

RAS 10297

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-05-22
DOCKETED 08/12/05

ATOMIC SAFETY AND LICENSING BOARD

SERVED 08/12/05

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Private Fuel Storage, L.L.C.

(Independent Spent Fuel Storage Installation)

Docket No. 72-22-ISFSI

ASLBP No. 97-732-02-ISFSI

May 27, 2003

PARTIAL INITIAL DECISION
(Contention Utah S, Decommissioning)

[Note: Although this partial initial decision was originally issued in May 2003, it was treated as a non-public issuance pending review of challenges by intervenor State of Utah to claims by applicant Private Fuel Storage, L.L.C., that pursuant to 10 C.F.R. § 2.790 certain portions of the decision should be withheld from public disclosure as proprietary information. With issuance of the Commission's final decision on that matter, see CLI-05-16, 62 NRC __ (July 22, 2005), this decision is being publically released in a redacted form.]

TABLE OF CONTENTS

I. INTRODUCTION 1

II. PROCEDURAL BACKGROUND 2

III. PARTIES' POSITIONS ON CONTENTION UTAH S 13

 A. Witness Qualifications 14

 1. PFS Witness Parkyn 14

 2. Staff Witnesses McKeigney and Wood 16

 3. State Witness Sheehan 18

 B. Financial Assurance Regarding Decommissioning 21

 1. Cost/Funding Adjustments 23

 a. Annual Review of Decommissioning Costs and Site Survey . . 23

 b. Adjustment in the Letter of Credit 25

 2. Storage Cask Decommissioning 25

 3. Vintage of Cost Estimates 27

 4. Decommissioning Cost Estimate Conservatism 28

 C. Large Scale Accidents and NRC Insurance Requirements 28

 D. License Conditions 31

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS 35

 A. Findings Regarding the PFS Application and Proposed Facility 35

 B. Findings and Conclusions Regarding the Parties' Witnesses Findings 36

 C. Findings and Conclusions Regarding Decommissioning Cost/Funding Matters 41

 1. Decommissioning Costs and Funding 41

 a. Annual Review of Decommissioning Costs and Site Survey . . 45

 b. Adjustment in the Letter of Credit 47

 2. Findings and Conclusions Regarding Storage Cask Decommissioning 50

 3. Findings and Conclusions Regarding Vintage of Cost Estimates 51

 4. Findings and Conclusions Regarding Cost Estimate Conservatism . . . 52

 D. Findings and Conclusions Regarding Large Accidents and NRC Insurance Requirements 52

 E. Findings and Conclusions Regarding License Conditions 55

V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW 56

-- PUBLICLY-AVAILABLE VERSION --

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Private Fuel Storage, L.L.C.

(Independent Spent Fuel Storage Installation)

Docket No. 72-22-ISFSI

ASLBP No. 97-732-02-ISFSI

May 27, 2003

PARTIAL INITIAL DECISION
(Contention Utah S, Decommissioning)

I. INTRODUCTION

1.1 Private Fuel Storage, L.L.C., (PFS) applied for a 10 C.F.R. Part 72 license in June 1997 to build and operate an independent spent fuel storage installation (ISFSI) located on the reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah, roughly fifty miles southwest of Salt Lake City. The applicant is organized as a limited liability corporation consisting of eight constituent electric utilities that possess one or more operating or shutdown nuclear power plants. Pursuant to the twenty-year license application, PFS intends to hold up to 40,000 metric tons uranium (MTU) at the one-quarter mile square Skull Valley site in an aboveground dry cask storage arrangement. This partial initial decision concerns admitted contention Utah S, Decommissioning, by which intervenor State of Utah contests the PFS method of decommissioning funding for the Skull Valley site.

1.2 For the reasons set forth below, the Board has determined that, notwithstanding the contention Utah S challenge, PFS has met its burden of proof to show that its

decommissioning plan meets the requirements of 10 C.F.R. §§ 72.30(a) and (c) by providing reasonable assurance that there is sufficient funding for site decommissioning and that the plan protects the health and safety of the public.¹ Thus, the Board finds in favor of PFS relative to contention Utah S.

II. PROCEDURAL BACKGROUND

2.1 A notice of opportunity for a hearing was published by the NRC in the Federal Register following the June 1997 submission of the PFS license application (LA). 62 Fed. Reg. 41,099 (July 31, 1997). The State was among several petitioners seeking admission to that adjudicatory proceeding in accordance with 10 C.F.R. § 2.714(a). See [State] Request for Hearing and Petition for Leave to Intervene (Sept. 11, 1997) at 1. Through an initial prehearing order dated September 23, 1997, the Board set October 24, 1997, as a deadline for the petitioners to supplement their petitions relative to their standing and to submit contentions and supporting bases. See Licensing Board Memorandum and Order (Initial Prehearing Order) (Sept. 23, 1997) at 2-3 (unpublished). This was followed by various orders that granted a thirty-day extension of the filing period, as well as a scheduled site visit and prehearing conference during the week of January 26, 1998. See Licensing Board Memorandum and Order (Schedule for Prehearing Conference/Site Visit and Responses to Supplemental Petition) (Oct. 24, 1997) at 1 (unpublished); Licensing Board Memorandum and Order (Ruling on Motions to Suspend Proceeding and for Extension of Time to File Contentions) (Oct. 17, 1997)

¹ The decommissioning plan is to be distinguished from the decommissioning funding plan (DFP); the former is submitted at the time of actual decommissioning whereas the latter is submitted by NRC licensees or applicants to show financial assurance for decommissioning. Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Comm'n, Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72, Regulatory Guide 3.66, at 1-3, 1-4, 1-6 (June 1990) [hereinafter Regulatory Guide 3.66]. The DFP is part of the decommissioning plan.

at 11 (unpublished). On November 23, 1997, the State filed a supplemental petition containing contention Utah S, followed by corresponding PFS and NRC staff responses. See [State] Contentions on the Construction and Operating [License] Application by [PFS] for an [ISFSI] (Nov. 23, 1997) at 123-30 [hereinafter State Contentions]; [PFS] Answer to Petitioners' Contentions (Dec. 24, 1997) at 236-56; NRC Staff's Response to Contentions Filed by [State] (Dec. 24, 1997) at 49-52; see also [State] Reply to the NRC Staff's and [PFS's] Response to [State] Contentions A through DD (Jan. 16, 1998) at 69-74. As originally proffered by the State, contention Utah S and its accompanying bases read as follows:

UTAH S -- Decommissioning

CONTENTION: The decommissioning plan does not contain sufficient information to provide reasonable assurance that the decontamination or decommissioning of the ISFSI at the end of its useful life will provide adequate protection to the health and safety of the public as required by 10 CFR § 72.30(a), nor does the decommissioning funding plan contain sufficient information to provide reasonable assurance that the necessary funds will be available to decommission the facility, as required by 10 CFR § 70.3(b).

BASIS: The Applicant's decommission plan and funding of the plan are deficient in the following respects:

1. 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. The Applicant intends to obtain a letter of credit "in [the] amount of \$1,631,000 to cover the estimated facility and site decommissioning costs, exclusive of the storage casks." LA at 5-2. As a newly formed entity and without any documentation included in the application as to PFS's capital structure or assets, the Applicant offers no reasonable assurance that it will be qualified to obtain such a letter of credit. Contention E (Financial Qualifications), which more fully discusses the financial assurance for newly formed entities, and whose basis is incorporated by reference into this contention.

2. The financial assurance regulations for decommissioning allow for use of an external sinking fund coupled with a surety method or insurance. 10 CFR § 72.30(c). The application specifies a surety will be in the form of a letter of

credit, but does not provide the wording for the letter of credit or state that the letter of credit is irrevocable. LA at 10-2, LA App. B, at 5-2, [Safety Analysis Report (SAR)] at 9-6. This is contrary to 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"), p.1-4, which states that the Decommissioning Funding Plan "should include the text of the financial assurance instrument(s) that a licensee has chosen to comply with the financial assurance requirements."

3. The application states that decommissioning will be preceded by off site shipment of the canisters containing the spent fuel. LA App. B, at 1-1, 2-3; SAR at 9.6-1. However, the Applicant's own words belie this possibility. In its discussion of "Need for the Facility" (ER 1.2), the Applicant portrays existing reactor sites as running out of spent fuel storage options. The Applicant also states that its facility "would allow reactors that are permanently shutdown to remove all the spent fuel from the site, thus permitting the complete decommissioning of the site." ER at 1.2-2. Therefore, the shipment of the spent fuel back to the originating nuclear power plants will not be viable at the time of decommissioning of the ISFSI.

It is not unrealistic to expect that once the spent fuel casks are stored at the PFS ISFSI, they will remain there beyond the expected license term because there are no off site shipment options. Fuel shipments to Morris, Illinois and West Valley, New York, offer two excellent examples of the plausibility of a this occurrence.

The facility at Morris, Illinois, built by General Electric for reprocessing of spent fuel but never operated as such, included a wet storage pool in which spent fuel was staged for reprocessing. Although no spent fuel was reprocessed in that facility, the spent fuel has remained in storage for decades in the absence of disposal or alternative storage. Similar circumstances developed at the West Valley facility, which was originally built and operated by Nuclear Fuel Services. At that location, spent fuel was reprocessed and high-level waste was generated, and in the absence of disposal or alternative storage capacity, the high-level waste has also remained at that site for decades.

Furthermore, the federal government has not provided a disposal facility to which the spent fuel could be sent. Therefore, the major prerequisite for decommissioning (*i.e.*, a facility to which the spent fuel could be shipped so that decommissioning could begin) is simply assumed to be available. This points out another defect in

the application: The Applicant has failed to identify contingent costs in the realistic event that the ISFSI cannot be decommissioned at the end of the license term.

4. The Applicant has failed to justify the basis for all decommissioning cost estimates. The application estimates the cost to decommission a storage cask is \$17,000 and estimates the decommissioning cost for the remainder of the ISFSI at \$1,631,000. LA pp. 1.7, 3.2. There can be no meaningful review of these amount[s] unless they are broken down with some specificity. Furthermore, 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.

In addition, some of the estimates provided do not appear consistent. For example, the Applicant specifies that \$5 per square foot is adequate to decontaminate the Canister Transfer Building, whereas the Applicant estimated cost to decontaminate the cask surface is \$1 per square foot. LA, App. B, pp. 4-2 & 3. The reader is unable to determine whether the Applicant erred in estimating the decommissioning costs or whether there is a reason for the discrepancy in costs.

The application lacks the detailed and justified cost estimates [] necessary to evaluate the adequacy of the Applicant's decommissioning costs. The Applicant tries to excuse this omission by stating that decontamination efforts are not currently capable of being quantified, LA, App. B, at 2-1. This excuse is invalid. 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. Moreover, the Decommissioning Plan must include "comprehensive consideration of both direct and all indirect decommissioning costs. The 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 following: maximum quantities of spent fuel, other radioactive waste, and solid and hazardous waste generated during the license term; size of decontamination surface areas;

disposal needs for spent fuel, low level radioactive waste, solid waste, hazardous waste and other regulated materials; and demolition and removal of the structures and restoration of the site to its original state.

5. 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.

6. The Applicant has failed to reasonably anticipate the extent of severity of contamination by optimistically presuming there will be no residual contamination on the casks or pads. For example, the Applicant indicates that the storage pads will not be contaminated and only includes funding to decontaminate 10% of the total surface area. LA, Appendix B. The basis for funding cleanup of only 10% of the storage pads is not justified. *See also* Contention J (Inspection and Monitoring of Safety components), Basis 2(b) (Detection and control of contamination). Therefore, the Preliminary Decommissioning Plan should provide procedures and cost estimates that reflect realistic consideration of the potential need for decommissioning of a facility that has experienced contamination from canister releases. LA App. B, at 2-1, 6-1.

7. The Applicant has failed to identify the types of waste it anticipates will be generated at the facility. Moreover, the Applicant has failed to propose decontamination and disposal practices except to state that "to the extent practicable . . . conventional methods [will be used]." LA App. B, at 2-3. For instance, the Applicant assumes that the welded closure of canisters of spent fuel makes impossible or precludes leakage of canisters. As recently evidenced by the Sierra Nuclear VSC-24 cask design deficiencies, welding does not always result in a leak tight closure and demonstrated leak tight welded closures can subsequently fail. *See e.g.*, NRC Demand for Information, EA 97-441 (October 6, 1997) ACN # 9710100120.

8. The application inadequately addresses decontamination of storage casks. The Applicant makes the following statement: "Storage casks with contamination or activation levels above the applicable NRC limits for unrestricted

release will be dismantled, with the activated or contaminated portions segregated and disposed of as low level waste” (emphasis added). LA, App. B, at 2-3. Nowhere does the Applicant discuss the process by which dismantling will occur, where dismantling will occur, and whether the Applicant will have trained personnel, suitable equipment and appropriate safety procedures to undertake this operation. This information is necessary to provide effective detail on decommissioning plans and costs.

9. The Applicant has failed to adequately estimate the cost of decontaminating each storage cask liner. The estimated cost of decontamination of a typical storage cask liner is dependent upon the percentage of the liner assumed to exhibit contamination or activation. The analysis presented includes an unsupported assumption that only 20% of the typical liner will be contaminated. A larger percentage would increase the estimated decontamination cost beyond that provided for in cask decontamination prepayments to the decommissioning funding plan. Adequate funding for storage cask decommissioning cannot be assured because it would then depend on successful assessment of participating customers to pay for the additional costs. LA App. B, at 4-2. This cost may also be increased as a result of Applicant’s failure to provide a means for decontaminating all parts of the canisters. See Contention J, Inspection and Maintenance of Safety Components, Basis 2 (Hot cell needed to protect against undue risk).

10. The Applicant specifies that decommissioning costs include \$250,000 for a survey of the ISFSI site. LA, App. B, pp. 4-2, 3. However, the Applicant does not describe the type of survey or the sampling protocol. Without such information, it is impossible to determine the adequacy of the plan or the decommissioning cost estimates. The Applicant’s generic description of an intent to meet NRC limits for unrestricted release fails to meet the “sufficient information on proposed practices and procedures for the decommissioning of the site and facility” required by 10 CFR § 72.30(a). Id. at 2.3.

11. The Applicant has failed to provide decommissioning procedures and costs at an intermodal transfer facility (Rowley Junction). In fact the application has failed to provide any significant details concerning the planned structures and operations at the transfer facility.

State Contentions at 123-30 (footnote omitted).

2.2 In an April 22, 1998 decision, the Board accepted intervention requests from the State; Ohngo Gaudadeh Devia; Confederated Tribes of the Goshute Reservation; Skull Valley Band of Goshute Indians; and Castle Rock Land and Livestock, L.C., Skull Valley Co., Ltd., and Ensign Ranches of Utah, L.C., (hereinafter referred to collectively as Castle Rock). See LBP-98-7, 47 NRC 142, 157, reconsideration 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). Contention Utah S was one of twenty-six issues the Board admitted as contentions in its April 22, 1998 decision. See id. at 251-58. In admitting contention Utah S, the Board limited it to those bases sufficient to establish a genuine material dispute worthy of additional inquiry, i.e., Basis 1, Basis 2, Basis 4, Basis 5, Basis 10, and Basis 11. See id. at 196-97. In addition, the decommissioning cost estimates for nonradiological solid and hazardous waste disposal under Basis 4 of Utah S were found to be at issue insofar as they concerned license termination. See id. Finally, contention Utah S was deemed inadmissible as to the matters set forth in Basis 3, Basis 6, Basis 7, Basis 8, and Basis 9. See id. Finally, consolidating it with contention Castle Rock 7, the Board revised Utah S to read as follows:

UTAH S/CASTLE ROCK 7 -- Decommissioning

CONTENTION: The decommissioning plan does not contain sufficient information to provide reasonable assurance that the decontamination or decommissioning of the ISFSI at the end of its useful life will provide adequate protection to the health and safety of the public as required by 10 C.F.R. § 72.30(a), nor does the decommissioning funding plan contain sufficient information to provide reasonable assurance that the necessary funds will be available to decommission the facility, as required by 10 C.F.R. § 72.22(e).

Id. at 255.²

² Because of its similarity to contention Utah S, the Board admitted and consolidated portions of contention Castle Rock 7 with contention Utah S. In pertinent part, Castle Rock 7 provided:

2.3 Thereafter, the Board granted a PFS motion for summary disposition on contention Utah B, License Needed for Intermodal Transfer Facility, essentially holding that 10 C.F.R. Part 72 does not apply to the Rowley Junction Intermodal Transfer Point (ITP). See LBP-99-34, 50 NRC 168, 176 (1999). In that same ruling, the Board requested that the parties convey their views of the impact of the resolution of contention Utah B upon the other contentions, including Utah S. See id. at 178. The Board subsequently dismissed the portion of Utah S relating to the Rowley Junction ITP, namely the existence of decommissioning procedures and costs at the Rowley Junction ITP (Basis 11). LBP-99-39, 50 NRC 232, 236 (1999).

CASTLE ROCK 7 -- Inadequate Financial Qualifications

CONTENTION: The Application does not provide assurance that PFS will have the necessary funds to cover estimated construction costs, operating costs, and decommissioning costs, as required by 10 C.F.R. § 72.22(e) in that:

* * * * *

c. the Application does not provide assurance that PFS will have sufficient resources to cover nonroutine expenses, including without limitation the costs of a worst case accident in transportation, storage, or disposal of the spent fuel;

* * * * *

f. The Application fails to itemize cost estimates and otherwise provide enough detail to permit evaluation of the tenability of such estimates.

LBP-98-7, 47 NRC at 214-15. Although Castle Rock received party status, on December 21, 1998, these intervenors submitted a notice of voluntary withdrawal from the proceeding due to a settlement that it reached with PFS. See LBP-99-6, 49 NRC 114, 116 (1999). The State sought to preserve paragraph c as part of the contention, a request the Board granted. See id. at 121.

2.4 In a February 2, 2000 order, the Board scheduled hearings on Utah S, in addition to other contentions, from June 19 to June 30, 2000, in Salt Lake City, Utah, and set July 31, 2000, as the deadline for the parties to submit their proposed findings of fact and conclusions of law. See Licensing Board Order (General Schedule Revision and Other Matters) (Feb. 2, 2000) attach. A (unpublished). The Board granted the parties' April 7, 2000 joint motion to exclude the license application's decommissioning cost estimates. See Licensing Board Memorandum and Order (Granting Joint Motion to Approve Stipulation on Contention Utah S and Outlining Administrative Matters) (May 1, 2000) at 2-3 (unpublished) [hereinafter Joint Motion Memorandum and Order]. Also, the Board amended the matters to be litigated at the evidentiary hearing as those set forth by the parties in attachment A to their April 7 motion. See id.; Joint Motion by the State of Utah and the Applicant to Approve Stipulation for the Hearing of Utah Contention S (Apr. 7, 2000), attach. A [hereinafter Joint Motion]. Attachment A altered Basis 1, Basis 4, Basis 5, and Basis 10 to read as follows:

Basis 1: 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.[]

Basis 4: 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.

Basis 5: The decommissioning cost estimate totally ignores the potential for large accidents and associated release or contamination of 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.

Basis 10: 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).

Joint Motion attach. A at 1-2; see Joint Motion Memorandum and Order at 2-3.³ Under Basis 1, however, PFS reserved the right to argue that amended Basis 1 is not in conformity with the State's initial Basis 1 and is beyond the scope of admitted contention Utah S. See Joint Motion attach. A at 1 n.**. The Board set May 15, 2000, as the deadline for the parties to submit

³ A footnote to attachment A indicated that Basis 2 no longer remained at issue due to a change in the language of a proposed letter of credit supplied by PFS. See Joint Motion attach. A at 1 n.*.

Prefiled testimony and Prefiled exhibits for their direct cases. See Joint Motion Memorandum and Order at 4. On June 27, 2000, the State, the staff, and the Applicant presented their cases regarding contention Utah S.⁴ See Tr. at 2414-551.

2.5 All three parties timely filed their proposed findings of fact and conclusions of law on July 31, 2000. See NRC Staff's Proposed Findings of Fact and Conclusions of Law Concerning [Contention Utah S Decommissioning] (July 31, 2000) [hereinafter Staff Findings]; [PFS] Proposed Findings of Fact and Conclusions of Law on [Contention Utah S] (July 31, 2000) [hereinafter PFS Findings]; [State] Proposed Findings of Fact and Conclusions of Law Regarding Contention Utah S, [PFS] Capacity to Fund Decommissioning (July 31, 2000) [hereinafter State Findings]. The next day, acting on a Licensing Board referral, the Commission affirmed in part, reversed in part, and remanded for further proceedings a Board decision (LBP-00-6) involving PFS financial qualifications and directed that, among other things, PFS submit to the Board, the State, and the staff copies of its model service agreement (MSA) by which it would enter into contracts to provide spent fuel storage services. See CLI-00-13, 52 NRC 23 (2000). As a consequence, the Board requested that on or before August 28, 2000, the parties describe the impact of CLI-00-13 upon their July 31, 2000 proposed findings of fact and conclusions of law involving the three contentions -- Utah E/Confederated Tribes F, Financial Assurance, Utah R, Emergency Planning, and Utah S -- that were the subject of the June 2000 evidentiary hearing. See Licensing Board Order (Scheduling/Administrative Matters) (Aug. 4, 2000) at 2 (unpublished). As a result, the parties filed their proposed reply findings, incorporating discussions of the impacts, if any, of CLI-00-13 upon contention Utah S and the

⁴ Although the hearing session regarding contention Utah S was open to the public, see Tr. at 1385, in light of the financial assurance subject matter of the contention, to ensure there are no inappropriate disclosures we are affording the contents of this decision confidential treatment pending further review.

other contentions.⁵ See NRC Staff's Proposed Findings in Reply to the [State] Proposed Findings Concerning [Contention Utah S] (Aug. 28, 2000) [hereinafter Staff Response]; [PFS] Reply to the Proposed Findings of Fact and Conclusions of Law of the [State] and the NRC Staff on [Contention Utah S] (Aug. 28, 2000) [hereinafter PFS Response]; [State] Discussion of the Impact of CLI-00-13 on Proposed Findings of Fact and Conclusions of Law Relating to [Contention Utah S] (Aug. 28, 2000) [hereinafter Initial State CLI-00-13 Response]; [State] Proposed Response to Findings of Fact and Conclusions of Law Relating to Contention Utah S (Aug. 28, 2000) [hereinafter State Response]. The Board separately dealt with the schedule for filing the PFS MSA, as the Commission directed in CLI-00-13. In response to a Board order, the parties filed further responses regarding the impact of CLI-00-13 on the remaining contentions, including Utah S. See Licensing Board Order (Granting Motion for Leave to File Reply and Permitting Additional Filings on Impact of CLI-00-13) (Sept. 1, 2000); NRC Staff's Response to the [State's] Comments Concerning the Impacts of CLI-00-13 (Sept. 11, 2000) [hereinafter Staff CLI-00-13 Response]; [PFS's] Response to [State] and NRC Staff's Filings Regarding the Impact of Commission Decision CLI-00-13 (Sept. 11, 2000) [hereinafter PFS CLI-00-13 Response]; [State] Response to [PFS] and the Staff's Discussion of the Impact of CLI-00-13 (Sept. 11, 2000) [hereinafter State CLI-00-13 Response].

III. PARTIES' POSITIONS ON CONTENTION UTAH S

3.1 The June 2000 evidentiary hearing focused on four bases from contention Utah S, namely Basis 1, Basis 4, Basis 5, and Basis 10, as modified by the parties' April 2000 joint motion. All evidence on contention Utah S was heard by the Board on June 27, 2000.

⁵ Both PFS and the staff included a discussion of the impact of CLI-00-13 in their proposed reply findings, while the State submitted a proposed reply finding and a discussion of the impact of CLI-00-13 separately.

Based on the evidence received at the hearing on contention Utah S, we describe the parties' positions below.⁶

A. Witness Qualifications

3.2 For the contention Utah S segment of the June 2000 evidentiary hearing, PFS presented a single witness, Mr. John D. Parkyn, Chairman of the PFS Board of Managers. The staff offered two witnesses, Dr. Alex F. McKeigney and Mr. Robert S. Wood, both of whom were employed in the Division of Regulatory Improvement Programs in the Office of Nuclear Reactor Regulation. Finally, the State offered one witness, Dr. Michael F. Sheehan, a partner with the firm of Osterberg & Sheehan, Public Utility Economists. Both PFS and the staff raised concerns over portions of Dr. Sheehan's testimony, in particular those parts relating to Dr. Sheehan's discussion of the probability of large accidents and possible cleanup costs. As indicated below, we describe the parties' positions as to the qualifications of the four witnesses.

1. PFS Witness Parkyn

3.3 PFS presented Mr. John D. Parkyn as its witness relative to the sufficiency of the DFP for the PFS facility (PFSF). Mr. Parkyn is employed as both Vice-President of Genoa Fuel Tech, a subsidiary of Dairyland Power Cooperative, and Chairman of the PFS Board of Managers. See Testimony of John D. Parkyn on Decommissioning the PFSF - Contention

⁶ In its proposed findings of fact and conclusions of law, the State challenged the PFS undocumented service agreements. See State Findings at 7. The Commission in CLI-00-13 ordered PFS to provide a sample service contract that fulfills a number of financial assurance license conditions it imposed based on previous PFS financial assurance commitments. Thereafter, the State was to be given a chance to challenge the sufficiency of the MSA and, depending on the intervenors' objections, if any, either a summary disposition motion could be filed or a hearing could occur. See CLI-00-13, 52 NRC at 35. In a separate decision today, we also rule on the subsequent PFS motion for summary disposition on contention Utah E/Confederated Tribes F. See LPB-05-20, 62 NRC __ (May 27, 2003).

Utah S (fol. Tr. at 2424) at 1 & attached resume [hereinafter Parkyn Utah S Testimony]. His testimony indicates that Mr. Parkyn's experience in nuclear power spans over thirty years. Id. at 1-2 & attached resume. Mr. Parkyn received a bachelor's degree from the University of Wisconsin in nuclear engineering. See id. at 1 & attached resume. Further, Mr. Parkyn is licensed as a Professional Engineer in Wisconsin and as a Professional Nuclear Engineer in California, and has authored many papers in the field of nuclear energy. See id. Mr. Parkyn is a member of the National Planning Committee for the American Nuclear Society and was Chairman of the Wisconsin Division of the American Nuclear Society. See id.

3.4 Mr. Parkyn's former employment includes work as a certified reactor operator with the U.S. Army's White Sands Missile Range (1967 to 1969); as Operations Engineer, Fuel Shipping Supervisor, and licensed Senior Reactor Operator with Wisconsin Electric Power Company at its Point Beach Nuclear Plant (1972 to 1974); and Operations Engineer, Shift Technical Advisor, Fuel Shipping Supervisor, Shift Supervisor, Senior Reactor Operator, Assistant Superintendent, Plant Manager, and Acting Chief Executive Officer for Nuclear Power at Dairyland Power Cooperative's La Crosse Boiling Water Reactor. See id. at 2. As a Senior Reactor Operator with Wisconsin Electric Power Company, Mr. Parkyn's duties included budgeting and costing of plant modifications. See id. While serving as Plant Manager and Acting Chief Executive Officer for Nuclear Power with Dairyland Power Cooperative from 1982 until 1994, Mr. Parkyn was involved with supervising plant operations, budgeting, and staffing, as well as leading the plant when it shut down and began decommissioning in 1987. See id. In 1994, Mr. Parkyn went to work with the Mescalero Fuel Storage project, and he continued working with that organization after it became PFS. See id. In his current capacity with PFS, Mr. Parkyn oversees the functioning of the company that will build, operate, and decommission the PFSF. See id. at 3.

3.5 Mr. Parkyn is also Chairman of the Board of the Bank of Stoddard, Wisconsin, and the Bank of Ferryville, Wisconsin, as well as a Director of River Bank in La Crosse, Wisconsin. See id. at 1-2. Although the State during cross-examination brought up Mr. Parkyn's involvement as director of the bank offering PFS a letter of credit, see Tr. at 2448, none of the parties in their proposed findings of fact and conclusions of law questioned the purported expertise of Mr. Parkyn nor the reasons for which his testimony is offered.

2. Staff Witnesses McKeigney and Wood

3.6 Dr. Alex F. McKeigney and Mr. Robert S. Wood, both employed by the NRC, appeared on behalf of the staff to supply testimony relative to contention Utah S. Specifically, Dr. McKeigney and Mr. Wood testified on PFS conformity with Commission regulations pertaining to decommissioning. See NRC Staff Testimony of Alex F. McKeigney and Robert S. Wood on Utah Contention S -- Decommissioning (fol. Tr. at 2479) [hereinafter McKeigney/Wood Testimony].

3.7 Dr. McKeigney earned a bachelor's degree in sociology and economics from the University of Mississippi, a master's degree and Ph.D. in sociology from the University of North Carolina, and an master's of business administration degree from Harvard Business School. Id. attached resume. Prior to his tenure with the staff, Dr. McKeigney worked with electric utilities that operate nuclear power reactors, thus providing him the opportunity to explore alternative corporate strategies and financing plans, review options for project financing, and engage in quantitative analyses and reviews. See id. As a Financial Analyst in the Office of Nuclear Reactor Regulation's Division of Regulatory Improvement Programs, Dr. McKeigney is involved with such issues as financial qualifications, decommissioning funding assurance, and foreign ownership and control of nuclear reactors and nuclear material facilities. See id. at 1-2 & attached resume. Dr. McKeigney's responsibilities include assembling safety evaluation reports

(SERs) and related information about an applicant's or licensee's financial wherewithal for license activities. See id. at 1-2. Furthermore, Dr. McKeigney is involved on task forces focusing on financial areas, special studies, and assignments. See id. at 2 & attached resume. Dr. McKeigney analyzed the PFS LA and its associated SAR, focusing on decommissioning funding assurance as well as PFS responses to the staff's requests for additional information (RAIs). See id. at 2. In addition, Dr. McKeigney prepared Chapter 17 of the staff's SER, entitled "Financial Qualifications and Decommissioning Funding Assurance" (Dec. 15, 1999, revised and reissued on Jan. 4, 2000), and the NRC Staff's Position on Contention Utah S (Dec. 15, 1999). See id. at 2-3.

3.8 Mr. Wood earned a bachelor's degree in economics from Drew University, a master's degree in public administration from Ohio State University, and completed the qualifying exams and coursework for a Ph.D. in economics at Ohio State University. See id. attached resume. Mr. Wood serves as a Senior Level Licensee Financial Policy Advisor in the Division of Regulatory Improvement Programs of the Office of Nuclear Reactor Regulation. See id. at 2 & attached resume. Additionally, Mr. Wood worked in the former U.S. Atomic Energy Commission, and held the positions of Management Intern, Systems Analyst, Program Analyst, Assistant to the Chief of the Antitrust and Indemnity Group, and Section Chief for the Policy Development and Financial Evaluation Section in the Inspection and Licensing Policy Branch. See id. attached resume. Mr. Wood handled such topics as nuclear property and liability insurance, financial assurance for decommissioning nuclear power facilities, financial qualifications of NRC licensees, electric utility deregulation, license transfers, and other financial and economic issues with a potential impact on the safe operations and decommissioning of NRC-licensed nuclear facilities. See id. at 2 & attached resume. Moreover, Mr. Wood counseled NRC senior management and offered technical guidance and

oversight to NRC staff members in his various fields of expertise, including financial assurance analysis. See id. Relative to the PFS application, Mr. Wood reviewed the LA, the SAR, and the PFS responses to the staff's RAIs addressing decommissioning funding assurance. See id. at 3. Mr. Wood also examined Dr. McKeigney's work on Chapter 17 of the staff's SER and the NRC's Position on Contention Utah S (Dec. 15, 1999). See id. None of the parties challenged the admissibility of the testimony from staff witnesses McKeigney and Wood.

3. State Witness Sheehan

3.9 The State presented one witness on contention Utah S, Dr. Michael F. Sheehan, whose objective was to address the reasonableness of the PFS decommissioning cost estimates in four areas. See Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the [State] Regarding Contention Utah S (fol. Tr. at 2491) at 6 [hereinafter Sheehan Utah S Testimony]; State Findings at 2. These four areas include (1) the exclusion of large accidents in PFS's decommissioning cost estimates; (2) the vintage of the data used for the cost estimates and what year's dollars were applied; (3) the insufficiency of the PFS means of accounting for cost increases in its decommissioning cost estimates; and (4) the insufficiency of PFS's change in fee charges to its customers relative to increases in costs. See Sheehan Testimony at 6.

3.10 In addition to receiving a bachelor of science degree, a master of arts degree, and Ph.D. in economics from the University of California at Riverside, Dr. Sheehan holds a legal degree from the University of Iowa College of Law. See Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the State of Utah Regarding Contention Utah E (fol. Tr. at 2190) at 1 [hereinafter Sheehan Utah E Testimony]; State Exh. 9 (Resume of Michael F. Sheehan). Currently, Dr. Sheehan is a partner in Osterberg & Sheehan, a firm specializing in public utility economics, and he has experience teaching in the field of economics. See Sheehan Utah E

Testimony at 1. Within the past twenty years, Dr. Sheehan has concentrated his work in planning and project budget and finance analysis. See id. at 1-2. Dr. Sheehan's experience includes work on utility rate cases, municipal valuation cases and projects, local and regional regulation of solid waste operations including rate setting, determination and evaluation of prevailing wage rates on public projects, financial studies in support of municipal collective bargaining, as well as financial qualification issues in NRC proceedings. See id. at 2. Dr. Sheehan has also worked on issues relative to geothermal development in California, surface mining in Oregon, uranium mining in New Mexico, and high and low level radioactive waste issues in the west and midwest. See id. In addition, Dr. Sheehan is familiar with NRC regulations pertaining to ISFSIs, Chapter 17 of both the original (Dec. 15, 1999) and reissued (Jan. 4, 2000) versions of the staff's SER, the revised contention per the joint motion by PFS and the State, the NRC Staff's Statement of Its Position Concerning Group I-II Contentions (Dec. 15, 1999), and the procedural history of contention Utah S. See Sheehan Utah S Testimony at 5.

3.11 In his direct testimony regarding large accidents in decommissioning cost estimates, Dr. Sheehan referenced several studies on cleanup costs. See Sheehan Utah S Testimony at 8. Dr. Sheehan testified in his answer eleven that according to one of the studies, the costs for cleaning up a rural area 4.3×10^5 square meters in size involving a cask with fourteen pressurized water reactor fuel assemblies for a shipping cask would run between \$13 million and \$620 million (in 1985 dollars). See id. The same study projected that this type of large accident would require 460 days to clean up. See id. During PFS cross-examination, Dr. Sheehan acknowledged that he lacked expertise in cost estimating and in calculating the likelihood of accidents, radiological results, or cleanup costs. See Tr. at 2492, 2508. Although the State recognizes that Dr. Sheehan is not a cost estimator, it points out that staff witnesses

McKeigney and Wood lack similar expertise, and that uncertainties, such as large scale accidents, still must be considered in PFS decommissioning planning. See State Response at 6-7. Nevertheless, the State argues that Dr. Sheehan is a qualified witness who followed NRC regulations in his economic analysis of PFS's decommissioning cost estimates. See Sheehan Utah S Testimony at 4.

3.12 Both PFS and the staff argue that the limitations on Dr. Sheehan's expertise relative to answer eleven, particularly in the areas of estimating costs and the aftermath of accidents, affect the weight to be accorded his testimony.⁷ See PFS Findings at 75-76; PFS Response at 50; Staff Findings at 66-67. Notwithstanding Dr. Sheehan's assertion that the studies cited in answer eleven are designed merely to provide an order of magnitude for cleanup costs, see Tr. at 2531-34, both PFS and the staff argue that the cited figures are not probative of actual cleanup costs that may be incurred at the PFS facility. See PFS Findings at 75-76; Staff Findings at 67. Dr. Sheehan, as PFS points out, stated that the studies cited in answer eleven demonstrate cleanup costs are "probably not zero." PFS Findings at 76; see Tr. at 2532-33. Further, PFS notes that key elements of the studies cited by Dr. Sheehan in answer eleven are different than those that can or will exist at the PFS facility (e.g., the use of transportation casks in the studies versus storage casks at the PFS facility). See PFS Findings at 75-76. PFS further emphasizes Dr. Sheehan's inability to describe the underlying assumptions of spent fuel oxidation in the event of a worst-case accident scenario. See PFS Findings at 76.

⁷ During the evidentiary hearing, both PFS and the staff argued in favor of striking answer eleven to Dr. Sheehan's testimony due to his lack of expertise in the subject matter (i.e., projected cleanup costs and the large accident probabilities). See Tr. at 2508-09, 2535-37. Additionally, the staff cautioned against the admission of answer eleven on relevance grounds because the statistics Dr. Sheehan mentioned do not refer to the casks used or to any accident at the PFS site. See Tr. at 2535. The Board, however, denied both motions to strike answer eleven of Dr. Sheehan's direct testimony. See Tr. at 2509-10, 2537.

B. Financial Assurance Regarding Decommissioning Cost/Funding Matters

3.13 The State is concerned that the PFS DFP does not provide the appropriate measures of reasonable assurance for guarding the public health and safety as required by NRC regulations for ISFSIs (Part 72). See State Findings at 13. All three parties agree that the decommissioning regulations under Part 72 govern PFS's ISFSI application. Under Part 72, an application for an ISFSI must provide:

(e) Except for DOE, information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the license is sought. The information must state the place at which the activity is to be performed, the general plan for carrying out the activity, and the period of time for which the license is requested. The information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary[] funds or that by a combination of the two, the applicant will have the necessary funds available to cover the following:

* * * * *

(3) Estimated decommissioning costs, and the necessary financial arrangements to provide reasonable assurance before licensing, that decommissioning will be carried out after the removal of spent fuel, high-level radioactive waste, and/or reactor-related [Greater than Class C] waste from storage.

10 C.F.R. § 72.22(e).

3.14 Furthermore, each decommissioning plan must contain the following information:

(a) Each application under [Part 72] must include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel, high-level radioactive waste, and reactor-related GTCC [(Greater than Class C)] waste have been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS [(Monitored Retrievable Storage Installation)] at the end of its useful life will provide adequate protection to the health and safety of the public. This plan must identify and discuss those design features of the ISFSI

or MRS that facilitate its decontamination and decommissioning at the end of its useful life.

(b) The proposed decommissioning plan must also include a decommissioning funding plan containing information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS. This information must include a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (c) of this section, including means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI or MRS.

* * * * *

(d) Each person licensed under this part shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of --

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) A list contained in a single document and updated no less than every 2 years of the following:

(i) All areas designated and formerly designated as restricted areas as defined under 10 CFR 20.1003; and

(ii) All areas outside of restricted areas that require documentation under § 72.30(d)(1).

(4) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for

assuring funds if either a funding plan or certification is used.

Id. § 72.30(a)-(b), (d). Licensees engaged in radiological decommissioning are required to conduct a decommissioning site survey in accordance with the provisions of 10 C.F.R. § 72.54(l)(2).

1. Cost/Funding Adjustments

a. Annual Review of Decommissioning Costs and Site Survey

3.15 An applicant for an ISFSI license is required to include in its decommissioning plan a mechanism for periodically reviewing and adjusting its decommissioning cost estimates during the life of the ISFSI. 10 C.F.R. § 72.30(b). The State asserts that the PFS proposed decommissioning plan for the Skull Valley site lacks a firm commitment to conduct an annual review and adjust projected costs due to real changes in inflation and costs, notwithstanding Mr. Parkyn's testimony that it will do so. See State Findings at 7. On the other hand, the State acknowledges PFS's intention to annually review and revise its decommissioning cost estimate for storage casks and the PFS site relative to changes in the rate of inflation as measured by the Bureau of Labor Statistics' Consumer Price Index (CPI). See id. The State claims that the PFS asserted intention to pass increased costs onto its customers in the event of increased decommissioning costs by itself is inadequate without the language of the service agreements to support PFS this assertion. See State Findings at 7-8.

3.16 Both PFS and the staff argue that the State's argument on this issue is erroneous. PFS maintains that it is committed to performing annual reviews and adjustments due to inflationary, technological, or regulatory changes. See PFS Findings at 71. Further, PFS intends to conduct yearly audits on specific decommissioning items and the overall cost estimate on account of "changes in the tasks, scope, cost or schedule for decommissioning." See id. The staff argues that the DFP commits PFS annually to reviewing and revising its

estimates for changes other than inflation (e.g., scope or cost of decommissioning). See Staff Response at 7. The staff notes that PFS is not solely concerned with inflation when it annually reviews the cost estimate. See Staff Findings at 63.

3.17 The staff concludes PFS will have sufficient funding to decommission its ISFSI, in part because of the service agreements binding customers to cost increases and a rate of return received on its decommissioning fund. See Staff Findings at 63; Staff Response at 6. According to the staff, there is no requirement under Part 72 for an ISFSI licensee to commit to annual reviews of its decommissioning cost estimates. See Staff Response at 6. The staff argues that Part 72 only requires a licensee to make periodic adjustments to its decommissioning cost estimates. See Staff Response at 6. In connection with Basis 10, which contests PFS apparent lack of a cost escalation mechanism for a site survey, the staff argues PFS will include this item in its annual review of inflation and other real cost changes. See Staff Findings at 68.

3.18 PFS indicates it will include a provision in the service agreements requiring customers to be responsible for any increases in decommissioning costs discovered by the annual review. See PFS Findings at 71. PFS argues that it will pass increases in decommissioning costs onto any customers storing spent nuclear fuel at the facility, irrespective of whether they are current customers. See id. at 72. In fact, the staff adds that PFS will commit its customers to funding decommissioning shortfalls until the PFS license terminates. See Staff Findings at 63. PFS contends that Part 72 does not mandate a more specific mechanism to account for increases in decommissioning costs than it already has provided. See PFS Response at 52.

b. Adjustment in the Letter of Credit

3.19 Although PFS expects to pay off its letter of credit within two years of commencement of operations, PFS points out that it will pursue an increased letter of credit when needed. See PFS Findings at 70-71. The State questions the likelihood that PFS can increase its letter of credit in the future to protect itself against a decommissioning funding shortfall, because Mr. Parkyn (a director of the bank issuing the letter of credit) will not be associated with the project when the license expires and PFS allegedly is an “entity without any real assets.” State Response at 3-4. Both the staff and PFS rely upon Mr. Parkyn’s testimony that PFS should be able to adjust its letter of credit in the future if decommissioning costs rise. See PFS Findings at 71-72; Staff Findings at 60-61. The staff also finds the PFS \$1,631,000 letter of credit acceptable under NRC regulations (10 C.F.R. § 72.30(c)(2)) and staff guidance, see Staff Findings at 61; Tr. at 2549-50. PFS and the staff state that there is no NRC requirement for an applicant using a letter of credit to show that it can obtain additional monies for future events. See PFS Findings at 72; Staff Findings at 61.

2. Storage Cask Decommissioning

3.20 Part 72 requires ISFSI license applicants to provide decommissioning financial assurance, which is to be provided through at least one of the following methods:

(1) Prepayment. Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee’s administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. . . . Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Commission, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Commission within[] 30 days after receipt of notification or cancellation.

(ii) The surety method or insurance must be payable to a trust established for decom[m]issioning costs. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(iii) The surety or insurance must remain in effect until the Commission has terminated the license.

(3) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund establishing and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provision must be as stated in paragraph (c)(2) of this section.

10 C.F.R. § 72.30(c).

3.21 In Basis 1, as modified by the parties' joint motion on April 7, 2000, the State alleged that PFS did not fulfill the Commission's requirement of reasonable assurance for sufficient funds to decommission the proposed facility under 10 C.F.R. § 72.30(b). Specifically, the State challenges the fact that the letter of credit sought by PFS, for \$1,631,000, did not consider the amounts necessary for decommissioning the storage casks. See Joint Motion attach. A at 1. PFS makes three arguments relative to Basis 1: (1) the State did not address this issue during the June 2000 evidentiary hearing; (2) in the alternative, modified Basis 1 is

beyond the scope of contention Utah S as admitted because the original Basis 1 covered the ability of PFS to get a \$1,631,000 letter of credit, not the decommissioning of storage casks or the prepayment of the associated costs; and (3) customers will prepay storage cask decommissioning costs, an approved method of decommissioning funding under 10 C.F.R. § 72.30(c)(1). See PFS Findings at 67-68. PFS argues that its method of providing financial assurance to decommission the facility and the Skull Valley site, through a letter of credit coupled with an external sinking fund, is approved under 10 C.F.R. § 72.30(c)(2)-(3). See id. at 69-70. Finally, PFS states that it will begin with a letter of credit equivalent to 100 percent of the facility and site decommissioning costs, and then reduce the letter of credit as it places customer payments received over the life of the facility into an external sinking fund. See id. at 70.

3. Vintage of Cost Estimates

3.22 In Basis 4 and Basis 10, the State claims that the PFS ISFSI license application fails to specify what year's dollars is used in its cost estimates for a storage cask (\$17,000 to decommission), the facility itself (\$1,631,000 to decommission the rest of the PFS site), and a final site survey (estimated at \$260,000). See Joint Motion attach. A, at 1. NUREG-1567, the staff's spent fuel dry storage facility standard review plan, indicates ISFSI license applicants are to submit a DFP that includes a cost estimate for decommissioning expressed in the year's dollars used, which should not precede the year in which the cost estimate is devised. See McKeigney/Wood Testimony at 5-6 (citing NUREG-1567, Standard Review Plan for Spent Fuel Dry Storage Facilities (Mar. 2000)). All three parties agree that any doubts pertaining to the vintage of the data (i.e., the year from which the underlying cost data was created) and the specific year's dollars used in the decommissioning plan were resolved by Mr. Parkyn's

testimony that 1997 dollars apply. See State Findings at 6; PFS Findings at 70-71, 77; Staff Findings at 62, 68.

4. Decommissioning Cost Estimate Conservatism

3.23 In Basis 4, the State also claims that PFS has not conservatively predicted an upper bound for the number of fuel casks that will be located at the facility during the license term. See Joint Motion attach. A, at 1. PFS responds that its decommissioning cost estimate and funding plan recognizes the maximum amount of spent fuel that will be located at the facility (i.e., 4,000 casks). See PFS Findings at 73. Specifically, PFS states that its cost estimate is for decommissioning a particular spent fuel storage cask that accompanies each spent fuel canister kept at the facility; the cost estimate acknowledges the prepayment method employed to achieve financial assurance. See id. PFS intends to use the maximum quantity of spent fuel stored in computing site decommissioning costs, which is reflected in its cost estimates and accompanying letter of credit. See id. at 73-74.

C. Large Scale Accidents and NRC Insurance Requirements

3.24 Under Basis 5, the State is concerned with the omission of the costs of potential large scale accidents from the PFS DFP. See Joint Motion attach. A. As mentioned above, Dr. Sheehan's testimony included a discussion of the consequences of large accidents in connection with transporting spent nuclear fuel. The State proposes that PFS include the potential costs of a large scale accident in its proposed decommissioning plan to fulfill the requirement in section 72.30(a) that the plan "provide reasonable assurance that the decontamination and decommissioning of the ISFSI . . . at the end of its useful life will provide adequate protection to the health and safety of the public." See State Findings at 9-10, 12-13. In the alternative, the State seeks a license condition mandating that PFS purchase minimum insurance coverage. See id. at 12-13; State Response at 6.

3.25 The parties acknowledge that Part 72 excludes any overt insurance requirements for ISFSI licensees. See State Findings at 11; PFS Findings at 75. The State asserts that because licensees face different requirements under Part 50 and Part 72 for possessing nuclear property insurance, large accident-related costs should not be treated the same way for ISFSI applicants as is the case with power reactor applicants. See State Findings at 11. According to the State, Part 50 excludes large accident costs from decommissioning cost estimates because there is a nuclear property insurance requirement. See id. Because Part 72 has no such insurance requirement, the State maintains, there is no reasonable assurance that the necessary decommissioning funds will be available. See id. at 11-12. The State has additional concerns over the extent and duration of the PFS onsite property insurance coverage, and the unknown accident potential at the Skull Valley site, see id. at 11-13, particularly because the uncertainties associated with military training activities (admitted contention Utah K) and earthquakes (admitted contention Utah L) at the Skull Valley site were not resolved as of the time the parties submitted their filings relative to Utah S, see State Response at 6-7. Additionally, the State notes that, according to a PFS witness on insurance for contention Utah E, one of the two major nuclear insurers in the United States, American Nuclear Insurers (ANI), may discontinue its domestic nuclear property insurance business. See State Findings at 12. Nonetheless, the State asks the Board to either reject PFS's application for want of "reasonable assurance" of sufficient funding, or to impose license conditions for minimum insurance coverage. See State Findings at 12-13; State Response at 6.

3.26 PFS states that although onsite property insurance is not mandatory under Part 72, it is permissible for ISFSI licensees, and PFS intends to purchase the amount of nuclear property insurance sufficient to cover potential accident costs. See PFS Findings at 75.

In the view of PFS, the State proposes requirements that are “inconsistent” with preexisting NRC regulations. See PFS Response at 55.

3.27 The staff views the State’s request to include accident recovery costs as part of the PFS decommissioning plan as “an attack on the Commission’s regulations and, as such, [it] cannot be considered.” Staff Response at 9. According to the staff, there is no regulation or guidance for including large accidents within the scope of decommissioning. See Staff Findings at 65-66. Indeed, the staff declares, a proposed rule would separate potential accident recovery costs from decommissioning funding. See id. at 66. PFS and the staff also maintain there is a difference in the level of risk between a Part 50 nuclear reactor and an ISFSI due to the characteristics of the fuel being held, a disparity recognized by the Commission in CLI-00-13. See PFS Response at 54; Staff Response at 8. According to the staff, given that the Commission could have included large scale accident recovery costs in a Part 72 DFP had it chosen to, this explains why no such requirement exists for ISFSIs. See Staff Response at 8. Dr. Sheehan, according to the staff, mentioned that accident recovery costs would become an issue in decommissioning “only if the contamination had not been cleaned up previously,” yet there was no evidence that such a circumstance would actually occur. See Staff Findings at 66.

3.28 PFS argues that its onsite property insurance reasonably resolves the issue of considering potential costs of accident recovery at the Skull Valley site and, therefore, these costs do not need to be included in decommissioning. See PFS Response at 53. Acknowledging that the State questions the availability of nuclear property damage insurance over the life of the PFS facility, see State Findings at 12, PFS asserts that the surviving insurer will cover the entire U.S. nuclear industry and “is owned by the nuclear plant owners within the nuclear industry.” PFS Response at 53. PFS also claims that the contentions cited by the

State to support its argument, contention Utah K and contention Utah L, concern the suitability of the Skull Valley site, not the consequences of radiological releases. See id. at 54. The staff also maintains that not only is the State's argument regarding to the number of domestic nuclear insurers that will exist in the future without basis, but it disregards the testimony that \$50 million in onsite nuclear property insurance may be available elsewhere. See Staff Response at 9.

D. License Conditions

3.29 The State expresses doubt about the commitment in the allegedly "abstract" promises PFS made during the June 2000 evidentiary hearing and in its findings and conclusions. From the State's perspective, the Commission in CLI-00-13 refused to accept PFS's abstract promises from the adjudication and licensing process. As a result, the State wants the Board either to reject PFS's application, see State Findings at 13-14, or approve its own suggested license conditions for promises PFS made relative to contention Utah S. See Initial State CLI-00-13 Response at 6-7.⁸ If PFS faces additional license conditions, in the State's view, then the staff can better monitor and enforce PFS commitments, while providing a degree of concreteness to PFS promises. See id. at 2. The State prefers specific license conditions to the complexities associated with simply examining service agreements. See id. Moreover, the State fears that by solely using service agreements without specific license conditions, the staff would not be able to enforce any contractual duties because it is not in privity to any of the customer service contracts. See id. at 3. The State predicts that the staff does not have the ability to enforce the previously-made PFS promises absent license conditions, and the staff will only act if PFS breaches a specific regulation, license condition, or

⁸ The State's initial discussion of the impact of CLI-00-13 addressed contentions Utah E and Utah S.

order. See id. The State takes issue with the staff's reluctance to suggest license conditions beyond those addressed by the Commission in CLI-00-13, arguing that the Commission was limited to issues that were on the record before it, which excluded costs, onsite insurance, and decommissioning. See id. at 4. In the alternative, the State claims that the Board has jurisdiction to formulate PFS's commitments into an order mandating that PFS follow certain requirements. See id. at 5 (citing Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB 898, 38 NRC 36, 41 (1988)).

3.30 As to the specific conditions the State seeks, it asks for a requirement that PFS annually review its decommissioning cost estimate and compare it to the levels of funding at that time. See State Findings at 8, 13-14. Further, pursuant to this license condition, if a shortfall in decommissioning funding is later uncovered, the State requests that PFS be required to address the deficit through one of the methods specified in 10 C.F.R. § 72.30(c) (e.g., prepayment; surety method, insurance, or other guarantee method; an external sinking fund), with any monies received from customers kept separate from PFS's control of liquid assets. See id. The State also urges the Board to impose a license condition that would require PFS to acknowledge potential accident recovery costs by including such expenditures in its decommissioning plan or through holding nuclear property insurance. See id. at 12-13. Moreover, the State wants PFS to expand its decommissioning funding levels (i.e., its letter of credit and/or external sinking fund) in the event PFS insurance becomes insufficient to cover potential accident recovery costs or PFS discontinues its coverage. See id. at 13. Additionally, the State seeks a license condition that PFS possess at least ~~xxxxxxxxxxxx~~ in nuclear property insurance coverage. See id. And to the extent PFS becomes unable to receive such coverage in the future, the State wants a license condition that would require PFS to consider

the probability of a large scale accident at the Skull Valley site and potential accident recovery costs, and adjust its decommissioning cost estimate and funding levels accordingly. See id.

3.31 In response, PFS asserts that some of the State's proposed license conditions are superfluous because NRC regulations already contain the same mandates. See PFS Response at 53. PFS also claims that some of the State's proposed license conditions are based on an overstatement of the Commission's CLI-00-13 holding regarding license conditions. See id. at 5-6. In this regard, PFS views the State's proposed license conditions as encompassing "every commitment and stated intention made by PFS in the licensing process, regardless of its nature or significance." Id. at 6. According to PFS, however, converting every commitment and stated intention put forth during a licensing adjudication into a license condition is not required under Part 72. In fact, PFS declares, such applicant commitments usually are included within the final safety analysis report submitted ninety days after the license is approved. See id.; see also 10 C.F.R. § 72.70(a).

3.32 PFS also maintains that the amount of insurance it intends to secure will cover potential accident recovery costs. See PFS Response at 55. In this regard, PFS challenges the State's proposed requirement that PFS include the amount of recovery costs greater than the commercially available level of insurance coverage in its decommissioning cost estimates as being contrary to NRC regulations. See id. PFS views the Commission's approach in CLI-00-13 as being one aimed at ensuring the sufficiency of the service agreements' incorporation of commitments previously made by PFS, as well as "render[ing] not ripe for decision arguments made by the State in its findings that the Board should discount commitments made by PFS at the hearing regarding provisions that will be included in the Service Agreements." PFS CLI-00-13 Response at 2.

3.33 Finally, regarding the State's request for a license condition binding PFS to conduct annual reviews and updates of its cost estimates, PFS states that such a commitment is already part of its license application and repeats what it is required to do under 10 C.F.R. § 72.30(b). See PFS CLI-00-13 Response at 9. PFS further argues that contention Utah S does not cover nuclear property insurance because NRC decommissioning is not concerned with accident recovery costs. See id. at 10. Moreover, PFS points out, under CLI-00-13 the Commission imposed a license condition for PFS to secure a certain amount of nuclear property insurance. See id.

3.34 The staff describes the State's interpretation of CLI-00-13 as "overly broad" and asserts that the only license conditions should be the ones that the Commission specifically listed in that decision. See Staff CLI-00-13 Response at 4. In particular, the staff asserts that the State misunderstands the Commission's use of "including" by asserting it requires a complete listing of the PFS commitments made during this proceeding as license conditions, regardless of their importance. See id. at 5. The staff believes that only the seven requirements listed by the Commission in CLI-00-13 must be license conditions, arguing that NRC practice recognizes only significant matters as license conditions. See id. In the alternative, the staff recommends that the Board refer its ruling to the Commission if it has any doubts about the appropriate use of license conditions consistent with CLI-00-13. See id. at 6-7.

3.35 Turning to the specific license conditions requested by the State, the staff notes that licensees already have a duty periodically to review their cost estimates and associated funding levels. See Staff Response at 6. In addition, the staff declares that no NRC regulation requires licensees to perform an accident consequence assessment. See id. Further, the staff views the State's argument that PFS customers must be responsible for rising

decommissioning cost estimates as having become moot, because the Commission in CLI-00-13 requires PFS to supply a sample service agreement with such a provision. See id. at 7. Further, regarding the State's proposed license condition that would require PFS to maintain **xxxxxxxxxxxx** in onsite nuclear property insurance, the staff points out that PFS agreed to secure the maximum reasonably available amount of insurance, which is presently **xxxxxxxxxxxx**. Id. at 10. The staff acknowledges that the Commission in CLI-00-13 charged the staff with including a license condition for mandatory onsite (at a level of coverage to be determined at hearing) and offsite (\$200 million, the maximum amount commercially available) insurance. Id.

3.36 Thus, as to contention Utah S, the staff claims that CLI-00-13 "does not substantially impact the resolution of the matters that are currently the subject of the parties' proposed findings of fact and conclusions of law." Staff Response at 39-40. The staff contends that the CLI-00-13-directed sample service agreements will serve as a basis for verifying the PFS promises and rectifying any outstanding issues per the summary disposition and, if necessary, evidentiary hearing procedures outlined by the Commission. See id. at 40. According to the staff, the license conditions required by the Commission in CLI-00-13 simply provide another means of affording financial assurance regarding decommissioning. See id.

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS

A. Findings Regarding the PFS Application and Proposed Facility

4.1 PFS filed an application with the NRC in June 1997 pursuant to 10 C.F.R. Part 72 for a license that would allow it to construct and maintain an ISFSI for an initial twenty-year period with the possibility of renewal for an additional twenty years. The PFS LA includes, among other things, an SAR and an emergency plan. The proposed ISFSI is

designed to accommodate up to 4000 concrete storage casks containing sealed metal canisters holding as much as 40,000 metric tons of uranium in the form of spent nuclear fuel from commercial nuclear reactors. See Staff Exh. A, encl. at 1-1 (Dec. 15, 2000 [NRC Staff] Safety Evaluation Report of the Site-Related Aspects of the [PFS ISFSI] (as revised Jan. 4, 2000) [hereinafter Staff SER]. The planned facility is to occupy 820 acres within the confines of the 18,000 acre reservation of the Skull Valley Band in Tooele County, Utah. See id. While there are no large towns within a ten-mile radius of the proposed ISFSI, the thirty-resident Skull Valley Band reservation village is located about 3.5 miles east-southeast of the PFS site. See id. PFS plans to fund the construction, operation, and decommissioning of the facility through equity contributions of its owners and by service agreements with member and nonmember customers. See id. at 17-3.

B. Findings and Conclusions Regarding the Parties' Witnesses Findings

4.2 We have previously discussed the party's witnesses in section III.A above, which now serves as a basis for our findings to follow. First, we address the weight merited by each witness' testimony on the issues underlying contention Utah S.

4.3 In the event of a challenge to a witness' qualifications, the party offering that witness bears the burden of showing that the witness possesses sufficient expertise. See Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977). There is no bright-line rule under the agency's rules of practice for evaluating a witness's expert qualifications. See Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). Rather, the Federal Rules of Evidence, and specifically Rule 702, provide a standard to gauge a witness's expert status, id., even though the Federal Rules of Evidence are not binding and serve only as guidance for

presiding officers, Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant),

LBP-01-09, 53 NRC 239, 250 (2001). Federal Rule of Evidence 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Presiding officers have, in the past, accorded less weight to the testimony of a witness acknowledging no expertise in a specific area. See Public Service Electric and Gas Co. (Hope Creek Generating Station, Units 1 and 2), LBP-78-15, 7 NRC 642, 647 n.8 (1978). NRC case law does allow a witness to be qualified through academic training or relevant experience, or a combination of both. See Shearon Harris, LBP-01-09, 53 NRC at 250.

4.4 The PFS witness for contention Utah S, John D. Parkyn, testified about the level of insurance commercially available and what amount PFS would obtain, as well as the PFS means of meeting the decommissioning financial assurance requirements. See Parkyn Utah S Testimony at 4-8. Mr. Parkyn possesses over thirty years of experience in the nuclear power industry, as well as a bachelor's degree in nuclear engineering. See id. at 1-2 & attached resume. His experience includes oversight of the decommissioning activities at the La Crosse Boiling Water Reactor, which ceased operations in 1987. See id. at 2 & attached resume; Tr. at 2427-35. Mr. Parkyn has been involved with the PFS project since 1994, Parkyn Utah S Testimony at 2, and is currently Chairman of the PFS Board of Managers, id. at 1. Mr. Parkyn's testimony did not go so far as to predict the magnitude of recovery from a potential accident affiliated with the PFS facility; rather, Mr. Parkyn testified regarding the amount of insurance coverage that would be sufficient to cover onsite recovery costs associated with a radiological accident at the facility. See Parkyn Contention E Testimony at 4. In light of Mr. Parkyn's

experience in the nuclear industry and with the PFS project, we find Mr. Parkyn to be qualified to testify about his prior involvement in decommissioning and PFS's ability to meet NRC decommissioning requirements.

4.5 Staff witnesses Alex F. McKeigney and Robert S. Wood testified about the NRC's requirements pertaining to decommissioning, in particular those addressing financial assurance. Dr. McKeigney has a bachelor's degree in sociology and economics, a master's degree and a Ph.D. in sociology, and a master's of business administration degree. See McKeigney/Wood Testimony at attached resumes. Prior to his employment at the Commission, Dr. McKeigney dealt with electric utilities that control nuclear power reactors in a number of areas, including financing plans and corporate strategies. See id. Dr. McKeigney's work with the Office of Nuclear Reactor Regulation's Division of Regulatory Improvement Programs as a Financial Analyst encompasses decommissioning funding assurance. See id. at 2. Mr. Wood received a bachelor's degree in economics, a master's degree in public administration, and completed the qualifying coursework and exams for a Ph.D. in economics. See id. attached resume. Mr. Wood has an extensive background with the Commission and its predecessor, the United States Atomic Energy Commission, including work in the areas of nuclear property and liability insurance and decommissioning funding assurance. See id. Both Dr. McKeigney and Mr. Wood examined parts of PFS's application with respect to decommissioning funding assurance. See id. at 2-3. Although neither Dr. McKeigney nor Mr. Wood are cost estimators, see Tr. at 2603, the Board finds that both Dr. McKeigney and Mr. Wood are qualified to testify about PFS's license application relative to NRC decommissioning requirements.

4.6 The State offered the testimony of Dr. Michael F. Sheehan to assess the sufficiency of the PFS decommissioning cost estimates through his training as an economist. See State Findings at 3. Both PFS and the staff challenge the portion of Dr. Sheehan's

testimony relating to estimating the probabilities and associated recovery costs for accidents involving the transportation of spent nuclear fuel, i.e., answer eleven of Dr. Sheehan's prefiled testimony. See PFS Findings at 75-76; PFS Response at 50; Staff Findings at 66-67. Answer eleven supports the State's argument that the Board should consider large scale accidents in evaluating the financial assurance provided by PFS's decommissioning funding and approving its license application. See Sheehan Testimony at 7-9.

4.7 While the staff points out the dissimilarities between the studies Dr. Sheehan cited and any accident that could occur relative to the facility, see Staff Findings at 66-67, PFS criticizes Dr. Sheehan's limited knowledge of the studies' details, see PFS Findings at 75-76. Dr. Sheehan could not explain the basis for an upper bound on accident recovery costs in the studies he cited. See Tr. at 2524. Moreover, testimony indicated that some of the casks in the studies were transportation casks rather than storage casks, which would have been more apropos relative to any potential accident connected with the facility. See Tr. at 2511-12. In fact, Dr. Sheehan could not state whether the casks in the studies were the same casks that PFS will use. See Tr. at 2513-14, 2517-18. Although Dr. Sheehan acknowledged that a canister-based system, such as the one that will be used by PFS, may provide additional safeguards against any potential accidents, he could not determine if any of the studies involved a sealed welded canister-based system. See Tr. at 2511-12. In addition, Dr. Sheehan was unaware of the enrichment, burn-up, and age of the spent fuel in the studies, even though those factors could impact accident recovery costs. See Tr. at 2514, 2517. Moreover, Dr. Sheehan could not describe the assumptions behind spent fuel oxidation in the event of a worst-case scenario, and thus could not determine whether a similar event could take place at the PFS facility. See Tr. at 2519-21.

4.8 In addition, PFS and the staff express concerns with Dr. Sheehan's inexperience in estimating costs and accident probabilities. See PFS Findings at 75; Staff Findings at 67. Neither PFS nor the staff, however, directly contests the admissibility of Dr. Sheehan's testimony as a whole. Dr. Sheehan has a background in public utility economics, specifically planning and project budget and finance analysis. See Sheehan Utah E Testimony at 1. Further, Dr. Sheehan has performed financial qualifications work in connection with adjudications before the Commission. See id. at 2. At the June 2000 evidentiary hearing, however, Dr. Sheehan admitted that he does not predict the likelihood of accidents, nor has he projected "radiological consequences of accidents or cleanup costs," notwithstanding answer eleven. Tr. at 2492, 2508. Dr. Sheehan could not predict the likelihood of potential accidents affiliated with the PFS ISFSI, despite cautioning that one should "assume that there is some substantial risk pending the outcome of" other contentions (i.e., those issue statements that concern events that could produce a radionuclide release). Id. at 2507-08.

4.9 The Board recognizes there are limitations to Dr. Sheehan's expertise in estimating probabilities of accidents and the accompanying costs and the applicability of the accident studies he cited. In this regard, we find Dr. Sheehan's testimony inadequate to establish a range of values or a specific figure for recovery costs from an accident affiliated with transporting spent nuclear fuel. Indeed, Dr. Sheehan's testimony indicated that recovery costs from an accident can attain any possible value "other than zero," and that he merely intended to provide some order of magnitude. See Tr. at 2531-33. Therefore, the Board does not use Dr. Sheehan's testimony to establish accident probabilities or associated cleanup costs, but merely to note that a cost figure is "possible." See Public Service Electric and Gas Co. (Hope Creek Generating Station, Units 1 and 2), LBP-78-15, 7 NRC 642, 647 (1978) (where witness testified that an event was possible, viewed as meaning that "almost anything can be considered to be

possible”). Nonetheless, based on Dr. Sheehan’s experience in the field of economics, we recognize Dr. Sheehan as being qualified to analyze the sufficiency of the PFS decommissioning plan, excluding matters related to accident probabilities and accident cost estimation.

C. Findings and Conclusions Regarding Decommissioning Cost/Funding Matters

1. Decommissioning Costs and Funding

4.10 The PFS facility will have a maximum storage capacity of up to 4,000 casks, or 40,000 MTU of spent nuclear fuel (SNF), which is the basis for the PFS decommissioning cost estimate. See State Exh. 10, LA Chap. 1, at 4-1 (portions of the PFS license application, Chapter 1 (rev. 6), and the accompanying preliminary decommissioning plan (PDP), Appendix B (revs. 0 & 4)) [hereinafter LA]. According to PFS, it intends to follow a “start clean, stay clean” philosophy in operating the facility. Id. at 1-8. Nonetheless, PFS claims that its cost estimate for decommissioning embodies a conservative approach that predicts that some level of decontamination may occur. See id. at 1-8. As mandated by 10 C.F.R. § 72.30, PFS prepared a PDP in conjunction with its LA that describes the conceptual underpinnings for the decontamination and decommissioning of its proposed facility. A more detailed final decommissioning plan will be presented to the NRC for its review and approval at least one year prior to the final removal of the SNF canisters from the facility and no later than one year prior to expiration of the PFSF operating license. See LA, App. B at 1-1, 2-2. PFS expects to carry out its decommissioning activities in a series of phases, some of which will be completed during the operational phase of the facility. See id. at 4-1.

4.11 PFS decommissioning estimates assume that, if used to its maximum storage capacity, certain PFSF areas and components will require decontamination as follows: (1) decommissioning storage casks at a cost of \$17,000 for each used cask, for a total cost of

\$68,000,000 (1997 dollars); and (2) decommissioning of the rest of the facility at a cost of \$1,631,000 (1997 dollars). See LA, App. B at 4-4, 4-6; Parkyn Utah S Testimony at 5. Relative to storage cask decommissioning, efforts undertaken at the originating reactors and when the SNF canisters are transported to the facility are designed to keep surface contamination levels within prescribed levels prior to their placement into storage casks. See LA, App. B at 4-3. Although PFS thus anticipates that the storage casks will be free of any radioactive contamination or activation, it nonetheless has estimated expenditures associated with initial decontamination at \$365 per storage cask and \$550 per storage cask for waste disposal. See id. at 4-3. For casks exhibiting fixed contamination or activation, PFS estimates a cost of \$850 per cask to examine the type and degree of activation or fixed contamination. See id. PFS also estimates costs associated with residual activation or contamination of a steel storage cask liner at \$3,000 to dismantle and package the liner. Further, shipping and disposal costs for the low-level wastes associated with decontamination are estimated at \$1,400 for transportation and \$3,600 for disposal, but if the storage cask concrete is activated, it is estimated to require \$1,970 to scabble the cask and \$270 to dispose of the concrete.⁹ See id. at 4-4. The PFS cost estimate for decommissioning the remainder of the facility and the Skull Valley site includes expenditures affiliated with a site characterization survey (\$250,000); decommissioning of four transfer casks (\$200,000); decommissioning of eight shipping casks (\$400,000); decontamination of the Canister Transfer Building (\$230,000); storage pad decontamination

⁹ Although the PFS initial storage cask decommissioning estimate was approximately \$17,000 per cask, as the figures above indicate this was later adjusted to \$12,500 per cask. PFS nonetheless has decided to charge customers the original amount and maintain the balance (nearly \$4,500 per cask) as a contingency factor. See McKeigney/Wood Testimony at 7.

(\$241,000); final site release survey (\$260,000); and independent verification survey (\$50,000).¹⁰ See id. at 4-4 to 4-7.

4.12 The cost for storage cask decommissioning is to be prepaid by PFS customers and held in an external escrow account in accord with 10 C.F.R. § 72.30(c)(1) before each spent fuel canister is transported to the facility, an arrangement that is to be reflected in customer service agreement commitments. See Parkyn Utah S Testimony at 4. By placing customer prepayments into an escrow account, PFS intends to collect all monies necessary for decommissioning before any need arises, such as radiation exposure. See id. at 4-5. PFS anticipates periodically adjusting the escrow account to reflect the remaining storage cask decommissioning efforts. See LA, App. B at 5-1 to 5-2. For a PFS customer to ship a spent fuel canister to the facility, service agreements a prepayment of at least \$17,000 into an externalized escrow account. Id. at 5-1. Moreover, because its decommissioning efforts will be ongoing, PFS theorizes it can finish storage cask decommissioning by the end of canister removal and offsite shipping operations. See id.

4.13 Facility size is a small factor in overall site decommissioning costs, with the only cost variances relating to the area of the concrete storage pads and any potential decontamination and waste removal costs for that area. See McKeigney/Wood Testimony at 7. In this regard, the PFS projected expenditures of \$1,631,000 for decommissioning the remainder of the facility and the Skull Valley site are to be covered through a letter of credit and an external sinking fund in accordance with 10 C.F.R. § 72.30(c)(3). See LA Chap. 1, at 1-9. The letter of credit will be equal to the entire \$1,631,000 estimated cost for decommissioning

¹⁰ The \$1,631,000 total for decommissioning of the facility includes \$400,000 and \$200,000 for decommissioning of the shipping casks and transfer casks, respectively, which were over-reported by a factor of ten in an earlier version of the PDP, but remain in the total estimate as a contingency factor. See LA, App. B at 4-7.

the site, although this amount may be adjusted as payments for decontamination and decommissioning costs are placed into the external sinking fund. See Parkyn Utah S Testimony at 4. PFS plans to receive site decommissioning payments from customers during the lifetime of the facility. See id. at 4. In this regard, customers will pay for any deficit in site decommissioning funding, as well as their share of the contamination-related costs, if any, produced from their stored SNF. See id. at 6.

4.14 Because storage cask decommissioning is an ongoing process, PFS intends to periodically revise the level of funds held in escrow. See id. at 6. In particular, PFS contemplates escalating the escrow amount and per-canister fee in accordance with annual reviews relative to inflation using the Bureau of Labor Statistics's CPI and changes in storage cask decommissioning costs (e.g., based on the activities, extent, cost or timing of decommissioning). See id. at 5, 6. Based on service agreements, customers will face pro rata increases if storage cask decommissioning costs increase, even if their fuel is no longer stored at the facility. See id. at 6; Tr. at 2449-50, 2464. If decommissioning costs increase prior to an entity becoming a PFS customer, it will face higher decommissioning payments. See Parkyn Utah S Testimony at 6-7.

4.15 Regarding overall site decommissioning costs, PFS will annually review and adjust, if necessary, its letter of credit and external sinking fund for the facility and Skull Valley site based on inflation and the nature and cost of decommissioning. See id. at 6. All cost data in the PDP is listed in 1997 dollars. See id. at 5; Tr. at 2425. PFS will consider changes in cost as a result of new regulatory requirements, technology, labor, and other elements. See Tr. at 2426, 2435-36, 2438-39. Labor is considered by PFS as a "primary driver" for projecting decommissioning costs. See McKeigney/Wood Testimony at 9. PFS will account for cost changes due to labor through a regional CPI figure for urban wage earners. See id. The

annual review aims to account for changes to specific decommissioning items and the total decommissioning estimate. See Parkyn Utah S Testimony at 5. PFS will pursue changes to the letter of credit based upon amounts paid into the external sinking fund and overall site decommissioning costs. See id. at 4; Tr. at 2425-26. Although the site survey cost estimate (\$250,000) likewise is expressed in 1997 dollars, PFS will consider changes in this item through its annual review as well. See Parkyn Utah S Testimony at 8. Customers will be responsible for their pro rata share of any increase in overall site decommissioning costs as well as the costs of any contamination caused by the customer or anyone acting on its behalf. Id. at 6.

a. Annual Review of Decommissioning Costs and Site Survey

4.16 Relative to the decommissioning cost estimates for a storage cask, site, and site survey, the State contends in Basis 4 and Basis 10 that PFS's "estimates are not properly escalated to convert past dollars values into future dollars values" Joint Motion attach. A at 1. In his testimony, Dr. Sheehan criticized PFS for limiting cost estimate adjustments to the national CPI. See Sheehan Utah S Testimony at 11. In addition, the State argues that PFS has not explicitly expressed an obligation in its decommissioning plan to making cost estimate adjustments on the basis of other factors, such as real changes in cost and inflation. See State Findings at 7. Consequently, the State asks for a licensing condition for PFS to perform annual reviews and adjustments of its decommissioning cost estimates, including use of the 10 C.F.R. § 72.30(c) methods to recover any funding shortfalls. See id. at 8.

4.17 NRC regulations and guidance explicitly require ISFSI applicants to perform periodic rather than annual reviews of their cost estimates. See 10 C.F.R. § 72.30(b) (a PDP must include "means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI"); see also NUREG-1567, at 16-7 (applicant should provide a "means for updating the cost estimate, on a periodic basis"). Therefore, by requesting a license condition

that requires PFS to review and adjust its cost estimates on an annual basis, the State apparently is seeking a stricter requirement than that mandated by Commission regulations, which we decline to impose. See 10 C.F.R. § 2.758(a) (party challenge to an NRC regulation in an adjudicatory proceeding not permitted); GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 206 (2000) (denying intervenor request for a requirement “more stringent” than NRC regulations).

4.18 Be that as it may, the State’s argument under Basis 4 and Basis 10 also is unavailing because, as PFS has already detailed in its PDP, it is committed to reviewing and adjusting decommissioning cost estimates annually. See LA, App. B at 5-2 to 5-3. The PDP states that PFS will annually review and adjust its external sinking fund and letter of credit due to inflation as measured by the CPI, as well as shifts in the scope or cost of decommissioning (through an annual review of the cost estimate). See id. at 5-2. Moreover, individual elements of the cost estimate will be consulted and updated on the basis of “tasks, scope, cost[,] or schedule for decommissioning.” Id. at 5-2 to 5-3. This application commitment mirrors testimony given by Mr. Parkyn that PFS will revise its decommissioning funding as a result of changes in the data underlying its estimates. See Tr. at 2438. As was noted above, Mr. Parkyn stated that PFS will make revisions due to labor, technology, and regulatory changes. See id. at 2426, 2435-39. Hence, PFS has not restricted its escalation factors to the inflation rate, but rather identified a number of factors to consider at the evidentiary hearing. Indeed, Dr. Sheehan indicated he was satisfied with Mr. Parkyn’s response regarding escalation factors and revising the cost estimate due to technology or regulatory changes, thereby clarifying a few perceived uncertainties from the PFS decommissioning plan. See Tr. at 2494, 2495. Moreover, Dr. Sheehan’s concerns about funding adequacy also are addressed by the stated PFS intent to have its customers cover any decommissioning funding shortfall. See Tr.

at 2494. We, therefore, find that PFS has satisfactorily accounted for annual revision and escalation of its cost estimates.

b. Adjustment in the Letter of Credit

4.19 As we also noted above, site decommissioning will be accomplished jointly through a letter of credit and an external sinking fund consisting of customer decommissioning fund payments. See Parkyn Utah S Testimony at 4. While PFS envisions that it will have the letter of credit paid off within two years of commencing operations, it will increase the letter of credit if necessary (e.g., due to increased site decommissioning costs or customer payments received). See id. at 6; Tr. at 2439-42, 2449. For its part, PFS does not anticipate any difficulties in increasing its letter of credit. See Parkyn Utah S Testimony at 6.

4.20 The State, however, doubts the likelihood that PFS will actually be able to increase its letter of credit and cites a potential conflict of interest because Mr. Parkyn is Director of River Bank in La Crosse, Wisconsin, which is the bank issuing the PFS letter of credit. See State Response at 3-4. Dr. Sheehan found “a high degree of uncertainty” as to whether PFS could increase its letter of credit in the future. Sheehan Utah S Testimony at 12. Although Dr. Sheehan did not provide concrete support for his claim of uncertainty, the State dismisses PFS’s commitment to increase the letter of credit as “pure speculation,” and further argues that Mr. Parkyn may eventually leave the PFS project during the course of its license term. See State Response at 3-4. PFS and the staff explain that PFS plans to use a letter of credit and external sinking fund in conformity with NRC regulations and guidance. See Parkyn Utah S Testimony at 5; Staff Findings at 61.

4.21 Notwithstanding the State’s argument that there is a potential conflict of interest because Mr. Parkyn is a River Bank director, we find PFS has secured a letter of credit that meets applicable regulations and guidance. Under 10 C.F.R. § 72.30(c)(2), a letter of credit (or

any other surety method) is an approved means of attaining financial assurance for decommissioning. Staff witnesses McKeigney and Wood, who both reviewed PFS's decommissioning plan, testified at the June 2000 evidentiary hearing that PFS's letter of credit conformed with NRC regulations and guidance. See Tr. at 2549. The State nonetheless argues that PFS will not be able to account for changes in decommissioning costs in the future. And in this regard, citing age concerns, Mr. Parkyn did acknowledge his likely absence from the PFS project at some point in the future. See Tr. at 2448. There is no evidence from the State, however, that PFS was only able to secure the letter of credit through Mr. Parkyn's connection to River Bank. Similarly, the State has not demonstrated that a future increase in the letter of credit rests upon Mr. Parkyn's continued service on the River Bank Board of Directors. The State merely speculates that PFS may not be able to increase its letter of credit in the future, an unsupported allegation we are unwilling to accord any significant weight. Furthermore, staff witnesses McKeigney and Wood, both of whom have considerable familiarity with NRC regulations and guidance, stated there are no requirements or guidance for applicants relying upon a letter credit to show an ability to obtain additional funds for future events. See Tr. at 2549-50. This certainly is in congruity with the Commission recognition that Part 72 requires that an applicant demonstrate "reasonable assurance" of sufficient decommissioning funding, not an "ironclad" guarantee. Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 260 (1996).

4.22 In this regard, we are satisfied that PFS's decommissioning plan will provide sufficient financial assurance in the event PFS will need to obtain additional funding for decommissioning activities. First, in addition to the letter of credit, PFS will be using an external sinking fund supported by customer payments for site decommissioning costs. See Parkyn Utah S Testimony at 4. Under agency regulations, only as an external sinking fund increases

(e.g., from customer payments received) can the value of the attending surety method decrease. See 10 C.F.R. § 72.30(c)(3). Second, PFS will include commitments in its service agreements binding customers to fund any additional amounts for decommissioning based upon their pro rata usage of the facility. See Parkyn Utah S Testimony at 6; Tr. at 2449. Moreover, if a customer or anyone acting on the customer's behalf creates a need for decontamination efforts to be taken, PFS intends to charge that customer for the cleanup, rather than draw upon its letter of credit. See Parkyn Utah S Testimony at 6; Tr. at 2450-51.

4.23 Furthermore, the PFS decommissioning funding scheme has an additional conservatism in that it does not take into account a real rate of return on the funds kept in its decommissioning account during the facility's lifetime, notwithstanding the provisions of Part 50 that approve accounting for a two percent real rate of return on such escrow accounts for nuclear reactors. See Parkyn Utah S Testimony at 6. Applying a two percent real rate of return on the decommissioning account over a period of forty years (i.e., the initial twenty-year license term plus an additional twenty-year renewal period) can "increase the value of the funds by 120 percent before taxes." Id. We find support for this prognosis in Mr. Parkyn's experience in decommissioning the La Crosse nuclear power plant, during which there was a greater than two percent rate of return on the decommissioning funds. See Tr. at 2473-74; Parkyn Utah S Testimony at 2-3. In contrast, the State has not justified its "conclusory fears" about problems arising from future increases in the cost estimate. Yankee Rowe, CLI-96-7, 43 NRC at 263. Based on the preponderance of evidence before us, we have on difficulty concluding that if there is a need for increased decommissioning funding in the future, PFS will be able to secure additional monies via a larger letter of credit or otherwise.

2. Findings and Conclusions Regarding Storage Cask Decommissioning

4.24 In modified Basis 1, the issue is posited as to whether PFS has shown financial assurance for decommissioning notwithstanding the exclusion of storage cask decommissioning costs in its \$1,631,000 letter of credit for site and facility decommissioning. See Joint Motion at attach. A. At the time of the joint motion, PFS reserved the right to challenge Basis 1, arguing that it was not within the scope of the original Basis 1. See id. The State did not present any arguments at the June 2000 evidentiary hearing regarding the sufficiency of PFS's plan for storage cask decommissioning, either through its own witnesses or those of PFS or the staff. Although the State addressed the PFS letter of credit through the witnesses that testified relative to contention Utah S, it did not do so within the context of storage cask decommissioning.

4.25 The Board has the discretion to dismiss a contention for default where a sponsoring party does not pursue it at hearing, in other words an "abandoned contention." LBP-00-5, 51 NRC 64, 67-68 (2000). Or, it could take up our previously deferred ruling on a PFS pre-hearing brief contending that modified Basis 1 was outside the scope of the contention as originally admitted, due to ripeness, see Licensing Board Memorandum and Order (Ruling on In Limine Motions and Providing Administrative Directives) (June 12, 2000) at 8 n.2, and find that as originally admitted, contention Utah S "does not provide the vehicle" for the State's arguments on storage cask decommissioning relative to PFS's letter of credit. See LBP-01-23, 54 NRC 163, 172 (2001); see also Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97, n.11 (1988) (noting that "an intervenor is not free to change the focus of an admitted contention, at will, as the litigation progresses"). Nonetheless, we find on the merits of the State's argument in Basis 1 that PFS meets its burden to demonstrate financial assurance under 10 C.F.R. § 72.30. By its definition, "[p]repayment is

the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets . . . [and] may be in the form of . . . [an] escrow account" 10 C.F.R. § 72.30(c)(1). In this instance, PFS has followed the provisions of section 72.30(c)(1) as to storage cask decommissioning because customer payments are received prior to shipment of the spent fuel and kept in an external prepaid account.

3. Findings and Conclusions Regarding Vintage of Cost Estimates

4.26 The State contends that PFS's license application omitted any reference to the year's dollars used or upon which the raw data was generated for its cost estimates to decommission a cask, the facility, and a final site survey. See Joint Motion at attach. A. As stated above, NUREG-1567 indicates ISFSI applicants are to submit a cost estimate for the entire scope of the decommissioning plan, described in a specific year's dollars. See NUREG-1567, at 16-7; McKeigney/Wood Testimony at 6. The cost estimate should be stated in a year's dollars no less recent than the year in which it was assembled. See NUREG-1567, at 16-7. Dr. Sheehan stated that the vintage of the data and the year's dollars used for the cost estimate ensure the estimate's accuracy as to the rate of inflation and the real cost increase. See Sheehan Utah S Testimony at 10-11.

4.27 At the June 2000 evidentiary hearing, Mr. Parkyn testified that the estimates and vintage of the data were in 1997 dollars. See Parkyn Utah S Testimony at 5, 8; Tr. at 2425. Dr. Sheehan, the State's witness on contention Utah S, was satisfied with Mr. Parkyn's answers on these issues, insofar as Mr. Parkyn's testimony is correct. See Tr. at 2494, 2495-96. Although PFS's preliminary DFP contained no reference to the year's dollars used for its cost estimates, staff witnesses McKeigney and Wood testified that the staff's understanding was that all cost estimate figures were stated in 1997 dollars based on PFS's revised license application.

McKeigney/Wood Testimony at 9. A conference call between Mr. Parkyn and the staff on May 9, 2000 confirmed this result. Id. There was no contrary testimony presented at trial on the issues of year's data used or vintage of data, and the parties agree that these issues were resolved. Thus, we find that with respect to Basis 4 and Basis 10, the vintage of the data and PFS's cost estimates are reflected in 1997 dollars.

4. Findings and Conclusions Regarding Cost Estimate Conservatism

4.28 The State asserted in amended Basis 4 that PFS, as the ISFSI applicant, should follow a conservative approach in its decommissioning projections. Staff witnesses McKeigney and Wood agreed that PFS should, and did, use a conservative approach in predicting the maximum amount of spent fuel casks that will be located at the facility during the license term. See McKeigney/Wood Testimony at 10-11. We agree and find that PFS employed a conservative approach in its license application with respect to storage cask decommissioning and site decommissioning. First, under storage cask decommissioning, PFS will utilize a spent fuel canister-specific cost estimate and have customers prepay storage cask decommissioning fees to directly project the maximum amount of spent fuel that the facility will hold. See Parkyn Utah S Testimony at 7. Second, PFS will account for site decommissioning by projecting costs and the letter of credit that accompany a full capacity facility, i.e., 4,000 casks or 40,000 MTU. See id.

D. Findings and Conclusions Regarding Large Accidents and NRC Insurance Requirements

4.29 In the context of its modified Basis 5, the State also contends that PFS should consider the potential for large accidents affiliated with the ISFSI in its decommissioning cost estimates, due to the scope of the operation and its impact on decommissioning costs. Joint Motion at attach. A. State witness Sheehan asserts that a conservative cost estimate for the facility accounts for the risks of accidents and accompanying radionuclide release through

either insurance or its decommissioning cost estimates, see Sheehan Utah S Testimony at 7, an argument the State uses to bolster its request to require PFS to account for accidents in its cost estimates, see State Findings at 12-13.

4.30 We, however, agree with PFS and the staff that Part 72 ISFSI licensees, like Part 50 nuclear reactor licensees, see 10 C.F.R. § 50.54(w), face no requirement for including potential accident recovery costs within decommissioning cost estimates. Dr. Sheehan could not identify any NRC regulations that required large accidents be included within the scope of ISFSI decommissioning. See Tr. at 2496; see also McKeigney/Wood Testimony at 11. Although the NRC does not require ISFSI licensees under Part 72 to obtain onsite property insurance to cover potential accident cost recovery, that cost nonetheless is accounted for by the nuclear property damage insurance PFS will obtain to cover the facility, as is discussed below, and so need not be counted separately as a decommissioning cost. See 50 Fed. Reg. 5600, 5606 (Feb. 11, 1985) (proposed rule indicating that “[a]ssurance of funds for post-accident cleanup is more properly covered by use of insurance” rather than under a decommissioning rule).

4.31 In this regard, potential onsite accident recovery costs would be covered under PFS nuclear property damage insurance. See Parkyn Utah S Testimony at 7. PFS intends to purchase the highest level of onsite nuclear property insurance “available at reasonable costs and at reasonable terms from private sources,” which was **xxxxxxxxxxxx** at a **xxxxxxx** annual premium at the time of Mr. Parkyn’s testimony relative to contention Utah E. See Testimony of John Parkyn on Onsite Property Insurance For the Facility Contention Utah E/Confederated Tribes F (fol. Tr. at 2173) at 4 [hereinafter Parkyn Utah E Testimony]. Specifically, Nuclear Electric Insurance Limited (NEIL) is willing to supply up to **xxxxxxxxxxxx** for onsite property coverage at an annual premium of **xxxxxxx**, while overseas insurers are

able to offer xxxxxxxxxxxx at an annual premium of xxxxxxxx. See id. at 4. Further, although PFS contends that \$70 million in nuclear property insurance coverage would be more than adequate for onsite coverage in the event of a radiological incident at the facility, PFS nonetheless intends to secure the greatest amount of nuclear property insurance available for its ISFSI for a total annual premium of xxxxxxxx in year 2000 dollars. See id. at 4-5. Moreover, if that the level of coverage commensurate with a xxxxxxxx premium falls under \$70 million in year 2000 dollars, PFS will increase its coverage or conduct an accident consequences assessment to calculate the recovery costs from the maximum potential radiological accident and obtain an appropriate amount of coverage. See id. In no case, however, will PFS obtain more insurance than is available at reasonable costs and terms from the commercial sector or as required by the NRC by rulemaking. See id.

4.32 As we noted in our ruling today on contention Utah E, we consider this arrangement sufficient to establish PFS financial assurance relative to onsite insurance consistent with the Commission's directives on this subject in CLI-00-13.¹¹ See LBP-05-21, 62 NRC __, __ (May 27, 2003) (slip op. at 100-01). We also find that the State has not provided any support for its claim that coverage may not be available over the life of the facility because there may be only one domestic nuclear property insurance provider at some point in the future. The State does not account for the fact that NEIL, which would be providing nuclear property insurance for the entire United States nuclear industry, is an entity financially backed (through membership status) by virtually all the nuclear plant

¹¹ To the degree Dr. Sheehan seeks increased insurance coverage based on inclusion of accident probabilities due to earthquakes (contention Utah L) or military training (contention Utah K) as causes of possible accidents at the facility, his argument is misdirected because these contentions address the suitability of the Skull Valley site for the facility, rather than the consequences of an accident or associated cleanup costs. See LBP-98-7, 47 NRC at 253.

owners in the United States. See Tr. at 1801-02. Moreover, PFS intends to secure insurance from both NEIL and overseas insurers. See Parkyn Utah E Testimony at 4.

E. Findings and Conclusions Regarding License Conditions

4.33 In CLI-00-13, 52 NRC at 29, the Commission held that license conditions could be used to achieve a reasonable assurance that PFS meets the financial qualification requirements under 10 C.F.R. Part 72 for operating an ISFSI facility. As was noted in section III.E above, the State as requested the imposition of a number of license conditions relative to contention Utah S. In this instance, however, we have substantively rejected the merits of arguments underlying the requested State license conditions in the areas of annual reviews and subsequent cost estimate adjustment (section IV.C.1) and insurance (section IV.D). Thus, there is no need for us to address the sufficiency of these State proposed conditions. See Power Authority of the State of New York (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 558-59 (2001) (declining to address intervenor's proposed license conditions when the merits of decommissioning funding assurance argument were rejected). Further, we reject the State's suggestion that basically every commitment expressed by PFS during the June 2000 evidentiary hearing and in its findings and conclusions should be transformed into a license condition. See CLI-01-9, 53 NRC 232, 235 (2001). Thus, we find that the State's proposed license conditions are unnecessary, and decline to adopt them in whole or as part of a Board order.¹²

¹² Although we would not have imposed the requested conditions in any event, the fact that the principal State's concerns are now covered under the MSA provisions submitted by PFS in accordance with CLI-00-13 seeks to further highlight that the need for such conditions is lacking. See, e.g., [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to State of Utah's Objections to the Adequacy of [PFS MSA] to Meet Part 72 Financial Assurance Requirements (Dec. 4, 2000), Declaration of John Parkyn, exh. 1, at 32-33, 34-35 (Model Agreement for Storage of Spent Nuclear Fuel by and between [PFS] and ___ (Dec. 4, 2000)) (section 13.5.1, dealing with decommissioning costs that makes customers responsible for proportional share of

V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW

5.1 Having considered all the evidence submitted by the parties in this proceeding, including the proposed findings of fact and conclusions of law, based on the findings and conclusions set forth in section IV above, the Board finds that PFS has met its burden under 10 C.F.R. § 72.22(e) to establish reasonable assurance that it is financially qualified to decommission its proposed Skull Valley, Utah facility, such that the public health and safety will be protected. Therefore, relative to the issues raised in contention Utah S, the Board finds those matters are resolved in favor of PFS.¹³

6.1 Pursuant to 10 C.F.R. § 2.760, it is this twenty-seventh day of May 2003, ORDERED, that this partial initial decision will constitute a final decision of the Commission forty (40) days from the date of issuance, or on Monday, July 7, 2003, unless a petition for review is filed in accordance with 10 C.F.R. § 2.786, or the Commission directs otherwise. Any party wishing to file a petition for review on the grounds specified in 10 C.F.R. § 2.786(b)(4) must do so within fifteen (15) days after service of this partial initial decision. The filing of a

all facility decommissioning costs and requires preshipment payment of \$40,000 per canister (in 1997 dollars), subject to annual PFS adjustment, including adjustment for inflation, and section 13.6, making customer liable for all PFS costs incurred in connection with decontamination efforts associated with customer's use of PFS equipment or customer-loaded casks/canisters).

¹³ Recently, in the form of a motion for reconsideration of its decision in LBP-03-04, 57 NRC __ (Mar. 10, 2003), regarding State concerns over the probability of military aircraft accidents in connection with the Skull Valley facility, PFS has put before the separate Licensing Board chaired by Administrative Judge Farrar the possibility of authorizing initial construction and operation of a significantly smaller, 336-cask facility. Currently, the license application before this Board outlines plans for a very differently sized facility, and it is upon the basis of that application that we make our ruling today.

petition for review is mandatory in order for a party to have exhausted its administrative remedies before seeking judicial review. Within ten (10) days after service of a petition for review, parties to this proceeding may file an answer supporting or opposing Commission review. Any petition for review and any answer shall conform to the requirements of 10 C.F.R. § 2.786(b)(2)-(3).

6.2 Given previous party positions suggesting that financial assurance-related information may include proprietary or other sensitive data, on or before Friday, June 20, 2003, the State, PFS, and the staff shall provide the Board with a joint filing outlining each (1) proposed redaction of any part of this partial initial decision to which there is no objection; (2) proposed redaction of any part of this partial initial decision to which there is an objection; and (3) proposed redaction of any part of the cross-examination plans submitted by the parties to the Board in connection with the evidentiary presentations on contention Utah S. The particular word or phrase to be withheld from public release shall be specified for each proposed redaction; blanket requests for withholding are disfavored. Further, in accordance with 10 C.F.R. § 2.790, the party seeking the proposed redaction shall at the same time provide a separate submission that describes with specificity (as supported by any necessary affidavits)

the reasons for withholding each proposed redaction from the public. Responses by any party objecting to a proposed redaction shall be filed on or before Monday, June 30, 2003.

THE ATOMIC SAFETY
AND LICENSING BOARD¹⁴

/RA/

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

/RA/

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland

May 27, 2003

¹⁴ Pursuant to previous Board issuances on e-mail service of documents identified as potentially containing proprietary information, copies of this memorandum and order were sent this date by Internet e-mail transmission to counsel for PFS, the State, and the staff. In addition, this date a memorandum was sent by e-mail to all the parties to this proceeding advising them of the issuance of this decision and the Board's determination to afford this decision confidential treatment pending a response by PFS, the State, and the staff to the Board's inquiry under paragraph 6.2 above. See Licensing Board Memorandum and Order (Notice Regarding Issuances Concerning Contentions Utah E/Confederated Tribes F and Contention Utah S) (May 27, 2003) (unpublished).

Although agreeing with the result reached here, because of illness Judge Kline was unavailable to participate in the final preparation of this decision.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
PRIVATE FUEL STORAGE, L.L.C.) Docket No. 72-22-ISFSI
)
(Independent Spent Fuel Storage)
Installation))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LBP-05-22-REDACTED VERSION OF LB PARTIAL INITIAL DECISION (CONTENTION UTAH S, DECOMMISSIONING) have been served upon the following persons by deposit in the U.S. mail, first class, or through NRC internal distribution.

Office of Commission Appellate
Adjudication
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Administrative Judge
G. Paul Bollwerk, III, Chairman
Atomic Safety and Licensing Board Panel
Mail Stop - T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Sherwin E. Turk, Esquire
Laura C. Zaccari, Esquire
John T. Hull, Esquire
Darani M. Reddick, Esquire
Office of the General Counsel
Mail Stop - 0-15 D21
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Administrative Judge
Peter S. Lam
Atomic Safety and Licensing Board Panel
Mail Stop - T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Stephen L. Simpson, Esquire
Office of the Solicitor
Department of the Interior
Division of Indian Affairs
1849 C Street, NW, Mailstop 6456-MIB
Washington, DC 20240

Diane Curran, Esquire
Harmon, Curran, Spielberg
& Eisenberg, L.L.P.
1726 M Street, NW, Suite 600
Washington, DC 20036

Joro Walker, Esquire
Director, Utah Office
Western Resource Advocates
1473 South 1100 East, Suite F
Salt Lake City, UT 84105

Martin S. Kaufman, Esquire
Atlantic Legal Foundation
205 E. 42nd St.
New York, NY 10017

Docket No. 72-22-ISFSI
LBP-05-22-REDACTED VERSION OF LB PARTIAL
INITIAL DECISION (CONTENTION UTAH S, DECOMMISSIONING)

Denise Chancellor, Esquire
Assistant Attorney General
Utah Attorney General's Office
160 East 300 South, 5th Floor
P.O. Box 140873
Salt Lake City, UT 84114

Jay E. Silberg, Esquire
D. Sean Barnett, Esquire
Pillsbury Winthrop Shaw Pittman LLP
2300 N Street, NW
Washington, DC 20037-1128

John Paul Kennedy, Sr., Esquire
David W. Tufts, Esquire
Confederated Tribes of the Goshute
Reservation and David Pete
Durham Jones & Pinegar
111 East Broadway, Suite 900
Salt Lake City, UT 84105

Richard Wilson
Department of Physics
Harvard University
Cambridge, MA 02138

Tim Vollmann, Esquire
3301-R Coors Road N.W., #302
Albuquerque, NM 87120

Paul C. EchoHawk, Esquire
ECHOHAWK LAW OFFICES
151 North 4th Avenue, Suite A
P.O. Box 6119
Pocatello, ID 83205-6119

Joseph R. Egan, Esquire
Martin G. Malsch, Esquire
Egan, Fitzpatrick, Malsch & Cynkar, PLLC
The American Center at Tysons Corner
8300 Boone Boulevard, Suite 340
Vienna, VA 22182

[Original signed by Evangeline S. Ngbea]

Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 12th day of August 2005