

Wesley C. Patrick, President
Center for Nuclear Waste
Regulatory Analyses
Post Office Drawer 28510
6220 Culebra Road
San Antonio, Texas 78228-0510

UC: 2 6 1997

Dear Dr. Patrick:

Subject: Program Element Plan for Safety Review of a Topical Safety
Analysis Report Submitted by Private Fuel Storage (PFS) Limited
Liability Company for the Private Fuel Storage Facility for the
FY98 Operations Plan Under Contract No. NRC-02-97-009

Enclosed is the Program Element Plan (PEP) for the subject work. This PEP
shall be used as the basis for development of an Operations Plan for fiscal
year (FY) 1998.

Milestones and deliverables for the FY 1998 Operations Plan should be
developed using this information, indicating whether the deliverable is an
intermediate or major milestone. The NRC staff will provide the CNWRA with
comments on the interim reports as outlined in Section 9.0. All PFS
deliverables are predecisional, and should be marked accordingly. The CNWRA
is encouraged to work with NRC counterparts to ensure a thorough understanding
of this requirement.

The CNWRA is directed to submit the Operations Plan no later than three weeks
after receipt of this letter. A separate task under the Spent Fuel Office
Operations Plan should be established for this work. Mark S. Delligatti will
be the PEM for this task.

Should you have any questions regarding this letter, please contact me at
301/415-6730.

Sincerely, *S/*
Barbara D. Meehan, Contracting Officer
Contract Management Branch No. 3
Division of Contracts and
Property Management
Office of Administration

Enclosure: As stated
cc: JLinehan NMSS

RNL Issued pursuant to memo dated 10/24/97 from SFortuna.

Distribution:
CMB3, BMeehan, MMace, SFortuna NMSS, BStiltenpole NMSS, MDelligatti NMSS

ADM:DCPM:CMB1
BMeehan
10/28/97

**Program Element Plan for Assistance in the Review of
a Topical Safety Analysis Report
Submitted by Private Fuel Storage, Limited Liability Company for
the Private Fuel Storage Facility.**

1.0 Introduction

This Program Element Plan delineates technical assistance activities to be performed by the Center for Nuclear Waste Regulatory Analyses in support of the Spent Fuel Project Office (SFPO) review of the Topical Safety Analysis Report submitted by Private Fuel Storage, Limited Liability Company (PFS), as part of its application for license to construct and operate the Private Fuel Storage Facility, a proposed away-from-reactor independent spent fuel storage installation. These activities include the preparation of an Safety Evaluation Report (SER) with respect to 10 CFR Part 72.

2.0 Background

PFS has submitted an application to construct and operate an ISFSI on the Reservation of the Skull Valley Band of Goshute Indians. The Reservation is surrounded by Toole County, Utah. A consortium of utilities has joined together to create PFS. It is the intention of these utilities to ship spent fuel from their nuclear utilities to the Private Fuel Storage Facility (as the ISFSI is to be known). The application references the applications for certification of two dual-purpose spent fuel cask systems, currently under staff review, which PFS intends to use. Since the casks are thus, not part of this review, it focuses mainly on reviewing compliance with the regulatory requirements associated with siting and facilities.

3.0 Objective

The objective of this activity is to assist the staff in the review the TSAR and development of an SER.

4.0 Level of Effort

The principal investigators represent the technical expertise provided by the contractor and provide technical continuity during the entire review process. They should have professional credentials in the technical areas assigned to them that will qualify them as expert witnesses for testifying at public hearings. They should have a clear understanding of the depth of review generally required by the NRC and specifically required by the type of activity proposed by the applicant for the disciplines they represent. They should also understand the association between DOE work performed on the CISF and the U.S. geologic repository program.

The reviewers will be responsible for technical review of discrete areas within the entire review effort. Reviews can be performed by any qualified staff member but may be performed by a principal investigator or by the project manager. At a minimum, the major disciplines needed include:

1. Environmental Engineering/Health Physics with experience in accident analysis
2. Civil/Structural Engineering with experience in seismology
3. Geology and the Natural Sciences associated with facility siting
4. Nuclear Engineering with experience in criticality and shielding design
5. Nuclear Plant Operations with experience in fuel handling.
- 6.

The reviewers who perform the actual work shall provide detailed technical records of the methods used to evaluate all aspects of their areas of responsibility. Upon completion of an evaluation, the reviewer or responsible principal investigator will distill this record to suitable documentation for inclusion in NRC reports. SFPO requires that all reports be provided in both draft and final form.

The level of effort (LOE) for this technical assistance request is estimated to be 1 staff-years for fiscal year 1998 and point .2 each in FY99 and FY00. Planned allocation is as follows:

Overall level of effort (LOE)

<u>Fiscal Year</u>	<u>LOE</u>
1998	150K
1999	100K
2000	50K

5.0 Period of Performance

The work on the tasks described in this SOW is anticipated to commence on or about December 1, 1997, and will continue through December, 2000.

6.0 Task Description

Task 1: Safety Evaluation Report for the PFS TSAR

CNWRA input for the SER for the TSAR will be completed. The requirements of 10 CFR Part 72 will dictate the overall scope of the assessment. Specifically, the major areas of review include: site characteristics, principal design criteria; operation systems; site generated waste confinement and management; radiation protection; accident analysis; operating controls and limits, and quality assurance. The contractor will use NUREG-1536 and NUREG-1567 as

guidance in making findings for several areas of this review. The contractor will identify any difficulties and inconsistencies with using NUREG-1567 and NUREG-1571 as review documents.

The reviewer(s) will be requested to assist in meetings with the applicant with regard to TSAR issues. The reviewer(s) may also be requested to assist in resolving technical comments for NRC's Committee to Review Generic Requirements (CRGR).

Level of Effort: FY 98: 1 staff- year
FY 99 .20 staff-year
FY 00 .20 staff-year

7.0 Meetings and Travel

For planning purposes throughout the duration of this task, it is expected that there will be monthly coordination meetings between the contractor and NRC staff by telephone or video conference. At the NRC's direction the contractor will attend meetings at NRC headquarters in Rockville, MD to plan, coordinate, resolve issues, and discuss the progress and status of the work. NRC will fund only those trips approved by the NRC Contracting Officer in advance and that are directly related to this project description.

8.0 NRC Furnished Materials

NRC will provide the contractor, as appropriate, with copies of NRC's current regulations, guidance documents, storage and transportation cask documents, and other documents identified as pertinent to performing the required work.

9.0 Product/Deliverables Schedules

The following deliverables will be required from the contractor:

1. Request for Additional Information

Within 90 days the contractor will provide the NRC staff with a request for additional information (RAI), in the format provided by the NRC staff. This will document additional information needed in order for a determination of compliance with applicable regulatory requirements to be made.

2. Requests for Additional Information (rounds 2 and 3, if necessary)

In a schedule determined by the applicants response to the first round RAI, the contractor may be asked to develop additional RAI's if necessary.

3. Safety Evaluation Report on the TSAR

The contractor will provide its draft input into the SER to the NRC staff, in the format provided by staff, 90 days after the receipt of the response to the final RAI. Staff will review the input and, if necessary, request a final version within 30 days of receipt of the draft. The contractor would then have 21 days to provide final input.

3. Presentation to NRC Peer Review Group on the Assessment Report and the Safety Evaluation Report

The contractor will be required to give a presentation of its work to the NRC peer review group. The presentation will defend contractor evaluations and conclusions that will be submitted as input into the final SER. As a result of the presentation, the contractor may be required to provide additional work. The presentation will be given at least 15 days before submittal of final input.

4. Litigation Support

As required by the NRC staff, the CNWRA will support the NRC staff by contributing to oral and written testimony for adjudicatory hearings associated with the Private Fuel Storage application.

ANALYSIS OF RELATIONSHIP OF
THE CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES'
POTENTIAL WORK SCOPE FOR
THE U.S. NUCLEAR REGULATORY COMMISSION
FOR REVIEW OF THE PRIVATE FUEL STORAGE TSAR
AND NRC'S RESPONSIBILITIES UNDER THE NUCLEAR WASTE POLICY ACT

PURPOSE:

This document provides background information on the proposed scope of work for the Center for Nuclear Waste Regulatory Analyses' (CNWRA) support to the Nuclear Regulatory Commission (NRC) staff on the review of the Private Fuel Storage, Limited Liability Company's (PFS's) Topical Safety Analysis Report (TSAR) for an away-from-reactor independent spent fuel storage installation (ISFSI) to be located on the Reservation of the Skull Valley Band of Goshute Indians.

BACKGROUND:

A consortium of nuclear utilities has formed PFS in order to ensure that adequate interim storage will be available for spent fuel from their operating reactors. This step has been taken because of the utility's uncertainty about the timing of the completion of a repository and the political uncertainties associated with federal interim storage. Some of the nuclear plants represented by the utilities (i.e., Northern States Power's Prairie Island Nuclear Generating Plant) are under State mandated restrictions on the amount of waste that can be stored on-site. PFS has contracted to rent land on the reservation of the Skull Valley Band of Goshute Indians. PFS and the Tribe have indicated that additional space is available to accommodate waste from utilities besides those which currently belong to PFS. The Skull Valley Band of Goshute Indians are a Federally-recognized Indian Tribe. The reservation is surrounded by Tooele County, Utah. PFS has submitted an application, pursuant to 10 CFR Part 72, to construct and operate an ISFSI on the Reservation. The staff has docketed the application.

The staff believes that there is language in Title B, Section 132 of the NWPA, which enables the Commission to support a decision that the review of the PFS application is related to its NWPA activities and can be placed at the CNWRA under its charter. Section 132 states that the Secretary of Energy, the Commission, and other federal officials shall "...take such actions as such official considers necessary to encourage and expedite the effective use of

available storage and necessary additional storage, at the site of each civilian nuclear power reactor..."(42 USC 10152). In addition to the Prairie Island situation, a number of civilian nuclear power reactors are running out space in their spent fuel pools. Reviewing the PFS TSAR appears to be an action "necessary to encourage and expedite the effective use of available storage."

POTENTIAL SCOPE OF SFPO CNWRA ACTIVITIES:

The PFS ISFSI will be a facility at which HLW may be stored pending the opening of the geologic repository. Review of the PFS facility described in the TSAR will be similar to the review of surface facilities at the proposed geologic repository. The PFS TSAR Table of Contents includes topics such as: site characteristics, principal design criteria; operation systems; site generated waste confinement and management; radiation protection; accident analysis; operating controls and limits, and quality assurance. These are all topics included in Draft Regulatory Guide DG-1003: "Format and Content of the License Application for the High-Level Waste Repository." Some of these topics are also found in DOE's "Site Characterization Progress Reports," which are published semi-annually, as required by Section 113 of the NwPA. These topics, will, of course, also be covered in the repository license application.

The staff will find the experience and lessons learned in the PFS facility TSAR review very useful in reviewing the repository license application. Because the PFS facility TSAR references cask systems to be used, rather than including the cask systems data in the application, the TSAR will generally reflect the class of facilities which will be found either at an interim storage facility or for surface operations at a repository. Providing the CNWRA with this early experience reviewing facilities substantially similar to those to be built at the repository would be an important development in the NRC high-level waste (HLW) program. Because of the extremely long pre-licensing consultation period in the repository program, actual "hands-on" experience with license application reviews is becoming less common. This task will provide such experience in a particularly meaningful way.

Evaluation of PFS TSAR:

Review of the PFS TSAR will result in a Safety Evaluation Report (SER). The SER objectives are to document the staff's determination on the acceptability of the applicant's demonstration of compliance with the applicable regulatory requirements of 10 CFR Part 72.

Specifically, the major areas of review include: site characteristics, principal design criteria; operation systems; site generated waste confinement and management; radiation protection; accident analysis; operating controls and limits, and quality assurance. As noted above, several of these areas are very similar to the areas the staff will also review for the repository surface facilities.

RELATIONSHIP OF THE PROPOSED SCOPE TO THE NRC'S HLW RESPONSIBILITIES UNDER NWPA:

The relationship between the anticipated scope of work and NRC responsibilities under the NWPA is strong. As stated above, analysis and siting of the PFS facility is similar to the siting of repository surface facilities. Safe movement, packaging and repackaging, and storage of high-level radioactive waste or spent nuclear fuel is common to all activities associated with spent fuel after it leaves the reactor vessel. The handling of spent fuel for any centralized interim storage will be very similar to the activities associated with handling and repackaging for final disposal that would take place under the Repository Operations and Engineered Barrier System activities which the CNWRA currently carries out for the staff. The spent nuclear fuel or high-level radioactive waste must be moved from transportation to storage canisters or from storage canisters to disposal canisters, or from transportation canisters to disposal canisters. The latter two activities will take place at the surface facilities of the repository, the former at the PFS facility.

The CNWRA has been working with the staff in the areas of repository design and surface facilities for the geologic repository. A knowledge and understanding of the facilities to be used for the safe handling of spent fuel and other HLW is important for future repository licensing decisions. The review of the PFS TSAR, and its implication for HLW which has been in interim storage for extended periods of time, will provide important information that can be factored into the review of structures, systems, and components important to safety, and waste isolation at the repository.

CONCLUSION:

Given the close relationship between the PFS facilities and repository surface facilities, the staff believes that OGC would be fully justified in a determination that NRC's PFS TSAR review activities fall under the purview of the NWPA related activities and, hence, the CNWRA charter.