

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
PRIVATE FUEL STORAGE, LLC)	Docket No. 72-22-ISFSI
)	
(Independent Spent)	
Fuel Storage Installation))	

NRC STAFF'S OBJECTIONS AND RESPONSES
TO THE "STATE OF UTAH'S FOURTEENTH SET OF
DISCOVERY REQUESTS DIRECTED TO THE NRC STAFF"

INTRODUCTION

On November 5, 2001, the State of Utah ("State") filed the "State of Utah's Fourteenth Set of Discovery Requests Directed to the NRC Staff" ("Fourteenth Request"), concerning the application for an Independent Spent Fuel Storage Installation ("ISFSI") filed by Private Fuel Storage, L.L.C. ("PFS" or "Applicant"). In its Request, the State filed (a) 11 requests for admission, and (b) 7 interrogatories (Interrogatory Nos. 9-15) concerning Contention Utah L, Part B (seismic exemption). The NRC Staff ("Staff") hereby files its objections and responses to the State's Fourteenth Request,¹ as follows.²

GENERAL OBJECTIONS

Objection 1. The Staff objects to each of the State's discovery requests, in that the State has not complied with the Commission's regulations that govern discovery from the Staff. In this regard, it is well established that discovery against the Staff rests on a different footing than

¹ These objections and responses are filed pursuant to a one-day extension of time agreed to by Counsel for the State.

² The Staff's answers to the State's requests for admissions are supported by the Affidavits of John Stamatakos and Keith K. McDaniel, attached hereto; objections are stated by Counsel.

discovery in general. *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-634, 13 NRC 96, 97-98 (1981). While discovery from parties in an NRC adjudicatory proceeding is generally governed by the provisions of 10 C.F.R. § 2.740 *et seq.*, interrogatory and document discovery against the Staff is governed by the provisions of 10 C.F.R. §§ 2.720(h)(ii)-(iii), 2.744 and 2.790.³ These regulations establish certain limits to the Staff's obligation to respond to discovery requests. In particular, with regard to requests for the production of documents, the Commission's rules provide:

(a) A request for the production of an NRC record or document not available pursuant to 10 C.F.R. § 2.790 . . . shall set forth the records or documents requested, either by individual item or by category, and shall describe each item or category with reasonable particularity and shall state why that record or document is relevant to the proceeding.

(b) If the Executive Director for Operations objects to producing a requested record or document on the ground that (1) it is not relevant or (2) it is exempted from disclosure under § 2.790 and the disclosure is not necessary to a proper decision in the proceeding or the document or the information therein is reasonably obtainable from another source, he shall so advise the requesting party.

10 C.F.R. § 2.744(b).⁴

Moreover, it is an adequate response to *any* discovery request for a party to state that the information or document requested is available in the public domain and to provide information to

³ See *also* 10 C.F.R. §§ 2.740(f)(3), 2.740a(j), 2.740b(a), and 2.741(e) (excluding discovery from the Staff from the general provisions of those regulations).

⁴ The rule further provides for application by the requesting party to the presiding officer to compel production of the documents, where the movant shows that the document is relevant to the issues in the proceeding; and the document is not exempt from disclosure under 10 C.F.R. § 2.790 -- or, if exempt, that the document or information is necessary to a proper decision in the proceeding and is not reasonably obtainable from another source. 10 C.F.R. §§ 2.744(c)-(d). Additionally, 10 C.F.R. § 2.744(e) provides a framework for limited disclosure (under a protective order) of documents exempt from disclosure under 10 C.F.R. § 2.790, upon a finding by the presiding officer that such disclosure is necessary to a proper decision in the proceeding. *Cf.* 10 C.F.R. § 2.740(c).

locate the material requested. 10 C.F.R. § 2.740(b)(1); *accord, Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-79-8, 10 NRC 141, 147-148 (1979).

Here, the State has not complied with the Commission's requirements governing discovery against the Staff. First, the State has not indicated that the requested documents and information are not available in the public domain. Indeed, some of the documents requested by the State are available to the public in the Commission's Public Document Room (PDR), or have previously been provided to the State. Further, the State has not indicated that the requested information and documents are exempt from disclosure under 10 C.F.R. § 2.790 or that it can not obtain the documents from public sources. Similarly, to the extent that any documents may be exempt from disclosure, such as the documents requested by the State concerning the NRC's rulemaking process and the development of a rulemaking approach, the State has not explained why any such exempt items are necessary to a proper decision in the proceeding.⁵

Objection 2. The Staff objects to each of the State's discovery requests, insofar as they request information that is not relevant to the issues in this proceeding and/or that exceeds the scope of admitted contention Utah L, Part B (seismic exemption) in this proceeding.

Objection 3. The Staff objects to the State's discovery requests insofar as they relate to matters which are outside the jurisdiction of the NRC and/or are beyond the proper scope of this proceeding.

Objection 4. The Staff objects to each of the State's discovery requests, insofar as they seek to impose an obligation to respond that is different from or greater than the obligations imposed by Commission requirements in 10 C.F.R. Part 2. *See, e.g., "Instruction B" ("Supplemental Responses")* (Request at 2).

⁵ In addition, to the extent that the instant discovery requests seek information that has been withheld from public disclosure as proprietary information, the State has been afforded access to that material by the Applicant under a confidentiality agreement, and the State has shown no reason why it could not obtain the requested information from the Applicant.

Objection 5. The Staff objects to each of the State's discovery requests, insofar as they may request information or documents from the "Nuclear Regulatory Commission," "NRC," or other persons or entities who are not NRC Staff members or consultants in this proceeding. See, e.g., "Definition A" (Request at 3). The NRC and persons other than Staff members (e.g., Commissioners, Commissioners' Assistants, Licensing Board members, ACRS members, etc.) are not parties to this proceeding and are not properly subject to the State's requests for discovery.

Objection 6. The Staff objects to each of the State's discovery requests, insofar as they request personal information such as the home address and telephone numbers of persons employed by or affiliated with the Staff, and which may be protected from disclosure under 10 C.F.R. § 2.790(a). See, e.g., "Definition E.1" ("describe" or "identify") (Request at 4).

Objection 7. The Staff objects to each of the State's discovery requests, insofar as they may request information pertaining to or copies of intra-agency memoranda, notes and other pre-decisional materials; or information or documents protected under the attorney-client privilege, the doctrines governing the disclosure of attorney work product and trial preparation materials, and/or any other privilege or exemption that warrants or permits the non-disclosure of documents under the Freedom of Information Act, as set forth in 10 C.F.R. § 2.790(a). Notwithstanding this objection, to the extent, if any, that documents are requested in the State's Fourteenth Request, the Staff will prepare a privilege log to identify documents that are sought to be withheld from discovery as privileged or exempt from disclosure, and will produce that log to the State.

Objection 8. The Staff objects to each of the State's discovery requests, insofar as they request information concerning the NRC's internal rulemaking process and the development of a generic Part 72 seismic rulemaking approach, which matters are not relevant to the issues in this proceeding and/or exceed the scope of admitted contention Utah L, Part B (seismic exemption); further, the State has not explained why any such exempt items are necessary to a proper decision in the proceeding.

Objection 9. The Staff objects to each of the State's discovery requests, insofar as they may pertain to Contention Utah L, Part A (geotechnical), which is an issue that has previously been the subject of discovery and is not currently subject to discovery under the Licensing Board's scheduling orders in this proceeding. See, e.g., "Attachment A" to "Order (General Schedule Revisions)," dated September 20, 2001 (discovery against the Staff on Contention Utah L, Part A, has been completed, except as to new matters for which discovery commences January 2, 2002).

RESPONSES TO DISCOVERY REQUESTS

Notwithstanding the above objections to the State's Fourteenth Request, and without waiving these objections or its right to interpose these or other objections in the future, the Staff hereby states the following additional objections and responses to the State's Request.

CONTENTION UTAH L, PART B - Geotechnical

A. Requests for Admissions

REQUEST FOR ADMISSION NO. 1. Do you admit that, in the case of the INEEL ISFSI exemption (SECY-98-071), what the Staff approved for a design-basis earthquake was not a 2,000-year return-period ground motion (0.30 g peak ground acceleration on soil from the PSHA) but rather a ground motion with a higher return period (0.36 g ground acceleration with an appropriate response spectrum).

STAFF RESPONSE. The Staff objects to this request on the grounds that it (1) constitutes an improper compound and confusing question, (2) is vague and ambiguous, (3) the cited document (SECY-98-071) speaks for itself, and (4) the cited document is publicly available, and the State has not shown any reason why it could not obtain the requested information from publicly available sources, including, without limitation, the referenced document. Notwithstanding these objections, the Staff states as follows: No. In SECY-98-071, the Staff stated as follows:

. . . the Staff finds that the DOE approach of using the 2000-year return period mean ground motion as the design earthquake for dry storage facilities is adequately conservative. The design earthquake

proposed by DOE-ID for the ISFSI exceeds the peak ground acceleration value of the mean 2000-year return period ground motion.

SECY-98-071, "Exemption to 10 CFR 72.102(f)(1) Seismic Design Requirement for Three Mile Island Unit 2 Independent Spent Fuel Storage Installation (April 8, 1998), at 3. See also, Attachment to SECY-98-071 ("Evaluation of Exemption Request to 10 CFR 72.102(f)(1) Seismic Requirement"), at 3 ("the staff finds that the DOE Standard 1020 risk-graded approach of using the 2000-year return period mean ground motion as the DE is adequately conservative. . .").

REQUEST FOR ADMISSION NO. 2. Do you admit that you are aware that the U.S. Department of Energy ("DOE") revised DOE Standard 1020-2001, released on August 22, 2001, for review and comment.

STAFF RESPONSE. No. The Staff is aware, however, that the U.S. Department of Energy ("DOE") released a draft revision of DOE-STD-1020-94 in August 2001, for review and comment; that document (DOE-STD-1020-YEAR PROPOSED) has not been approved and is subject to modification.

REQUEST FOR ADMISSION NO. 3. Do you admit that in Revised DOE Standard 1020-2001, the standard for earthquake input excitation for Performance Category 3 in terms of a Mean Seismic Hazard Exceedance Level has been changed to a value of 4×10^{-4} (2,500-year return period), thus raising the Mean Seismic Hazard Exceedance Level standard originally established by DOE.

STAFF RESPONSE. The Staff objects to this request on the grounds that it (1) constitutes an improper compound and confusing question, (2) the cited document (DOE-STD-1020-YEAR PROPOSED) speaks for itself, and (3) the cited document is publicly available, and the State has not shown any reason why it could not obtain the requested information from publicly available sources, including, without limitation, the referenced document. Notwithstanding these objections, the Staff states as follows: No. See Response to Request for Admission No. 2, *supra*.

REQUEST FOR ADMISSION NO. 4. Do you admit that the design approach to seismic design standards for Performance Category 3 in DOE Standard DOE-STD-1020-94 specifies both a "Seismic Hazard Exceedance Probability" of 5×10^{-4} /year (for sites not near tectonic plate boundaries) and a "Target Seismic Performance Goal" of 1×10^{-4} /year, where "Performance Goal" is defined by the DOE as "the annual probability of exceedance of acceptable behavior limits" (DOE-STD1020-94 at A-2).

STAFF RESPONSE. The Staff objects to this request on the grounds that it (1) improperly and incorrectly paraphrases the cited document (DOE-STD-1020-94), (2) constitutes an improper compound and confusing question, (3) the cited document speaks for itself, and (4) the cited document is publicly available, and the State has not shown any reason why it could not obtain the requested information from publicly available sources, including, without limitation, the referenced document. Notwithstanding these objections, the Staff admits that DOE-STD-1020-94 includes both a "Target Seismic Performance Goal" and a "Seismic Hazard Exceedance Probability" for DOE Performance Category 3 facilities.

REQUEST FOR ADMISSION NO. 5. Do you admit in the absence of an established target seismic performance goal, or similar risk reduction considerations, there will be no documented conservatism in selected design basis ground motion recurrence interval at the PFS site.

STAFF RESPONSE. The Staff objects to this request on the grounds that it is vague and ambiguous insofar as it uses the phrases "established target seismic performance goal," "similar risk reduction considerations," and "documented conservatism." Notwithstanding these objections, the Staff states as follows: No.

REQUEST FOR ADMISSION NO. 6. Do you admit that the Staff's asserted equivalence between design earthquake ground motions having a median annual probability of exceedance of 1×10^{-5} and a mean annual probability of exceedance of 1×10^{-4} validly applies only to the Central and Eastern United States and not necessarily to sites in the Western United States. See PFS Safety Evaluation Report ("SER") September 2000, at 2-42.

STAFF RESPONSE. The Staff objects to this request on the grounds that it (1) is vague and ambiguous, insofar as it uses the phrases “asserted equivalence” and “validly applies,” (2) mischaracterizes the language in the Staff’s SER of September 2000, and (3) constitutes an improper compound and confusing question. Notwithstanding these objections, the Staff states as follows: No.

REQUEST FOR ADMISSION NO. 7. Do you admit that the Staff has taken the position that an acceptable metric or quantitative measure for a design basis ground motion at a dry-cask ISFSI is a total probability of exceedance of 1×10^{-2} (i.e., the total probability of exceeding the design basis ground motion) over the design life of the facility. See Modified Rulemaking Plan, September 26, 2001, at 7.

STAFF RESPONSE. The Staff objects to this request on the grounds that it (1) mischaracterizes the language of the Modified Rulemaking Plan (SECY-01-0178), (2) is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence in this proceeding, (3) the cited document speaks for itself, and (4) the cited document is publicly available, and the State has not shown any reason why it could not obtain the requested information from publicly available sources, including, without limitation, the referenced document. Notwithstanding these objections, the Staff states as follows: No.

REQUEST FOR ADMISSION NO. 8. Do you admit that for an ISFSI with a planned operational period of approximately 40 years, a design-basis ground motion whose total probability of exceedance = 1×10^{-2} would be one with a return period roughly double 2,000 years (40 years \times $2.5\text{E-}04$ = $1.0\text{E-}02$). See Modified Rulemaking Plan, September 26, 2001, at 7

STAFF RESPONSE. The Staff objects to this request on the grounds that it (1) is vague and ambiguous insofar as it uses the phrase “planned operational period,” (2) is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence in this proceeding, (3) the cited document speaks for itself, and (4) the cited document is publicly available, and the State has

not shown any reason why it could not obtain the requested information from publicly available sources, including, without limitation, the referenced document. Notwithstanding these objections, the Staff states as follows: No.

REQUEST FOR ADMISSION NO. 9. Do you admit that the occurrence of vibratory ground motions exceeding design basis ground motions with an estimated average return period of 2,000 years should be considered a credible event?

STAFF RESPONSE. The Staff objects to this request on the grounds that it is vague, confusing and ambiguous insofar as it uses the term “credible event” in the context of seismic ground motion analyses and/or a PSHA. See “NRC Staff’s First Supplemental Responses to the State of Utah’s Sixth Set of Discovery Requests Directed to the NRC Staff (Utah Contention L),” dated July 12, 2000, at 2-4.

REQUEST FOR ADMISSION NO. 10. Do you admit that the occurrence of vibratory ground motions exceeding design basis ground motions with an estimated average return period of 10,000 years should be considered a credible event?

STAFF RESPONSE. See Response to Request for Admission No. 9, *supra*.

REQUEST FOR ADMISSION NO. 11. Do you admit that tipover of spent fuel storage casks at the proposed PFS ISFSI should be considered a credible event?

STAFF RESPONSE. The Staff objects to this request on the grounds that it is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence in this proceeding. Notwithstanding this objection, the Staff states as follows: No.

B. Interrogatories

INTERROGATORY NO. 9. Fully describe any differences, and the basis thereof, between the Staff justification in its Safety Evaluation Report (September 2000) that a “2,000-year return period is acceptable for the seismic design of the PFS Facility” (SER at 2-42) and the Staff justification for recommending Option 4 in its Modified Rule Making Plan: 10 CFR Part 72 – “Geological and Seismological

Characteristics for Siting and Design of Dry Cask Independent Spent Fuel Storage Installations," SECY-01-0178 (September 26, 2001).

STAFF RESPONSE. The Staff objects to this request on the grounds that it (1) is vague and ambiguous insofar as it uses the phrase "any differences, and the basis thereof," (2) is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence in this proceeding, (3) the cited documents (the SER for the PFS Facility, and SECY-01-0178) speak for themselves, (4) the cited documents are publicly available, and the State has not shown any reason why it could not obtain the requested information from publicly available sources, including, without limitation, the referenced documents, and (5) the request would require the Staff to perform a comparative analysis which is not needed to support the Staff's position and is therefore improper under 10 C.F.R. § 2.740(b)(3)(B).

INTERROGATORY NO. 10. If you admit Request for Admission No. 1, fully explain the basis for the Staff assertion, in its Safety Evaluation Report dated September 2000 at 2-42, that "[a] 2,000-year return period is acceptable for the seismic design of the PFS Facility" because [among other reasons]: "[t]he NRC has accepted a design seismic value that envelopes the 2,000-yr return period probabilistic ground motion value for the TMI-2 ISFSI license . . ." SER at 2-42.

STAFF RESPONSE. See Response to Request for Admission No. 1, *supra* (Request for Admission No. 1 is denied).

INTERROGATORY NO. 11. If you admit Requests for Admission Nos. 2 and 3, explain whether DOE approval of Revised DOE Standard 1020-2001 would affect the Staff's reliance on the old DOE Standard DOE-STD-1020-94 to justify accepting a 2,000-year return period probabilistic ground motion for the PFS ISFSI, deemed to be similar to DOE Performance-Category-3 facilities. See SER, September 2000, at 2-42. If there would be no effect, explain why.

STAFF RESPONSE. See Responses to Requests for Admission Nos. 2 and 3, *supra* (Request for Admission Nos. 2 and 3 are denied). Further, the Staff objects to this request on the

grounds that it (1) constitutes an improper compound question, (2) is improperly argumentative, and (3) constitutes a hypothetical question that lacks factual support and calls for speculation.

INTERROGATORY NO. 12. If you admit Request for Admission No. 4, explain fully why the Staff considers it correct to use DOE's seismic hazard exceedance probability of 5×10^{-4} in order to justify the acceptability of using a 2,000-year return period probabilistic ground motion for the PFS ISFSI (SER, September 2000, at 2-42) without also requiring the target seismic performance goal of 1×10^{-4} /year for SSC performance. See DOE Standard 1020-94 at C-4 to 7.

STAFF RESPONSE. See Response to Request for Admission No. 4, *supra*, and the objections stated therein, which are incorporated by reference in response to this interrogatory. Notwithstanding these objections, the Staff states as follows.

DOE Standard 1020-94, was cited as one of several bases in support of the Staff's determination to accept the PFS PSHA with a 2,000-year return period in the Staff's Safety Evaluation Report ("SER") of September 2000 (SER at 2-40 - 2-42). In determining to accept the PFS PSHA with a 2,000-year return period, the Staff considered, *inter alia*, the design criteria for comparable nuclear facilities as established in DOE-STD-1020-94; the technical bases provided in support of the INEEL TMI-2 seismic exemption (SECY 98-071); the seismic requirements and guidance applicable to nuclear power plants; and an understanding that the radiological hazard posed by a dry cask storage ISFSI is inherently lower than that of a nuclear power plant (and a dry cask storage ISFSI is less vulnerable to earthquake-induced accidents than a nuclear power plant). The Staff did not determine to accept the PFS PSHA with a 2,000-year return period on the basis of whether PFS meets the target seismic performance goal for DOE Performance Category 3 facilities, or whether the PFS Facility satisfies the seismic and engineering criteria contained in DOE-STD-1020-94, inasmuch as that standard does not establish requirements for nuclear facilities licensed and regulated by the Commission.

Further, the Staff has determined that the PFS application complies with applicable NRC requirements and regulatory guidance, as set forth in the SER. In this regard, PFS was required to perform a variety of analyses to assess the performance of structures, systems and components important to safety (“SSCs”), including their performance under seismic loading conditions. The Staff considers that the acceptable application of NRC standards and guidance by an applicant in performing such analyses serves to incorporate an acceptable level of conservatism into a facility’s design, assuring that SSCs have additional design margins for beyond design basis loads due to conservatisms in the design and methods of analysis.

INTERROGATORY NO. 13. If you deny Request for Admission No. 6, explain fully the basis and justification for the following two statements made by the Staff:

1. From SER, December 15, 1999, at 2-45:
Considering the radiological safety aspects of a dry spent fuel storage facility, conservative peak ground motion values that have a 99 percent likelihood of not being exceeded [equivalent to a probability of exceedance of 1×10^{-2}] in the 20-year licensing period of the Facility are considered adequate for its design. This exceedance probability corresponds to a return period of 2,000 years.
2. From Modified Rulemaking Plan, September 26, 2001, at 7:
The rationale for the proposed mean annual probability of exceedance of $5.0\text{E-}04$ (return period of 2,000 years) for a design earthquake is based on several points . . . [including]: The total probability of exceedance for a design earthquake at an ISFSI facility with an operational period of 20 years ($20 \text{ years} \times 5.0\text{E-}04 = 1.0\text{E-}02$) is the same as the total probability of exceedance for an earthquake event at the proposed pre-closure facility at Yucca Mountain with an operational period of 100 years ($100 \text{ years} \times 1.0\text{E-}04 = 1.0\text{E-}02$).

STAFF RESPONSE. The Staff objects to this request on the grounds that (1) it improperly characterizes the cited documents, (2) the cited documents speak for themselves, and (3) insofar as this request pertains to the Modified Rulemaking Plan in SECY-01-0178, it is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence.

INTERROGATORY NO. 14. If Request for Admission No. 11 is admitted, please describe what the Staff would consider to be acceptable ways to mitigate the hazard of cask tipover.

STAFF RESPONSE. See Response to Request for Admission No. 11, *supra* (Request for Admission No. 11 is denied). Further, the Staff objects to this request on the grounds that it (1) seeks to discover information that is beyond the scope of Contention Utah L, Part B, as admitted, and (2) is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence in this proceeding.

INTERROGATORY NO. 15. Fully describe the participation of PFS' witness, Dr. C. Allin Cornell as a member of an expert panel for NRC's contractor ICF retained to develop, review, and comment on the technical basis of allowing applicants to conduct probabilistic seismic hazard analyses 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, and what information was conveyed to Allin Cornell as a member of the panel. See Deposition of Allin Cornell (October 31 to November 1, 2001).

STAFF RESPONSE: The Staff objects to this Request on the grounds that it (1) seeks to discover draft, predecisional or privileged information that is exempt from disclosure under 10 C.F.R. § 2.790, (2) seeks to discover information that is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence in this proceeding, and (3) is unduly broad and burdensome. Notwithstanding these objections, the Staff states as follows.

ICF Incorporated ("ICF") was retained as a contractor to the NRC under Contract No. NRC-04-95-065 ("Support for the Development of Regulations"). Task Order No. 17 of that contract, entitled "Geological and Seismological Characteristic for Siting and Design of Dry Cask Independent Spent Fuel Storage installations, 10 CFR Part 72," pertains to rulemaking activities initiated by the Commission to amend 10 C.F.R. § 72.102 to allow, *inter alia*, the use of probabilistic seismic hazard analyses in the siting and design of dry cask ISFSIs. I serve as the NRC technical

monitor with respect to Task Order No. 17. The ICF project manager with respect to Task Order No. 17 is Mr. Donald Hammer.

The Statement of Work for Task Order No. 17 identified five subtasks to be provided under the task order to support the rulemaking package, including the performance of “analyses for development of technical basis to address the uncertainties and perform probabilistic seismic hazards analysis” to be used in connection with preparing a Regulatory Analysis and Environmental Assessment. The Statement of Work further identified the “workscope” for these five subtasks, including item 1.6, which states as follows: “Assemble a panel, with a maximum of four members, of nationally recognized experts to perform review and comment on the contractor’s analyses and recommendations.”

In the performance of its duties under the contract, ICF entered into a subcontract with Science Applications International Corporation (“SAIC”). In addition, pursuant to subtask 1.6, recited above, ICF assembled a panel of experts to assist it in the performance of its technical duties under the contract. ICF sought assistance from the expert panel with respect to various matters, including assistance in the development of a technical basis to support the rulemaking and in the development of the regulatory guide to accompany the proposed rule.

ICF selected Dr. Cornell to be a member of this expert panel, and entered into a subcontract between ICF and Dr. Cornell, dated October 1, 1999, for this purpose. The subcontract specified a period of performance of October 1, 1999, to March 30, 2000. Dr. Cornell executed the subcontract with ICF on October 23, 1999. A “Statement of Work” (attached as Appendix B to the subcontract between Dr. Cornell and ICF) identified the scope of the technical assistance sought by ICF under the subcontract.

Based upon information and belief, Dr. Cornell’s participation was limited largely to two conference calls and one meeting with NRC/ICF/SAIC working group members. The first conference call was held on November 10, 1999 at 11:15 a.m. EST. The purpose of this

conference call was to appoint a chairperson for the expert panel, briefly discuss the working group's tasks and subtasks, identify expert panel priorities and document needs, and establish a tentative schedule for future interactions. The second conference call was held on February 17, 2000 at 3:00 p.m. EST. This conference call focused on technical issues relating to the working group's initial recommendations concerning changes to the Part 72 seismic regulations. The meeting was held on March 16, 2000, from 8:00 a.m. to 3:00 p.m. EST, at the SAIC office in Germantown, MD. This meeting focused on the development of the technical basis for the staff's proposed rulemaking. In addition to communications at the meeting and two conference calls, Dr. Cornell would have received information in telephone calls and/or electronic mail messages from ICF, SAIC and/or other members of the panel, relating to administrative and/or technical matters related to the expert panel's duties.

Documents that are in the Staff's (and/or ICF's) possession that were distributed or conveyed to Dr. Cornell as a participant in the above-referenced conference calls and meeting, and as a member of the expert panel generally, are being produced or identified in a privilege log, to the extent feasible, in the "NRC Staff's Objections and Responses to the State of Utah's Thirteenth Set of Discovery Requests Directed to the NRC Staff," dated November 16, 2001.

Appendix A to the subcontract between ICF and Dr. Cornell sets forth the "Subcontract General Terms & Conditions." Section 5 of the subcontract states as follows:

5. PROPRIETARY INFORMATION. All information developed or disclosed under this Agreement shall, unless otherwise stated by Contractor, be deemed to be Proprietary and Confidential Information ("Proprietary Information"). Verbal communications pertaining to the Services shall be presumed to be Proprietary Information unless otherwise stated by Contractor.

Proprietary Information shall not be disclosed to any other person except to those individuals who need access to such Proprietary Information to the extent needed to ensure proper performance of the Services and who have agreed to abide by the provisions of this Section. Proprietary information shall not be used for any purpose

other than as reasonably necessary for the proper performance of the Services.

Subcontractor shall not be liable for disclosure or use of Proprietary Information which: (1) is generally available to the public without breach of this Agreement; (2) is disclosed with the prior written approval of the disclosing party; or (3) is required to be released by law or court order (but only after actual and timely prior written notice has been delivered to Contractor sufficient to enable the Contractor to seek protection of such Proprietary Information).

Test results, studies, analyses, reports and other information or data developed under this Agreement ("Deliverables") shall be deemed to be Proprietary Information and shall be deemed to be the sole property of the Contractor. The Subcontractor shall not disclose the content of the Deliverables to any third party(ies) without the prior written authorization of the Contractor.

Subcontractor shall return all Proprietary Information to the Contractor upon Contractor's request or upon termination of this Agreement, whichever occurs first. Subcontractor shall have the right to retain a copy of the Proprietary Information for its internal records, subject to Subcontractor's continued compliance with the restrictions and obligations set forth in this Section. This Section shall survive termination of this Agreement.

Further, Section 2 of Appendix A incorporates by reference the NRC's contract with ICF, and states that the Subcontractor (Dr. Cornell) assumes toward Contractor (ICF) all of the Contractor's obligations and responsibilities toward its Client (*i.e.*, the NRC) in its Contract with the NRC; in turn, the Contract between ICF and the NRC includes restrictions concerning the use and disclosure of proprietary and other confidential or privileged information. In addition, Appendix H to the Subcontract identifies "Special Contract Requirements," which include requirements prohibiting the release of information protected under the Freedom of Information Act, "without prior written approval by the contracting officer unless the information has previously been released to the public by the NRC."

Accordingly, to the extent that Dr. Cornell may have received or provided any information and/or documents in the course of his work related to his subcontract with ICF (and hence ICF's contract with the NRC), such information and documents are to be treated as privileged.

In the recent deposition of Dr. Cornell, he discussed his disclosure to PFS personnel and/or attorneys of certain information and/or documents related to his involvement in the NRC rulemaking effort (see Cornell Dep. Tr. at 25-26, 28-29, and 68). The Staff did not authorize Dr. Cornell to disclose such information or documents to PFS or its attorneys; and Mr. Donald Hammer of ICF has informed the Staff that, to the best of his recollection and belief, ICF did not authorize Dr. Cornell to do so. Further, no record of written authorization for such disclosure has been identified by ICF or the Staff.⁶

Respectfully submitted,

/RA/

Sherwin E. Turk
Martin J. O'Neill
Counsel for NRC Staff

Dated at Rockville, Maryland
this 16th day of November 2001

⁶ The foregoing Staff answer to Interrogatory No. 15 is supported by the "Affidavit of Keith K. McDaniel," attached hereto.

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PRIVATE FUEL STORAGE, L.L.C.) Docket No. 72-22-ISFSI
)
(Independent Spent Fuel)
Storage Installation))

AFFIDAVIT OF KEITH K. McDANIEL

COUNTY OF MONTGOMERY)
) SS:
STATE OF MARYLAND)

Keith K. McDaniel, having first been duly sworn, does hereby state as follows:

1. I am employed as a Program Manager in the Rulemaking & Guidance Branch, Division of Industrial and Medical Nuclear Safety, Office of Nuclear Material Safety and Safeguards (NMSS), U.S. Nuclear Regulatory Commission (NRC), in Washington, D.C. A statement of my professional qualifications is attached hereto.

2. I have reviewed the foregoing answer of the NRC Staff to Interrogatory No. 15 in the "State of Utah's Fourteenth Set of Discovery Requests Directed to the NRC Staff," and verify that it is true and correct to the best of my knowledge, information and belief.

/RA/

Keith K. McDaniel

Sworn to before me this
15th day of November, 2001

Notary Public

My commission expires: _____

KEITH KENT MCDANIEL

EDUCATION:

Bachelor of Science in Nuclear Engineering, May 1979
University of Maryland, College Park, MD

Masters in Business Administration, May 1987
Loyola College, Baltimore, MD

PROFESSIONAL EXPERIENCE:

PROGRAM MANAGER

8/99 - present

Rulemaking & Guidance Branch
Office of Nuclear Material Safety and Safeguards (NMSS)
U.S. Nuclear Regulatory Commission
11555 Rockville Pike, Rockville, MD, 20852

Duties and Responsibilities:

Responsibilities include developing proposed and final rules to support NMSS activities. Duties include project and contract management, participation in the planning, formulation, and implementation of Agency/Office programs, policies, and procedures, and the planning and implementation of technical and regulatory reviews. Assignments include the evaluation of technical and administrative issues related to public health, safety, safeguards, and environmental protection.

COMMISSIONER ASSISTANT

6/97 - 8/99

Office of Commissioner Dicus
U.S. Nuclear Regulatory Commission
11555 Rockville Pike, Rockville, MD, 20852

Duties and Responsibilities:

Primary responsibilities involved analyzing assigned technical and policy issues that were before the Commission for consideration and action. Served as the principal reviewer of issues in such areas as site decommissioning, low-level and high-level waste disposal, U.S. Department of Energy ("DOE") oversight, U.S. Enrichment Corporation privatization, Agreement State programs, and fuel cycle operations.

NUCLEAR PROCESS ENGINEER

3/90 - 6/97

Fuel Cycle Licensing Branch, NMSS
(Fuel Cycle Safety Branch, NMSS, 3/90 - 3/92)
United States Nuclear Regulatory Commission
11555 Rockville Pike, Rockville, MD, 20852

Duties and Responsibilities:

Primary responsibilities involved overseeing the performance of licensees dealing with source material and special nuclear material. As a project manager, acquired a working knowledge of licensing, regulations, policies, and procedures pertaining to the possession and handling of source, by-product, and special nuclear materials. Gained extensive knowledge in nuclear fuel fabrication processes and related safety issues. Safety issues included accidental criticality and the spread of radioactivity, and the adequacy of protective measures to protect against such hazards. Project management assignments included preparation for NRC involvement in the disposition of surplus plutonium from the United States and Russia. Conducted detailed evaluations of license renewal applications and site characterization and decommissioning plans; prepared environmental assessments and safety evaluation reports; and issued license renewals, license amendments, and license terminations.

Special assignments included serving as Acting Section Chief in the Fuel Cycle Licensing Branch, NMSS for a 3-month period in 1996; technical assistant to Commissioner Dicus (7/96-2/97); Acting Section Chief, Licensing Branch, NMSS (1/96-3/96); technical assistant in the Executive Director's Office (10/94-2/95); Acting Section Chief, Operations Branch, NMSS (5/94-7/94); and participation in the NRC Supervisory Development Program (1993-94).

NUCLEAR ENGINEER

4/87 - 3/90

Low-Level Waste Management Division, NMSS
United States Nuclear Regulatory Commission
11555 Rockville Pike, Rockville, MD, 20852

Duties and Responsibilities:

Responsibilities included managing technical assistance contracts with DOE laboratories for reviewing topical reports and developing criteria for low-level waste disposal facilities. Duties involved managing, integrating, and coordinating the activities of contractors with NRC staff members and managers. Performed technical reviews of topical reports concerning complex low-level waste forms. Work involved performing technical evaluations of the structural integrity of these waste forms, critiquing contractor's evaluations, interacting with utilities and vendors, making site and vendor visits to observe and inspect waste processing systems, and preparing technical evaluation reports. Provided technical assistance to State licensing authorities regarding low-level radioactive waste disposal issues; and participated in the review of Agreement State licensing programs and prototype applications for disposal site licenses.

PROJECT ENGINEER

1/85 - 3/87

Westinghouse Hittman Nuclear Inc.
9151 Rumsey Road, Columbia, MD 21045

Duties and Responsibilities:

Managed development programs for systems and equipment design of Westinghouse-standard and customer-specific radioactive waste processing and handling systems; responsible for licensing and regulatory compliance efforts related to this equipment. Designs included drying systems, volume reduction systems, radioactive waste containers and shipping casks. Served as Project Engineer for the on-site operation for processing contaminated liquids at the Maxey Flats disposal site. Managed contracts for the delivery of radioactive waste processing systems, components, and services to nuclear facilities throughout the United States. Served as Project Manager for the start-up of in-plant solidification systems, mobile solidification and demineralization systems, and handling equipment ancillary to plant waste processing operations.

NUCLEAR ENGINEER

5/79 - 1/85

Westinghouse Hittman Nuclear Inc.
9151 Rumsey Road, Columbia, MD 21045

Duties and Responsibilities:

Planned and implemented research and development programs involving volume reduction and solidification techniques for a variety of radioactive waste types. Research efforts resulted in the issuance of four Westinghouse patents and in being awarded the Westinghouse Engineering Achievement Award. During two years of this period, was responsible for laboratory activities. Developed and implemented a process training program for new employees assigned to field activities. Was responsible for on-site start-up of processes involving new products developed from research and development, in over ten nuclear power plants in the United States .

Duties also included designing Type A and Type B shipping casks used to safely transport radioactive materials. Design work involved shell structural analysis, materials analysis, and radiation attenuation analysis. Shielding and dose rate calculations were also performed for planning on-site processing of radioactive materials.

PUBLICATIONS:

"Resin Volume Reduction System", presented at the American Nuclear Society Conference, 1984.

"Status of NRC's Waste Form Regulatory Guide" presented at the 1987 LLWM Waste Management Conference, May 1987.

PATENT DISCLOSURES:

"High Concentration Boric Acid Solidification Process"

"Waste Slurry Liquid Removal System"

"Resin Press Volume Reduction"

"Heat Press for Resin Volume Reduction"

AWARDS:

Westinghouse Engineering Achievement Award, 1985
NRC High Quality Certificate, January, 10, 1989
NRC Certificate of Appreciation, March 16, 1989
NRC Special Achievement Certificate, December 5, 1989
NRC Certificate of Appreciation, December 28, 1990
NRC High Quality Certificate, February 9, 1992
NRC Special Act or Service Award, July 13, 1992
Certificate of Completion, NRC Supervisory Development Program, February 17, 1995
NRC Special Act Award, December 11, 1996

MEMBERSHIPS:

Elected Vice President of American Nuclear Society, Maryland Chapter; Spring 1976

Member of American Nuclear Society, National (1976-1989)

RELATED TRAINING COURSES:

Radiological Survey in Support of Decommissioning, 1996
Nuclear Criticality Safety Course (F-101), 1995
Fuel Cycle Technology Course (F-200), 1995
Hazards of Chemical & Mechanical Fuel Cycle Process Course, 1995
Personnel Management Practices, 1993
Radiation Worker Training, 1991
Acquisition Training for Project Managers, 1988
Fundamentals of Project Management, 1987
Directing the Engineering Project, 1985

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-ISFSI
)
(Independent Spent Fuel)
Storage Installation))

AFFIDAVIT OF JOHN STAMATAKOS

COUNTY OF MONTGOMERY)
) SS:
STATE OF MARYLAND)

John Stamatakos, having first been duly sworn, does hereby state as follows:

1. I am employed as a Senior Research Scientist at the Center for Nuclear Waste Regulatory Analysis (CNWRA), which is division of the Southwest Research Institute (SwRI), in San Antonio, Texas. I am providing this affidavit under a technical assistance contract between the NRC Staff and SwRI. A statement of my professional qualifications is attached hereto.

2. I have reviewed the foregoing answers of the NRC Staff to Requests for Admission Nos. 1 - 8 and 11, and Interrogatory No. 12, in the "State of Utah's Fourteenth Set of Discovery Requests Directed to the NRC Staff," and verify that they are true and correct to the best of my knowledge, information and belief.

/RA/

John Stamatakos

Sworn to before me this
16th day of November, 2001

Notary Public

My commission expires: _____

JOHN STAMATAKOS
Senior Research Scientist
Center for Nuclear Waste Regulatory Analyses
Southwest Research Institute

B.S., Geology, Franklin and Marshall College, Lancaster, Pennsylvania, 1981

M.S., Geology, Lehigh University, Bethlehem, Pennsylvania, 1988

Ph.D., Geology, Lehigh University, Bethlehem, Pennsylvania, 1990

Dr. Stamatakos is a structural geologist and geophysicist with international research experience in regional and global tectonics. Dr. Stamatakos has conducted research on a range of topics including paleomagnetism, neotectonics, kinematics of fault block rotations in strike-slip, normal, and thrust fault systems, effects of internal strain on the magnetic properties of deformed rocks, evolution of curvature in arcuate mountain belts, and age and sequence of deformation in folded and faulted mountain belts. This research has focused on the northern and central Appalachians in the eastern United States and Canada, the Hercynian mountains in Germany and northern Spain, the Rocky Mountains and Basin and Range in the western United States, and the northern Cordilleran Mountains in Alaska. Other strengths include numerical modeling of deformation, magnetostratigraphy, rock magnetism, and exploration geophysics.

As a Research Scientist in the Center for Nuclear Waste Regulatory Analyses, Dr. Stamatakos is a Principal Investigator for structural deformation and seismicity, including tectonics and neotectonics research. Tectonics research at CNWRA currently includes compiling a tectonics Geographic Information System (GIS) database, field analyses of the structural and tectonic elements of the Basin and Range province in southwestern United States, evaluation of seismic and faulting hazards at nuclear facilities, and the development of tectonic models for the region surrounding the proposed high-level nuclear waste repository at Yucca Mountain, Nevada. These investigations, sponsored by the U.S. Nuclear Regulatory Commission, currently support development of the tectonic framework for evaluation of risk of earthquakes and volcanic activity, and the effects of structures and tectonic processes on groundwater flow in the region surrounding Yucca Mountain.

Prior to coming to CNWRA, Dr. Stamatakos held positions as a visiting faculty at the University of Michigan and as a postdoctoral fellow at the Eidgenössische Technische Hochschule (ETH) in Zurich, Switzerland. At the University of Michigan, Dr. Stamatakos taught courses in field mapping, structural geology, geophysics, and tectonics.

Dr. Stamatakos has written or collaborated on nearly 50 papers and reports on structural geology, tectonics, and geophysics. He has made presentations at international conferences in the U.S., Canada, and Europe and has won an outstanding paper award from the American Geophysical Union. Dr. Stamatakos is associate editor of the Geological Society of America Bulletin, GP Editor for EOS of the American Geophysical Union, and is a regular reviewer of papers for the Journal of Geophysical Research, Earth and Planetary Science Letters, Reviews of Geophysics, Journal of Structural Geology, Physics of the Earth and Planetary Sciences, and Geophysical Research Letters as well as grant proposals for the National Science Foundation.

Professional Chronology: Petroleum Geologist, Analex Geosciences, 1981–1983; Research and Teaching Assistant, Lehigh University, 1984–1990; Research Fellow, Eidgenössische Technische Hochschule, Switzerland, 1990–1992, Visiting Assistant Professor, University of Michigan, 1992–1995, Research Scientist, Southwest Research Institute, Center for Nuclear Waste Regulatory Analyses, 1995–Present.

Memberships: Geological Society of America, American Geophysical Union, Sigma Xi.
I am employed as a Section Chief in the Rulemaking and Guidance Branch (RGB), Division of Industrial and Medical Nuclear Safety (IMNS), Office of Nuclear Material Safety and Safeguards (NMSS), U.S. Nuclear Regulatory Commission (NRC), in Washington, D.C.

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-ISFSI
)
(Independent Spent)
Fuel Storage Installation))

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S OBJECTIONS AND RESPONSES TO THE 'STATE OF UTAH'S FOURTEENTH SET OF DISCOVERY REQUESTS DIRECTED TO THE NRC STAFF'" in the above captioned proceeding have been served on the following through deposit in the NRC's internal mail system, with copies by electronic mail, as indicated by an asterisk, or by deposit in the U.S. Postal Service, as indicated by double asterisk, with copies by electronic mail this 16th day of November, 2001:

G. Paul Bollwerk, III, Chairman*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(E-mail copy to GPB@NRC.GOV)

Office of the Secretary*
ATTN: Rulemakings and Adjudications
Staff
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(E-mail copies to SECY@NRC.GOV
and HEARINGDOCKET@NRC.GOV)

Dr. Jerry R. Kline*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(E-mail copy to JRK2@NRC.GOV)

Office of the Commission Appellate
Adjudication
Mail Stop: 16-C-1 OWFN
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. Peter S. Lam*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(E-mail copy to PSL@NRC.GOV)

James M. Cutchin, V*
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(E-mail to JMC3@NRC.GOV)

Atomic Safety and Licensing Board
Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Jay E. Silberg, Esq.**
Ernest Blake, Esq.
Paul A. Gaukler, Esq.
Sean Barnett, Esq.
Shaw Pittman
2300 N Street, N.W.
Washington, DC 20037-8007
(E-mail copy to jay_silberg,
paul_gaukler, sean_barnett, and
ernest_blake@shawpittman.com)

Tim Vollmann, Esq.**
3301-R Coors Road N.W.
Suite 302
Albuquerque, NM 87120
(E-mail copy to tvollmann@hotmail.com)

Denise Chancellor, Esq.**
Fred G. Nelson, Esq.
Laura Lockhart, Esq.
Utah Attorney General's Office
160 East 300 South, 5th Floor
P.O. Box 140873
Salt Lake City, UT 84114-0873
(E-mail copy to
dchancel@att.State.UT.US)
and jbraxton@email.usertrust.com)

Connie Nakahara, Esq.**
Utah Dep't of Environmental Quality
168 North 1950 West
P. O. Box 144810
Salt Lake City, UT 84114-4810
(E-mail copy to
cnakahar@att.state.UT.US)

Diane Curran, Esq.**
Harmon, Curran, Spielberg & Eisenberg
1726 M Street, N.W., Suite 600
Washington, D.C. 20036
(E-mail copy to
dcurran@harmoncurran.com)

John Paul Kennedy, Sr., Esq.**
David W. Tufts, Esq.
Durham, Jones & Pinegar
111 East Broadway, Suite 900
Salt Lake City, UT 84105
(E-mail copy to dtufts@djplaw.com)

Joro Walker, Esq.**
Land and Water Fund of the Rockies
1473 South 1100 East, Suite F
Salt Lake City, UT 84105
(E-mail copy to utah@lawfund.org)

Land and Water Fund of the Rockies**
2260 Baseline Road, Suite 200
Boulder, CO 80302

Paul C. EchoHawk, Esq.
EchoHawk PLLC
P.O. Box 6119
Pocatello, Idaho 83205-6119
E-mail copy to:
pechohawk@hollandhart.com

/RA/

Sherwin E. Turk
Counsel for NRC Staff