UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

DECLARATION OF MICHAEL LADD

Michael J. Ladd states as follows under penalties of perjury:

1. I am the Training Process Manager at the Prairie Island Nuclear Generating Station for the Northern States Power Company. In that position I am responsible for reviewing, evaluating, and implementing the training program at the Prairie Island plant. I am providing this declaration in support of a motion for summary disposition of Contentions Utah F and Utah P in the above captioned proceeding to show that Private Fuel Storage's (PFS) training and certification program for the Private Fuel Storage Facility (PFSF) satisfies the requirements of Subpart I of 10 C.F.R. Part 72.

2. My professional and educational experience is summarized in the curriculum vitae attached as Exhibit 1 to this declaration. I have extensive experience designing and evaluating NRC training programs. I have been and am currently responsible for ensuring that all training programs for the Prairie Island Nuclear Site meet and or exceed NRC and Institute of Nuclear Power Operations ("INPO") guidelines for training and qualification. This involves review and use of all NRC Regulations, NRC and INPO Guidelines, NRC Regulatory Guides, American National Standards Institute (ANSI) standards associated with nuclear power plant training and simulator training, as well as

all rules of usage, when implementing the NRC's "Systematic Approach to Training" to develop, implement and evaluate training programs.

3. In addition, throughout my career, I have had a wide range of other responsibilities related to the training of personnel for nuclear facilities. I have been an Instructor for General Employee Training, operations, engineering, maintenance, radiation protection and chemistry and emergency planning. I have also served as an Operations instructor in which capacity I designed the initial, continuing training, and simulator training for the Monticello Nuclear Plant. I have also performed audit exams for various utilities across the United States on operator license candidates for both pressurized water reactors and boiling water reactors. I have also served as a Technical Training Superintendent in which capacity I supervised a staff of 11 instructors and engineers that analyzed, designed, developed, implemented and evaluated training programs for Radiation Protection and Chemistry, Electrical and Mechanical Maintenance, Engineering, Instrumentation and Control, and Construction and Craft personnel at Prairie Island. I have also developed and reviewed task lists and associated training program descriptions and course outlines as well as on-the-job training (OJT) and oral and written exams for all disciplines at a nuclear facility. In February of 1998, I assisted in an evaluation of the Fitzpatrick Nuclear Power Plant in New York to evaluate their Operations training. In March of this year, I was team member of the World Association of Nuclear Operators that evaluated the Three Mile Island Nuclear Generating plant. My area of concentration was training qualification and management of all site training programs.

4. I am knowledgeable of the PFS training program. Before providing this declaration, I have thoroughly reviewed the training program as described in the PFSF License Application (LA) and Safety Analysis Report (SAR) and evaluated it against the requirements set forth in 10 C.F.R. §§ 72.190, 192 and 194 and related NRC and industry guidelines, standards and practices.

5. The State of Utah alleges in Utah F that the training and certification of PFS personnel as described in the LA and the SAR fail to satisfy Subpart I of 10 C.F.R.

Part 72 and will not assure that the PFSF is operated in a safe manner. I have reviewed the State's allegations and the PFSF training program and have determined that, contrary to the State's allegation, the PFS program provides for the proper training, testing, and certification of PFSF personnel in accordance with NRC regulations and well established principles for the training of nuclear personnel. In addition, PFS has set forth in appropriate detail personnel qualifications and testing and training requirements for PFSF personnel.

6. NRC regulations provide that a program for the training of Independent Spent Fuel Installation (ISFSI) personnel is to consist of "training, proficiency testing, and certification of ISFSI . . . personnel." 10 C.F.R. § 72.192. The PFSF LA and SAR provide for such a training program. The PFSF training program as described in the LA and the SAR identifies those PFSF personnel that are to be trained and the specific areas in which training is to occur. It provides for systematic approach to their training by adopting the "Systematic Approach to Training" (SAT), which is a well defined training process mandated by the NRC for the training of nuclear plant operators under 10 C.F.R. § 55.4 for developing the detailed curriculum for training PFSF personnel in the areas identified in the LA and the SAR. As it does for operator training, the PFS program similarly provides for a systematic approach for testing operator proficiency and it provides the standards which are to be used in operator certification for the PFSF. This is a comprehensive program that more than adequately covers each of the points that 10 C.F.R. § 72.192 mandates for the training of ISFSI personnel.

7. In terms of those persons who are to be trained, the SAR provides that "[i]ndividuals who operate equipment and controls that have been identified as 'important to safety' in the Safety Analysis Report and in the NRC license must be trained and certified. Supervisory personnel who direct the operation of equipment and controls that are 'important to safety' must also be certified." SAR at 9.3-3. Thus, the scope of the PFS training program is in accordance with NRC requirements set forth in 10 C.F.R. §

72.190, which mandates the training of personnel operating equipment important to safety and their supervisors.

8. The SAR goes on to identify the specific areas in which these persons are to be trained. It provides that "the "PFS Operator Training Program" will address the following subject areas: 1) canister transfer system design and operations, 2) canister transfer system normal and off-normal procedures, 3) storage facility normal and off-normal procedures, 4) normal and off-normal transportation procedures for on-site transportation 5) maintenance, 6) storage cask temperature monitoring system, 7) radiation detection, monitoring, sampling, and survey instruments, 8) facility layout and functions, 9) operator responsibility and authority, 10) Technical Specifications, 11) normal and emergency communications, 12) transportation, and 13) topics covered in General Employee Training (GET) with specific emphasis on operations. SAR at 9.3-3 to –4. (The SAR also specifies the topics in which GET will be provided, which includes facility operation and design. SAR at 9.3-2 to –3.)

9. In addition to substantive topics, the SAR provides that "[a]ll [PFS] personnel involved in activities important to safety will be trained on the associated procedures prior to conducting the activity. Formal training of personnel on facility procedures will be substantially complete prior to the receipt of radioactive materials at the PFSF." SAR at 9.4-5. Further, PFS has specified the "format and depth of coverage" of the formal procedures that PFS will generate for the activities important to safety at the PFSF and on which all PFSF personnel involved in such activities will be trained. SAR at 9.4-4.

10. As part of their certification training, appropriate personnel will also conduct preoperational testing of the actual storage system components at the PFSF. The testing will be conducted without fuel but will include full-load testing of all rigging and attachments, and limits of travel on lifting and transfer equipment. SAR at 9.2-4. "The purpose for operational testing is to ensure that . . . personnel involved in spent fuel shipping, receipt, and canister transfer, onsite transport, and storage operations perform their intended tasks in accordance with approved procedures, with ALARA awareness, with

efficiency, and without compromising personnel or public safety." SAR at 9.2-5. The specific pieces of equipment on which PFS personnel will conduct preoperational testing as part of their certification are specified in the PFS SAR. SAR at 9.2-4. The specific operational tests that PFS personnel will perform as part of their certification are also specified in the SAR. SAR at 9.2-5 to –6.

11. Finally, the SAR provides that where training in addition to that specified in the SAR is required, training materials will be developed using the Systematic Approach to Training (described in Paragraphs 12-14). SAR at 9.3-4. Exceptions to the use of the SAT method in the development of the curriculum for the training program will be approved on a case-by-case basis by the emergency preparedness coordinator. SAR at 9.3-4.

12. Thus, the SAR identifies the areas on which PFSF personnel who operate equipment and controls that have been identified as "important to safety" and their supervisors are to be trained. Further, the SAR provides that training in these areas will be implemented "using a Systematic Approach to Training," SAR at 9.3-1, which as previously noted is a well defined process mandated by the NRC for the training of nuclear plant operators under 10 C.F.R. § 55.4. The SAT as defined in 10 C.F.R. § 55.4 includes five basic elements. These are:

1) Systematic analysis of the jobs to be performed.

2) Learning objectives derived from the analysis which describe desired performance after training.

3) Training design and implementation based on the learning objectives.

4) Evaluation of trainee mastery of the objectives during training.

5) Evaluation and revision of the training based on the performance of trained personnel in the job setting.

13. The PFSF SAR elaborates on how PFS will use the SAT to implement its training program. The SAR provides that following the SAT method, the training pro-

gram will be "based upon analysis of the job performance requirements to establish the knowledge level and skills that are required for each position" at the PFSF. SAR at 9.3-1. The SAR goes on to state that:

> Explicit learning objectives and performance measures are generated from this analysis. Training plans are then developed which identify training settings, sequences, and materials required. The training program is implemented by conducting the training activities, documenting the training and evaluating the program's effectiveness.
>
> Job descriptions will detail the training, education, and experience requirements for each position. An individual assessment of the employee's needs will be conducted relative to the identified training requirements of each of the respective positions. Training will consist of classroom and on-the-job training (OJT), as appropriate, for all individuals, commensurate with their job duties an responsibilities.

SAR at 9.3-1. "Training materials will be developed by the site personnel qualified on [the relevant] tasks. Training will also be delivered by individuals qualified on the particular tasks, or by appropriate contractors." Id. at 9.3-4. In conducting their training, trainers will follow a curriculum that outlines the steps necessary to perform each task on which they are instructing. PFS Response to RAI 9-10 (May 19, 1998), attached as Exhibit 2 to this declaration.

14. Thus, the PFS training program provides for the comprehensive training of PFSF personnel in the various areas that they will be required to function in accordance with the well-established principles of the SAT. The SAT is a well-defined process – implemented at nuclear power plants throughout industry – by which PFS will identify the functions to be performed at the PFSF, develop individual job tasks for each of the functions, and link those individual job tasks to individual training curriculum and objectives, testing requirements and ultimately certification. The implementation of the PFS training program through the well defined industry-wide approach defined by the SAT is analogous to a quality assurance program that is implemented through its quality assurance procedures.

15. The PFS training program also provides personnel qualification and testing and certification requirements for PFSF personnel. PFS has specified, pursuant to 10 C.F.R. § 72.28(a), the minimum personnel qualification requirements for holders of key positions at the PFSF, including: General Manager/Chief Operating Officer, Radiation Protection Manager, Radiation Protection Technicians, Lead Mechanic/Operator, Mechanics. Lead Instrument and Electrical Technician, Instrument and Electrical Technicians, Lead Quality Assurance Technician. Quality Assurance Technician and Quality Assurance Auditor, Lead Nuclear Engineer, Nuclear Engineers, Security Captain. and the Emergency Preparedness Coordinator. SAR at 9.1-23 to –27.

16. The PFS training program also sets forth both formal testing requirements, tied to specific passing examination grades as well as on-the job training (OJT) requirements that "will be documented in a set of Qualification Cards containing the Job Performance Measures of practical factors that are required to be performed by the Operator." LA at 7-1. The LA sets forth the related proficiency testing and certification standards as follows:

> [As described above,] [t]he OJT requirements will be documented in a set of Qualification Cards containing the Job Performance Measures of practical factors that are required to be performed by the Operator. Each person to become Certified must have these Qualification Cards completed prior to being allowed to independently perform the applicable tasks . . . . The operators will have to pass comprehensive written and practical examinations in order to become Certified. The trainee must score 80% or higher on the written exam to pass. The practical exam shall be on a pass/fail basis, as evaluated by previously Certified personnel . . . .

LA at 7-1. Thus, the PFS training program provides that proficiency is to be tested by completion of OJT qualification cards, a practical exam based on the OJT, and a formal written exam. PFS elaborated on the formal testing process in response to a Request for Additional Information from the NRC Staff. PFS reiterated that, "[a]t the conclusion of task training, proficiency testing will be administered to ensure that proper understanding has been achieved by the person being trained. A test will be prepared and graded by the instructor and will be retained in the facility records for a two year period." Response to

RAI 9-10 (May 19, 1998). Such testing will flow directly from PFS's use of the SAT to implement its training program, for under 10 C.F.R. § 55.4 the SAT calls for "training design and implementation based on the learning objectives" and "evaluation of trainee mastery of the objectives during training."

17. Finally, the PFS training program provides the standards under which operators are to become certified before independently operating equipment important to safety. Specifically, they follow the areas of proficiency testing. An operator must have completed the OJT qualification cards, pass the practical exam, and achieve an 80% or higher on the formal written exam. LA at 7-1. PFS will certify that all personnel are trained as required as part of the PFSF Operational Readiness Review, before receiving spent fuel at the PFSF. SAR at 9.2-7.

18. Further, in accordance with the SAT methodology, the SAR provides for the evaluation of the PFS training program: "the effectiveness of the training, and the training program will be evaluated by reviewing written test performances, performance on walk through evaluations, on-the-job training, and feedback from trainees, supervisors, and instructors." Id. at 9.3-2

19. After initial training, testing, and certification, all PFS employees will receive periodic retraining. All PFS personnel will receive GET retraining – on all GET topics – at least once every two years. SAR at 9.3-5. PFS employees will also receive job-specific and certification retraining at least once every two years. Topics for retraining will be selected from initial training, NRC bulletins and information notices, major equipment and procedure changes, relevant industry events, and topics designated by the PFSF General Manager or requested by other site personnel. SAR at 9.3-5. PFS elaborated on the retraining that it would undertake in response to RAI 9-10 as follows:

> Retraining and refresher training will be provided at intervals that are appropriate to the specific task. Retraining will involve a review of the basic tasks plus special attention to those items within the task which have undergone change. When new equipment is added or modifications in ex-

> isting equipment of a significant nature are made, procedures will be modified and retraining on the revised procedure and equipment by a qualified instructor will be provided to those persons already certified prior to operation of that equipment.

Exhibit 2, Response to RAI 9-10 (May 19. 1998).

20. In summary, PFS has described in detail the specific subject areas and PFSF systems and components on which PFS employees will receive training, defined the process (i.e., the SAT) by which this training is to be implemented, and set forth the requirements and standards for the testing of proficiency and certification of PFSF personnel. The PFS training program more than adequately addresses each of the three NRC requirements specified in 10 C.F.R. § 72.192 and there is no basis for the State's claim in Utah F that PFS has not submitted or adequately "defined a training and certification program" for the PFSF.

21. Indeed, the level of detail in the PFSF training program as described in the LA and the SAR is equivalent to, or exceeds, that found in the license applications and safety analysis reports for other ISFSIs. Attached as Exhibit 3 to this declaration is the training program included in the Part 72 license application for the ISFSI located at the Calvert Cliffs Nuclear Power Plant; attached as Exhibit 4 is the training program included in the Part 72 license application for the ISFSI located at the Prairie Island Nuclear Generating Plant. As can be seen from reviewing these programs, the level of detail in the PFSF license application on the whole exceeds that found in these two ISFSI applications. Although both generally referred to using their existing nuclear plant training programs, the development of the training program for ISFSI specific activities in these applications was generally less than that set forth in the PFSF application. Thus, based on accepted NRC practice, and the SAT principles on which the PFSF training program is based, the training program set forth in the PFSF LA and SAR provides sufficient information regarding the "training, proficiency testing, and certification of ISFSI . . . personnel" to satisfy NRC requirements set forth in 10 C.F.R. § 72.192.

22. In Utah F, the State raises a number of specific alleged deficiencies in the PFS Training Program. I have reviewed each of these assertions and have found none to be meritorious. First, the State asserts in basis 1 for Utah F that PFS has failed to submit a "listing of physical conditions that would bar a person from employment in specific positions." However 10 C.F.R. § 72.194 (Physical requirements) requires no such listing of physical or mental conditions that would bar a person from employment at an ISFSI. It simply requires that "[a]ny condition that might cause impaired judgement or motor coordination must be considered in the selection of personnel for activities that are important to safety." It explicitly goes on to state that "[t]hese conditions need not categorically disqualify a person, if appropriate provisions are made to accommodate such defect." 10 C.F.R. § 72.192.

23. In basis 3 to Utah F, the State asserts that PFS has not shown that the qualifications that will be required of PFSF personnel are sufficient to guarantee that the facility will be operated safely in a number of respects, the first being that neither the General Manager nor the Operators are required to have any experience in dry storage operations. The State's assertion is unfounded, in that the General Manager and the Operators will be trained to operate the PFSF safely as described above and moreover. their qualifications will be consistent with the qualifications of similarly situated personnel at nuclear power plants licensed by the NRC as well as those personnel that operate ISFSIs licensed under Part 72 located at nuclear power plants.

24. In addition to being trained and certified, the PFS General Manger and operators will have sufficient education and experience to operate the PFSF safely. The PFS SAR states that the PFS General Manager will have ten years of "responsible experience within the nuclear industry" and a bachelor's degree "in an engineering or scientific field generally associated with nuclear power production, fuel storage, or radiation protection." SAR at 9.1-23 to –24. Furthermore. the General Manager shall be familiar with all applicable rules, regulations, codes and procedures. SAR at 9.1-15. Thus the PFS

General Manager's qualifications will be more than sufficient to ensure that the PFSF is operated safely.

25. Further, prior experience in dry-storage operations per se is not required. NRC regulations require that the license application include "the technical qualifications, including training and experience, of the applicant to engage in the proposed activities." 10 C.F.R. § 72.28(a). American National Standard N18.1-1971, Selection and Training of Nuclear Power Plant Personnel, § 4.1 (March 1971), states that

> Nuclear power plant personnel shall have that combination of education, experience, health, and skills commensurate with their level of responsibility, which provides reasonable assurance that decisions and actions during all normal and abnormal conditions will be such that the plant is operated in a safe and efficient manner

Thus the standard does not call for prior experience in the specific jobs that personnel will perform at a plant. The NRC Staff has stated that it accepts the ANSI standard "as [a] source[] for criteria and guidance, as applicable, for ISFSI . . . training." Standard Review Plan for Spent Fuel Dry Storage Facilities, NUREG-1567 (Draft, Oct. 1996), at 13-7. Indeed, given the greater complexity of operating and maintaining a nuclear power plant compared to that of an ISFSI, application of the ANSI standard for nuclear power plants to ISFSIs is conservative.

26. The ANSI standard continues, regarding plant managers: "At the time of initial core loading or appointment to the active position, the plant manager shall have ten years of responsible power plant experience, of which a minimum of three years shall be nuclear power plant experience." Id. § 4.2.1. "Nuclear power plant experience" is defined as "that nuclear experience acquired in the design, construction, startup, or operation of nuclear power plants." Id. § 4.1. Thus the standard does not call for plant managers to have specific experience in any single facet of plant operation, but rather that they have sufficient nuclear experience generally to understand plant operations and to make decisions such that the plant is operated in a safe and efficient manner. Moreover, the 10

years of nuclear experience to be required of the PFSF General Manager substantially exceeds the 3-year minimum required by the ANSI standard.

27. Regarding the education of plant operators, the ANSI standard indicates that those plant operators who will not be licensed reactor operators should have a high school diploma or equivalent. ANSI N18.1-1971 § 4.5.1. Under this standard, non-licensed operators need not have prior nuclear plant experience or prior experience at the specific jobs they will perform at the plant. PFS operators – who will not be licensed reactor operators – will have high school diplomas plus four to six years of prior experience in mechanical maintenance. SAR at 9.1-24 to –25. Thus, they will have more experience than called for by the ANSI standard and therefore will be more than sufficiently qualified to operate the PFSF safely.

28. Finally, as indicated in paragraph 7, all operators and all personnel who supervise them must be trained and certified. The PFS SAR, as shown above, describes the initial and continuing training programs and how each job and task at the PFSF will be constantly evaluated to ensure the training program is effective. Potential PFSF operators and the General Manager will have to complete a combination of classroom, OJT, and practical factors to demonstrate their mastery of the tasks they will be required to perform as PFSF operators.

29. In basis 3 to Utah F, the State asserts further that PFS has not shown that the qualifications that will be required of PFSF personnel are sufficient to guarantee that the facility will be operated safely, in that the detail of instruction courses, training programs, or work on simulation facilities is not laid out.

30. The State's assertion is unfounded, in that, as shown above, the PFS SAR does provide sufficient detail regarding the PFS training program. PFS has also set forth the instruction courses that will be used to train PFS employees. As described in paragraph 8, PFS has specified the subject areas in which trainees will be instructed. As described in paragraphs 9-10, PFS has specified that trainees will be instructed on PFSF

procedures and will be trained on actual PFSF equipment. As described in paragraph 9, PFS has specified the format and depth of coverage of the procedures on which trainees will be instructed. Further details are generated through the implementation procedures and are not required to be submitted with the application. Finally, the State's contention regarding simulator training is simply irrelevant, in that (as described in paragraph 10 above) PFS personnel will not be trained on simulators but rather, at least the initial PFSF personnel, will be trained on actual PFSF equipment prior to the receipt of fuel at the facility. PFS SAR at 9.2-4 to –5. Therefore, contrary to the State's claim, trainees will have successfully manipulated real equipment prior to the receipt of spent nuclear fuel at the PFSF.

31. In basis 3 to Utah F. the State asserts further that PFS has not shown that the qualifications that will be required of PFSF personnel are sufficient to guarantee that the facility will be operated safely, in that PFS has not specified any written examinations and operating tests, including the items that would be on such a test. The State's assertion is wrong. PFS has specified the examinations and test that will be given to operators before they are certified. As described in paragraphs 16 and 17 above, PFS has described its testing and certification programs. Furthermore, as also described above, PFS has specified the subjects and equipment on which operators are to be trained. Thus, PFS has specified the examinations and operating tests that PFSF trainees will take; hence, PFS's submission is sufficient to meet NRC requirements.

32. In basis 3 to Utah F, the State asserts further that PFS has not shown that the qualifications that will be required of PFSF personnel are sufficient to guarantee that the facility will be operated safely, in that PFS has not specified the terms of qualification and revocation of operator license, provisions for requalification, and enforcement.

33. This claim is wrong as well. As described in paragraphs 16 and 17 above, PFS has specified the terms for qualification of PFSF operators. Furthermore, as described in paragraph 19 above, at least once every two years all PFS employees will be retrained generally and operators will receive certification retraining. The SAR also

states specifically that personnel failures during operational testing, which is part of the operator certification program, will result in "additional training, retraining, or dismissal of personnel." SAR at 9.2-5. Thus, PFS has in fact specified the terms of qualification and requalification of PFSF operators and the means of enforcement of PFS training requirements.

34. Furthermore, PFS will constantly evaluate its training program and the performance of its employees in order to correct any deficiencies that might develop. Page 9.3-2 of the SAR states, "[t]he training program depends on a constant evaluation of the job or task to be performed, the work environment, and the training provided, to determine whether the program is effective in producing and maintaining competent employees. Data from these evaluations are used to identify and correct deficiencies and to accommodate changing needs." The SAR commits PFS to the ongoing evaluation of its training program; this is the final step in the SAT. The Evaluation phase of the SAT ensures that the PFS training program is dynamic and maintains its effectiveness by evaluating the operator's performance with written and practical evaluations at a minimum of every two years. This methodology ensures that any change in operator proficiency or knowledge that is training-related will require a change in the training program. Also, ongoing evaluation will require reviewing the training process to ensure that it is effective in maintaining qualification and certification of PFS personnel.

35. In basis 3 to Utah F, the State asserts further that PFS has not shown that the qualifications that will be required of PFSF personnel are sufficient to guarantee that the facility will be operated safely. in that PFS merely states that "each member of the site staff involved with important to safety activities will be required to meet the minimum qualifications of the License," without stating those qualifications and how they will assure the public health and safety.

36. The State overlooks important material in the PFS SAR. SAR section 9.4 states that "all personnel involved in activities important to safety will be trained on the associated procedures prior to conducting the activity . . . . Personnel performing activi-

ties important to safety will be certified to perform such functions and will undergo refresher training and testing a minimum of every two years." SAR at 9.4-5. Those personnel will go through the PFS training program described above, including its testing and certification programs. Furthermore, in the implementation of the PFS training program, the SAT will identify those critical tasks important to operator, site, and public health and safety. Personnel involved in activities important to safety will be trained on those tasks and will be certified and reevaluated at least once every two years to ensure proficiency. Nuclear industry accredited training facilities follow this same methodology to ensure that site personnel are qualified and the health and safety of the public is maintained at and around nuclear facilities.

37. In basis 3 to Utah F, the State asserts further that PFS has not shown that the qualifications that will be required of PFSF personnel are adequate, in that PFS promises "Programs for additional site familiarization training and ongoing training and retraining" without stating the specific details of the training program and the minimum passing grade for certification.

38. Contrary to the State's claim, PFS has indeed described the process by which PFSF employees, including operators, will receive training and be certified subsequent to receiving their initial training (see paragraph 19). Retraining will be conducted by means similar to those used to conduct initial training and on subjects similar to those on which initial training was conducted, but, consistent with the SAT process. PFS will continuously reevaluate its training program to ensure that it is flexible and best imparts to PFSF operators the knowledge and skills necessary to operate the PFSF safely. Regarding certification grades, the PFS training program includes (as indicated in paragraphs 16-17) details such as the minimum passing grade for written exams (80%) and the standards for evaluating trainee performance on the OJT and practical factors (pass/fail). Furthermore, during the implementation of the PFS training program, course descriptions and outlines will be written and derived, by following the Systematic Approach to Training, that will provide greater detail related to initial, familiarization, certi-

fication and qualification, and continuing training for all PFSF technical disciplines. As reflected by the Calvert Cliffs and Prairie Island ISFSI applications, Exhibits 3 and 4, those course descriptions and outlines, as products of the implementation of the training program, do not need to be submitted with the license application. The State is simply calling for a level of detail that is not required at the license application stage.

39. In basis 3 to Utah F, the State asserts further that PFS has not shown that the qualifications that will be required of PFSF personnel are sufficient to guarantee that the facility will be operated safely, in that specific operational tests are stated on SAR 9.2-5 without indicating the minimum terms for passing the course. The State's claim is baseless and simply ignores what the PFS LA and SAR says about the examination and certification of PFS employees on OJT and practical factors. As described in paragraphs 16-17, the PFS training program sets forth both formal testing requirements, tied to specific passing examination grades as well as OJT requirements. The SAT to be followed by PFS requires that training objectives are written at the right cognitive and psychomotor level to ensure that the trainee has mastered the necessary knowledge or ability upon completion of the evaluation phase of training. Each training objective will include a condition, a behavior to be demonstrated, and a standard for mastery. OJTs, JPMs, practical factors, written exams, oral exams are written from the training objectives. Again, as stated above, the PFS License Application states that "OJT requirements will be documented in a set of Qualification Cards containing the Job Performance Measures of practical factors that are required to be performed by the Operator. Each person to become certified must have these Qualification Cards completed prior to being allowed to independently perform the applicable tasks." LA at 7-1. Therefore, PFS has specified how it will derive performance measures for operational tests and how it will evaluate trainees against those performance measures.

40. In short, the various claims raised by the State in its basis 3 to Utah F are without merit. Throughout this basis, the State is seeking more detail than that required by the NRC regulations at the license application stage, as is reflected by the Calvert

Cliffs and Prairie Island ISFSI training programs attached as Exhibits 3 and 4 to this declaration. There are sound reasons why such detail is not required at the license application stage. Among other reasons, the equipment on which training would be required has not yet been acquired. Nor are the procedures on which training would be required developed, or required to be developed, at the license application stage; such procedures are not written until plant staff are on board. Moreover, as a practical matter, it is desirable to have the plant manager and other senior staff involved in preparing the curriculum and other detailed aspects for the implementation of the training program.

41. In Utah P, the State contends that the Applicant has failed to describe a fully developed radiation protection program that ensures ALARA occupational exposures to radiation by not "adequately describing a training program that insures all personnel" who direct activities or work directly with radioactive materials or areas are capable of evaluating "the significance of radiation doses in terms of potential risk, including outlines of the training classes." I have reviewed the PFS application with respect to training for radiation protection and have determined that the information in the application is more than adequate at this, the license application stage. A fully developed Radiation Protection Training program, as alleged by the State, need not be described in the SAR. In particular, an outline of courses is a level of detail that far exceeds that required at the license application stage. The training information provided in the PFS SAR is sufficient for purposes of the application.

42. In the SAR, PFS has committed to implementing a Radiation Protection Program in accordance with 10 C.F.R. §§ 72.126, 20.1011, and 19.12, and an ALARA program following the requirements of 10 C.F.R. Part 20 and the guidelines of NRC Regulatory Guides 8.8 and 8.10. SAR at 7.1-1 to –3. These provisions to which PFS has committed require instruction in the significance of radiation dose. For example, 10 C.F.R. § 19.12(a) calls for instruction in "the health protection problems associated with exposure to radiation." Further, the SAR expressly provides that "PFSF personnel will be trained and updated on ALARA practices and dose reduction techniques to assure that

each individual understands and follows procedures to maintain his/her dose ALARA." Id. at 7.1-3. Further, during General Employee Training, all PFSF personnel will be trained in "[t]he nature and sources of radiation and contamination, interactions of radiation with matter, biological effects of radiation, methods of detecting and controlling radiation and contamination, ALARA concepts, facility access and visitor controls, decontamination procedures, use of monitoring and personal protective equipment, regulatory and administrative exposure and contamination limits, and site specific hazards." SAR at 9.3-3. Thus, PFS has committed to, and has made provision for, educating PFSF personnel in radiation safety, including the significance of radiation dose. The SAT will provide further detail in the implementation of this training.

43. In conclusion, the PFS training program meets the requirements of the law as stated in 10 C.F.R. § 72. 192. The specific details of course outlines, program descriptions, exams, objectives, OJTs and practical factors will be written and rewritten as PFS uses the SAT to implement its training program. The details submitted in the Private Fuel Storage Safety Analysis Report exceed what 10 C.F.R. § 72.192 requires.

I declare under penalty and perjury that the foregoing is true and correct.

Executed on June11, 1999.

Michael J. Ladd