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July 31, 2000

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of )  
 )  
PRIVATE FUEL STORAGE L.L.C. )  
 )  
(Private Fuel Storage Facility) )

Docket No. 72-22-ISFSI

**APPLICANT'S PROPOSED FINDINGS OF FACT AND  
CONCLUSIONS OF LAW ON CONTENTIONS  
UTAH E/CONFEDERATED TRIBES F AND UTAH S**  
*[Non-Proprietary Version]*

Pursuant to 10 C.F.R. § 2.754 and the Order of the Atomic Safety and Licensing Board ("Licensing Board" or "Board") dated February 2, 2000,<sup>1</sup> Applicant Private Fuel Storage L.L.C. ("Applicant" or "PFS") submits in the form of a partial initial decision its proposed findings of fact and conclusions of law concerning Utah Contention E/Confederated Tribes Contention F (Financial Assurance) ("Utah E") and Utah Contention S (Decommissioning) ("Utah S").<sup>2</sup> The proposed partial initial decision is organized into four sections. Section I, Introduction and Background, presents the history of the case to date. Section II, Overview and Conclusion, introduces Contentions Utah E and Utah S and the witnesses for the parties who testified regarding the contentions, summa-

<sup>1</sup> Order (General Schedule Revision and Other Matters) at 4, Attachment A (February 2, 2000).

<sup>2</sup> PFS will submit its proposed findings on Contention Utah R on August 7, 2000, pursuant to the Board's Order of July 24, 2000.

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rizes the testimony on each contention, and presents proposed conclusions on each contention. Section III, Findings of Fact, presents Applicant's proposed findings of fact on each contention, in sequentially numbered paragraphs.<sup>3</sup> Section IV, Conclusions of Law, presents Applicant's proposed conclusions of law on each contention, also in sequentially numbered paragraphs.

## I. INTRODUCTION AND BACKGROUND

This is the first partial initial decision in this contested proceeding on the application for a license for the Private Fuel Storage Facility ("PFSF"). The application is for a license under 10 C.F.R. Part 72 for an independent spent fuel storage installation ("ISFSI") to be located on the Skull Valley Band of Goshute Reservation, in Skull Valley, Utah, approximately 50 miles southwest of Salt Lake City. Applicant PFS is a limited liability corporation whose members are eight electric utilities, each with one or more operating or shutdown nuclear power plants. PFS plans to store up to 40,000 metric tons uranium ("MTU") of commercial spent nuclear fuel, from PFS members and non-member customers, in up to 4,000 above ground dry casks.

Applicant filed its license application with the NRC in June 1997. On July 27, 1997, the NRC published a notice of opportunity for a hearing. 62 Fed. Reg. 41,099 (1997). This notice provided an opportunity for any person whose interest might be affected by the proceeding to request a hearing and file a petition for leave to intervene.

The State of Utah ("State" or "Utah"); three Native American entities, Ohngo Gaudadeh

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<sup>3</sup> PFS is filing both a proprietary (complete) version of this document and a non-proprietary redacted version deleting the proposed findings with respect to Utah E (Section III.A), which contain proprietary information.

Devia (“OGD”), Confederated Tribes of the Goshute Reservation (“Confederated Tribes”), and the Skull Valley Band of Goshute Indians (“Skull Valley Band”); three ranching, farming, and land investment companies, Castle Rock Land and Livestock, L.C. (“Castle Rock”), Skull Valley Co., and Ensign Ranches of Utah, L.C.; and one individual, Confederated Tribes Chairman David Pete, filed five separate timely hearing requests/petitions to intervene and subsequently filed contentions concerning the license application. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 156-57, recons. granted in part and denied in part, LBP-98-10, 47 NRC 288, aff’d on other grounds, CLI-98-13, 48 NRC 26 (1998). In addition, in January 1998, the group Scientists for Secure Waste Storage (“SSWS”) filed a late petition to intervene. LBP-98-7, 47 NRC at 157, 163.

On April 22, 1998, after a January 1998 pre-hearing conference, the Licensing Board made initial determinations regarding party status and the admission of contentions. Id. at 169-78, 183-238. Party status was granted to the State, OGD, Confederated Tribes, the Skull Valley Band, Castle Rock, and Skull Valley Co. Id. at 169-78. The Board admitted 26 contentions. Id. at 251-58; see id. at 183-238. Subsequently, the Board also admitted three contentions on the Applicant’s security plan. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-13, 47 NRC 360, 373-74, recons. granted, LBP-98-17, 48 NRC 69 (1998).

In November 1998, the Southern Utah Wilderness Alliance (“SUWA”) submitted a late-filed petition to intervene and two contentions concerning the rail line PFS plans to build to the PFSF site along the west side of Skull Valley. Private Fuel Storage, L.L.C.

(Independent Spent Fuel Storage Installation), LBP-99-3, 49 NRC 40, 44, aff'd, CLI-99-10, 49 NRC 318 (1999). The Board granted SUWA party status and admitted part of one of its contentions. LBP-99-3, 49 NRC at 54. In December 1998, intervenors Castle Rock and Skull Valley Co. withdrew from the case pursuant to a settlement with PFS and the Board dismissed the three contentions and certain bases of consolidated contentions for which Castle Rock and Skull Valley Co. had been the sole sponsors. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-6, 49 NRC 114, 116, 123 (1999). Prior to the first phase of the evidentiary hearing, which is the subject of this decision, 15 more contentions were dismissed entirely or in part as a result of motions for summary disposition filed by the Applicant, withdrawal by intervenor State of Utah, or settlement between the Applicant and the State.<sup>4</sup>

This first phase of the evidentiary hearing considered Contentions Utah E (Construction and Operating Costs and On-Site Nuclear Property Insurance), Utah R (Fire-

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<sup>4</sup> Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-23, 49 NRC 485 (1999) (Utah Contention C, Radiation Dose); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-29, 50 NRC 42 (1999) (Utah Contentions F/P, Training); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-31, 50 NRC 147 (1999) (Utah Contentions Security-A, -B, and -C); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-32, 50 NRC 155 (1999) (Contention Utah G, Quality Assurance); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-33, 50 NRC 161 (1999) (Contention Utah M, Probable Maximum Flooding); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-34, 50 NRC 168 (1999) (Utah Contention B, Intermodal Transfer Facility); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-35, 50 NRC 180 (1999) (Contention Utah K/Confederated Tribes B, Credible Accidents); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-39, 50 NRC 232 (1999) (Utah Contention N, Flooding; Utah Contention K/Confederated Tribes B Credible Accidents; Utah Contention O, Hydrology; Utah Contention R, Emergency Plan; and Utah Contention S, Decommissioning); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-00-5, 51 NRC 64 (2000) (Contention Utah Security C); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-00-6, 51 NRC 101 (2000) (Utah Contention E/Confederated Tribes F, Financial Assurance); Memorandum and Order (Granting Joint Motion to Approve Stipulation on Contention Utah S and Outlining Administrative Matters) (May 1, 2000); State of Utah's Notice of Withdrawal of Contention Utah H (Inadequate Thermal Design) (June 15, 2000).

fighting Support Capability), and Utah S (Decommissioning Funding). Direct testimony and related exhibits were filed on May 15, 2000, with revised testimony and exhibit lists filed the week of June 12, 2000.<sup>5</sup> The hearing was held on June 19-22 and 27, 2000 in Salt Lake City, Utah. The Board received limited appearance statements pursuant to 10 C.F.R. § 2.715(a) on June 23-24, 2000. The second phase of the evidentiary hearing is scheduled to be held in the summer of 2001 and will concern all remaining contentions in this proceeding.<sup>6</sup>

The decisional record of the proceeding for the first phase consists of the testimony contained in the transcripts of the hearing and the exhibits filed by the parties.<sup>7</sup> In preparing our decision, we reviewed and considered the entire record and proposed findings of fact and conclusions of law (and the replies thereto) submitted by the parties. Those proposed findings and conclusions that are not incorporated directly or by inference in this partial initial decision are rejected as being unsupported by the record of the case or as being unnecessary to the rendering of this decision.

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<sup>5</sup> The Board had requested that the parties re-file some attachments to testimony as exhibits and some testimony and exhibits were stricken as a result of motions in limine. Memorandum and Order (Ruling on In Limine Motions and Providing Administrative Directives) (June 12, 2000).

<sup>6</sup> Those contentions are: Utah Contention K/Confederated Tribes Contention B (Credible Accidents), Utah Contention L (Geotechnical), Utah Contention O (Hydrology), Utah Contention T (Permits), Utah Contention U (Impacts of On-site Storage), Utah Contention V (Transportation-Related Environmental Impacts), Utah Contention W (Other Impacts), Utah Contention Z (No-Action Alternative), Utah Contention AA (Alternative Sites), Utah Contention DD (Ecology and Species), Utah Contention GG (Cask Pad Stability), OGD Contention O (Environmental Justice), and SUWA Contention B (Alternative Rail Lines).

<sup>7</sup> Appendix A to this partial initial decision identifies, by witness, the location of written testimony in the transcript. Appendix B lists the exhibits identified and the location in the transcript of the Board's ruling on any offer of an exhibit into evidence.

This Board's jurisdiction is limited to a determination of findings of fact and conclusions of law on matters put into controversy by the parties to the proceeding or found by the Board, sua sponte, to involve a serious safety, environmental, or common defense and security question. Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22-23 (1998); see 10 C.F.R. § 2.760a. The Board has made no sua sponte findings in this case.

## II. OVERVIEW AND CONCLUSION

### A. Contention Utah E (Financial Assurance)

Contention Utah E, which challenged the financial qualifications of the Applicant, was admitted by the Licensing Board (as consolidated with Confederated Tribes Contention F) with 10 bases in April 1998. LBP-98-7, 47 NRC at 187, 236, 251-52. On December 3, 1999, PFS filed a motion for partial summary disposition on 9 of the 10 bases supported by an affidavit from Chairman of the PFS Board of Managers, John Parkyn. (Not included in PFS's motion was Basis 6, which concerned the adequacy of PFS's construction and operating cost estimates.) The primary bases for PFS's motion were commitments not to begin construction until funding for construction was fully committed and not to begin operation until long-term Service Agreements were in place to cover the operating and maintenance costs for the facility for the entire term of the Agreements.

The NRC Staff supported the motion and the State opposed it. The NRC Staff further proposed two license conditions to implement PFS's commitments, which were included in the Staff's Safety Evaluation Report. These two conditions are as follows:

- A. Construction of the [PFS] Facility shall not commence before funding (equity, revenue and debt) is fully committed that is adequate to construct a Facility with the initial capacity as specified by PFS to the NRC [redacted]MTU capacity]. Construction of any additional capacity beyond this initial capacity amount shall commence only after funding is fully committed that is adequate to construct such additional capacity.
- B. PFS shall not proceed with the Facility's operation unless it has in place long-term Service Agreements with prices sufficient to cover the operating, maintenance, and decommissioning costs of the Facility, for the entire term of the Service Agreements.

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-00-6, 51 NRC 101, 109 (2000) (Commission appeal pending).

On March 10, 2000, the Board granted the motion in part and dismissed Bases 1-5 and 7-10 of Utah E, except those aspects of Bases 5 and 10 relating to on-site property insurance coverage for the PFSF. Id. at 134, 137.<sup>8</sup> Since PFS did not seek summary judgment of Basis 6 concerning the adequacy of PFS's construction and operating cost estimates, three issues – construction costs, operating costs, and on-site property insurance – remained for litigation here.

### **1. Construction Costs**

Under NRC regulations, a license applicant must show that it has reasonable assurance of obtaining the funds necessary to build, operate, and decommission an ISFSI. 10 C.F.R. § 72.22(e). PFS will be subject to a license condition that prevents it from con-

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<sup>8</sup> Underlying the Board's granting of partial summary disposition was its determination that PFS's commitments, subsumed in the NRC Staff's proposed license conditions, provided reasonable assurance consistent with the Commission's decision in Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997).

structing the PFSF without sufficient committed funding to cover construction costs. LBP-00-6, 51 NRC at 109. Thus, in order to show that it has reasonable assurance of obtaining sufficient funds to build the PFSF, i.e., to allow the NRC to determine that the committed funding is sufficient, PFS must present a reasonable estimate of facility construction costs. Finding 3, infra.

Testimony for PFS on the cost of structures and site work for the PFSF was provided by Mr. Joseph Gase, Manager of Project Controls and Resource Staffing for the Denver office of Stone & Webster Engineering Corporation (the architect/engineer for the PFSF project), and Mr. George Takacs, a principal estimating engineer for Stone & Webster. Pre-filed Testimony of Joseph F. Gase and George L. Takacs IV on PFSF Construction Costs (inserted into the record after Tr. 1681) at 1-2 [hereinafter “Gase/Takacs”]. Mr. Gase has worked in the engineering and construction industry for nearly 30 years and has served as lead estimator on a number of large construction projects. Gase/Takacs at 1-2. Mr. Takacs has over 25 years of experience in project estimating, cost control, planning, and scheduling and has prepared cost estimates for a number of large projects, including nuclear projects for the Department of Energy. Id. at 2-3. Mr. Gase and Mr. Takacs developed and provided cost estimates for the construction of the site and its various structures as well for the construction of the Low Rail Line. Id. at 7-18. The costs for the site, structures and Low Rail Line were broken down into their various components for which estimates were provided. See PFS Exh. D (eight page spread sheet of PFSF construction cost estimates).

Testimony on the cost of equipment and administrative costs to be incurred during construction was provided by PFS Chairman, Mr. John Parkyn. Pre-filed Testimony of John Parkyn on PFSF Construction Costs (inserted into the record after Tr. 1845) at 1 [hereinafter “Parkyn Const.”]. Mr. Parkyn is a nuclear engineer who has worked in the nuclear power industry for over 30 years. Parkyn Const. at 1-2. Prior to serving as PFS Chairman, he had been Plant Manager and Acting Chief Executive Officer for Nuclear Power at the LaCrosse Boiling Water Reactor, where his responsibilities included oversight of plant operations and budgeting and staffing for the site. Id. at 2. He was involved in the construction of the LaCrosse reactor and the construction of the Point Beach reactor for Wisconsin Electric Power Company. Id. at 3. Mr. Parkyn also serves on the Governor’s Commission on Passenger Rail in Wisconsin and had served as a member of the Wisconsin Legislative Study Committee on Railroads. Id. at 2. Based on commonly available data, bids from vendors, costs of analogous equipment, and on his experience, Mr. Parkyn testified to the costs for the rail and other transportation equipment, other loading system equipment, cask haulers and other capital expenses. Id. at 6-12. He also provided testimony on administrative costs that would be incurred by PFS during construction and how PFS would escalate its construction cost estimates. Id. at 13-17.

Testimony on the PFSF construction costs for the NRC Staff was provided by Dr. Alex McKeigney, Financial Analyst in the Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation, and Mr. Robert Wood, Senior Level Licensee Financial Policy Advisor, also in the Division of Regulatory Improvement Programs,

Office of Nuclear Reactor Regulation. Pre-Filed Testimony of Alex F. McKeigney and Robert S. Wood on Utah Contention E/Confederated Tribes F (Financial Assurance) at 1 (inserted into the record after Tr. 2559) [hereinafter “McKeigney/Wood Utah E”]. Dr. McKeigney has over 20 years of experience in strategic and financial planning for nuclear electric utilities. See id., McKeigney Resume. He currently performs a wide range of analytical functions for the NRC in such areas as financial qualifications, decommissioning funding assurance, and foreign ownership and control of nuclear reactors and nuclear materials facilities. Id. at 1. Mr. Wood began his career with the Atomic Energy Commission nearly 30 years ago and has held several positions with responsibility for the NRC’s programs and policies concerning financial qualifications, decommissioning funding assurance, antitrust, insurance, and economic analysis. Id., Statement of Professional Qualifications. He currently is responsible for the development and implementation of NRC policies and programs for nuclear insurance, financial assurance for decommissioning nuclear power plants, financial qualifications of NRC licensees, electric utility deregulation, and license transfers. Id. at 2. Dr. McKeigney and Mr. Wood testified that PFS’s estimates of the construction costs for the PFSF were adequate under NRC regulations. Id. at 4-7.

Testimony on the construction costs for the PFSF for the State was provided by Dr. Michael Sheehan, partner in the firm of Osterberg and Sheehan, Public Utility Economists. Pre-filed Testimony of Michael Sheehan on Contention Utah E (inserted into the record after Tr. at 2190) at 1 [hereinafter “Sheehan Utah E”]. Dr. Sheehan has a Ph.D. in economics and has testified in many state public utility commission cases re-

garding project planning. Id. at 1-3. Dr. Sheehan has, however, had no expertise or experience in estimating construction costs for nuclear facilities or large industrial projects generally. Tr. at 2202-07 (Sheehan). Dr. Sheehan's testimony challenged PFS's construction cost estimates on the grounds that they were not "hard cost estimates," that they contained omissions and uncertainties, and that they did not specify the age of the data or the year's dollars used. Sheehan Utah E at 9. Dr. Sheehan, however, did not testify directly as to what any of the construction costs of the PFSF should be.

Based on evaluation of all the evidence in the record, the Licensing Board finds that PFS has provided reasonable estimates of the construction costs for the PFSF, and that based on the license condition that PFS have sufficient funding committed to cover its estimates before commencing construction, PFS has shown reasonable assurance that it will obtain sufficient funds to construct the PFSF. The Board's specific findings on this issue are set forth in Section III.A.1 below.

## **2. Operating Costs**

PFS will also be subject to a license condition that prevents it from operating the PFSF unless it has sufficient customer Service Agreements to cover operating and maintenance ("O&M") costs over the life of the facility. LBP-00-6, 51 NRC at 109. Therefore, in order to show that it has reasonable assurance of obtaining sufficient funds to operate the PFSF, thus allowing the NRC to determine that the funds obtained under the Service Agreements are sufficient, PFS must present a reasonable estimate of facility O&M costs. Finding 3, infra.

PFS's testimony on the O&M costs for the PFSF was provided by Mr. Parkyn and Northern States Power Company's Project Manager for Dry Cask Storage at the Prairie Island Nuclear Generating Plant, Jon Kapitz.<sup>9</sup> Pre-filed Testimony of John Parkyn and Jon Kapitz (inserted into the record after Tr. 2017) at 1, 3 [hereinafter "Parkyn/Kapitz"]. Mr. Kapitz has worked in the nuclear industry for nearly 20 years and has extensive experience with spent fuel dry storage operations. Id. at Attachment 2. He has been responsible for overall project management of the Prairie Island ISFSI, including preparing and managing its budget. Id. at 2. Mr. Parkyn and Mr. Kapitz testified as to the estimated O&M costs for the PFSF, breaking costs down into 18 categories and providing an estimate and supporting rationale for each one. Id. at 5-29.

NRC Staff testimony on the O&M costs for the PFSF was provided by Dr. McKeigney and Mr. Wood. McKeigney/Wood Utah E at 1. Dr. McKeigney and Mr. Wood testified that PFS's estimates of the O&M costs for the PFSF were adequate under NRC regulations. Id. at 4-7.

The State's testimony on the O&M costs for the PFSF was provided by Dr. Sheehan. Sheehan Utah E. While, as noted above, Dr. Sheehan has testified before state public utility commissions regarding project planning, id. at 2-3, he has had no expertise or experience in estimating operating costs for nuclear facilities or large industrial projects generally. Tr. at 2202-07 (Sheehan). Dr. Sheehan's testimony challenged PFS's operating cost estimates on the grounds that they contained omissions, uncertainties, and un-

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<sup>9</sup> Just prior to the hearing, Mr. Kapitz was promoted to Superintendent of Nuclear Engineering for Northern States Power. Tr. at 2016-17 (Kapitz).

supported assumptions and did not explain the use of cost escalators over time. Sheehan Utah E at 30. As with his construction costs testimony, Dr. Sheehan did not testify directly as to what any of the operating costs of the PFSF should be.

Based on evaluation of all the evidence in the record, the Licensing Board finds that PFS has provided reasonable estimates of the operating and maintenance costs for the PFSF and that, based on the licensee condition that PFS have executed Service Agreements in place to cover its estimates, PFS has shown reasonable assurance that it will obtain sufficient funds to operate and maintain the PFSF. The Board's specific findings on this issue are set forth in Section III.A.2 below.

### **3. On-Site Nuclear Property Insurance**

Testimony on on-site property insurance for the PFSF was provided by Hanson Pickerl, Senior Vice President of the Midwest Region Marsh Power Group, a specialty group within Marsh USA, Inc., and Mr. Parkyn. Pre-filed Testimony of Hanson D. Pickerl at 1 (inserted into the record after Tr. 1757) [hereinafter "Pickerl"]; Pre-filed Testimony of John Parkyn on On-Site Property Insurance for the PFSF at 1 (inserted into the record after Tr. 2173) [hereinafter "Parkyn Ins."]. Mr. Pickerl has been a member of the Marsh Nuclear professional staff since 1985 and has been responsible for all aspects of nuclear insurance procurement and administration for utility and nuclear industry clients. Pickerl at 2. Marsh USA is a subsidiary of the world's largest insurance broker and risk management service company. Id. at 1. Mr. Parkyn's responsibilities as Plant Manager and Acting Chief Executive Officer for Nuclear Power at LaCrosse included knowledge of the requirements for and costs of nuclear insurance for reactors that are operating and

undergoing decommissioning. Parkyn Ins. at 3. Mr. Pickerl testified as to the availability, cost, and scope of coverage of on-site property insurance for the PFSF. Pickerl at 3-6. Mr. Parkyn testified as to how much insurance coverage should be required for the PFSF and how much PFS has committed to obtaining. Parkyn Ins. at 3-9.

NRC Staff testimony on on-site property insurance was provided by Dr. McKeigney and Mr. Wood. McKeigney/Wood Utah E at 10-13. As noted above, Dr. McKeigney's analytical functions for the NRC include financial qualifications and decommissioning funding assurance. Id. at 1. Mr. Wood is responsible for, inter alia, the development and implementation of NRC policies and programs for nuclear insurance. Id. at 2. Dr. McKeigney and Mr. Wood testified regarding NRC requirements for property insurance, the availability and cost of coverage, and that PFS's commitment to obtain insurance satisfied NRC financial assurance requirements. Id. at 10-12.

The State's testimony regarding on-site property insurance was provided by Dr. Sheehan. Sheehan Utah E at 48-54; see also Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the State of Utah Regarding Contention Utah S (inserted into the record after Tr. 2491) at 7-10 [hereinafter "Sheehan Utah S"]. While Dr. Sheehan has some academic background in risk management, Sheehan Utah E at 4, he has had no experience or expertise with nuclear property insurance, Tr. at 2219-22 (Sheehan), and no experience or expertise in estimating the probabilities or consequences of accidents. Tr. at 2492, 2405-08 (Sheehan). Dr. Sheehan testified to the availability, and scope of coverage of on-site property insurance for the PFSF and to the amount of coverage that should be required for the PFSF. Sheehan Utah E at 48-54.

Based on its evaluation of all the evidence in the record, the Licensing Board finds that PFS's commitments for obtaining property insurance for the PFSF provide reasonable assurance that PFS will have sufficient resources to cover non-routine expenses, including potential accident recovery costs. The Board's findings on this issue are set forth in Section III.A.3 below.

**B. Contention Utah S (Decommissioning)**

Utah S challenged the adequacy of PFS's decommissioning plan and decommissioning funding plan for the PFSF. In admitting the contention, the Board limited its scope to Bases 1, 2, 4, 5, 10, and 11. LBP-98-7, 47 NRC at 196-97, 255.<sup>10</sup> On April 7, 2000, PFS and the State filed a joint motion on the scope of Utah S in which the parties agreed not to litigate the decontamination costs estimates set forth in the PFS application or the wording of the letter of credit, thus removing Basis 2 of Utah S entirely as an issue.<sup>11</sup> The Board granted the motion and approved the proposed revision of the language of the remaining Bases 1, 4, 5, and 10, such that the issues remaining to be litigated under Utah S are:

the sufficiency of the funding for direct and indirect decommissioning costs, taking into account (1) the year's dollars used to establish the PFS costs; (2) the escalation factors employed to arrive at the future value of those costs; (3) the maximum quantities of spent fuel at the PFS site during the license term; (4) the potential for large accidents; and (5) the means by which PFS will provide suffi-

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<sup>10</sup> Utah S, Basis 11 was subsequently dismissed based upon the dismissal of Utah Contention B. See Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation) LBP-99-39, 50 NRC 232, 236 (1999).

<sup>11</sup> Joint Motion by the State of Utah and the Applicant to Approve Stipulation for the Hearing of Utah Contention S (Apr. 7, 2000) [hereinafter "Utah S Joint Motion"].

cient funds if a comparison between the cost estimate and present funds indicates a deficit in present decommissioning plan funding.<sup>12</sup>

PFS's testimony on its decommissioning funding plan was provided by Mr. Parkyn. Testimony of John D. Parkyn on Decommissioning the PFSF – Contention Utah S (inserted into the record after Tr. 2424) [hereinafter “Parkyn Utah S”]. As Plant Manager and Acting Chief Executive Officer for Nuclear Power at the La Crosse reactor from 1982 to 1994, he was responsible for oversight of plant operations and budgeting and planning for the site as the reactor shut down and commenced decommissioning. Id. at 2-3. Mr. Parkyn testified regarding PFS's plan for funding the decommissioning of the PFSF site and its spent fuel storage casks, the means by which PFS will adjust its cost estimates to account for potential cost increases, and how PFS will address the potential costs of recovery from an accident at the PFSF. Id. at 4-8.

Testimony on decommissioning funding for the NRC Staff was provided by Staff analysts Dr. McKeigney and Mr. Wood. NRC Staff Testimony of Alex F. McKeigney and Robert S. Wood on Utah Contention S – Decommissioning Funding (inserted into the record after Tr. 2479) [hereinafter “McKeigney/Wood Utah S”]. Both Dr. McKeigney and Mr. Wood perform analytical functions at the NRC concerning, inter alia, financial assurance for decommissioning. Id. at 1-2. Dr. McKeigney and Mr. Wood testified that PFS had provided reasonable assurance that sufficient funds would be available to de-

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<sup>12</sup> Memorandum and Order (Granting Joint Motion to Approve Stipulation on Contention Utah S and Outlining Administrative Matters) at 2 (May 1, 2000).

commission the PFSF and that none of the bases of Contention Utah S had merit. Id. at 7-13.

The State's testimony on the PFS decommissioning funding plan was provided by Dr. Sheehan. Sheehan Utah S. Dr. Sheehan has had no expertise or experience in estimating costs associated with nuclear facilities or with estimating the probabilities or consequences of accidents. Tr. at 2492 (Sheehan); see id. at 2202-07 (Sheehan). Dr. Sheehan's pre-filed testimony asserted that PFS's decommissioning funding plan was deficient in that it did not identify the year's dollars or the age of the data used therein, did not provide an adequate means to account for potential decommissioning cost increases, and did not adequately account for potential accident recovery costs that might be incurred at the PFSF. Sheehan Utah S at 14. At the hearing, however, after having heard PFS and NRC Staff testimony, Dr. Sheehan indicated that some of his concerns had been adequately addressed. Tr. at 2488, 2493-96 (Sheehan). Specifically, Dr. Sheehan indicated that his concerns over the year's dollars and the age of the data used in the funding plan and the means by which PFS would periodically review and adjust its cost estimates and recoup any difference between the amount collected and the estimates had been resolved. Tr. at 2493-96 (Sheehan). Thus, Dr. Sheehan's remaining concerns were PFS's ability to obtain a larger letter of credit if needed to cover increases in estimated site decommissioning costs and PFS's accounting for potential accident recovery costs. Tr. at 2495.

Based on evaluation of all the evidence in the record, the Licensing Board finds that PFS has shown reasonable assurance of the availability of funds for decommissioning. The Board's findings on this issue are set forth in Section III.B below.

### **III. FINDINGS OF FACT**

#### **A. Contention Utah E**

{Utah E Proposed Findings of Fact contain PFS confidential commercial and financial information from proprietary testimony and exhibits and is therefore not included in this non-proprietary version of Applicant's Proposed Findings of Fact and Conclusions of Law.}

**B. Contention Utah S**

**1. Letter of Credit and Storage Cask Decommissioning Funding**

110. In Contention Utah S, Basis 1, as amended, the State alleges that:

The Applicant has failed to provide reasonable assurance, as required by 10 CFR § 72.30(b), that funds will be available to decommission the ISFSI in that the letter of credit PFS intends to obtain “in the amount of \$1,631,000 to cover the estimated facility and site decommissioning costs, exclusive of the storage casks,” LA, App. B, p. 5-2, does not include funds for the decommissioning of the storage casks.

Utah S Joint Motion, Attachment A.<sup>37</sup>

111. To fund the decommissioning of the spent fuel storage casks, PFS will prepay the cost of decommissioning each cask into an escrow account prior to the shipment to the PFSF of the spent fuel to be stored in that cask. PFS Service Agreements will require customer payment of cask decommissioning costs prior to the shipment to PFSF of the canister to be stored in that cask. Parkyn Utah S at 4-5.

112. The State of Utah proffered no direct or rebuttal testimony on amended Utah S Basis 1. See generally Sheehan Utah S; Tr. at 2538-39 (Sheehan). Nor did it cross-examine the PFS or NRC Staff witnesses on Utah S Basis 1. See Tr. at 2426-71, 2475-77 (Parkyn), 2480 (McKeigney/Wood).

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<sup>37</sup> In the Joint Motion, the Applicant had reserved its right to argue that amended Basis 1 was outside the scope of Utah S as admitted and hence was not litigable in this proceeding. Utah S Joint Motion, Attachment A at n.\*\*.

113. An intervenor's failure to litigate an admitted contention, or part thereof, constitutes a default. LBP-00-5, 51 NRC at 68; see Boston Edison Co. (Pilgrim Nuclear Generating Station, Unit No. 2), LBP-76-7, 3 NRC 156, 157 (1976); Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-90-12, 31 NRC 427, 429-31, aff'd in part, ALAB-934, 32 NRC 1 (1990); see also Consumers Power Co. (Palisades Nuclear Power Facility), LBP-82-101, 16 NRC 1594, 1595-96 (1982). Under 10 C.F.R. § 2.707, "[o]n failure of a party to file an answer or pleading within the time prescribed . . . [or] to appear at a hearing . . . the presiding officer . . . may make such orders in regard to the failure as are just . . . ." Upon a default, it is appropriate under 10 C.F.R. § 2.707 to dismiss the contention. LBP-00-5, 51 NRC at 68-69; see Pilgrim, LBP-76-7, 3 NRC at 157-58; Seabrook, LBP-90-12, 31 NRC at 430-31; Palisades, LBP-82-101, 16 NRC at 1596.
114. Because the State failed to proffer testimony or conduct cross-examination on Utah S Basis 1, it is in default with respect to that basis. Therefore, under 10 C.F.R. § 2.707, we dismiss Utah S Basis 1.
115. We alternatively find that amended Utah S Basis 1 is outside the scope of the contention as admitted and hence is not litigable.<sup>38</sup> Basis 1, as admitted, asserted that PFS would be unable to obtain a letter of credit "in amount of \$1,631,000 to

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<sup>38</sup> The Applicant had argued in a pre-hearing brief that amended Utah S Basis 1 was outside the scope of Utah S as admitted. Applicant's Brief on the Scope of Utah Contention S, Basis One (May 31, 2000). The Board deferred ruling on the issue, however, on the grounds of ripeness, in that the State had presented no pre-filed testimony regarding amended Basis 1. Memorandum and Order (Ruling on In Limine Motions and Providing Administrative Directives) at 8 n.2 (June 12, 2000).

cover the estimated facility and site decommissioning costs, exclusive of the storage casks.”<sup>39</sup> Basis 1 did not allege that the letter of credit must cover storage cask decommissioning. Nor did Basis 1 (or any other admitted bases of Utah S) allege that it would be improper for PFS to prepay cask decommissioning costs on a cask-by-cask basis prior to the use of each cask at the PFSF. Therefore, because it is outside the scope of Basis 1 as admitted, amended Basis 1 is not litigable.

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 & n.11 (1988).

116. Furthermore, even if it were within the scope of the contention as admitted, we would find amended Basis 1 without merit, in that PFS has chosen to prepay storage cask decommissioning costs rather than rely upon a letter of credit to cover them. See 10 C.F.R. § 72.30(c); Finding 119, infra. “Prepayment is [defined as] the deposit prior to the start of operation into an account segregated from licensee assets . . . of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs.” 10 C.F.R. § 72.30(c)(1). Thus, prepayment of cask decommissioning costs prior to the operation of each cask (i.e., the storage of spent fuel therein), is an acceptable means of complying with NRC ISFSI decommissioning funding requirements.

## **2. Cost Escalation and Potential Future Deficiencies**

117. In Contention Utah S, Basis 4, as amended, the State alleges that:

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<sup>39</sup> State of Utah’s Contentions on the Construction and Operating License Application by Private Fuel Storage, LLC for an Independent Spent Fuel Storage Facility at 123 (Nov. 23, 1997).

The Applicant has failed to justify the basis for its decommissioning cost estimates of \$17,000 to decommission a storage cask and of \$1,631,000 to decommission the remainder of the ISFSI in that (i) the decommissioning cost estimates do not state the year's dollars used (e.g., 1997 dollars) as provided in NUREG-1567, Draft Standard Review Plan for Spent Fuel Dry Storage Facilities, LA Appendix B, Chapter 4, and (ii) the estimates are not properly escalated to convert past dollars values into future dollars values (i.e. the future value of costs when the costs are expected to be incurred).

An applicant for a part 72 ISFSI license must submit a Decommissioning Funding Plan "at the time of the license application." Regulatory Guide 3.66, Standard Format and Content of Financial Assurance Mechanisms required for decommissioning under 10 CFR Parts 30, 40, 70 and 72 (hereafter "Reg. Guide 3.66"), at.1-3, 1-6. The Decommissioning Plan "must compare the cost estimate with present funds, and if there is a deficit in present funding the plan must indicate the means for providing sufficient funds for completion of decommissioning." NUREG 1567, at 16-4. This information is missing from the application.

Furthermore, to ensure that sufficient decommissioning funds are available, the Applicant should take a conservative approach in estimating the maximum quantity of spent fuel casks to be stored at the site during the license term.

Utah S Joint Motion, Attachment A.

118. NRC regulations require an ISFSI license application to include a decommissioning funding plan containing information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI. 10 C.F.R. § 72.30(b); see also 10 C.F.R. § 72.22(e)(3). The funding plan must include a cost estimate and a description of the method of assuring the availability of funds. 10 C.F.R. § 72.30(b). An applicant may choose from three methods of assurance: 1) prepayment of funds into an escrow account; 2) a surety, insurance, or guarantee method that will guarantee that decommissioning costs will be paid; or 3) an ex-

ternal sinking fund into which payments will be made periodically, coupled with a surety, insurance, or guarantee method to provide assurance until the sinking fund is fully funded. 10 C.F.R. § 72.30(c).

119. To fund the decommissioning of the PFSF facility and site (excluding the storage casks), PFS will use a letter of credit coupled with an external sinking fund into which decommissioning fund payments will be deposited upon collection of funds from PFS customers under Service Agreements. Prior to beginning of operation, PFS will have obtained a letter of credit equal to 100% of the estimated site decommissioning costs. PFS will collect site decommissioning payments from its customers periodically over the life of the PFSF such that the total amount for decommissioning the site will have been deposited in the external sinking fund by the time all the spent fuel is removed from the PFSF. As the site decommissioning funds are paid into the external sinking fund, the letter of credit may be reduced by an equivalent amount. Parkyn Utah S at 4. PFS envisions that in fact it will pay off its letter of credit within two years of the beginning of operations. Tr. at 2448-49 (Parkyn). As stated in Finding 116, supra, the decommissioning funding for each storage cask will be prepaid into an escrow account prior to the shipment to the PFSF of the spent fuel to be stored in that cask.
120. The estimated cost of decommissioning the site set forth in the license application is provided in 1997 dollars. The estimated cost of decommissioning each spent fuel cask is also provided in 1997 dollars. Parkyn Utah S at 5. The cost estimates

in the application were based on 1997 data. Tr. at 2425 (Parkyn); see id. at 2431-32, 2434-35 (Parkyn).

121. To convert PFS's decommissioning cost estimates into future year dollars and to account for any real changes in the cost of decommissioning the PFSF, i.e., changes other than those attributable to changes in the value of the dollar, PFS will conduct an annual review of its decommissioning cost estimates. Parkyn Utah S at 5; Tr. at 2425-26 (Parkyn). PFS will account for the effects of inflation using the Consumer Price Index, published by the Bureau of Labor Statistics. Parkyn Utah S at 5. Also on an annual basis, PFS will review both the individual elements of the decommissioning cost estimate and the overall estimate and revise them as necessary to account for any changes in the tasks, scope, cost or schedule for decommissioning. Id.; see Tr. at 2435-38 (Parkyn). Such review will also account for any cost effects arising from technological or regulatory changes. Tr. at 2426, 2437-39 (Parkyn). The customers' obligation to fund any increases will be provided for in PFS's Service Agreements. Parkyn Utah S at 5-6.
122. Based on its annual review of decommissioning costs, PFS will adjust its Letter of Credit to account for any changes in overall site decommissioning costs and for deposits into PFS's decommissioning external sinking fund that will be made. Parkyn Utah S at 6. If PFS needs a letter of credit of greater value to cover estimated site costs, it has committed to obtaining one. Parkyn Utah S at 6; see also Tr. at 2439-42 (Parkyn).

123. The State's witness, Dr. Sheehan, claimed that there is "a high degree on uncertainty whether PFS will be able to secure additional funds under a letter of credit." Sheehan Utah S at 12. However, Dr. Sheehan, provided no bases or analysis, in either his written or his oral testimony, to support this claim. Further, as testified by the NRC Staff, an applicant that relies on a letter of credit for decommissioning funding is not required to demonstrate an ability to secure additional funds for future events. Tr. at 2549-50 (McKeigney/Wood). Moreover, (1) PFS intends to pay off its letter of credit within several years after the license is issued, based on payments made by its customers (Finding 119, supra.), (2) PFS will be able to backcharge its customers for any increases in its decommissioning costs (Finding 124, infra.), and (3) PFS's decommissioning funding plan is inherently conservative since it takes no credit for any return on collected funds (Finding 125, infra.). In this light, we find that Dr. Sheehan's concern about PFS's ability to secure additional funds under a letter of credit does not call into question the reasonable assurance of PFS's decommissioning funding plan.
124. Further, under the Service Agreements, PFS will require its customers to make up their proportionate shares of any increase in PFS's site decommissioning costs, on the basis of the portion of the capacity of the PFSF each customer has reserved for spent fuel storage. Parkyn Utah S at 6; see Tr. at 2449-50, 2462 (Parkyn). This would include customers whose fuel had been removed from the PFSF. Tr. at 2464, 2472 (Parkyn). The Service Agreements will similarly require customers to make up any increase in the decommissioning costs of the storage casks in which

the customers' spent fuel will be stored. Parkyn Utah S at 6. For customers with Service Agreements who have not yet made decommissioning payments, PFS will adjust the amounts to be paid and thus will ensure that all cost increases are covered. Id. at 6-7.

125. In any event, it is unlikely that a decommissioning funding shortfall will occur. PFS's decommissioning funding plan is conservative in that it does not account for the real rate of return PFS will realize on the money in its decommissioning account over the life of the PFSF. A 2 percent annual real rate of return (such as allowed by NRC regulations for nuclear power plants under 10 C.F.R. § 50.75) over 40 years would increase the value of the funds by 120 percent before taxes. Parkyn Utah S at 6. In practice, nuclear power plant licensees may realize real rates of return on decommissioning trust funds even greater than the 2 percent the NRC allows to be presumed under its regulations. Tr. at 2473-74 (Parkyn).
126. PFS's decommissioning cost estimate takes into account the maximum quantity of spent fuel that will be stored at the PFSF. PFS's decommissioning funding plan includes a cost estimate (and provides for the collection and escrowing of monies) to decommission each spent fuel storage cask associated with each spent fuel canister that will be stored at the PFSF. Parkyn Utah S at 7. Thus, PFS's decommissioning cost estimate and funding plan for the storage casks directly accounts for the maximum quantity of spent fuel that will be stored at the PFSF. As for the site decommissioning costs, PFS's cost estimates and the size of its letter of credit are based upon decommissioning of the concrete storage pads predicated

on the maximum quantity of spent fuel that could be stored at the PFSF, i.e., 4,000 casks, including estimation of site survey costs based on a full-capacity site.

Id.

### **3. Large Accidents**

127. In Contention Utah S, Basis 5, the State alleges that:

The decommissioning cost estimate totally ignores the potential for large accidents and associated release or contamination at the ISFSI. LA Appendix B, Chapter 4. The very large number of casks that are to be handled at the ISFSI and the large number of operations and movements that will be required argue strongly for anticipating this potential and making arrangements for a multimillion dollar increase in decommissioning to “provide reasonable assurance that the planned decommissioning of the ISFSI will be carried out” as required by 10 CFR §72.30.

Utah S Joint Motion, Attachment A.

128. PFS does not need to include the cost of accident recovery in its decommissioning cost estimate, in that the NRC treats post-accident cleanup costs apart from decommissioning. The NRC has stated, in the context of nuclear reactors for which on-site property insurance is required, that potential accident recovery costs are not the subject of decommissioning funding:

Assurance of funds for post-accident cleanup is more properly covered by the use of insurance. Post-accident cleanup activities are broader in scope than decommissioning, that is, they can lead ultimately to either reuse [of the facility] or decommissioning. Accordingly, the funding requirements for accident cleanup are not included in [the decommissioning rule] but are contained in 10 CFR 50.54(w) which requires [reactor licensees to] obtain insurance to cover decontamination and cleanup costs associated with onsite property damage resulting from an accident.

Decommissioning Criteria for Nuclear Facilities, Proposed Rule, 50 Fed. Reg. 5,600, 5,606 (1985);<sup>40</sup> see also Changes in Property Insurance Requirements for NRC Licensed Nuclear Power Plants, Final Rule, 52 Fed. Reg. 28,963, 28,970-28,971 (1987).

129. Although, the NRC does not require Part 72 ISFSI licensees to obtain on-site property insurance to cover the potential cost of accident recovery, the potential cost of accident recovery for an ISFSI may be accounted for by nuclear property damage insurance. See Findings 92-93, supra. PFS has committed to obtaining onsite property damage insurance coverage which the Board has determined will be sufficient to provide for the potential costs of accident recovery at the PFSF. Finding 109, supra.
130. The State's witness, Dr. Sheehan, cited various studies of radiological consequences and cleanup costs for hypothetical accidents involving the transportation of spent nuclear fuel. Sheehan Utah S at 8. However, during cross-examination, Dr. Sheehan acknowledged that he did not know the basis for the higher range of the cleanup dollar costs cited in his testimony. Tr. at 2524 (Sheehan). Dr. Sheehan also acknowledged that he has no experience or expertise in estimating radiological consequences or cleanup costs (id. at 2492, 2508), that the studies all involved transportation casks, and not storage casks (id. at 2511-12), that he did

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<sup>40</sup> Although stated in the context of nuclear power reactors, the Commission simultaneously proposed, and eventually adopted, virtually identical decommissioning funding regulations for ISFSIs. 50 Fed. Reg. 5,600; 10 CFR Parts 30, 40, 50, 41, 70, and 72 General Requirements for Decommissioning Nuclear Facilities, Final Rule, 53 Fed. Reg. 24,018 (1988).

not know whether the studies involved a sealed welded canister-based system, such as that to be used by PFS (id. at 2512), that he did not know whether the casks that were subject of the studies were like those that PFS would use (id. at 2513-14, 2517-18), that he did not know the enrichment, burn-up, or age of the spent fuel involved in those studies, which would make a difference in the absolute calculation of cleanup costs (id. at 2514, 2517), and that he did not know the underlying assumptions concerning spent fuel oxidation in the consequences of the worst-case accident, cited in his written testimony, which “[c]ould be significant,” (id. at 2519-21). Dr. Sheehan further acknowledged that the cleanup costs and related numbers cited in his testimony were not intended to represent actual cleanup costs at the PFSF in the event of an accident, that the relevant PFSF numbers could be some “other order of magnitude,” and that as a practical matter all that can be said based on the studies and numbers presented in his written testimony is that the PFSF numbers are “probably not zero.” Tr. at 2532-33 (Sheehan). In view of this testimony, we find that the cleanup cost numbers cited by Dr. Sheehan are of no practical relevance here, and do not call into question the adequacy of PFS’s decommissioning funding (or property insurance coverage).

131. Based on the above findings, we conclude that PFS does not need to include the potential cost of accident recovery in its decommissioning funding plan.

#### **4. Site Survey Cost Escalation**

132. In Contention Utah S, Basis 10, the State alleges that:

The Applicant specifies that decommissioning costs include \$260,000 for a survey of the ISFSI site. LA, App B, p. 4-6.

The Applicant has failed to justify the basis for this estimate in that does not state the year's dollars used (e.g., 1997 dollars) as provided in NUREG-1567, Draft Standard Review Plan for Spent Fuel Dry Storage Facilities, LA Appendix B, Chapter 4, and (ii) is not properly escalated to convert past dollars values into future dollars values (i.e. the future value of costs when the costs are expected to be incurred).

Utah S Joint Motion, Attachment A.

133. The decommissioning site survey is part of radiological decommissioning. 10 C.F.R. § 72.54(1)(2). Thus, an ISFSI license applicant must provide assurance of the availability of funds to perform the survey as part of the funds to conduct radiological decommissioning activities. 10 C.F.R. § 72.30(b).
134. PFS has stated that it provided the site survey cost estimate in 1997 dollars. Parkyn Utah S at 8.
135. Similar to other decommissioning costs, PFS will account for potential future increases in the cost of the site survey due to inflation by adjusting the survey cost estimate annually using the Consumer Price Index. Parkyn Utah S at 8. Changes in the real cost of the site survey, i.e., those not attributable to inflation, will be accounted for as part of the annual review of the entire PFSF decommissioning cost estimate to ensure that both the individual elements and the overall estimate remain valid or are revised to account for any changes in the tasks, scope, cost or schedule for decommissioning or for regulatory or technological changes. Parkyn Utah S at 8; see Tr. at 2426, 2437-39 (Parkyn).<sup>41</sup>

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<sup>41</sup> As with other decommissioning costs, PFS's funding plan is conservative in that it does not take into account the rate of return that it will realize on collected funds. See Finding 125, supra.

#### IV. CONCLUSIONS OF LAW

##### A. Contention Utah E

1. The Applicant has shown reasonable assurance of obtaining funds necessary to cover construction costs for the PFSF by providing reasonable estimates of the construction costs of the facility together with the proposed financial license condition that prohibits PFS from commencing construction of the facility before adequate construction funding is committed
2. The Applicant has shown reasonable assurance of obtaining funds necessary to cover operating costs for the PFSF by providing reasonable estimates of the operating costs of the facility together with the proposed financial license condition that prohibits PFS from operating the facility before obtaining customer Service Agreements with prices sufficient to cover the operating, maintenance, and decommissioning costs of the facility.<sup>42</sup>
3. The Applicant's commitment to obtain on-site property insurance coverage for the PFSF is sufficient to show that the application provides reasonable assurance that PFS will have sufficient resources to cover non-routine expenses, including on-site accident recovery costs.

##### B. Contention Utah S

4. Under 10 C.F.R. § 72.30, the Applicant has shown reasonable assurance that the necessary funds will be available to decommission the PFSF, including the storage casks in which the fuel will be stored while on site.

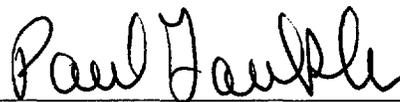
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<sup>42</sup> The adequacy of PFS's decommissioning funding plan is the subject of contention Utah S.

**V. CONCLUSION**

The Applicant respectfully requests that the Board rule in favor of the Applicant on Contentions Utah E and Utah S.

Respectfully submitted,



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July 31, 2000

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of )  
 )  
PRIVATE FUEL STORAGE L.L.C. ) Docket No. 72-22  
 )  
(Private Fuel Storage Facility) ) ASLBP No. 97-732-02-ISFSI

CERTIFICATE OF SERVICE

I hereby certify that copies of the “Applicant’s Proposed Findings of Fact and Conclusions of Law on Contentions Utah E/Confederated Tribes F, and Utah S [Proprietary Version],” containing PFS proprietary financial information on Utah E, was served on the persons listed below by e-mail with conforming copies by first class U.S. mail, postage prepaid, the 31st day of July 2000.

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I further certify that copies of the "Applicant's Proposed Findings of Fact and Conclusions of Law on Contentions Utah E/Confederated Tribes F and Utah S [Non-Proprietary Version]" were served on the persons listed below (unless otherwise noted) by e-mail with confirming copies by U.S. mail, first class, postage prepaid, this 31<sup>st</sup> day of July 2000.

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Paul A. Gaukler

### Appendix A Pre-filed Testimony

Witnesses	Testimony	Location
<i>Utah E/Confederated Tribes F</i>		
Joseph Gase and George Takacs	Testimony of Joseph F. Gase and George L. Takacs IV on PFSF Construction Costs Contention Utah E/Confederated Tribes F	Tr. 1681
John Parkyn	Testimony of John Parkyn on PFSF Construction Costs Contention Utah E/Confederated Tribes F	Tr. 1845
John Parkyn and Jon Kapitz	Testimony of John Parkyn and Jon Kapitz on the Operation and Maintenance Costs of the PFSF Contention Utah E/Confederated Tribes F	Tr. 2017
Hanson Pickerl	Testimony of Hanson D. Pickerl on Nuclear Property Insurance for the PFSF Contention Utah E/Confederated Tribes F	Tr. 1757
John Parkyn	Testimony of John Parkyn on On-Site Property Insurance for the PFSF Contention Utah E/Confederated Tribes F	Tr. 2173
Alex McKeigney and Robert Wood	NRC Staff Testimony of Alex F. McKeigney and Robert S. Wood on Utah Contention E/Confederated Tribes F (Financial Assurance)	Tr. 2559
Michael Sheehan	Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the State of Utah Regarding Contention Utah E	Tr. 2190
<i>Utah R</i>		
Kenneth Dungan and Wayne Lewis	Testimony of Ken Dungan and Wayne Lewis on Fire Protection at the PFSF—Contention Utah R	Tr. 1456
Paul Lain and Randolph Sullivan	NRC Staff Testimony of Paul W. Lain and Randolph L. Sullivan Concerning Contention Utah R (Onsite Fire Fighting Capability)	Tr. 1543
Gary Wise	Prefiled Testimony of Gary A. Wise on Behalf of the State of Utah Regarding Contention Utah R	Tr. 1588
<i>Utah S</i>		
John Parkyn	Testimony of John D. Parkyn on Decommissioning the PFSF – Contention Utah S	Tr. 2424
Alex McKeigney and Robert Wood	NRC Staff Testimony of Alex F. McKeigney and Robert S. Wood on Utah Contention S – Decommissioning Funding	Tr. 2479

<b>Witnesses</b>	<b>Testimony</b>	<b>Location</b>
Michael Sheehan	Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the State of Utah Regarding Contention Utah S	Tr. 2491

## Appendix B Exhibits

Exhibit	Board Ruling	Location	
		Marked	Received
PFS Exhibit A—Fig. 1.2-1, PFSF General Arrangement	Admitted	Tr. 1461	Tr. 1462
PFS Exhibit B—Fig. 4.7-1, Sheet 1 of 3, Canister Transfer Building	Admitted	Tr. 1461	Tr. 1462
PFS Exhibit C—Fig. 4.3-1, Canister Transfer Building Fire Zones & Barriers	Admitted	Tr. 1461	Tr. 1461
PFS Exhibit D—PFS Construction Cost Estimate	Admitted	Tr. 1682	Tr. 1682
PFS Exhibit E—PFS Storage Facility/Railroad Preliminary Construction Cost Estimate (May 13, 2000)	Admitted	Tr. 1846	Tr. 1846
PFS Exhibit F—Letter from Lawrence Krantz, Senior Underwriter, Nuclear Electric Insurance Limited (NEIL), to John Parkyn (May 11, 2000)	Admitted	Tr. 1759	Tr. 1759
PFS Exhibit G—Safety Analysis Report (SAR), Revision 13, pp. 9.1-13, 9.3-3, and 9.5-2; Emergency Plan, Revision 9, pp. 1-4, 3-5, 4-3, and 6-2	Admitted	Tr. 1467	Tr. 1468
PFS Exhibit H—SAR, Revision 9, pp. 2.2-2 to 2.2-23	Admitted	Tr. 1950	Tr. 1951
PFS Exhibit I—SAR, Revision 7, p. 8.2-43	Admitted	Tr. 1969	Tr. 1970
PFS Exhibit J—Amended and Restated Business Lease between the Skull Valley Band of Goshute Indians and Private Fuel Storage, pp. 13-14 (May 20, 1997).	Admitted	Tr. 2159	Tr. 2159
PFS Exhibit K—Drawings Used to Develop PFSF Construction Cost Estimates	Admitted	Tr. 2610	Tr. 2610
PFS Exhibit L—Letter from David B. Ripsom, Vice President and General Counsel, NEIL, to John Parkyn (June 26, 2000)	Admitted	Tr. 2618	Tr. 2618
PFS Exhibit M—PFS Safety RAI No. 2, LA 1-1	Admitted	Tr. 2673	Tr. 2673
NRC Staff Exhibit A—NRC Staff, PFSF Safety Evaluation Report (Jan. 4, 2000)	Admitted	Tr. 1537	Tr. 1545
NRC Staff Exhibit B—NFPA 600 Standard on Industrial Fire Brigades, 2000 Edition	Admitted	Tr. 1622	Tr. 1677
State Exhibit 1—PFSF Emergency Plan (EP), Revision 3, pp. 4-2 to 4-4, Fig. 4-1	Admitted	Tr. 1496	Tr. 1591
State Exhibit 2—PFSF Safety RAI No. 2, EP-7	Admitted	Tr. 1590	Tr. 1591

Exhibit	Board Ruling	Location	
		Marked	Received
State Exhibit 3—PFSF Safety RAI No. 2, EP-8	Admitted	Tr. 1590	Tr. 1591
State Exhibit 4—PFSF Safety RAI No. 2, EP-21	Admitted	Tr. 1590	Tr. 1591
State Exhibit 5—PFSF EP Chapter 5, excerpts	Admitted	Tr. 1590	Tr. 1591
State Exhibit 6—NFPA 600 Standard on Industrial Fire Brigades, 1996 Edition	Admitted	Tr. 1590	Tr. 1591
State Exhibit 7—PFSF EP Chapter 8, excerpts	Admitted	Tr. 1591	Tr. 1591
State Exhibit 8—NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, excerpts	Admitted	Tr. 1496	Tr. 1591
State Exhibit 9—Curriculum Vitae of Michael Sheehan	Admitted	Tr. 2192	Tr. 2192
State Exhibit 10—PFS License Application (LA), excerpts	Admitted	Tr. 2193	Tr. 2193
State Exhibit 11—PFS LA, p. 1-6; PFS LA RAI No. 1, Questions 1-3, 1-5, 1-7 and 1-8	Admitted	Tr. 2194	Tr. 2194
State Exhibit 12—PFS Environmental Report (ER), excerpts	Admitted	Tr. 2200	Tr. 2200
State Exhibit 13—PFS Safety RAI No. 2, LA 1-1	Admitted	Tr. 2200	Tr. 2200
State Exhibit 14—Deposition of John Parkyn (May 3, 2000), excerpts	Admitted	Tr. 2200	Tr. 2200
State Exhibit 15—PFS 1998 Business Plan, excerpts	Admitted	Tr. 2200	Tr. 2200
State Exhibit 16—PFS Storage Facility/Railroad Preliminary Construction Cost Estimate (April 26, 2000)	Admitted	Tr. 1884	Tr. 2200
State Exhibit 17—Private Fuel Storage Transportation Study (Feb. 1998), excerpts	Admitted	Tr. 2200	Tr. 2200
State Exhibit 18—Interoffice Correspondence from Stan Macie, Stone & Webster Engineering Corp., with attached estimates prepared by Carter Concrete Products	Admitted	Tr. 2200	Tr. 2200
State Exhibit 19—PFSF Project Design Plan Construction Schedule and Proposed Environmental Permitting Needs (Feb. 9, 1999)	Admitted	Tr. 2200	Tr. 2200

Exhibit	Board Ruling	Location	
		Marked	Received
State Exhibit 20—Letter from Steve Agace, Operations Manager of Holtec International, to Max DeLong, Private Fuel Storage (Dec. 12, 1998)	Admitted	Tr. 1911	Tr. 1913
State Exhibit 21—Memorandum of Understanding between Private Fuel Storage and Holtec International (May 22, 1997)	Admitted	Tr. 2088	Tr. 2089
State Exhibit 22—Verified Statement of John Parkyn before the Surface Transportation Board (Dec. 30, 1999)	Admitted	Tr. 2200	Tr. 2200
State Exhibit 23—PFS Confidential Finance Committee Information (Nov. 25, 1996)	Admitted	Tr. 2200	Tr. 2200
State Exhibit 24—PFS LA RAI No. 1, Question 1-4	Admitted	Tr. 2200	Tr. 2200
State Exhibit 25—Real Estate Settlement Agreement between PFS and Castle Rock, et.al., (Dec. 15, 1998), excerpts	Admitted	Tr. 2200	Tr. 2200
State Exhibit 26—U.S. Department of Energy, Dry Transfer System, Topical Safety Analysis Report, Volume I, excerpts	Admitted	Tr. 2200	Tr. 2200
State Exhibit 27—Amended and Restated Business Lease between the Skull Valley Band of Goshute Indians and Private Fuel Storage (May 20, 1997), excerpt	Admitted	Tr. 2200	Tr. 2200
State Exhibit 28—Utah Radiation Control Act, Part 3	Admitted	Tr. 2200	Tr. 2200
State Exhibit 29—Deposition of Hanson Pickerl (May 5, 2000)	Admitted	Tr. 2200	Tr. 2200
State Exhibit 30—Letter from William Reamer, U.S. Nuclear Regulatory Commission, to Christopher J. Wentz (June 29, 1995)	Admitted	Tr. 2200	Tr. 2200
State Exhibit 31—Nuclear Electric Insurance Limited Primary Policy for April 1, 2000	Admitted (as marked)	Tr. 1780	Tr. 1954
State Exhibit 32—1998 PFS Business Plan, p. 54/117	Admitted	Tr. 1902	Tr. 1905
State Exhibit 33—1998 PFS Business Plan, 40-year, 40,000 MTU Scenario, pp. 33/118, 34/118	Admitted	Tr. 2032	Tr. 2033
State Exhibit 34—1998 PFS Business Plan, 40-year, 40,000 MTU Scenario, p. 30/118	Admitted	Tr. 2112	Tr. 2113

Exhibit	Board Ruling	Location	
		Marked	Received
State Exhibit 35—Tooele County Corporation Contract No. 00-05-15, with PFS (May 23, 2000)	Admitted	Tr. 2646	Tr. 2647
State Exhibit 36—PFSF Safety RAI No. 2, LA 1-2	Admitted	Tr. 2651	Tr. 2652
State Exhibit 37—Sheehan Calculations of PFS Host Payments to Tooele County and the Skull Valley Band	Admitted	Tr. 2657	Tr. 2661