

RELATED CORRESPONDENCE

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF THE SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

In the Matter of:

) Docket No. 72-22-ISFSI

PRIVATE FUEL STORAGE, LLC  
(Independent Spent Fuel  
Storage Installation)

) ASLBP No. 97-732-02-ISFSI

) January 22, 2002

STATE OF UTAH'S EIGHTEENTH SET OF DISCOVERY REQUESTS  
DIRECTED TO THE NRC STAFF

Pursuant to the Board's Orders dated April 22, 1998 (LBP-98-7), June 29, 1998, August 20, 1998, and September 20, 2001 and accompanying revised schedule, and 10 CFR §§ 2.720, 2.740, 2.742, and 2.744, Intervenor State of Utah, hereby requests that the Staff of the Nuclear Regulatory Commission ("Staff") answer the following Interrogatories and Admission Requests separately, fully, in writing, and under oath within 10 days. All of these Interrogatories are necessary to a proper decision in this proceeding for Contention Utah L.

As required by 10 CFR § 2.744(a), this discovery request is being served on the NRC Executive Director for Operations.

I. INSTRUCTIONS

A. Scope of Discovery. These interrogatories and admission requests are directed to NRC Staff and any of the Staff's contractors or agents (collectively "NRC" or "Staff"). The interrogatories and admission requests cover all information in the possession, custody and control of NRC Staff, including information in the possession of officers, employees, agents, servants, representatives, attorneys, or other persons directly or

indirectly employed or retained by NRC Staff, or anyone else acting on their behalf or otherwise subject to NRC Staff's control.

B. Supplemental Responses. Each of the following interrogatories and admission requests is a continuing one pursuant to 10 CFR § 2.740(e) and the State hereby demands that, in the event that at any later date NRC Staff obtains or discovers any additional information which is responsive to these interrogatories and request for admissions, NRC Staff 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:

1. The identity and location of persons having knowledge of discoverable matters;
2. 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
3. New information which makes any response hereto incorrect.

C. Objections. If you object to or refuse to answer any interrogatory or admission request 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.

## II. DEFINITIONS

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

A. "NRC," "Staff," "you" and "your" refers to the officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by the Staff of the U.S. Nuclear Regulatory Commission, or anyone else acting on its behalf or otherwise subject to the Staff's control.

B. "PFS," or "Applicant," 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.

C. 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, 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, spreadsheets, working papers, computer tapes, computer printout sheets, information stored in computers or other data storage or processing equipment, electronic mail, 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.

D. "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.

E. The words "describe" or "identify" shall have the following meanings:

1. 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;

2. 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.

3. In connection with an entity other than a natural person (eg, 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.

4. 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.

F. "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.

G. "ISFSI" shall mean the PFS proposed Independent Spent Fuel Storage Installation located in the northwest corner of the Skull Valley Goshute Indian reservation, Utah.

H. The word "discussion" shall mean communication of any kind, including but not limited to, any spoken, written, or signed form of communication.

I. The word "person" shall include any individual, association, corporation, partnership, joint venture, or any other business or legal entity.

J. Words herein of any gender include all other genders, and the singular form of words encompasses the plural.

K. The words "and" and "or" include the conjunctive "and" as well as the disjunctive "or" and the words "and/or."

L. The discovery sought by this request encompasses material contained in, or which might be derived or ascertained from, the personal files of NRC Staff employees, representatives, investigators, and agents.

### III. REQUEST FOR ADMISSIONS

REQUEST FOR ADMISSION NO. 1. Do you admit that PFS intends to use soil cement (or cement-treated soil) under and around the pads and around the Canister Transfer Building ("CTB") to provide a method for the foundations of the pads and the CTB to resist dynamic seismic loadings?

REQUEST FOR ADMISSION NO. 2. Do you admit that, to date, the Applicant has not demonstrated that its design to use soil cement under and around the storage pads and around the CTB will resist dynamic loadings?

REQUEST FOR ADMISSION NO. 3. Do you admit that, to date, the Applicant has not conducted any soil cement testing?

REQUEST FOR ADMISSION NOS. 4-6. The Safety Evaluation Report Supplement No. 2 (geotechnical and design changes to PFS facility) (SSER No. 2) states that the Applicant's stability analyses "rely on the shear strength of the natural soil underlying the lower layer of soil cement to resist sliding of the pads...." SSER No. 2, Ch. 2 at 44.

REQUEST FOR ADMISSION NO. 4. Do you admit that PFS's foundation system design for the storage pads is based on an insufficient number of tested samples?

REQUEST FOR ADMISSION NO. 5. Do you admit that PFS has not conducted any strain controlled cyclic triaxial tests.

REQUEST FOR ADMISSION NO. 6. Do you admit that PFS has failed to

use its cone penetration test (CPT) data to determine whether there is potential variability of shear strength in the pad emplacement area?

REQUEST FOR ADMISSION NO. 7. Do you admit that PFS has not adequately described the stress-strain behavior of the native foundation soils under the range of cyclic strains imposed by the design basis earthquake?

REQUEST FOR ADMISSION NO. 8. Do you admit that underestimating the dynamic Young's modulus of the cement-treated soil when subjected to impact during cask drop or tipover significantly underestimates the impact forces?

REQUEST FOR ADMISSION NO. 9. Do you admit that the pad foundations can resist dynamic loading and at the same time still meet the 1.1 factors of safety against sliding? See SSER No. 2, Ch. 2 at 45.

REQUEST FOR ADMISSION NO. 10. Do you admit that the CTB foundations can resist dynamic loading and at the same time still meet the 1.1 factors of safety against sliding?

REQUEST FOR ADMISSION NO. 11. Do you admit that Holtec's *Multi Cask Response at the PFS ISFSI from 2000 Year Seismic Event*, HI-2012640, is a non-linear analysis?

REQUEST FOR ADMISSION NO. 12. Do you admit that HI-2012640's non-linear analysis may be sensitive to phasing and thus must use multiple time histories?

REQUEST FOR ADMISSION NO. 13. Do you admit that HI-2012640 does not use multiple time histories?

REQUEST FOR ADMISSION NO. 14. Do you admit that the Staff does not conclude that Holtec in its analysis HI-2012640 must use multiple time histories?

REQUEST FOR ADMISSION NO. 15. Do you admit that HI-2012640 assumes that the storage pad will act as a rigid mat?

REQUEST FOR ADMISSION NO. 16. Do you admit that the Staff assumes that the storage pad will act as a rigid mat?

REQUEST FOR ADMISSION NO. 17. Do you admit that Holtec's HI-STORM 100 cask design is bottomed on the assumption that the unanchored casks will slide in a controlled manner when subjected to strong ground motions?

REQUEST FOR ADMISSION NO. 18. Do you admit that Staff assumes that unanchored HI-STORM 100 casks will slide in a controlled manner when subjected to strong ground motions?

#### IV. INTERROGATORIES: CONTENTION UTAH L

INTERROGATORY NO. 21<sup>1</sup>: Given that the ground motions at the PFS site are approximately 0.7g (horizontal and vertical) and that in the H-STORM 100 certificate of compliance the bounding accelerations are 0.445 g horizontal and 0.16g vertical,<sup>2</sup> describe with specificity why "resulting loads on the MPC and fuel assemblies remain bounded by the loads considered in the HI-STORM 100 FSAR," and the basis thereof. SSER No. 2, Ch. 5 at 1.

INTERROGATORY NO. 22: Describe with specificity whether or not the

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<sup>1</sup> The NRC Staff agreed to up to five additional interrogatories on Contention Utah L. The numbering of interrogatories is sequential from the last set of interrogatories propounded on the Staff by the State for Utah L.

<sup>2</sup> See e.g., Utah's Response and Opposition to Applicant's Motion for Summary Disposition of Utah L, Part B dated December 7, 2001, (hereafter "Utah Response 12/7/01") Resnikoff Dec. ¶ 12.



storage pads will behave as a rigid mat and the effect of the assumption of rigidity, if any, on subsequent calculations such as those prepared by ICEC, and the basis thereof. *Sæ e.g., PFS Calculation No. G(PO17)-2, Storage Pad Analysis and Design* by International Civil Engineering Consultants.

INTERROGATORY NO. 23: Describe with specificity what redundancies are built into Holtec's cask design other than Holtec's assumption that the casks will slide on the pad in a controlled manner during an earthquake and the basis thereof.

INTERROGATORY NO. 24: An analysis prepared on behalf of the State by Dr. Mohsin Khan of Altran Corporation ("Khan Report")<sup>3</sup> concluded that if realistic and applicable ranges of interface parameters are considered, the casks will be subjected to severe dislocation, lift off and tipping at the PFS site. Describe how the Staff took the Khan Report into account in reaching its conclusions in the SSER relating to cask stability for the design basis earthquake, and if it did not take the Khan Report into account, explain why not. *Sæ SSER No. 2, Ch. 5 at 28-30.*

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<sup>3</sup>*Sæ Utah Response 12/7/01, Exhibit 2 and attachment F thereto.*

INTERROGATORY NO. 25: Describe whether or not the soil cement cap around the CTB impacts soil impedance parameters and kinematic motion of the CTB foundation and the basis thereof.

DATED this 22<sup>nd</sup> day of January, 2002.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Denise Chancellor", is written over a horizontal line.

Denise Chancellor, Assistant Attorney General  
Fred G Nelson, Assistant Attorney General  
Connie Nakahara, Special Assistant Attorney General  
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CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S EIGHTEENTH SET OF DISCOVERY REQUESTS DIRECTED TO THE NRC STAFF was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 22<sup>nd</sup> day of January, 2002:

Rulemaking & Adjudication Staff  
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(original and two copies)

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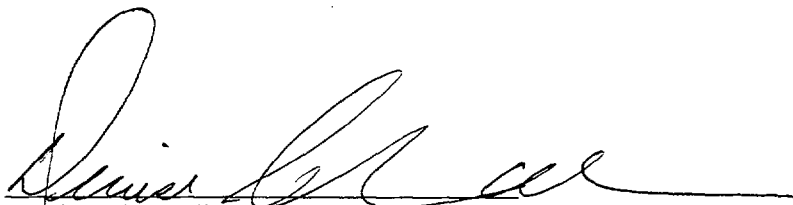
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A handwritten signature in black ink, appearing to read "Denise Chancellor", written over a horizontal line.

Denise Chancellor  
Assistant Attorney General  
State of Utah

STATE OF UTAH  
OFFICE OF THE ATTORNEY GENERAL



MARK L. SHURTLEFF  
ATTORNEY GENERAL

RAY HINTZE  
Chief Deputy - Civil

RYAN MECHAM  
Chief of Staff

KIRK TORGENSEN  
Chief Deputy - Criminal

January 22, 2002

William D. Travers  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: In the Matter of Private Fuel Storage, LLC, Docket 72-22

Dear Mr. Travers;

Pursuant to 10 CFR § 2.744(a), enclosed is the State of Utah's Eighteenth Set of Discovery Requests Directed to the NRC Staff, dated January 22, 2002.

Please contact me with any questions at (801) 366-0286. Thank you.

Sincerely,

Denise Chancellor  
Assistant Attorney General

Enclosure: as stated  
cc: PFS Docket 72-22-ISFSI Service List