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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION '00 AUG 21 P4:26

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	Docket No. 72-22-ISFSI
PRIVATE FUEL STORAGE, LLC (Independent Spent Fuel Storage Installation)	)	ASLBP No. 97-732-02-ISFSI
	)	August 7, 2000

STATE OF UTAH'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW REGARDING CONTENTION UTAH R, PRIVATE FUEL STORAGE, LLC'S CAPABILITY TO FIGHT FIRES ON SITE

Pursuant to the Board's Schedule accompanying its February 2, 2000 Order, its Order granting extension of time (July 24, 2000), and following an evidentiary hearing held in Salt Lake City on June 19, 2000, the State of Utah hereby submits the following proposed findings of fact and conclusions of law with respect to Contention Utah R.

I. PROCEDURAL BACKGROUND AND WITNESS QUALIFICATIONS

1. The only issue remaining for hearing on Contention Utah R is the State's assertion that PFS has not adequately described the means and equipment for mitigation of accidents because PFS does not have adequate support capability to fight fires onsite. *See* LBP-99-36, Memorandum and Order (Denying Motion for Partial Summary Disposition of Contention Utah R), dated August 30, 1999.

2. The Licensing Board admitted testimony on Contention Utah R by PFS's witness panel, Kenneth W. Dungan and Wayne Lewis ("Dungan & Lewis"), the Staff's witness panel, Paul W. Lain and Randolph L. Sullivan ("Lain & Sullivan") and the State's witness, Gary A. Wise.

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3. The State tendered its witness, Gary A. Wise, the Utah State Fire Marshal, as an expert in fire safety. As described in Mr. Wise's testimony and attached resume, Mr. Wise has been the State Fire Marshal since 1996 and in that position is responsible for the licensing and certification of the propane industry, fireworks industry and fire suppression industry throughout the State of Utah. His office prepares plan reviews and inspections of new construction of State-owned buildings, schools and other government buildings. As Fire Marshal, Mr. Wise also meets with Fire Chiefs around the State, many of whom are in charge of volunteer fire departments, to assist them in keeping abreast and complying with National Fire Protection Association, Inc. ("NFPA") standards and federal Occupational Safety and Health Administration ("OSHA") regulations. From 1983 to 1996 Mr. Wise has had hands-on experience with fire fighting. He was the Chief of the Orem Fire Department from 1990 to 1996 and was responsible for the City of Orem complying with NFPA 1500. During his fire department career, Mr. Wise has written, developed and implemented many fire safety programs. In addition, Mr. Wise has an A.S. degree in Fire Science, is certified in a number of emergency disciplines, including Fire Officer II, Hazardous Materials Operations, and Peace Officer, and has received additional training in emergency response and fire management and tactics. *See* Wise Testimony at 2 and attached resume.

4. The skills, training and experience of a Fire Marshal, Chief of a city fire department and a fire fighter are sufficient to factually evaluate PFS's capability to fight fires onsite.

5. In his testimony, Fire Marshal Wise offered specific, detailed and credible factual evidence of PFS's lack of training and personnel to fight fires onsite. His criticisms

of PFS's training and staffing were not based on subjective, unreasonable standards, but were based on his reasoned judgment as the Utah State Fire Marshal and his experience as a fire chief and fire fighter. Moreover, his conclusions are consistent with NRC's own regulations.

6. Accordingly, Mr. Wise is qualified by knowledge, experience, training and education to testify as an expert witness regarding whether PFS has adequate support capability to fight fires onsite. Furthermore, given Mr. Wise's longevity of employment in the fire service, the Licensing Board affords strong weight to Mr. Wise's testimony regarding fire safety issues, especially as those issues relate to life-safety of firefighters.

II. SUMMARY OF THE ARGUMENT

7. In order to demonstrate the requisite support capability to fight fires onsite, PFS cannot effectively rely on off-site assistance and must rely entirely on its own personnel, and as presently constituted, PFS does not have a sufficient number of on-site staff or adequately trained staff to fight fires onsite, and thus PFS's Emergency Plan does not mitigate the consequences of accidents, protect public health and safety or protect workers onsite, including PFS fire fighters.

III. RELEVANT LEGAL STANDARD

8. The Emergency Plan provisions for off-site ISFSIs are found at 10 CFR 72.32(a) and require, *inter alia*, (5) mitigation of the consequences of each type of accident, including those provided to protect workers onsite, and a program to maintain equipment; (7) responsibilities of licensee personnel should an accident occur; (8) notification and coordination to promptly notify off-site response organizations and request off-site

assistance; (10) the training the licensee will provide workers on how to respond to an emergency; (11) the means of restoring the facility to a safe condition after an accident; (12) conduct of semiannual communications checks with off-site response organizations and biennial on-site exercises to test response to simulated emergencies; and (15) arrangements made for requesting and effectively using off-site assistance on site and provisions that exist for using other organizations capable of augmenting the planned on-site response.

9. NUREG 1576, Standard Review Plan for Spent Fuel Dry Storage Facilities (Final Report, March 2000), refers to Emergency Planning at § 10.4.5, which in turn states that Regulatory Guide 3.67, Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities contains the principal guidance on preparation of emergency plans for ISFSIs. NUREG-1567 (March 2000) at 10-14. On July 20, 2000, however, the Staff informed the Board that Interim Staff Guidance - 16 ("ISG-16") revised § 10.4.5 of NUREG-1567 by deleting reference to Reg. Guide 3.67. In its letter the Staff argues that the Board may take "official notice" of ISG-16 as the "applicable regulatory criteria." Staff letter at 2.

The Board notes that regulatory guidance documents are not regulations, do not have the force of regulations and merely present one party's view – the Staff's – of how to comply with regulatory requirements. *See e.g.*, Curators of the University of Missouri, CLI-95-1, 41 NRC 71, 98, 150 (1995). Moreover, "an agency is free to choose among permissible interpretations of its governing statute, and that at times new interpretations may represent a sharp shift from prior agency views or pronouncements." International Uranium (USA) Corp (Request for Materials License Amendment), CLI-00-1, 51 NRC 9, 19 (2000) (hereafter

"IUC") (*citing* Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 842-43 (1984). Such a shift is permissible provided the reasons are explained. IUC, 51 NRC at 19.

10. Reg. Guide 3.67 requires a description of "the means and equipment provided for mitigating the consequences of each type of accident ... [including] the mitigation of consequences to workers onsite as well as to the public offsite" (§ 5.3); the effective use of protective equipment and supplies including the proper on-site distribution or availability of special equipment, such as individual respiratory protection and protective clothing (§ 5.4.1.2); and specification of the training afforded to those personnel who prepare, maintain and implement the emergency plan, and training provided on the use of protective equipment and training for on-site personnel who are not members of the emergency response staff (§ 7.2).

Some provisions of NUREG-1567 as modified by ISG-16 are similar to Reg. Guide 3.67. ISG-16 requires the Emergency Plan to describe "the means and equipment provided for limiting the consequences of each type of accident identified in the plan" (§ 3.6); the nature of onsite protective actions including the "timely relocation of onsite persons, effective use of protective equipment and supplies, and use of appropriate contamination control measures" (§ 3.6.2); the protective equipment and supplies available to emergency response personnel, its location and means of distribution (§ 3.6.3); and training requirements for each position in the emergency organization (§ 3.11).

One of the six major phases of the Staff's review process is "evaluation of the proposed programs that support protection of worker and public health and safety"

NUREG 1567 at 1. Unlike section 5.3 of Reg Guide 3.67, ISG-16 does not specifically state the Emergency Plan must address the mitigation of consequences to workers onsite as well as to the public offsite. *See also* 10 CFR § 72.32(5) (mitigation measures to protect workers onsite).

11. It appears that PFS intends to meet the regulatory requirements for emergency planning, in part, by resort to NFPA 600 standards. NFPA standards provide reasonable guidance for organizing, equipping and training fire fighters. NFPA first adopted "Suggestions for Organizing Private Fire Departments" in 1902[1] and over the years NFPA has revised the standards to now include NFPA 600, Industrial Fire Brigades and NFPA 1500, Standards on Fire Department Occupational Safety and Health Program.

In general, NFPA 600 standards set minimum standards for organizing, operating, training, and equipping industrial fire brigades.[2] State's Exhibit 6, NFPA 600 § 1-2. It also sets the minimum standards for the occupational safety and health of industrial fire brigade members while performing fire fighting and related duties. Id. § 1-1.1. The standard also applies to any organized private, industrial group of employees having fire fighting duties such as emergency brigades, emergency response teams, fire teams, and plant emergency organizations. Id. § 1-1.2.

In contrast, NFPA 1500 sets minimum standards for a fire-service-related

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[1] *See* State's Exhibit 6, cover page.

[2] Fire brigade is defined in NFPA 600 as an organized group of employees within an industrial occupancy who are knowledgeable, trained, and skilled in at least basic firefighting operations, and whose full-time occupation might or might not be the provision of fire suppression and related activities for their employer. NFPA § 1-5.

occupational safety and health program. State's Exhibit 8, NFPA 1500 § 1-1.1. The standard applies to public, governmental, military, private, and industrial fire department organizations providing rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services.

The purpose of NFPA 1500 is to specify the minimum standards for an occupational safety and health program for a fire department and to specify safety guidelines for those members involved in rescue, fire suppression, emergency medical services, hazardous materials operations, special operations, and related activities. Id. § 1-2.1.

12. In a formal adjudicatory proceeding, 10 CFR § 2.732 provides that the applicant has the burden of proof, and "in order for the applicant to prevail on each contested factual issue, the applicant's position must be supported by a preponderance of the evidence." Louisiana Energy Services, L.P. (Claiborne Enrichment Center), LBP-96-7, 43 NRC 142, 144 (1996), *citing* Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2, ALAB-819, 22 NRC 681, 720 (1985); Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2, ALAB-763, 19 NRC 571, 577 (1984). Furthermore, while 10 CFR § 2.714 imposes the burden of going forward on the intervenor, it does not shift the ultimate burden of proof from the applicant to the intervenor. Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-15, 44 NRC 8, 16 (1996).

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

A. Off-Site Fire Fighting Assistance

1. Off-Site Fire Fighting Assistance from Tooele County.

13. PFS intends to call on the Tooele County Fire Department to augment its

fire fighting capabilities and to fight large fires beyond the capability of PFS fire brigade. Wise Testimony at 3. Tooele County has an all volunteer fire department. The fire department is dispatched from Tooele City, a distance of approximately 55 miles from the PFS site. It would take at least 90 minutes for PFS to obtain off-site assistance. Id.

14. Testimony by PFS's witness Wayne Lewis that PFS may obtain off-site assistance from Terra is totally speculative and without support. Tr. at 1470. Mr. Lewis did not know the population of Terra, whether it was an all-volunteer brigade, or how long it would take off-site assistance at Terra to arrive at the PFS facility. Mr Lewis relied on a booklet from Tooele County, that was not introduced into evidence, as the apparent source of his information. Id at 1470-71. On the other hand, Mr. Wise testified that Terra is very small, with a population of probably 150 to 200 people, has an all volunteer fire department and that most adult residents do not work in Terra. Tr. at 1633.

15. In any event, Mr. Lewis admitted that PFS must be self-sufficient in its fire fighting needs. Tr. at 1471-72. Thus, PFS cannot effectively use or rely on off-site assistance to fight fires on-site.

2. Off-site Assistance During Off-Normal Hours

16. Both Reg. Guide 3.67 and ISG-16 require a description of the "onsite emergency response organization for the facility, and include the organization for periods such as offshifts, holidays, weekends, and extended outages when normal operations are not being conducted." Reg. Guide 3.67, § 4.2. *See also* ISG-16 § 3.8.2 which contains almost identical language. PFS has not complied with either Reg. Guide 3.67, § 4.2 or ISG-16 § 3.8.2 because during off-normal hours PFS anticipates it will take 90 minutes for PFS's call

back procedures to get trained fire fighters back to the site. Tr., Dungan & Lewis at 1515. Moreover, as discussed in the preceding paragraph, off-site assistance from Tooele County will not be timely available to fill the void at the PFS site during off-normal hours.

17. PFS will have security staff on site 24 hours a day. PFS, however, will not train security staff to NFPA standards as fire fighters. Testimony of Dungan & Lewis at 27.[3] *See also* Sullivan, Tr. at 1570. For fires requiring fire fighting during off-normal hours, PFS intends to page one member and call the others back by telephone. Id. *See also* State's Exhibit 2 at 1. The Staff took the Applicant's assessment at face value that it would take ninety minutes to call back fire fighters during off-normal hours. Sullivan, Tr. at 1570. Assuming, *arguendo*, that it will take ninety minutes to call back fire fighters, such a system will not allow timely response to effectively use those fire fighters who have been called back during off-normal hours. The Board finds the Applicant's Emergency Plan deficient in how it will cope with fires on-site during off-normal hours.

B. NRC Authority and Responsibility in Emergency Planning

1. NRC's Authority and Responsibility for Non-Radiological Releases

18. According to Reg. Guide 3.67, "[e]mergency planning is concerned with individual and organizational responses to a range of potential accidents" and further, "[a]ccident descriptions should include nonradioactive hazardous material releases that could impact emergency response efforts." Reg. Guide 3.67 at §§ 2 and 2.1. Section 3.3 of ISG-16 requires accident descriptions to include "non-radiological, hazardous material releases that

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[3] On June 16, 2000, the Dungan & Lewis testimony (at 27) was revised to state that PFS security personnel will not participate on the fire brigade.

could impact emergency response efforts." ISG-16, however, is primarily focused on preventing exposure to radiological releases.

19. In the instant case, PFS's decision to locate its spent nuclear fuel storage facility on an Indian reservation means that if NRC does not review all aspects of PFS's on-site fire fighting capability, including its ability to protect the non-radiological health and safety of the public and on-site workers, it will not be reviewed at all by any governmental entity. Mr. Wise testified that for a non-governmental industrial facility on non-reservation lands in Utah, building and occupancy permits are issued by local jurisdictions. Tr. at 1661. He further testified that certification of the adequacy of fire brigade training programs and procedures would be done by those local governmental entities. Id.

In this case, there is a void in the typical building approvals and fire inspections that local governments usually undertake because PFS is located on an Indian reservation that performs absolutely no governmental functions. *See e.g.*, NUREG-1714, Draft Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and Related Transportation Facility in Tooele County, Utah (hereafter "PFS D-EIS") at § 1.6.2.2 (PFS needs no permits or approvals from the Skull Valley Band of Goshute Indians for the proposed action).

20. In order to fill the interstices in the regulations, notwithstanding the NRC Staff's testimony that its authority is limited to the review of PFS's emergency response

actions that relate to the release of radioactive materials,[4] the Board finds that in this instance the NRC has the authority and responsibility under 10 CFR § 72.32(a) to review the totality of PFS's Emergency Plan as it relates to PFS's on-site fire fighting capability, including its ability to protect the health and safety of the public and on-site workers, including PFS fire fighters. The Staff under 10 CFR § 72.32 has the obligation to ensure that the Applicant's Emergency Plan protects onsite workers and that includes PFS employees who perform fire fighting duties. Thus, the Board reviews whether PFS's Emergency Plan satisfactorily addresses health and safety standards relating to emergency planning by evaluating the adequacy of PFS's staffing, training, and equipment to effectively fight any and all fires onsite, whether or not they result in a radiological release.

2. Regulatory Presumption that Off-site Assistance Will Be Available

21. The regulations, 10 CFR 72.32(a)(8), 12) and (15), and regulatory guidance assume that off-site assistance will be available to the Applicant to fight fires onsite. *See e.g.*, Description of Area Near the Site (Reg. Guide 3.67 §1.3; ISG-16 § 3.2); Alert (Reg. Guide 3.67 §3.2.1; ISG-16 § 3.4.1); Site Area Emergency (Reg. Guide 3.67 § 3.2.2; ISG-16 § 3.4.2); Information to be Communicated (Reg. Guide 3.67 § 3.3; ISG-16 § 3.10); Local Offsite Assistance to the Facility (Reg. Guide 3.67 § 4.3; ISG-16 § 3.16); Coordination with Participating Government Agencies (Reg. Guide 3.67 § 4.4; ISG-16 § 3.8.6); Off-site Protective Actions (Reg. Guide 3.67 §5.4.2; ISG-16 § 3.6.4); Off-site Communications (Reg. Guide 3.67 § 6.2.2); Training (Reg. Guide 3.67 § 7.2; ISG-16 § 3.11); Drills and

[4] Lain & Sullivan, Hearing transcript ("Tr.") at 1558-61,

Exercises (Reg. Guide 3.67 § 7.3; ISG-16 § 3.13); and Letters of Agreement (Reg. Guide 3.67 § 7.7; ISG-16 § 3.15).

22. However, because of the PFS facility's location, PFS cannot rely on timely off-site response to assist it in fighting fires onsite.

PFS's Emergency Plan states that it will obtain off-site assistance from Tooele County. Wise Testimony at 2. Tooele County, however, does not have a full-time dedicated fire department but rather operates on an all volunteer basis. Furthermore, Tooele City is about 55 miles by road from the PFS facility. EP, Rev. 9 at 4-1. Moreover, PFS's witness' suggestion that off-site response may come from the township of Terra is total speculation. Tr., Dungan & Lewis at 1470. The township of Terra has a total of thirty households. ER, Rev. 6 at 2.2-8. Moreover, even though closer to the PFS site than Tooele City, there is no evidence of how long it will take this rural community to assemble its all volunteer fire fighters and respond to an incident at the PFS facility. Furthermore, PFS's witness admitted that PFS must be self-sufficient in its fire fighting needs. Tr., Dungan & Lewis at 1471-72.

Accordingly, we conclude that the normal presumption that off-site assistance will be available to a facility does not apply in the case of PFS, and we take this into account when evaluating to what fire fighting standards PFS must adhere and whether it has the capability to fight fires on-site.

C. NFPA Standards

23. There is a disagreement between the State and PFS whether NFPA 1500 or

NFPA 600 standards apply to PFS.

The Applicant intends to organize, operate, train and equip eleven non-security staff in accordance with the standards prescribed by NFPA 600, Standards on Industrial Fire Brigades. PFS Exhibit G (EP, Rev. 9 at 4.3). NFPA 600 standards, however, do not afford the training necessary for a PFS organized fire brigade to effectively protect fire fighters, on-site workers, public health and safety or to mitigate the consequences of accidents. Instead, PFS must be required to comply with NFPA 1500, Standards on Fire Department Occupational Safety and Health Program. However, even if compliance with NFPA 600 is deemed sufficient, PFS does not comply with NFPA 600.

1. NFPA 1500 Standard

24. Mr. Wise testified that the training and functions PFS fire fighters must perform, such as rescue operations and fighting internal structural fires, as well as the fact that the facility is located far from a municipal fire department, invokes NFPA 1500 as the appropriate standard applicable to PFS fire fighters. Tr. at1614. Mr. Wise also testified:

> I think that there's certain issues that are defined in NFPA 600, specific duties that they may be trained for and may have to conduct that then puts them in the role of an industrial fire department versus a brigade. And with that emphasis, then 1500 adds a little bit higher level of safety and requirements for a little bit better training and expertise. That's what we're talking about is people's lives, not so much the property of the administration building and so on burning down, but there's also people that could be inside, workers that could be inside for some reason be trapped. And if those fire brigade members don't have the expertise and the regular training to have the confidence level to make an interior attack, a rescue, then someone's going to lose their life. And to go to 1500 I don't think is an unwarranted requirement.

Tr. at 1608.

25. PFS's argument that NFPA 600 standards are good enough for the PFS facility attempts to rely on the fact that PFS will only be organized to fight fires at a specific facility and will not be going outside that facility. Tr a 1603-04. However, PFS overlooks the clear statement in NFPA 1500 that most industrial fire brigade are not fire departments, but where a facility is located far from a municipality that has an organized fire department and the fire brigade will perform rescue operations, it is a fire department. State's Exhibit 8, NPFA 1500 § A-1-5; Wise Testimony at 9.

26. NFPA 1500 is the appropriate standard to which PFS staff must be trained. PFS has admitted that it must be self-sufficient in its fire fighting needs. Given the 55 miles distance from Tooele City to the PFS facility and the all volunteer nature of the Tooele County fire department, the PFS facility will need to be self-reliant to function as a municipal fire department. State's Exhibit 8, NFPA 1500 § A-1-5 (industrial facilities located far from a municipality with an organized fire department fall within NFPA 1500).

Furthermore, the PFS fire fighting unit will need to be organized and equipped for interior structural fire fighting and to provide rescue services. The PFS fire brigade members are to receive training on types of fires (including those involving radioactive materials), fire tetrahedron, dangers of fire, protective clothing, self-contained breathing apparatus, and types of fire extinguishers. Wise Testimony, State's Exhibit 4 at 1. In addition, PFS fire brigade members will participate in fire drills annually. Id. at Exhibit 7. NFPA 1500 states that industrial fire brigades that provide rescue services are fire departments. State's Exhibit 8, NFPA 1500 § A1-5. In addition, NFPA 1500 defines "Fire Department" as "any organization providing rescue, fire, suppression and related activities".

Id. § 1-5. *See also* Id. § 1-2-1.

We conclude, therefore, that as PFS is (a) located far from a municipality with an organized fire department; (b) may be required to fight interior structural fires; and (c) may be required to perform rescue operations, it must be organized as an industrial fire department under NFPA 1500. *See* State's Exhibit 8, NFPA 1500; §§ 1-1, 1-2.1; 1-5 (Industrial Fire Department) and § A-1-5. Furthermore, as Mr. Wise testified, fire fighter safety could be jeopardized if PFS does not adhere to NFPA 1500 standards. In order to meet 10 CFR § 72.32(a)(5), (7), (10) and (11), PFS is required to comply with NFPA 1500. Accordingly, the Licensing Board rejects the Applicant's Emergency Plan as not in compliance with NFPA standards, Reg. Guide 3.6 and 10 CFR § 72.32(a).

2. PFS Does Not Comply with NFPA 600 Standards

27. PFS does not even comply with NFPA 600 standards. PFS has stated that it needs only one back-up fire fighter for rescue operations. Duncan & Lewis, Tr. at 1506-07. The new 2000 edition NFPA 600 standards now requires a two person back-up. Staff Exhibit B, § 5-3.5. As described in greater detail in subsection B *supra*, PFS does not have adequate staffing to perform this function.

28. PFS does not comply with NFPA 600 § 5-3, Protective Clothing and Protective Equipment. Self-contained breathing apparatus and other personal protective equipment will be stored in the Health Physics Building. Liam, Tr. 1564. Such a storage location could pose a danger to fire fighters responding to a fire in the Canister Transfer Building ("CTB"). First, by having to retrieve gear from the Health Physics building, there would be a delay in responding to a fire in the CTB. Second, fire fighters could start an

initial attack without personal protective gear even though the fire was beyond the incipient stage, and they would be at great risk. Wise, Tr. at 1648.

29. PFS does not comply with NFPA 600 § 1-4.1 and 2-1.2.1, with respect to an organizational statement or training because PFS still has provided only sketchy details about the type, amount and frequency of training, the limits of the fire brigade's actions and responsibility, the workplace duties the fire brigade is expected to perform in the workplace. Wise Testimony at 5.

30. We conclude that because PFS's does not comply with NFPA 600, its Emergency Plan is deficient to meet the requirements of 10 CFR § 72.32.

D. PFS Staffing

31. PFS's witness testified that a minimum of five PFS staff personnel will be trained and equipped as a "structural fire brigade" in accordance with NFPA 600. Dungan & Lewis Testimony at 26. PFS states that a senior fire brigade member will supervise the four remaining members, with two persons assigned to each hose. State's Exhibit 2 at 1.

32. PFS states that it will train eleven persons in order to take into account vacations, absences, etc. so as to have five trained fire brigade members on site during normal hours. *See e.g.*, Dungan & Lewis, Tr. at 1499. The entire staff trained as fire fighters, however, could be involved in cask transfer operations when needed to fight a fire during normal operational hours. Id. at 1511.

33. The Board finds PFS is short-staffed to have an effective fire fighting unit. There are a total of twenty-four non-security PFS personnel. The eleven persons trained to NFPA 600 standards as fire fighters consist of the entire staff for Instrument/Electrical

Maintenance,[5] Mechanical Maintenance/Operations,[6] and Radiation Protection.[7] PFS Exhibit G at EP, Rev. 9 at 4-3. The remaining PFS staff not trained to NFPA 600 standards as fire fighters include all security personnel, three persons in the Quality Assurance, five persons in the Nuclear Engineering and five persons in Administration. Id.

34. PFS's short-staffing results in PFS trying to do too many things with too few trained fire fighters. PFS will need one fire fighter to drive the PFS facility fire truck to the site of the fire; if needed, a second fire fighter would need to retrieve and drive the fire truck located at the Goshute village back to the facility. Once a fire truck is at the site of the fire, one fire fighter is needed to hook up and operate the pump on the fire truck. Tr. at 1505. *See also* Wise Testimony, Tr. at 1501. In addition to two fire fighters being on each hose line, there would need to be an incident commander and back-up rescue fire fighters. Wise Testimony at 7-8.

35. PFS has testified that two persons will be on a hose and one person will act as back-up outside the hot zone. Duncan & Lewis, Tr. at 1506-07.

36. There has been a change in the 2000 edition of NFPA 600 (approved February 11, 2000) which now requires two industrial fire brigade members for structural interior fire fighting to be available for rescue whereas the previous edition required only one

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[5] This four person section consists of a lead and two other I & E technicians and a general plant worker. State's Exhibit 1, EP, Fig. 4-1.

[6] This four person section consists of a lead mechanical/operator, two mechanical technicians and a general plant worker. Id.

[7] This three person section consists of a radiation protection manager and two radiation protection technicians. Id.

person available for rescue. Staff Exhibit B, Forward and § 5-3.5.

37. PFS's witness admitted that PFS fire brigade must be capable of responding to a fire inside structures albeit only during working hours. Dungan & Lewis Testimony at 26.

38. Even though PFS has stated that it will comply with NFPA 600, to do so it must increase the minimum number of trained fire fighters because as presently constituted, PFS trained fire fighters would barely be capable of operating one hose line, having two fire fighters as back-up, and having an incident commander who would also need to operate the fire truck. We conclude that because of PFS's inadequate fire fighting staffing, PFS will not meet the minimum standards set forth in NFPA 600. Thus, the Applicant has failed to meet its burden of proof that it has the capability to fight fires because the Applicant has inadequate staffing to meet NFPA 600 standards. We, therefore, reject PFS's Emergency Plan.

E. Final Conclusions

39. NRC regulations applicable to off-site ISFSIs require, *inter alia*, mitigation of the consequences of each type of accident, including protection of workers onsite (10 CFR § 72.32(a)(5)); the responsibilities of licensee personnel should an accident occur (id. at (7)); the training the licensee will provide workers on how to respond to an emergency (id at (10)); and the means of restoring the facility to a safe condition after an accident (id. at (11)). In order to meet the foregoing requirements, PFS must have an adequately organized, staffed, trained and equipped fire fighting unit. NFPA standards, in particular NFPA 1500, are the appropriate mechanism to meet those requirements. PFS showed only a rudimentary

understanding of what is required to comply with NFPA standards, and moreover, does not have the trained staff to do the job.

In order to protect public health, safety, on-site workers, and mitigate the consequences of accidents, PFS should not be considered in compliance with Part 72 unless license conditions are imposed on it such that (a) PFS will have available for fire fighting an adequate number of staff (more than eleven) trained to NFPA standards; (b) PFS will comply with NFPA 1500; (c) even if PFS must comply with NFPA 600 instead of NFPA 1500, PFS will fully comply with all provisions of NFPA 600, including having an adequate number of trained staff to provide two-in two-out back-up rescue, storing personal protective clothing and equipment in or near the CTB, and providing specificity in its organizational statement and training program; and, finally, (d) PFS will station trained fire fighters on site during off-normal hours or at the very least PFS will be able to call back at least five off-duty fire fighters during off-normal hours within a reasonable time (e.g., within thirty minutes).

DATED this 7th day of August, 2000.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW REGARDING CONTENTION UTAH R, PRIVATE FUEL STORAGE, LLC'S CAPABILITY TO FIGHT FIRES ON SITE was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 7th day of August, 2000:

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