
28	16	2018	2,000	28,000			
29	17	2019	2,000	30,000			
30	18	2020	2,000	32,000			
31	19	2021	2,000	34,000			
32	20	2022	2,000	36,000			
33	Decomm	2023	0			Prior to GR	No new MTU
34	Decomm	2024	0			Prior to GR	No new MTU
35		**2025**					**GR Start**
36						0	Shipping Total
37							
38							
39							
40							
41	Source for GR Acceptances: Utah Comments on DEIS, September 27, 2000,						
42	p.7, Table 2, as drawn from ERI.						
43							
44	ASSUMPTIONS:						
45	Two years to decommission						
46	18 month construction + 4 additional months to open.						
47	Assumes optimistically that PFS can continue to ship at the 2,000 MTU rate						
48	throughout the period of dismantling and decommissioning.						
49							
50							
51	2c:\Utah\Feb 5 FEIS Ch 8.xls	W38-2010					

	A	B	C	D
1	**TABLE MFS-7**			2/11/02 11:47
2				
3				
4	SUMMARY OF SCENARIOS			
5				
6				
7				
8				
9		Repository Date		
10	Throughput (MTU)	2010	2015	2025
11				
12	27,000	Not Feasible	Not Feasible	Not Feasible
13	Maximum Feasible	15,523	9,073	0
14				
15				
16	38,000	Not Feasible	Not Feasible	Not Feasible
17	Maximum Feasible	15,523	9,073	0
18				
19				
20				
21				
22				
23				
24				
25				
26	NOTE: These maximum throughput figures are based on the optimistic			
27	assumption that PFS can get all the SNF remaining at the end of the			
28	license period into the geologic repository (GR) before the end of the			
29	decommissioning period. There are at least two issues involved in this:			
30	1. Whether PFS can maintain its 2,000 MTU handling rate throughout			
31	the dismantling/decommissioning of the site; and, 2. Whether the			
32	remaining MTU is of the proper priority to be accepted at the GR during these			
33	specific years or will have to be shipped back to its utility owners.			
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1	Table MFS-8						2/11/02 11:47
2							
3							
4	IMPACT OF TONNAGE REDUCTIONS ON NET BENEFITS						
5	dr = 7%						
6							
7	GR = 2015				GR = 2010		
8							
9		Throughput	Net Benefits			Throughput	Net Benefits
10	Scenario	(MTU)	(Million $)		Scenario	(MTU)	(Million $)
11							
12	I. 38,000 v. 2015	38,000	921		II. 38,000 v. 2015	38,000	647
13							
14	III. 27,000 v. 2015	27,000	255		IV. 27,000 v. 2015	27,000	60
15							
16	Reduction %	29%	72%		Reduction %	29%	91%
17							
18							
19							
20							
21	IMPACT OF TONNAGE REDUCTIONS ON NET BENEFITS						
22	dr = 3.8%						
23							
24	GR = 2015				GR = 2010		
25							
26		Throughput	Net Benefits			Throughput	Net Benefits
27	Scenario	(MTU)	(Million $)		Scenario	(MTU)	(Million $)
28							
29	I. 38,000 v. 2015	38,000	1,995		II. 38,000 v. 2015	38,000	1,497
30							
31	III. 27,000 v. 2015	27,000	840		IV. 27,000 v. 2015	27,000	404
32							
33	Reduction %	29%	58%		Reduction %	29%	73%
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EXHIBIT 2

STATE OF UTAH

OFFICE OF THE ATTORNEY GENERAL

JAN GRAHAM
ATTORNEY GENERAL

JAMES R. SOPER
Solicitor General

REED RICHARDS
Chief Deputy Attorney General

October 4, 2000

David L. Meyer,
Chief, Rules and Directives Branch
Division of Freedom of Information and Publications Services
Office of Administration
Mailstop T-6D-59
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

re: Comments on the Draft Environmental Impact Statement
for the Construction and Operation of an ISFSI on the Reservation of the
Skull Valley Band of Goshute Indians and the Related Transportation Facility
NRC Docket No. 72-22, ISFSI, Private Fuel Storage, LLC

Dear Mr. Meyer:

In accordance with our telephone conversation today, and as required by 10 CFR § 51.16(b), attached hereto is a non-proprietary copy of the State's proprietary comments submitted to you on September 27, 2000. I have confirmed with counsel for the Applicant that the attached portion of the State's comments does not contain proprietary information. The remainder of the State's comments should be treated as proprietary unless ERI is willing to allow those comments to be released as a public document.

The State appreciates the Staff's willingness to review the State's comments in their entirety. Also, thank you for your efforts to resolve the procedural issues involved with handling proprietary information.

Sincerely,

Denise Chancellor
Assistant Attorney General

cc: Paul Gaukler, Shaw Pittman
ERI

160 East 300 South, 5th Floor, P.O. Box 140873, Salt Lake City, Utah 84114-0873
Telephone: (801) 366-0290 Facsimile: (801) 366-0292

COMMENTS SUBMITTED BY THE STATE OF UTAH
September 27, 2000

on the

THE NRC STAFF'S DEIS COST BENEFIT ANALYSIS IN LIGHT OF STAFF'S RELIANCE ON ERI'S MATHEMATICAL MODELING OF THE MARKET FOR THE PROPOSED PFS FACILITY

NUREG–1714
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
For the Construction and Operation of an
Independent Spent Fuel Storage Installation
on the Reservation of the Skull Valley Band
of Goshute Indians and Related Transportation
Facility in Tooele County, Utah

DOCKET NO. 72-22
Private Fuel Storage (PFS), LLC

U. S. NUCLEAR REGULATORY COMMISSION
Office of Nuclear Material Safety and Safeguards
DEPARTMENT OF THE INTERIOR
Bureau of Indian Affairs
Bureau of Land Management
DEPARTMENT OF TRANSPORTATION
Surface Transportation Board

DEPARTMENT OF THE INTERIOR
Bureau of Land Management
PONY EXPRESS RESOURCE MANAGEMENT PLAN (RMP)
UT-020-00-5101-ER-J206, U-76985

I. Introduction

Chapter 8 of the DEIS [1] addresses the Benefits and Costs of the proposed action. DEIS, Section 8.1.1 lines 13-19, PFS's Model and Assumptions, states:

> The detailed chain of logic for PFS's assumptions and calculations is described in *Utility At-Reactor Spent Fuel Storage Costs for the Private Fuel Storage Facility Cost-Benefit*

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[1] NUREG-1714, *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*, June 2000.

Analysis Revision 2, ER-2025-0001, April 2000. This report was generated by PFS's contractor, Energy Resources International (ERI), in response to the staff's request for additional information. A summary of that report is provided below.

The following comments are based on proprietary information the State has obtained from ERI on September 15, 2000, and is supplemental to and not duplicative of the State's DEIS comments dated September 20, 2000. A discussion of the proprietary nature of the information and justification of filing late comments follows. In addition to the following discussion, a letter from Assistant Attorney General Denise Chancellor to Mr. David L. Meyer, Chief, Rules and Directives Branch, more fully describes the proprietary nature of the State's comments and the justification for filing the comments after September 21, 2000.

A. Proprietary Information

[*REDACTED: MAY CONTAIN PROPRIETARY INFORMATION*]

B. Justified Late-Filed Comments

[*REDACTED: MAY CONTAIN PROPRIETARY INFORMATION*]

C. Overview of the State's Comments[2]

It is extremely difficult at this time to provide an in-depth analysis of the Staff's presentation in Chapter 8 of the DEIS, given the Staff's reliance on ERI's 12 scenario mathematical model and the timing of the State's receipt of the proprietary electronic ERI data. Notwithstanding these difficulties, and noting that the conclusions set forth below are somewhat tentative given the limited time allowed for this review, it is possible to provide a number of examples or areas where the ERI analysis is pointedly unreasonable or flies in the face of actual practice or clear opportunities in the industry to address the SNF storage problem on a least cost basis.

These comments support the following general conclusions:

1. The ERI report is based on assumptions that unreasonably compound the cost of addressing the need for SNF storage in any manner other than via PFS;

2. ERI ignores a wide variety of more cost effective measures that utilities have historically and will continue to implement to minimize the cost of SNF storage;

3. ERI either ignores or assumes away any factors–especially timing factors–which would show the proposed PFS facility is not viable under circumstances which are just as likely to occur as those chosen by ERI to favor PFS;

4. Relying on and expanding upon the ERI analyses, the Staff has adopted unreasonable assumptions about costs and other factors which clearly biases the analysis in favor of the proposed PFS facility.

The economic viability of the proposed PFS facility depends upon a numbers of factors including, most prominently, the following seven: (1) when PFS opens; (2) when PFS closes; (3) when the DOE repository opens; (4) timing issues among reactors, DOE and the proposed PFS ISFSI; (5) costs in relationship to risk; (6) at-reactor ISFSI timing; and (7) demand for the PFS facility.

The review that follows focuses on how the Staff and ERI address each of these factors and whether their approach and the conclusions they draw from it are reasonable.

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[2] 10 CFR § 51.16(b) states that when submitting proprietary information, a non-proprietary summary should also be provided. This overview section may be disclosed as non-proprietary information, but in offering this summary the State does not concede that the State's comments can be reduced to this summary overview.

II. Comments

[*REDACTED PAGES 4-16: MAY CONTAIN PROPRIETARY INFORMATION*]