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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'00 FEB 11 P3:30

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECURITY
RULEMAKING AND
ADJUDICATIONS STAFF

In the Matter of:)	Docket No. 72-22-ISFSI
)	
PRIVATE FUEL STORAGE, LLC)	ASLBP No. 97-732-02-ISFSI
(Independent Spent Fuel)	
Storage Installation))	January 31, 2000

**STATE OF UTAH'S FIFTH SET OF DISCOVERY REQUESTS
DIRECTED TO THE NRC STAFF (UTAH CONTENTIONS E, H AND L)**

Pursuant to the Board's Orders dated April 22, 1998 (LBP-98-7), June 29, 1998 and August 20, 1998, 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" or "NRC") answer the following Interrogatories and Requests for Admissions separately, fully, in writing, and under oath within 10 days after service of this discovery request and produce documents requested below within 15 days after service of this request.

As required by 10 C.F.R. § 2.744(a), this discovery request is being served on the NRC Executive Director for Operations. In addition, pursuant to § 2.720(h), the State submits that this discovery is necessary to a proper decision in this proceeding and that answers to the interrogatories are not reasonably obtainable through any other sources.

I. INSTRUCTIONS

A. Scope of Discovery. These interrogatories and requests for admissions and production of documents are directed to NRC Staff and any of the Staff's contractors

or agents (collectively "NRC" or "Staff"). The interrogatories cover all information in the possession, custody and control of NRC, including information in the possession of officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by NRC, or anyone else acting on their behalf or otherwise subject to NRC's 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 NRC obtains or discovers any additional information which is responsive to these interrogatories and request for admissions and production of documents, NRC 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:

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 U.S. Nuclear Regulatory Commission, or anyone else acting on its behalf or otherwise subject to its 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, 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.

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 (*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.

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 employees, representatives, investigators, and agents.

III. DISCOVERY REQUESTS

A. CONTENTION E - FINANCIAL ASSURANCE

Document Requests - Utah E

DOCUMENT REQUEST NO. 1 - UTAH E: Please refer to Staff's Response dated January 28, 2000, to Admission Request No. 53, State's 4th Set of Discovery to the Staff. Please provide all documents that describe or otherwise address "the shipping

reactor's primary responsibility for accidents involving its fuel" when the fuel is shipped from an ISFSI and not from a reactor.

DOCUMENT REQUEST NO. 2 - UTAH E: Please provide all documents that the Staff has written or compiled relevant to cases where NRC Part 50 or Part 72 licensees have violated NRC rules in order to cut financial costs.

DOCUMENT REQUEST NO. 3 - UTAH E: Please provide all documents that describe or otherwise address the demand for the service PFS proposes to provide.

DOCUMENT REQUEST NO. 4 - UTAH E: Please provide all documents that describe or otherwise address the cost of constructing an NRC licensed ISFSI.

DOCUMENT REQUEST NO. 5 - UTAH E: Please provide all documents that describe or otherwise address the cost of operating and maintaining an NRC licensed ISFSI.

DOCUMENT REQUEST NO. 6 - UTAH E: Please provide all documents that describe or otherwise address the cost of decommissioning an NRC licensed ISFSI.

DOCUMENT REQUEST NO. 7 - UTAH E: Please provide all testimony or affidavits filed by the Staff in any part 72 licensing proceeding on the issue of financial qualifications.

DOCUMENT REQUEST NO. 8 - UTAH E: Please provide all documents which address the issue of the implications for health and safety when a Part 50 or Part 72 NRC licensee is in poor or deteriorating financial condition.

DOCUMENT REQUEST NO. 9 - UTAH E: Please provide all documents that

relate in any way to the two license conditions that appeared in the Staff's Safety Evaluation Report (SER), dated December 15, 1999, including how the conditions were developed.

DOCUMENT REQUEST NO. 10 - UTAH E: Please provide all documents that relate in any way to the development of the two license conditions that appear in the Staff's corrected version of the SER, including how the conditions were developed.

A. CONTENTION H - INADEQUATE THERMAL DESIGN

This discovery follows up on the NRC Staff's Objections and Responses to the "State of Utah's Third Set of Discovery Requests Directed to the NRC Staff (Utah Contention H) (January 10, 2000), particularly the Staff's response to Request for Admission No. 17. Request for Admission No. 17 and NRC Staff response are as follows:

Request for Admission No. 17: Do you admit that the NRC Staff or one of its contractors ran the ANSYS computer program for the purpose of evaluating the thermal design of the HI-STAR 100 transportation cask system.

STAFF RESPONSE: No. However, on information and belief, an individual member of the Staff (Mr. Steven Hogsett) performed an ANSYS computer run for the purpose of obtaining a better understanding of the HI-STAR cask design and to confirm the Holtec ANSYS calculations. Mr. Hogsett is no longer employed at the NRC.

1. Requests for Admissions - Utah H

REQUEST FOR ADMISSION NO. 1 - UTAH H. In the SER for the HI-STORM 100 cask system, the Staff states that:

Previous staff evaluations of the applicant's HI-STAR 100 SAR's FLUENT computer code results, using the ANSYS finite element computer code, confirmed the temperature calculation results of this method.

Do you admit that this representation is incorrect?

REQUEST FOR ADMISSION NO. 2 - UTAH H. Do you admit that the NRC Staff has no basis for verifying the representation quoted above in Request for Admission No. 1?

REQUEST FOR ADMISSION NO. 3 - UTAH H. At page 3.4-7 of the HI-STAR TSAR (Rev. 8), Holtec states that: "The FLUENT model was found to yield conservative results in comparison to the ANSYS model for the 'black' surface case." Do you admit that the NRC Staff ran the ANSYS code to verify Holtec's ANSYS model for the "black" surface case?

REQUEST FOR ADMISSION NO. 4 - UTAH H. At page 3.4-7 of the HI-STAR SER (Rev 8), Holtec states: "The FLUENT model benchmarked in this manner is used to solve the gray body radiation problem to provide the necessary results for determining the effective thermal conductivity of the governing PWR fuel assembly." Do you admit that the NRC Staff ran the ANSYS code to verify Holtec's ANSYS model for the "gray body radiation problem?"

REQUEST FOR ADMISSION NO. 5 - UTAH H. In the Staff's January 10, 2000, response to the State's Request for Admission No. 17 regarding Contention H, the Staff states that "Mr. Steven Hogsett performed an ANSYS computer run for the purpose of obtaining a better understanding of the HI-STAR cask design and to confirm the Holtec ANSYS calculations." Do you admit that this statement contradicts the statement in the HI-STORM SER that is quoted above in Request for Admission No. 1, in the sense that the

Staff used ANSYS to evaluate only Holtec's black body ANSYS calculations?

REQUEST FOR ADMISSION NO. 6 - UTAH H. With reference to the Staff's response to Request for Admission No. 17 that is quoted in Request for Admission No. 5 above, do you admit that Mr. Hogsett did not use ANSYS to evaluate Holtec's FLUENT calculations?

2. Interrogatories - Utah H

INTERROGATORY NO. 9 - UTAH H.¹ Identify all NRC Staff members who participated in the review and/or approval of the thermal design of the HI-STAR 100 and HI-STORM cask systems, including each individual's title, his or her role in the review process, the time period of their participation in the review, when he or she subsequently left his or her position or the agency (if applicable), and whether he or she left complete records of his or her work on departing.

INTERROGATORY NO. 10 - UTAH H. Explain the apparent discrepancy between (a) the Staff's statements in Section 4.5.4 of the HI-STORM 100 SER and Section 4.5.4 of the HI-STAR 100 SER to the effect that the Staff performed an independent computer analysis to confirm the results of the Holtec thermal analysis, and (b) the Staff's January 10, 2000 response to Request for Admission No. 17, which indicates that the Staff believes, but is unable to verify, that any such analysis was performed. Your explanation should include a discussion of whether the NRC Staff intends to retract and/or

¹ Numbering for these interrogatories is continued from the last interrogatory previously submitted to the Staff.

modify any statements in the SERs for the HI-STAR 100 or HI-STORM 100 cask systems regarding the adequacy of Holtec's thermal analysis for those cask systems.

3. Document Production Requests - Utah H

DOCUMENT REQUEST NO. 1 - UTAH H: Provide all documents, other than documents generated by Holtec or PFS, on which the NRC Staff relied in reaching the safety findings reported in Section 4.5.4 of the SER for the HI-STAR 100 cask system.

DOCUMENT REQUEST NO. 2 - UTAH H: Provide all documents, other than documents generated by Holtec or PFS that are in the public record, on which the NRC Staff relied in reaching the safety findings reported in Section 4.5.4 of the SER for the HI-STORM 100 cask system.

DOCUMENT REQUEST NO. 3 - UTAH H: Provide all documents, other than documents generated by Holtec or PFS that are in the public record, on which the NRC Staff relied in reviewing the thermal design for the PFS facility.

DOCUMENT REQUEST NO. 4 - UTAH H: Provide all documents, other than documents generated by Holtec or PFS that are in the public record, on which the NRC Staff relied in reaching the safety findings reported in Section 4.5.4 of the SER for the HI-STORM 100 cask system.

DOCUMENT REQUEST NO. 5 - UTAH H: Provide all documents which discuss in any way Mr. Hogsett's review of the HI-STAR 100 and HI-STORM 100 TSARs; the implications of his departure from the agency with respect to the safety findings in the SERs for the HI-STAR 100 and HI-STORM 100 cask systems or the safety review of the

PFS facility thermal design; and/or the implications of the lack of documentation of his analyses with respect to the safety findings in the SERs for the HI-STAR100 and HI-STORM 100 cask systems or the safety review of the PFS facility thermal design.

DOCUMENT REQUEST NO. 6 - UTAH H: If the NRC admits Requests for Admission No. 3 and/or No. 4 above, provide all calculations, correspondence, and any other materials that the Staff relied on or generated in performing the analysis. This request does not include materials submitted by PFS or Holtec that are on the public record.

DOCUMENT REQUEST NO. 7 - UTAH H: In the SER for the HI-STORM 100 cask system, the Staff states that:

The staff performed independent calculations for the form loss and friction loss coefficients used by the applicant to simulate the hydraulic characteristics of the internal air passage.

Please provide copies of all calculations that were performed.

B. CONTENTION L - GEOTECHNICAL

1. Document Requests - Utah Contention L

DOCUMENT REQUEST NO. 1 - UTAH L: As referenced in the Safety Evaluation Report dated December 15, 1999, please produce a copy of Stamatakos, J., R. Chen, M. McCann, and A.H. Chowdhury, 1999, *Seismic Ground Motion at the Private Fuel Storage Facility Site in the Skull Valley Indian reservation, San Antonio, TX: Center for Nuclear Waste Regulatory Analyses*. This document is directly relevant to the Staff's analyses of seismic ground motion and the grant of the Applicant's seismic exemption

request. See SER at 2-36. According to the State's knowledge, the document is not exempt from disclosure under 10 C.F.R. § 2.790.

DOCUMENT REQUEST NO. 2 - UTAH L. As referenced in the Safety Evaluation Report dated December 15, 1999, please produce a copy of Chen, R., and A.H. Chowdhury, 1998, *Seismic Ground Motion at the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation Site in Idaho National Engineering and Environmental Laboratory—Final Report*, CNWRA 98-007. San Antonio, TX: Center for Nuclear Waste Regulatory Analyses. This document is directly relevant to the Staff's justification of granting the Applicant's seismic exemption request conditional on using a 2,000 year return period interval. See SER at 2-45. According to the State's knowledge, the document is not exempt from disclosure under 10 C.F.R. § 2.790.

DOCUMENT REQUEST NO. 3 - UTAH L. Please produce copies of the exemption request and the deterministic and probabilistic ground-motion analyses, for the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation in Idaho National Engineering and Environmental Laboratory. These document(s) are directly relevant to the Staff's justification of granting the Applicant's seismic exemption request conditional on using a 2,000 year return period interval. See SER at 2-45. According to the State's knowledge these documents are not exempt from disclosure under 10 C.F.R. § 2.790.

DOCUMENT REQUEST NO. 4 - UTAH L. To the extent the Staff is relying on the specific cask stability analyses to support its justification of the Applicant's seismic exemption request conditioned on using a 2,000 year return period interval, please produce

copies of those analyses for cask tipover. These document(s) may be directly relevant to the Staff's justification for granting the Applicant's seismic exemption request conditional on using a 2,000 year return period interval. According to the State's knowledge, these documents are not exempt from disclosure under 10 C.F.R. § 2.790.

DATED this 31st day of January, 2000.

Respectfully submitted,



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CERTIFICATE OF SERVICE

'00 FEB 11 P3:29

I hereby certify that a copy of STATE OF UTAH'S FIFTH SET OF DISCOVERY
REQUESTS DIRECTED TO THE NRC STAFF (UTAH CONTENTIONS **EA** AND **L**)

OFFICE OF SETTING
RULES AND PROCEDURES
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 31st day of January, 2000:

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