

December 13, 2001 (10:49AM)

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:  PRIVATE FUEL STORAGE, LLC (Independent Spent Fuel Storage Installation)	) ) ) ) )	Docket No. 72-22-ISFSI  ASLBP No. 97-732-02-ISFSI  November 5, 2001
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STATE OF UTAH'S THIRTEENTH SET OF DISCOVERY REQUESTS  
DIRECTED TO THE APPLICANT

Pursuant to 10 CFR §§ 2.740, 2.741, and 2.742 and applicable orders of the Licensing Board, State of Utah, hereby requests that Private Fuel Storage, LLC ("PFS") answer the following Interrogatories and Requests for Admissions separately, fully, in writing, and under oath within 10 days<sup>1</sup> after service of this discovery request and produce documents requested below within 15 days after service of this request. The numbering of interrogatories, specific to a contention, begins after the highest numbered interrogatory propounded for that contention in the State's previous discovery to the Applicant.

I. INSTRUCTIONS

1. Scope of Discovery. These interrogatories and requests for admissions and production of documents are directed to Private Fuel Storage, LLC and any of the utility companies that own or comprise the members of PFS (collectively "PFS" or "Applicant"). The interrogatories cover all information in the possession, custody and control of PFS

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<sup>1</sup> Counsel for the State and PFS have agreed that the party responding to Interrogatories and Requests for Admissions during the formal discovery period may timely file a response within eight (8) working days after receipt of the Discovery Request.

and/or its owner members, including information in the possession of officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by them, or anyone else acting on their behalf or otherwise subject to their control.

2. Supplemental Responses. Each of the following requests is a continuing one pursuant to 10 C.F.R. § 2.740(e) and the State hereby demands that, in the event that at any later date PFS obtains or discovers any additional information which is responsive to these interrogatories and requests for admissions and production of documents, PFS shall supplement its responses to this request promptly and sufficiently in advance of the adjudicatory hearing.

Such supplementation shall include, but not be limited to:

- a. the identity and location of persons having knowledge of discoverable matters;
- b. the identity of each person expected to be called as an expert witness at any hearing, the subject matter on which she/he is expected to testify, and the substance of her/his testimony; and
- c. new information which makes any response hereto incorrect.

3. Objections. If you object to or refuse to answer any interrogatory under a claim of privilege, immunity, or for any other reason, please indicate the basis for asserting the objection, privilege, immunity or other reason, the person on whose behalf the objection, privilege, immunity, or other reason is asserted, and describe the factual basis for asserting the objection, privilege, immunity, or other reason in sufficient detail so as to permit the

administrative judges in this matter to ascertain the validity of such assertion.

If you withhold any document covered by this request under a claim of privilege, immunity, or for any other reason, please furnish a list identifying each document for which the privilege, immunity, or other reason is asserted, together with the following information: date, author and affiliation, recipient and affiliation, persons to whom copies were furnished and the job title and affiliation of any such persons, the subject matter of the documents, the basis for asserting the privilege, immunity, or other reason, and the name of the person on whose behalf the privilege, immunity, or other reason is asserted.

4. Estimates. Interrogatories calling for numerical or chronological information shall be deemed, to the extent that precise figures or dates are not known, to call for estimates. In each instance that an estimate is given, it should be identified as such together with the source of information underlying the estimate.

## II. DEFINITIONS

Each of the following definitions, unless otherwise indicated, applies to and shall be a part of each interrogatory and request for production which follows:

1. "PFS," "Applicant," "you," and "your" refers to Private Fuel Storage, LLC and the PFS members and their officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by them, or anyone else acting on their behalf or otherwise subject to their control.
2. The term "documents" means the originals as well as copies of all written, printed, typed, recorded, graphic, photographic, and sound reproduction matter however produced or reproduced and wherever located, over which you have custody or

control or over which you have the ultimate right to custody or control. By way of illustration, but not limited thereto, said term includes: records, correspondence, telegrams, telexes, wiring instructions, diaries, notes, interoffice and intraoffice communications, minutes of meetings, instructions, reports, demands, memoranda, data, schedules, notices, recordings, analyses, sketches, manuals, brochures, telephone minutes, calendars, accounting ledgers, invoices, charts, working papers, computer tapes, computer printout sheets, information stored in computers or other data storage or processing equipment, microfilm, microfiche, corporate minutes, blueprints, drawings, contracts and any other agreements, rough drafts, and all other writings and papers similar to any of the foregoing, however designated by you. If the document has been prepared and several copies or additional copies have been made that are not identical (or are no longer identical by reason of the subsequent addition of notations or other modifications), each non-identical copy is to be construed as a separate document.

3. "All documents referring or relating to" means all documents that in whole or in part constitute, contain, embody, reflect, identify, state, interpret, discuss, describe, explain, apply to, deal with, evidence, or are in any way pertinent to a given subject.
4. The words "describe" or "identify" shall have the following meanings:
  - (a) In connection with a person, the words "describe" or "identify" mean to state the name, last known home and business address, last known home and business telephone number, and last known place of employment and job title;

- (b) In connection with a document, the words “describe” or “identify” mean to give a description of each document sufficient to uniquely identify it among all of the documents related to this matter, including, but not limited to, the name of the author of the document, the date, title, caption, or other style by which the document is headed, the name of each person and entity which is a signatory to the document, the date on which the document was prepared, signed, and/or executed, any relevant bates numbers on the document, the person or persons having possession and/or copies thereof, the person or persons to whom the document was sent, all persons who reviewed the document, the substance and nature of the document, the present custodian of the document, and any other information necessary to adequately identify the document;
- (c) In connection with an entity other than a natural person (e.g., corporation, partnership, limited partnership, association, institution, etc.), the words “describe” or “identify” mean to state the full name, address and telephone number of the principal place of business of such entity.
- (d) In connection with any activity, occurrence, or communication, the words “describe” or “identify” mean to describe the activity, occurrence, or communication, the date of its occurrence, the identify of each person alleged to have had any involvement with or knowledge of the activity, occurrence, or communication, and the identity of any document recording or documenting such activity, occurrence, or communication.

5. "Date" shall mean the exact day, month, and year, if ascertainable, or if not, the best approximation thereof (including by relationship to other events), and the basis for such approximation.
6. "ISFSI" or "PFS facility" shall mean the PFS proposed Independent Spent Fuel Storage Installation located in the northwest corner of the Skull Valley Goshute Indian Reservation, Utah.
7. The word "discussion" shall mean communication of any kind, including but not limited to, any spoken, written, or signed form of communication.
8. The word "person" shall include any individual, association, corporation, partnership, joint venture, or any other business or legal entity.
9. Words herein of any gender include all other genders, and the singular form of words encompasses the plural.
10. The words "and" and "or" include the conjunctive "and" as well as the disjunctive "or" and the words "and/or."
11. The discovery sought by this request encompasses material contained in, or which might be derived or ascertained from, the personal files of PFS employees, representatives, investigators, and agents.

### **III. GENERAL DISCOVERY**

To the extent that the Applicant has not already answered the general interrogatories and general document requests in the State's previous discovery requests, please answer the following:

## A. GENERAL INTERROGATORIES

Pursuant to agreement between the State and PFS, these general interrogatories apply to all Utah admitted contentions, are in addition to the ten interrogatories<sup>2</sup> per contention allowed by the Board's Order dated April 22, 1998 (LBP-98-7), and are continuing in accordance with 10 CFR § 2.740(e).

GENERAL INTERROGATORY NO. 1. State the name, business address, and job title of each person who was consulted and/or who supplied information for responding to interrogatories, requests for admissions and requests for the production of documents. Specifically note for which interrogatories, requests for admissions and requests for production each such person was consulted and/or supplied information.

If the information or opinions of anyone who was consulted in connection with your response to an interrogatory or request for admission differs from your written answer to the discovery request, please describe in detail the differing information or opinions, and indicate why such differing information or opinions are not your official position as expressed in your written answer to the request.

GENERAL INTERROGATORY NO. 2. To the extent that PFS has not previously produced documents relevant to any Utah admitted contention, including without limitation Part B of Contention Utah L (Geotechnical), as that contention was amended by the Board in its Memorandum and Order (Requesting Joint Scheduling Report and Delineating Contention Utah L) dated June 15, 2001 ("Memorandum and Order")

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<sup>2</sup> By agreement with counsel for PFS, the State may propound upon PFS up to 20 interrogatories relating to Contention Utah L.

(hereinafter "Part B of Utah L"), identify all such documents not previously produced. PFS may respond to this request by notifying the State that PFS has updated its repository of documents relevant to admitted contentions at Parsons, Behle and Latimer.

GENERAL INTERROGATORY NO. 3. For each admitted Utah contention, including without limitation Part B of Utah L, give the name, address, profession, employer, area of professional expertise, and educational and scientific experience of each person whom PFS expects to call as a witness at the hearing. For purposes of answering this interrogatory, the educational and scientific experience of expected witnesses may be provided by a resume of the person attached to the response.

GENERAL INTERROGATORY NO. 4. For each admitted Utah contention, including without limitation Part B of Utah L, identify the qualifications of each expert witness whom PFS expects to call at the hearing, including but not limited to a list of all publications authored by the witness within the preceding ten years and a listing of any other cases in which the witness has testified as an expert at a trial, hearing or by deposition within the preceding four years.

GENERAL INTERROGATORY NO. 5. For each admitted Utah contention, including without limitation Part B of Utah L, describe the subject matter on which each of the witnesses is expected to testify at the hearing, describe the facts and opinions to which each witness is expected to testify, including a summary of the grounds for each opinion, and identify the documents (including all pertinent pages or parts thereof), data or other information which each witness has reviewed and considered, or is expected to consider or to rely on for his or her testimony.

**B. GENERAL DOCUMENT REQUESTS**

The State requests the Applicant to produce the following documents directly or indirectly within its possession, custody or control to the extent not previously produced by the Applicant during discovery:

REQUEST NO 1. All documents in your possession, custody or control identified, referred to, relied on, or used in any way in (a) responding to the interrogatories and requests for admissions set forth in the State's previous sets of Formal Discovery Requests to Applicant, PFS, (b) responding to the following interrogatories and requests for admissions in this document, or (c) responding to any subsequent interrogatories and requests for admissions filed with respect to the State's Contentions as admitted by the Board.

REQUEST NO. 2. All documents (including experts' opinions, workpapers, affidavits, and other materials used to render such opinion) supporting or otherwise relating to testimony or evidence that you intend to use at the hearings on each Utah admitted contention, including without limitation Part B of Utah L

**IV. DISCOVERY REQUESTS: CONTENTION UTAH L, PART B**

**A. Requests for Admissions - Contention Utah L, Part B.**

REQUEST FOR ADMISSION NO. 1. Admit that if a Holtec HI-STORM 100 cask falls over as a result of ground acceleration from a 2,000 year return interval earthquake, the cask concrete will crack.

REQUEST FOR ADMISSION NO. 2. Admit that if a Holtec HI-STORM 100 cask falls over as a result of ground motion from a 10,000 year return interval earthquake, the cask concrete will crack

REQUEST FOR ADMISSION NO. 3. Admit that if a Holtec HI-STORM 100 cask falls over as a result of ground acceleration from a 84<sup>th</sup> percentile earthquake, the cask concrete will crack

REQUEST FOR ADMISSION NO. 4. Admit that if the HI-STORM concrete cracks, the radiation shielding function of the cask may be impaired.

REQUEST FOR ADMISSION NO. 5. Admit that due to the outer and inner metal shell encasing the HI-STORM 100 concrete that a crack in the cask concrete cannot be repaired without removing the metal shell.

REQUEST FOR ADMISSION NO. 6. Admit that the concrete in the HI-STORM storage cask will compress or flatten if it tips over during a seismic event.

REQUEST FOR ADMISSION NO. 7. Admit that the outer and inner metal shell encasing the HI-STORM 100 concrete may deform if the cask falls over during a seismic event.

REQUEST FOR ADMISSION NO. 8. Admit that PFS has not constructed fragility curves for the HI-STORM 100 cask for a range of peak ground accelerations caused by potential earthquakes at the PFS site.

REQUEST FOR ADMISSION NO. 9. Admit that PFS has not constructed fragility curves for the cask pad for a range of peak ground accelerations caused by potential earthquakes expected at the PFS site.

REQUEST FOR ADMISSION NO. 10. Admit that PFS has not constructed fragility curves for the canister transfer building for the range of peak ground accelerations caused by potential earthquakes at the PFS site.

REQUEST FOR ADMISSION NO. 11. Admit that PFS has not constructed fragility curves for the canister transfer building foundation for the range of peak ground accelerations caused by potential earthquakes at the PFS site.

REQUEST FOR ADMISSION NO. 12. Admit that a risk reduction factor, as used in DOE Standard 1020-94 at C-4 to -7, cannot be applied to reduce dynamic motion such as cask sliding.

REQUEST FOR ADMISSION NO. 13. Admit that PFS has not calculated the “mean component failure return period” for the HI-STORM 100 cask due to peak ground accelerations for a 2,000 year mean return period earthquake at the proposed PFS site. *See* Applicant’s Objections and Responses to the State of Utah’s Eleventh Set of Discovery Requests Directed to the Applicant (October 2, 2001), Response to Interrogatory 15, ¶ 9 for definition of “mean component failure return period” (“PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set”).

REQUEST FOR ADMISSION NO. 14. Admit that PFS has not calculated the “mean component failure return period” for the HI-STORM 100 cask due to peak ground accelerations for a 10,000 year mean return period earthquake at the proposed PFS site. *See* PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return period.”

REQUEST FOR ADMISSION NO. 15. Admit that PFS has not calculated the “mean component failure return period” for the HI-STORM 100 cask due to peak ground accelerations for a deterministic earthquake at the proposed PFS site. *See* PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return

period.”

REQUEST FOR ADMISSION NO. 16. Admit that PFS has not calculated the “mean component failure return period” for the PFS storage pads due to peak ground accelerations for a 2,000 year mean return period earthquake at the proposed PFS site. See PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return period.”

REQUEST FOR ADMISSION NO. 17. Admit that PFS has not calculated the “mean component failure return period” for the PFS storage pads due to peak ground accelerations for a 10,000 year mean return period earthquake at the proposed PFS site. See PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return period.”

REQUEST FOR ADMISSION NO. 18. Admit that PFS has not calculated the “mean component failure return period” for the PFS storage pads due to peak ground accelerations for a deterministic earthquake at the proposed PFS site. See PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return period.”

REQUEST FOR ADMISSION NO. 19. Admit that PFS has not calculated the “mean component failure return period” for the canister transfer building due to peak ground accelerations for a 2,000 year mean return period earthquake at the proposed PFS site. See PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return period.”

REQUEST FOR ADMISSION NO. 20. Admit that PFS has not calculated the

“mean component failure return period” for the canister transfer building due to peak ground accelerations for a 10,000 year mean return period earthquake at the proposed PFS site. See PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return period.”

REQUEST FOR ADMISSION NO. 21. Admit that PFS has not calculated the “mean component failure return period” for the canister transfer building due to peak ground accelerations for a deterministic earthquake at the proposed PFS site. See PFS response to Interrogatory 15, ¶ 9, 11<sup>th</sup> discovery set for definition of “mean component failure return period.”

**B. INTERROGATORIES - Contention Utah L, Part B**

INTERROGATORY NO. 17. Fully explain and quantify the statement in PFS’s response to the State’s 11<sup>th</sup> Discovery Set, Interrogatory No. 15, ¶ 9, that typical SSCs are designed to a “mean component failure return period 5 to 20 times or more greater than the mean return period of the design-basis ground motion,” the bases therefor, and how this “mean component failure return period” applies to the stability of the HI-STORM 100 casks, relative movement of HI-STORM 100 casks, stability of the cask storage pads and supporting soil layers, stability of the canister transfer building and supporting soil layers, and limiting dose equivalents at the site boundary to less than regulatory limits.

INTERROGATORY NO. 18. Fully describe and quantify how the storage casks and other safety-related structures at the PFS facility “could withstand the loadings resulting from an even more severe earthquake without failure of SSCs” as it relates to stability of the HI-STORM 100 casks, relative movement of HI-STORM 100 casks, stability of the cask

storage pads and supporting soil layers, stability of the canister transfer building and supporting soil layers, and limiting dose equivalents at the site boundary to less than regulatory limits. See PFS's response to the State's 11<sup>th</sup> Discovery Set, Interrogatory No. 15, ¶ 6.

INTERROGATORY NO. 19. Fully describe the participation of PFS' witness, Dr. C. Allin Cornell, as a member of an expert panel for ICF to develop, review, and comment on the technical basis of allowing applicants to conduct probabilistic seismic hazard analysis at ISFSI sites, including the dates, times, and locations of meetings, conference calls, or other contacts, a summary of the discussion that occurred, what documents or information were distributed, what panel information was conveyed to PFS members, contractors, or attorneys. See Deposition of Allin Cornell (October 31 to November 1, 2001).

INTERROGATORY NO. 20. Identify the design basis ground motion that the storage casks and other safety-related structures at the PFS facility are currently designed to withstand and provide the supporting basis thereof as it relates to stability of the HI-STORM 100 casks, relative movement of HI-STORM 100 casks, stability of the cask storage pads and supporting soil layers, stability of the canister transfer building and supporting soil layers, and limiting dose equivalents at the site boundary to less than regulatory limits.

DATED this 5<sup>th</sup> day of November, 2001.

Respectfully submitted,

  
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CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S THIRTEENTH SET OF DISCOVERY REQUESTS DIRECTED TO THE APPLICANT was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 5<sup>th</sup> day of November, 2001:

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