

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

) Docket No. 72-22-ISFSI

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

) ASLBP No. 97-732-02-ISFSI

) April 9, 1999

STATE OF UTAH'S FIRST SET OF DISCOVERY REQUESTS
DIRECTED TO THE APPLICANT
[Redacted Version]

Pursuant to the Board's Orders dated April 22, 1998 (LBP-98-7), and Orders dated June 29, 1998 and August 20, 1998, and 10 CFR §§ 2.740, 2.741, and 2.742, Intervenor, 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 days¹ after service of this discovery request and produce documents requested below within 15 days after service of this request.

I. INSTRUCTIONS

A. Scope of Discovery. These interrogatories and request 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

¹ 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.

"Applicant"). The interrogatories cover all information in the possession, custody and control of PFS 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.

B. Lack of Information. If you currently lack information to answer any Interrogatory completely, please state:

1. The responsive information currently available;
2. The responsive information currently unavailable;
3. Efforts which you intend to make to secure the information currently unavailable; and
4. When you anticipate receiving the information currently unavailable.

C. 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 request 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:

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.

D. 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.

E. 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. "ER" shall mean the Environmental Report prepared by Private Fuel Storage, LLC as part of its license application for the NRC.

7. "SAR" shall mean the Safety Analysis Report as prepared by Private Fuel Storage, LLC as part of its license application for the NRC.

8. "EIS RAI Response" shall mean PFS's February 18, 1999 response to NRC Staff's December 18, 1998, Request for Additional Information relating to Environmental Impact Statement.

9. "Second Round Safety RAI Response" shall mean PFS's February 10, 1999 response to NRC Staff's January 21, 1999, Request for Additional Information on the License Application.

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

11. "TTP" or "TTF" shall mean, respectively, the intermodal transfer point or intermodal transfer facility, located next to the Union Pacific mainline approximately 1.8 miles west of Rowley Junction (also called Timpie) and Skull Valley Road, Utah.

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

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

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

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

16. 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

A. GENERAL REQUESTS FOR ADMISSIONS

REQUEST NO. 1. Do you admit that all commitments, representations, and statements made by the Applicant in response to the NRC Staff's past and future Requests for Additional Information, have the same effect as commitments, representations and statements made by the Applicant in its ISFSI Part 72 License Application?

REQUEST NO. 2. Do you admit that all commitments, representations, and statements made by the Applicant in response to the NRC Staff's past and future Requests for Additional Information, effectively amend the commitments, representations and statements made by the Applicant in its ISFSI Part 72 License

Application?

REQUEST NO. 3. Do you admit that all commitments, representations, and statements made by the Applicant in response to the NRC Staff's past and future Requests for Additional Information, are provisional commitments, representations, and statements to which the Applicant has not committed itself until it amends its ISFSI Part 72 License Application?

B. 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 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, 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, 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, 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, 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.

C. 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 informal discovery:

REQUEST NO. 1. All documents in your possession, custody or control that are identified, referred to or used in any way in responding to all of the above general interrogatories and the following interrogatories and requests for admissions relating to specific contentions.

REQUEST NO. 2. To the extent that PFS has not already produced documents to date, all documents in your possession, custody or control relevant to each Utah admitted contention, and to the extent possible, segregated by contention and separated from already produced documents.

REQUEST NO. 3. 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.

IV. UTAH CONTENTION B (License Needed for Intermodal Transfer Facility)

A. INTERROGATORIES - Utah Contention B

INTERROGATORY NO. 1. Expand on your answer to the EIS RAI

Response, question 1-2, by describing with specificity the actual design and specifications, including but not limited to, turning radius of the heavy haul tractor/trailers PFS or its agents may acquire for use at the ITF; the minimum and maximum number of tractor/trailers PFS or its agent may acquire; where specifically maintenance of the tractor/trailers will be conducted at the ITF; and the amount of time heavy haul transfer operations will take, commencing with the unloading of a cask from a rail car at the ITF to receipt and inspection at the ISFSI.

INTERROGATORY NO. 2. Expand on your answer to the EIS RAI

Response, question 1-2, by describing with specificity the actual design and specifications, including but not limited to turning radius and maximum travel speed, of the rail cars PFS or its agents may acquire for cross country cask transportation; the date on which PFS or its agents expect to make a decision on the final rail car design; the date(s) on which rail car orders will be placed; the minimum and maximum number of rail cars PFS or its agents will acquire; where specifically the rail cars will be parked at the ITF or nearby area; where specifically the rail cars and locomotives will

be maintained at the ITF; and where diesel fuel will be stored.

INTERROGATORY NO. 3. Expand on your answer to the Second Round RAI Safety Response, question Intermodal Transfer Point (designated by PFS as "PFSF Safety RAI No. 2, ITP-1") by describing with specificity the scope and coverage, including but not limited to inclusions and exclusions, of the proposed "transportation services agreement" PFS intends to enter into with utilities that may ship spent nuclear fuel to the proposed ISFSI for among other things rail car to heavy haul truck intermodal transfer operations; road transportation of casks from the ITF to the proposed ISFSI; rail services from the reactor site to the proposed ISFSI via the Low rail spur; continuous security and escort services of fuel shipments; communications with local emergency responders; and coordination with law enforcement.

B. DOCUMENT REQUESTS - Utah Contention B

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 informal discovery:

REQUEST NO. 1. All designs, specifications, drawings, reports, correspondence, including e-mails and telephone and meeting notes, and other documents that relate to the heavy haul tractor/trailers PFS may use to transport spent nuclear fuel casks from the ITF to the proposed ISFSI.

REQUEST NO. 2. All designs, specifications, drawings, reports,

correspondence, including e-mails and telephone and meeting notes, and other documents, referring or relating to the present status and acquisition of the heavy haul tractor/trailers PFS may use to transport spent nuclear fuel casks from the ITF to the proposed ISFSI.

REQUEST NO. 3. Any document, including but not limited to designs, specifications, drawings, reports, correspondence, e-mails, telephone and meeting notes, and other documents referring or relating to the rail cars PFS may use to transport spent nuclear fuel casks from the reactor sites to the proposed ISFSI.

REQUEST NO. 4. Any document, including but not limited to designs, specifications, drawings, reports, correspondence, e-mails, telephone and meeting notes, and other documents, referring or relating to the present status and acquisition of the rail cars PFS may use to transport spent nuclear fuel casks from the reactor sites to the proposed ISFSI.

REQUEST NO. 5. Any document, including but not limited to reports, correspondence, e-mails and telephone and meeting notes, between PFS and the U.S. Department of Transportation ("DOT") or the American Association of Railroads ("AAR") referring or relating to any type of required approvals or recommendations from DOT or AAR for the design and operation of the rail cars PFS may use to transport spent nuclear fuel casks from the reactor sites to the proposed ISFSI.

REQUEST NO. 6. Any document, including but not limited to reports,

correspondence, e-mails and telephone and meeting notes, referring or relating to regulatory approvals for and ownership, maintenance, and operation of the 32 miles rail line from the Union Pacific main line at Low to the proposed ISFSI.

REQUEST NO. 7. Any document, including but not limited to reports, correspondence, e-mails, telephone and meeting notes, or other documents referring or relating to Price-Anderson insurance coverage of shipments of spent fuel to the proposed ISFSI en route from: (a) for those reactor sites that do not have direct rail access, a reactor site to the main rail line; (b) the main rail line to the ITF; (c) the main line to the point at which the Low rail spur leaves the Union Pacific main line; and (d) the Low rail spur from the Union Pacific main line to the proposed ISFSI.

REQUESTS NO. 8 and NO. 9: Document Requests No. 8 and No. 9 relate to PFS's response to the Intermodal Transfer Point question in the Second Round Safety RAIs (designated by PFS as "PFSF Safety RAI No. 2, ITP-1). In its part (a) RAI response to the Intermodal Transfer question, PFS states it may perform intermodal transfer operations "as a common/contract carrier under a transportation services agreement with the utility customers or PFS may arrange for a third party to perform such services for the utility customers... [or PFS] may act as a broker."

REQUEST NO 8: Any draft, proposed or final contract, arrangement, or agreement, or any other document, including correspondence, e-mails and telephone and meeting notes, referring or relating in any way to: (a) a transportation services

agreement with any utility customer for intermodal transfer operations at the ITF; (b) a third party performing intermodal transfer operations at the ITF; and (c) brokerage by PFS to perform intermodal transfer operations at the ITF.

REQUEST NO. 9. In part (b) of its Second Round Safety RAIs Response to the Intermodal Transfer question, PFS refers to a rail choice option. Produce all documents referring or relating to contractual, formal or other arrangements PFS will provide for the rail transportation of spent nuclear fuel casks to the proposed ISFSI site.

V. UTAH CONTENTION C (Failure to Demonstrate Compliance With NRC Dose Limits)

The following requests for admissions and interrogatories are based on revised accident dose calculations, included as an attachment, and submitted to NRC on February 11, 1999 under separate cover, to the Second Round Safety RAI Response. The accident dose calculations were prepared by Dade Moeller and Associates for Stone and Webster, and are presented in two reports: UR-010, "RESRAD Pathway Analysis Following Deposition of Radioactive Material From the Accident Plumes" (February 9, 1999); and UR-009, "Accident Dose Calculations at 500m and 3219m Downwind for Canister Leakage Under Hypothetical Accident Conditions for the Holtec MPC-68 and SNC TranStor Canisters" (February 9, 1999). The revised calculations make a number of assumptions whose bases are unexplained.

A. REQUESTS FOR ADMISSIONS -- Utah Contention C

REQUEST NO. 1. Do you admit that in UR-010, PFS assumes a person stands 500 meters away from a canister for 2,000 hours/year?

REQUEST NO. 2. Do you admit that PFS assumes that the person standing 500 meters away from a canister for 2,000 hours is a worker?

REQUEST NO. 3. Do you admit that PFS assumes that there will not be any full time residents at or near the fence post of the controlled area?

REQUEST NO. 4. Do you admit that PFS assumes that it has control over the area beyond the fence post of the controlled area?

REQUEST NO. 5. Do you admit that PFS assumes the leak rate for the Holtec Hi-Storm storage cask is derived from NUREG-1617?

REQUEST NO. 6. Do you admit that PFS assumes that the leak rate for the Holtec Hi-Storm storage cask used at the PFS facility will be the same as is permitted by NRC regulations in 10 CFR 71.51 and Appendix A.

REQUEST NO. 7. Do you admit that PFS has done no independent analysis to justify the assumptions described in Admissions 1 and 2 above?

REQUEST NO. 8. Do you admit that a TOW-2 anti-tank missile can penetrate one meter of steel, and therefore could penetrate a HI-STAR 100 metal cask.?

REQUEST NO. 9. Do you admit that a MILAN anti-tank missile can penetrate one meter of steel, and therefore could penetrate a HI-STAR 100 metal cask?

REQUEST NO. 10. Do you admit that the leak rate A2, specified in 10 CFR Part 71, Appendix A for a type B transportation cask, could be exceeded by a direct strike of a TOW-2 or MILAN anti-tank missile?

REQUEST NO. 11. Do you admit that the hole diameter calculated in NUREG/CR-6487 could be exceeded by a direct strike of a TOW-2 or MILAN anti-tank missile?

B. INTERROGATORIES - Utah Contention C

INTERROGATORY NO. 1. Describe the basis for PFS's assumption in UR-009 and UR-010 of a 30-day exposure duration. Your answer should include a description of whether people at the fence post, 500 meters from a canister, are assumed to remain in the area or to be notified and evacuated and why, what is expected to occur during the 30-day period and why, and what occurs at the expiration of the 30-day period and why.

INTERROGATORY NO. 2. Justify a 30-day exposure period for each of the different exposure pathways: direct gamma from deposited radionuclides; direct gamma from the passing cloud; inhalation of gases, particulates and volatiles; and ingestion of food (for example, milk, vegetation, meat).

INTERROGATORY NO. 3.

To the extent that you answer Requests for Admissions numbered 1 through 4 in the affirmative, please explain the basis for your answer.

To the extent that you answer Requests for Admission numbered 1 through 4 in the negative, please explain the basis for your answer.

INTERROGATORY NO. 4. For a thyroid dose, PFS considers iodine-129, but ignores chlorine-36, which will also be present in irradiated fuel. Please justify your failure to include chlorine-36 in the thyroid dose analysis.

INTERROGATORY NO. 5. In UR-010, the RESRAD pathway analysis, particulates are assumed to be deposited downwind. The deposited radioactive material is then assumed to be mixed within the top one centimeter of soil. The standard code RESRAD is then employed to calculate direct gamma, food ingestion and inhalation of resuspended particulates. Rather than artificially mix radioactive material with soil, Moeller & Associates could have directly calculated a direct gamma dose from the surface density of deposited radionuclides (pCi/m^2) using FGR #12 (EPA, "External Exposure To Radionuclides In Air, Water, And Soil," EPA 402-R-93-081, September 1993), an EPA report Moeller & Associates used in calculating an immersion dose. Explain why FGR # 12 was not used in this case to calculate the direct gamma dose from the surface concentrations.

INTERROGATORIES NO. 6 through 8. Interrogatories 6 through 8 are based on the following information. In UR-009, Dade Moeller & Associates changes the methodology used in PFS's SAR for estimating the release of particulates, gases, and volatiles from a storage cask. The methodology is now based on NUREG-1617,

"Standard Review Plan Transportation Packages for Spent Nuclear Fuel" (March 1998). NUREG-1617 is in turn based on NUREG/CR-6487, a report by Lawrence Livermore National Laboratories ("LLNL") entitled "Containment Analysis for Type B Packages Use to Transport Various Contents" (November 1996). Please answer Interrogatories 6 through 8 regarding this analysis.

INTERROGATORY NO. 6. Justify the use of NUREG-1617, which relates to transportation casks, for an accident analysis involving storage casks. Your answer should include a discussion of the unique features of a storage cask compared to a transportation cask, such as the high temperature in a storage canister, the high pressure in a storage canister, the inability to apply ANSI standard N14.5 assumed in NUREG/CR-6487 (annual test of leak rate).

INTERROGATORY NO. 7. To the extent that you answer Requests for Admissions 5 through 7 in the negative, please explain the basis for your answers.

INTERROGATORY NO. 8. Describe how vibrations and heat during transport will affect the leak rate during storage. Your answer should include consideration of the effects of spalling of crud, degradation of fuel assemblies, and the effect of transportation vibrations on weld integrity.

INTERROGATORY NO. 9. Please explain why a sabotage accident, such as an anti-tank missile into a HI-STAR 100 cask, should not be considered a bounding accident, rather than the slight leakage considered by the NRC in NUREG-

1617. Your answer should include a discussion of the expected leak hole diameter following a direct strike by a TOW-2 or MILAN missile, and a comparison with the leak hole diameter calculated in NUREG/CR-6487.

B. DOCUMENT REQUESTS - Utah Contention C

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 informal discovery:

REQUEST NO. 1. Any qualitative or quantitative information and documents that relate to assumptions, calculations, and methodologies for PFS's accident dose limits analyses, exposure duration, exposure pathways, and leak rate for the Holtec casks.

VI. UTAH CONTENTION H (Inadequate Thermal Design)

A. INTERROGATORIES - Utah Contention H

The following interrogatories are based on proprietary information prepared by Holtec for PFS and submitted to the NRC in "HI-STORM Thermal Analysis for PFS RAI," Holtec Report No. HI-992134 (February 9, 1999) ("Thermal Analysis").

REDACTED - PROPRIETARY INFORMATION

REDACTED - PROPRIETARY INFORMATION

Counsel for the State and PFS have agreed that when the State uses information in a Discovery Request that is claimed by PFS to be proprietary or confidential, the State will redact the purported proprietary or confidential information from the Discovery Request served on all persons on the Certificate of Service except counsel for PFS. In its response to the Discovery Request, PFS will either (a) relinquish its proprietary or confidential claim and serve its response, including the relevant language from the State's Discovery Request, on all parties; or (b) file a justification of its proprietary or confidentiality claim with the Board concurrent with serving the response as a proprietary pleading, in accordance with the Board's Order relevant to proprietary pleadings.

REDACTED - PROPRIETARY INFORMATION

B. DOCUMENT REQUESTS - Contention H

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 informal discovery:

REQUEST NO. 1. In addition to any documents that have been produced to date in discovery, please produce any and all documents referring or relating in any way to the thermal design of the proposed ISFSI and/or the Holtec Hi-Storm cask, including all calculations, analyses, and assumptions used to determine the design temperature of the proposed ISFSI and the Hi-Storm cask.

REDACTED - PROPRIETARY INFORMATION

REDACTED - PROPRIETARY INFORMATION

VIII. CONTENTION L (Geotechnical)

A. INTERROGATORIES - Utah Contention L

The following interrogatories refer to an attachment (submitted under separate cover to NRC on February 11, 1999) to PFS's Response to the Safety RAIs, dated February 10, 1999 and relate to the diagrams for the four seismic lines accompanying Bay Geophysical Associates, Inc.'s Final Report entitled *High Resolution Seismic Shear Wave Reflection Profiling for the Identification of Faults at the Private Fuel Storage Facility Skull Valley, Utah*, dated January 1999, specifically, Interpreted Time Sections PFSF-98-A (Fig. 20), PFSF-98-B (Fig. 21), PFSF-98-C (Fig. 22) and PFSF-98-D (Fig. 23). Interrogatories No. 1 through No. 3 relate to the following notations on the insert box for each figure:

- (a) Last notation in the insert box, common to Figures 20 through 23: "Colour Data Type: Traces (Smoothed)," and
- (b) Fourth notation in the insert box, common to:
 - (i) Figures 21 through 23: "Enhanced [or Enh]... Trim Statics"
 - (ii) Figure 20: "RMS..."

INTERROGATORY NO. 1. Describe the purpose of "smoothing" the data (see notation described in (a) above) and also describe what effect "smoothing" had

on processing the data used to develop Figures 20 through 23.

INTERROGATORY NO. 2. Describe how valid data were not eliminated in the "trim" process; describe the purpose of using "statics," which flattens the data to a common horizon and de-emphasizes shallow faulting or near surface displacements; describe how PFS guarded against or compensated for such flattening or de-emphasis; and describe what processing applied to line 4, where the notation on Figure 20 refers to "RMS" as contrasted to the notation "enhanced trim statics" on Figures 21 through 23.

INTERROGATORY NO. 3. Describe how Bay Geophysical arrived at the placement of the Q_p horizon (marked in yellow on Figure 20) and Q/T (Quaternary/Tertiary) horizon (marked in blue on Figure 20); describe the supporting evidence, criteria and controls used to determine the placement of horizons Q_p and Q/T on Figure 20; and describe where the top of Paleozoic or bedrock is located on Figure 20, including the rationale for determining its location.

B. DOCUMENT REQUESTS - Utah Contention L

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 informal discovery:

REQUEST NO. 1. Any documents, including but not limited to data, that were independently developed without "static" or "trim" processing.

REQUEST NO 2. Any velocity profiles for any and all seismic lines.

REQUEST NO. 3. All documents relating to the rationale for the use and application of static and trim processing and smoothing the data.

VIII. CONTENTION O

A. INTERROGATORIES - Utah Contention O

INTERROGATORY NO. 1. Describe the sanitary systems, drains, sumps and other waste generating facilities that will be connected to the septic tank(s) and drainfields at the ISFSI site; the layout and design basis for the septic system(s), including maximum daily flow rate in gallons per day for each system; and describe plans for how PFS will monitor and sample the septic tank sludge and effluent entering the drainfield system(s).

INTERROGATORY NO. 2. Describe the chemicals, by name, quantity and concentration, that may be stored at the proposed ISFSI site, including at the PFS laboratory; the chemicals that may be used and lab tests that may be performed at any location at the proposed ISFSI site; the waste characteristics of any liquid waste, including but not limited to effluent from washing equipment, trucks, and other vehicles, and where and how PFS will dispose of such liquid waste.

INTERROGATORY NO. 3. Describe the effluents that could potentially be disposed of via any drain, to include the sump system in the Canister Transfer Building, from *inter alia* routine activities, such as equipment and cask handling

operations, from spills, and by failure of employees to follow waste routing procedures; and how PFS will monitor effluents originating from the facilities at the ISFSI site to the septic tank system(s), such facilities to include the laboratory, the Canister Transfer Building, and locations at which maintenance operations occur.

INTERROGATORY NO. 4. Describe how PFS will contain, treat and dispose of spills, storm water or any other effluents from construction activities (including sanitary waste disposal) and operational activities, including but not limited to the years the concrete batch plant and asphalt plant are expected to be located and operated at the ISFSI site; from runoff from the storage pads; from activities associated with vehicle, train and equipment maintenance; and from any spills or leakage from underground or above ground petroleum, chemical or other storage tanks.

INTERROGATORY NO. 5. Describe any and all environmental barriers, including but not limited to synthetic and earthen liners, hydraulic pavements, and the foundation design for the hydraulic pavements, that will be emplaced under the storage pads, in the drainage areas at the edge of the concrete storage pads, and in any retention pond; and any and all monitoring systems, including monitoring parameters, for detecting seepage from the concrete storage pads, drainage areas at the edge of the pads, and the retention pond.

INTERROGATORY NO. 6. Describe the number of water wells PFS intends to drill on the Reservation; the formal arrangements between PFS and the Band to drill

each well; approval from other water users who may be affected by PFS's water wells; the specific location, depth, and artesian pressure of each well; the safe annual yield of the aquifer beneath the proposed PFS wells; the projected drawdown of the aquifer from PFS's use and consumption of well water; and details of how the wells will be constructed, including the material to be used for the casing, the depth at which the casing will be perforated and how the well will be grouted.

INTERROGATORY NO. 7. At or before termination of PFS's NRC license or at or before transfer or relinquishment of the site and any buildings or structures to the Skull Valley Band of Goshute Indians, describe the PFS closure and disposal plan for the septic tank system, the retention pond, the storage pads and surrounding areas, and any contingency plans PFS has or remedial measures PFS will take for areas that may be impacted by fuel spills or other contaminants.

B. DOCUMENT REQUESTS - Utah Contention O

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 informal discovery:

REQUEST NO. 1. All designs, drawings or other documents referring or relating to the sanitary and wastewater systems, drains, sumps and other waste generating facilities and all monitoring systems related thereto.

REQUEST NO. 2. All designs, drawings or other documents referring or

relating to the retention pond, the septic tank system(s) and the drain fields and all monitoring systems related thereto.

REQUEST NO.3. All designs, drawings or other documents referring or relating to equipment, truck or other vehicular washing facilities or systems, and documents, including plans and drawing, describing how PFS will handle effluent from those activities.

REQUEST NO. 4. All documents referring or relating to spill prevention measures and effluent containment, treatment and disposal from construction, operation and maintenance activities at the proposed ISFSI site.

REQUEST NO. 5. All documents, including detailed design and construction drawings, referring or relating to all environmental barriers for the storage pads, the drainage areas at the edge of the storage pads, and the retention pond, and all monitoring systems relating thereto.

REQUEST NO. 6. All designs, drawings or other documents referring or relating to the construction of water wells, including but not limited to details about the materials that will be used in the construction and grouting of the well and the size and depth of the casing perforation.

REQUEST NO. 7. All documents referring or relating to the closure of the proposed ISFSI site, including but not limited to closure and disposal of the septic tank system(s), retention pond, storage pads, and contaminated areas from spill or other

pollutants.

XI. CONTENTION DD (Ecology and Species)

A. INTERROGATORIES - Utah Contention DD

INTERROGATORY NO. 1. In its EIS RAI Response to Question 2-1.a (Electrical Systems, SAR Section 4.3.2), PFS states that a "new electrical line will be constructed parallel to the site access road to furnish 12.5 kV to a 480 volt site transformer located at the site." Describe the potential impact and mitigation measures that PFS will take during the construction, operation and use of the line on the following species: peregrine falcon, bald eagle, bobolink, burrowing owl, caspian tern, common yellowthroat, ferruginous hawk, long-billed curlew, short-eared owl, Swainson's hawk, Skull Valley pocket gopher, Pohl's milkvetch and spring parsley.

INTERROGATORY NO. 2. Estimate the total acreage of the Skull Valley pocket gopher's habitat which may potentially be disturbed by the construction and operation of the proposed ISFSI; and describe PFS's intended efforts to minimize the area of potential disturbance and mitigate the potential impacts on the Skull Valley pocket gopher, a rare subspecies of the pocket gopher.

INTERROGATORY NO. 3. Describe the frequency of traffic associated with PFS's operations, including but not limited to heavy haul truck transportation, construction vehicles, and other vehicular traffic, to and from the intermodal transfer facility at Rowley Junction to the Skull Valley ISFSI site, and the impact that the

traffic frequency, and associated noise and human activity, may have on the nesting, mating, breeding and hunting activities of the peregrine falcon, bald eagle, bobolink, burrowing owl, caspian tern, common yellowthroat, ferruginous hawk, long-billed curlew, short-eared owl, and Swainson's hawk.

INTERROGATORY NO. 4. Describe the potential impacts and effects that the construction and operation of the Low rail spur transportation corridor, including but not limited to the alteration of drainage areas, may have on the least chub (a proposed endangered species since September 29, 1995), Columbia spotted frog, milk snake, Townsend's big-eared bat, Brazilian free-tailed bat, ringtail, sage grouse, burrowing owl, and Lewis' woodpecker.

B. DOCUMENT REQUESTS - Utah Contention DD

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 informal discovery:

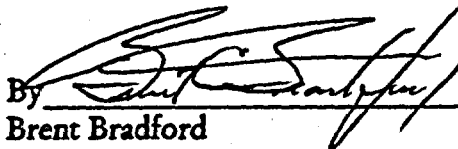
REQUEST NO. 1. All documents that evaluate the impact to species from the construction, operation and use of above ground electrical lines and transformers at and near the proposed ISFSI site and documents that describe the measures PFS will take to mitigate the effect of electric power lines and transformers, and associated construction and maintenance activities, on plants, animals and other species.

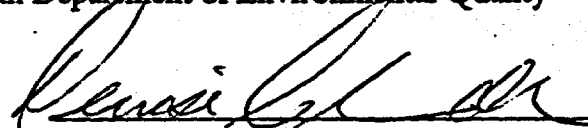
REQUEST NO. 2. All documents, including but not limited to reports and

evaluations, of how construction, operation and decommissioning of the proposed ISFSI and Low rail spur, and vehicular and train traffic to and from the proposed ISFSI, may impact the plants, animals and other species, including but not limited to the Skull Valley pocket gopher, and the ecological effects of such activities.

DATED this 9th day of April, 1999.

Respectfully submitted,
STATE OF UTAH

By 
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CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S FIRST SET OF
DISCOVERY REQUESTS DIRECTED TO THE APPLICANT (redacted version)
was served on the persons listed below (unless otherwise noted) by electronic mail
(unless otherwise noted) with conforming copies by United States mail first class, this
9th day of April, 1999:

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