

RAS 3782

RELATED CORRESPONDENCE

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OFFICE OF THE SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

**APPLICANT'S OBJECTIONS AND RESPONSES
TO THE STATE OF UTAH'S THIRTEENTH SET OF
DISCOVERY REQUESTS DIRECTED TO THE APPLICANT**

Applicant Private Fuel Storage, L.L.C. ("Applicant" or "PFS") files the following objections and responses to "State of Utah's Thirteenth Set of Discovery Requests Directed to the Applicant" ("State's Thirteenth Discovery Requests").

I. GENERAL OBJECTIONS

These objections apply to the Applicant's responses to all of the State's Thirteenth Discovery Requests.

1. The Applicant objects to the State's instructions and definitions on the grounds and to the extent that they request or purport to impose upon the Applicant any obligation to respond in manner or scope beyond the requirements set forth in 10 C.F.R. §§ 2.740, 2.741 and 2.742.

2. The Applicant objects to the State's Request for Production of Documents to the extent that it requests discovery of information or documents protected under the attorney-client privilege, the attorney work product doctrine, and limitations on discovery of trial preparation

Template = SECY-035

SECY-02

materials and experts' knowledge or opinions set forth in 10 C.F.R. § 2.740 or other protection provided by law.

II. GENERAL DISCOVERY

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.

APPLICANT'S RESPONSE:

In addition to counsel for PFS, the following persons were consulted and/or supplied information in responding to the discovery requests for the State's Thirteenth Discovery Requests:

Dr. Alan I. Soler
Holtec International
555 Lincoln Drive West
Marlton, NJ 08053

Dr. Everett L. Redmond II
Holtec International
555 Lincoln Drive West
Marlton, NJ 08053

Dr. C. Allin Cornell
110 Coquito Way
Portola Valley CA 94028

In response to whether the information or opinions of anyone who was consulted in connection with PFS's response to an interrogatory or request for admission differs from the

PFS's written answer to the discovery request, PFS is unaware of any such difference among those consulted.

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") (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.

APPLICANT'S RESPONSE:

PFS has updated its document repository 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.

APPLICANT'S RESPONSE:

See Applicant's Eighth Supplemental Response to State's First Request for Discovery, dated October 2, 2001, containing a list of witnesses on which the Applicant intends to rely for responses to Part B of Utah L. Applicant will revise and update this list as necessary.

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.

APPLICANT'S RESPONSE:

See response to General Interrogatory No. 3.

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.

APPLICANT'S RESPONSE:

See response to General Interrogatory No. 3.

III. 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:

DOCUMENT 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.

APPLICANT'S RESPONSE:

To the extent PFS has not previously produced documents responsive to previous discovery requests, Applicant will forward them to its repository of documents maintained at Parsons, Behle and Latimer in Salt Lake City, Utah. Applicant has previously provided documents relevant to Part B of Utah L at its document repository. To the extent that documents were used in responding to the interrogatories and requests for admissions contained in the State's Thirteenth Discovery Requests and such documents have not already been provided to the State, PFS will update its repository of documents relevant to Part B of Utah L, subject to any applicable claims of privilege.

DOCUMENT 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.

APPLICANT'S RESPONSE:

Applicant objects to this Request as being overly broad, vague, unduly burdensome and seeking privileged material. Applicant will provide such documents, with respect to its witnesses/experts, as agreed to by the State and PFS. See Applicant's Objections and Non-Proprietary Responses to State of Utah's Fourth Set of Discovery Requests and Supplemental Responses to State of Utah's Third Set of Discovery Requests [*Non-Proprietary Version*], Response to General Interrogatory No. 5 (Dec. 6, 1999).

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.

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. Part B of Utah L alleges that "PFS should be required either to use a probabilistic methodology with a 10,000-year return period or comply with the existing deterministic analysis requirement of section 72.102(f), or, alternatively, use a return period significantly greater than 2000 years." How Holtec's HI-STORM 100 cask, as designed, will perform in the presence of the ground acceleration from a 2,000 year return interval earthquake is not relevant to the methodology or standard that should be used for defining the design earthquake. Applicant further objects to this Request in that it assumes a fact that has not been

established, that is, that a Holtec HI-STORM 100 cask will fall over as a result of ground acceleration from a 2,000 year return interval earthquake. Notwithstanding these objections, and assuming a hypothetical tip-over from a 2000 year return interval earthquake, the Request is denied. Any damage would be limited to localized crushing in the area of impact. Declaration of Krishna P. Singh, Alan I. Soler, and Everett L. Redmond II (November 9, 2001) (“Holtec Dec.”) ¶¶ 25-26.

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

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes a fact that has not been established, that is, that a Holtec HI-STORM 100 cask will fall over as a result of ground acceleration from a 10,000 year return interval earthquake. Notwithstanding these objections, and assuming a hypothetical tip-over from a 10,000 year earthquake, the Request is denied. Any damage would be limited to localized crushing in the area of impact. Holtec Dec. ¶¶ 25-26.

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

APPLICANT'S RESPONSE:

Applicant objects to this Request as vague and ambiguous in that the term “84th percentile earthquake” is not defined. Applicant further objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes a fact that has not

been established, that is, that a Holtec HI-STORM 100 cask will fall over as a result of ground acceleration from an “84th percentile earthquake”. Notwithstanding these objections, and assuming that the “84th percentile earthquake” refers to the “deterministic” earthquake for the site, and further assuming a hypothetical tip-over from such an earthquake, the Request is denied. Any damage would be limited to localized crushing in the area of impact. Holtec Dec.

¶¶ 25-26

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

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes a fact that has not been established, that is, that the concrete contained in a Holtec HI-STORM 100 cask will crack. Notwithstanding these objections, the Request is denied.

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.

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes facts that have not been established, that is, that the concrete in a Holtec HI-STORM 100 cask will crack and that, if it does, it will need to be repaired.

Notwithstanding these objections, assuming hypothetically that the cask concrete would need to be repaired, the Request is admitted.

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.

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes facts that has not been established, that is, that a Holtec HI-STORM 100 cask will tip over during a seismic event. Notwithstanding these objections, and assuming a hypothetical tip-over from a seismic event, the Request is denied except to admit that there will local compression in the area of impact. Holtec Dec. ¶¶ 25-26.

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.

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes a fact that has not been established, that is, that a Holtec HI-STORM 100 cask will tip over during a seismic event. Applicant further objects to the Request in that whether the cask metal shells “may” deform is vague and ambiguous. Notwithstanding these objections, and assuming a hypothetical tip-over from a seismic event, the Request is denied except to admit that there will be localized deformation in the area of impact. Holtec Dec. ¶¶ 25-26.

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.

APPLICANT'S RESPONSE:

Applicant objects to this Request as vague and ambiguous in that the term “fragility curves” is not defined. Assuming the term “fragility curves” means curves that probabilistically depict the vulnerability of plant structures, systems, and components (i.e., the probability of their reaching a pre-defined limit state) as a function of earthquake ground shaking level, Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes a fact that has not been established, that is, that in order to meet specified seismic performance goals for a facility it is necessary to develop fragility curves for individual structures or components. Notwithstanding these objections, the Request is admitted.

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.

APPLICANT'S RESPONSE:

Applicant object to this Request as vague and ambiguous in that the term “fragility curves” is not defined. Assuming the term “fragility curves” means curves that probabilistically depict the vulnerability of plant structures, systems, and components (i.e., the probability of their reaching a pre-defined limit state) as a function of earthquake ground shaking level, Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes facts that has not been established, that is, that in order to meet specified seismic performance goals for a facility it is necessary to develop fragility curves for individual structures or components. Notwithstanding these objections, the Request is admitted.

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.

APPLICANT'S RESPONSE:

Applicant object to this Request as vague and ambiguous in that the term “fragility curves” is not defined. Assuming the term “fragility curves” means curves that probabilistically depict the vulnerability of plant structures, systems, and components (i.e., the probability of their reaching a pre-defined limit state) as a function of earthquake ground shaking level, Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes a fact that has not been established, that is, that in order to meet specified seismic performance goals for a facility it is necessary to develop fragility curves for individual structures or components. Notwithstanding these objections, the Request is admitted.

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.

APPLICANT'S RESPONSE:

Applicant object to this Request as vague and ambiguous in that the term “fragility curves” is not defined. Assuming the term “fragility curves” means curves that probabilistically depict the vulnerability of plant structures, systems, and components (i.e., the probability of their reaching a pre-defined limit state) as a function of earthquake ground shaking level, Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it assumes a fact that has not been established, that is, that in order to meet specified seismic

performance goals for a facility it is necessary to develop fragility curves for individual structures or components. Notwithstanding these objections, the Request is admitted.

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.

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that risk reduction factors are applied to reduce earthquake excitation. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of risk reduction factors.

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, 11th discovery set”).

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of specified return period. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the mean component failure return period.

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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. *See* Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of specified return period. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. *See* Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of a specified level. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of specified return period. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of specified return period. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of a specified level. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of specified return period. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of specified return period. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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, 11th discovery set for definition of “mean component failure return period.”

APPLICANT'S RESPONSE:

Applicant objects to this Request as beyond the scope of the contention admitted by the Licensing Board. See Response to Request for Admission No. 1. Applicant further objects to this Request in that it erroneously assumes that “the mean component failure return period” is calculated for the ground motions associated with an earthquake of a specified level. Such a parameter is impossible to compute. Notwithstanding these objections, the Request is denied on the basis that it misconstrues the uses and applications of the 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 11th 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.

APPLICANT'S RESPONSE:

Applicant objects to this interrogatory to the extent it asks “how” the 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” as beyond the scope of the contention admitted by the Licensing Board. How the detailed design of the facility’s structures and components is carried out to meet the specified design guidelines is not relevant to the methodology or standard that should be used for defining the design earthquake, which is the subject of Part B of Utah L. Notwithstanding this objection, Applicant states that, for the reasons given in the November 9, 2001 Declaration of C. Allin Cornell, designing for the 2,000-year mean return period earthquake ground motion and using the design guidelines in the applicable NRC Standard Review Plans means that typical important-to-safety systems, structures and components at the PFSF, such as the Canister Transfer Building and the HI-STORM storage casks and canisters, can be expected to have seismic failure probabilities 5 to 20 or more times lower than the design basis earthquake mean annual probability of exceedence (“MAPE”). With respect to specific elements of the seismic response of components or structures, such as the “relative movement of HI-STORM 100 casks” and others cited in the interrogatory, such potential seismic response phenomena are only intermediate points in the determination of the probability of failure of the component or structure. Such seismic response elements are addressed separately (e.g., the relative movement of the storage casks and their stability in a seismic event have been analyzed by the cask manufacturer Holtec International (“Holtec”)). Recent analyses by Holtec

demonstrate that the storage casks to be deployed at the PFSF have significant margins against even the occurrence of such seismic response phenomena and can, for example, withstand the ground motions associated with a beyond-design basis, 10,000 year return period earthquake without tipping over.

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 11th Discovery Set, Interrogatory No. 15, ¶ 6.

APPLICANT'S RESPONSE:

Applicant objects to this interrogatory to the extent it asks “how” the storage casks and other safety related structures “could withstand the loadings resulting from a 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” as beyond the scope of the contention admitted by the Licensing Board. See Response to Interrogatory No. 17. Notwithstanding this objection, Applicant states that as explained in the November 9, 2001 Declarations of Bruce E. Ebbeson, (“Ebbeson Dec.”) and Krishna P. Singh, Alan I. Soler, and Everett L. Redmond II (“Holtec Dec.”) each of the important-to-safety SSCs at the PFSF have been demonstrated by analysis to be capable of withstanding the accelerations imparted by an earthquake significantly more severe than the 2,000 year return period design basis earthquake for the PFSF. See Ebbeson Dec. para. 16-27; Holtec Dec. para. 15-37.

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).

APPLICANT'S RESPONSE:

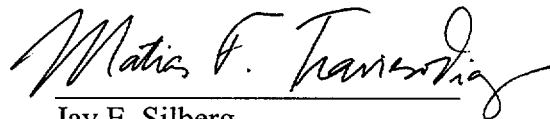
Applicant objects to this interrogatory to the extent it asks for information protected by attorney work product and attorney-client privilege, and further objects to this interrogatory in that the information sought is subject to a pending objection by the NRC Staff. Notwithstanding these objections, Applicant states that information responsive to this interrogatory was provided by Dr. Cornell in his deposition. *See* Cornell Tr. at 10-16, 25-33, 68-78.

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.

APPLICANT'S RESPONSE:

As set forth in the PFSF Safety Analysis Report, the design basis ground motion to which the storage casks and other safety-related structures at the PFS facility are currently designed are those of the 2,000 year return period earthquake taking place at the facility site. Applicant objects to the remainder of the interrogatory as beyond the scope of the contention admitted by the Licensing Board. See Response to Interrogatory No. 17.

Respectfully submitted,

A handwritten signature in black ink, reading "Matias F. Travieso-Diaz". The signature is fluid and cursive, with a horizontal line drawn underneath the name.

Jay E. Silberg
Ernest L. Blake
Paul A. Gaukler
Matias F. Travieso-Diaz
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Counsel for Private Fuel Storage, L.L.C.

Dated: November 16, 2001

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

CERTIFICATE OF SERVICE

I hereby certify that copies of the Applicant's Objections and Responses to the State of Utah's Thirteenth set of Discovery Requests Directed to the Applicant were served on the persons listed below (unless otherwise noted) by e-mail with conforming copies by U.S. mail, first class, postage prepaid, this 16th day of November, 2001.

G. Paul Bollwerk III, Esq., Chairman
Administrative Judge
Atomic Safety and Licensing Board Panel
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* By U.S. mail only


Matias F. Travieso-Diaz

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety And Licensing Board

In the Matter of

PRIVATE FUEL STORAGE L.L.C.

(Private Fuel Storage Facility)

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)
)

Docket No. 72-22

ASLBP No. 97-732-02-ISFSI


DECLARATION OF DR. ALAN I. SOLER

Dr. Alan Soler states as follows under penalties of perjury:

1. I am an Executive Vice-President with Holtec International. In this position, I am responsible for the development of analytical methods to evaluate cask designs.
2. I am duly authorized to verify Applicant's Response to State's Thirteenth Set of Discovery Requests to Applicant; specifically, Request for Admission Nos. 1-4, 6 and 7 and Interrogatory Nos. 18 and 20, as they relate to the performance of HI-STORM 100 storage casks and fuel canisters in a seismic event.
3. I certify that the statements and opinions in such responses are true and correct to the best of my personal knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 16, 2001



Dr. Alan I. Soler

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety And Licensing Board

In the Matter of)	
)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

DECLARATION OF DR. EVERETT L. REDMOND II

Dr. Everett L. Redmond II states as follows under penalties of perjury:

1. I am a Principal Engineer and Manager of the Nuclear Physics Department with Holtec International. I am responsible for all shielding, criticality, and confinement analysis work related to Holtec's dry cask storage systems, and in particular for the site-specific shielding analyses in support of deployment of the HI-STORM 100 Cask System at the PFSF ISFSI.

2. I am duly authorized to verify Applicant's Response to State's Thirteenth Set of Discovery Requests to Applicant; specifically, Request for Admission No. 4 and Interrogatory No. 18, as they relate to radiation doses at the site boundary.

3. I certify that the statements and opinions in such responses are true and correct to the best of my personal knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 16, 2001



Dr. Everett L. Redmond II

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety And Licensing Board

In the Matter of)	
)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

DECLARATION OF DR. C. ALLIN CORNELL

Dr. C. Allin Cornell states as follows under penalties of perjury:

1. I am a Professor at Stanford University California and an independent engineering consultant. I am a consultant to Private Fuel Storage, L.L.C.
2. I am duly authorized to verify Applicant's Response to State of Utah's Thirteenth Requests for Discovery; specifically, Request for Admission Nos. 12-21 and Interrogatory Nos. 17 and 19.
3. I certify that the statements and opinions in such responses are true and correct to the best of my personal knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 16, 2001.


Dr. C. Allin Cornell

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

DECLARATION OF MATIAS F. TRAVIESO-DIAZ

Matias F. Travieso-Diaz states as follows under penalty of perjury:

1. I am a member of the law firm Shaw Pittman LLP in Washington, D.C.
2. I am duly authorized to verify Applicant's Objections and Responses to the State of Utah's Thirteenth Set of Discovery Requests Directed to Applicant; specifically, the responses to General Interrogatory Nos. 3-5 and Interrogatory No. 20.
3. I certify that the statements in such responses are true and correct to the best of my personal knowledge and belief.
4. I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 16, 2001.


Matias F. Travieso-Diaz