

RELATED CORRESPONDENCE

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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF THE SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of:)

) Docket No. 72-22-ISFSI

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

) ASLBP No. 97-732-02-ISFSI

) February 7, 2002

STATE OF UTAH'S FOURTEENTH SET OF DISCOVERY REQUESTS
DIRECTED TO THE APPLICANT

Pursuant 10 CFR §§ 2.740, 2.741, and 2.742 and applicable orders of the Licensing Board, State of Utah, hereby requests that Private Fuel Storage, LLC ("PFS") answer the following Interrogatories and Requests for Admissions separately, fully, in writing, and under oath within 10 days¹ after service of this discovery request and produce documents requested below within 15 days after service of this request. This discovery request relates to Contention Utah QQ, which has now be consolidated into unified contention Utah L/ QQ (Geotechnical).

I. INSTRUCTIONS

1. Scope of Discovery. These interrogatories and requests for admissions and production of documents are directed to Private Fuel Storage, LLC and any of the utility companies that own or comprise the members of PFS (collectively "PFS" or "Applicant"). The interrogatories cover all information in the possession, custody and control of PFS

¹ Counsel for the State and PFS have agreed that the party responding to Interrogatories and Requests for Admissions during the formal discovery period may timely file a response within eight (8) working days after receipt of the Discovery Request.

and/or its owner members, including information in the possession of officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by them, or anyone else acting on their behalf or otherwise subject to their control.

2. Supplemental Responses. Each of the following requests is a continuing one pursuant to 10 C.F.R. § 2.740(e) and the State hereby demands that, in the event that at any later date PFS obtains or discovers any additional information which is responsive to these interrogatories and requests for admissions and production of documents, PFS shall supplement its responses to this request promptly and sufficiently in advance of the adjudicatory hearing.

Such supplementation shall include, but not be limited to:

- a. the identity and location of persons having knowledge of discoverable matters;
- b. the identity of each person expected to be called as an expert witness at any hearing, the subject matter on which she/he is expected to testify, and the substance of her/his testimony; and
- c. new information which makes any response hereto incorrect.

3. Objections. If you object to or refuse to answer any interrogatory under a claim of privilege, immunity, or for any other reason, please indicate the basis for asserting the objection, privilege, immunity or other reason, the person on whose behalf the objection, privilege, immunity, or other reason is asserted, and describe the factual basis for asserting the objection, privilege, immunity, or other reason in sufficient detail so as to permit the

administrative judges in this matter to ascertain the validity of such assertion.

If you withhold any document covered by this request under a claim of privilege, immunity, or for any other reason, please furnish a list identifying each document for which the privilege, immunity, or other reason is asserted, together with the following information: date, author and affiliation, recipient and affiliation, persons to whom copies were furnished and the job title and affiliation of any such persons, the subject matter of the documents, the basis for asserting the privilege, immunity, or other reason, and the name of the person on whose behalf the privilege, immunity, or other reason is asserted.

4. Estimates. Interrogatories calling for numerical or chronological information shall be deemed, to the extent that precise figures or dates are not known, to call for estimates. In each instance that an estimate is given, it should be identified as such together with the source of information underlying the estimate.

II. DEFINITIONS

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

1. "PFS," "Applicant," "you," and "your" refers to Private Fuel Storage, LLC and the PFS members and their officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by them, or anyone else acting on their behalf or otherwise subject to their control.
2. The term "documents" means the originals as well as copies of all written, printed, typed, recorded, graphic, photographic, and sound reproduction matter however produced or reproduced and wherever located, over which you have custody or

control or over which you have the ultimate right to custody or control. By way of illustration, but not limited thereto, said term includes: records, correspondence, telegrams, telexes, wiring instructions, diaries, notes, interoffice and intraoffice communications, minutes of meetings, instructions, reports, demands, memoranda, data, schedules, notices, recordings, analyses, sketches, manuals, brochures, telephone minutes, calendars, accounting ledgers, invoices, charts, working papers, computer tapes, computer printout sheets, information stored in computers or other data storage or processing equipment, microfilm, microfiche, corporate minutes, blueprints, drawings, contracts and any other agreements, rough drafts, and all other writings and papers similar to any of the foregoing, however designated by you. If the document has been prepared and several copies or additional copies have been made that are not identical (or are no longer identical by reason of the subsequent addition of notations or other modifications), each non-identical copy is to be construed as a separate document.

3. "All documents referring or relating to" means all documents that in whole or in part constitute, contain, embody, reflect, identify, state, interpret, discuss, describe, explain, apply to, deal with, evidence, or are in any way pertinent to a given subject.
4. The words "describe" or "identify" shall have the following meanings:
 - (a) In connection with a person, the words "describe" or "identify" mean to state the name, last known home and business address, last known home and business telephone number, and last known place of employment and job title;

- (b) In connection with a document, the words “describe” or “identify” mean to give a description of each document sufficient to uniquely identify it among all of the documents related to this matter, including, but not limited to, the name of the author of the document, the date, title, caption, or other style by which the document is headed, the name of each person and entity which is a signatory to the document, the date on which the document was prepared, signed, and/or executed, any relevant bates numbers on the document, the person or persons having possession and/or copies thereof, the person or persons to whom the document was sent, all persons who reviewed the document, the substance and nature of the document, the present custodian of the document, and any other information necessary to adequately identify the document;
- (c) In connection with an entity other than a natural person (eg, corporation, partnership, limited partnership, association, institution, etc.), the words “describe” or “identify” mean to state the full name, address and telephone number of the principal place of business of such entity.
- (d) In connection with any activity, occurrence, or communication, the words “describe” or “identify” mean to describe the activity, occurrence, or communication, the date of its occurrence, the identify of each person alleged to have had any involvement with or knowledge of the activity, occurrence, or communication, and the identity of any document recording or documenting such activity, occurrence, or communication.

5. "Date" shall mean the exact day, month, and year, if ascertainable, or if not, the best approximation thereof (including by relationship to other events), and the basis for such approximation.
6. "ISFSI" or "PFS facility" shall mean the PFS proposed Independent Spent Fuel Storage Installation located in the northwest corner of the Skull Valley Goshute Indian Reservation, Utah.
7. The word "discussion" shall mean communication of any kind, including but not limited to, any spoken, written, or signed form of communication.
8. The word "person" shall include any individual, association, corporation, partnership, joint venture, or any other business or legal entity.
9. Words herein of any gender include all other genders, and the singular form of words encompasses the plural.
10. The words "and" and "or" include the conjunctive "and" as well as the disjunctive "or" and the words "and/or."
11. The discovery sought by this request encompasses material contained in, or which might be derived or ascertained from, the personal files of PFS employees, representatives, investigators, and agents.

III. GENERAL DISCOVERY

To the extent that the Applicant has not already answered the general interrogatories and general document requests in the State's previous discovery requests, please answer the following:

A. GENERAL INTERROGATORIES

GENERAL INTERROGATORY NO. 1. State the name, business address, and job title of each person who was consulted and/or who supplied information for responding to interrogatories, requests for admissions and requests for the production of documents. Specifically note for which interrogatories, requests for admissions and requests for production each such person was consulted and/or supplied information.

If the information or opinions of anyone who was consulted in connection with your response to an interrogatory or request for admission differs from your written answer to the discovery request, please describe in detail the differing information or opinions, and indicate why such differing information or opinions are not your official position as expressed in your written answer to the request.

GENERAL INTERROGATORY NO. 2. To the extent that PFS has not previously produced documents relevant to any Utah admitted contention, including without limitation unified contention Utah L/ QQ, identify all such documents not previously produced. PFS may respond to this request by notifying the State that PFS has updated its repository of documents relevant to admitted contentions at Parsons, Behle and Latimer.

GENERAL INTERROGATORY NO. 3. For each admitted Utah contention, including without limitation unified contention Utah L/ QQ, give the name, address, profession, employer, area of professional expertise, and educational and scientific experience of each person whom PFS expects to call as a witness at the hearing. For purposes of answering this interrogatory, the educational and scientific experience of expected witnesses may be provided by a resume of the person attached to the response.

GENERAL INTERROGATORY NO. 4. For each admitted Utah contention, including without limitation unified contention Utah L/ QQ, identify the qualifications of each expert witness whom PFS expects to call at the hearing, including but not limited to a list of all publications authored by the witness within the preceding ten years and a listing of any other cases in which the witness has testified as an expert at a trial, hearing or by deposition within the preceding four years.

GENERAL INTERROGATORY NO. 5. For each admitted Utah contention, including without limitation unified contention Utah L/ QQ, 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.

B. 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:

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.

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 unified contention Utah L/QQ.

**IV. DISCOVERY REQUESTS: UNIFIED CONTENTION UTAH L/QQ
(formerly Contention Utah QQ)**

A. Requests for Admissions

REQUEST FOR ADMISSION NO. 1. Do you admit that PFS intends to use soil cement (or cement-treated soil) under the pads and around the Canister Transfer Building ("CTB") to assist in resisting the seismic loading from the design basis earthquake?

REQUEST FOR ADMISSION NO. 2. Do you admit that PFS has not presented any laboratory test plan and results of soil cement testing, including durability, strength and dynamic properties testing, for the storage pads and CTB areas?

REQUEST FOR ADMISSION NO. 3. Do you admit that PFS has not conducted any site-specific testing and soil-structure interaction analyses to show that cement-treated soil will be able to resist earthquake loadings for the CTB and storage pad foundations?

REQUEST FOR ADMISSION NO. 4. Do you admit that PFS has not presented evaluations and analyses of the long term behavior of cement-treated soil under operational loading e.g., cask transport vehicle) and environmental factors (e.g., curing, shrinkage, frost, dessication, salt and sulfide attack) over the proposed 40 year life of the

facility?

REQUEST FOR ADMISSION NO. 5. Do you admit that underestimating the dynamic Young's modulus of the cement-treated soil when subjected to impact during cask drop or tipover may significantly underestimate the impact forces?

REQUEST FOR ADMISSION NO. 6. Do you admit that the pad foundations can not resist the dynamic loading and at the same time meet the required 1.1 factors of safety against sliding without the use of soil cement underneath the pads?

REQUEST FOR ADMISSION NO. 7. Do you admit that the CTB foundations can not resist the dynamic loading and at the same time meet the 1.1 factors of safety against sliding without the use of soil cement around the perimeter of the CTB?

REQUEST FOR ADMISSION NO. 8. Do you admit that Holtec's *Multi Cask Response at the PFS ISFSI from 2000 Year Seismic Event*, HI-2012640, is a non-linear analysis?

REQUEST FOR ADMISSION NO. 9. Do you admit that the analysis in HI-2012640 is based on only one set of time history?

REQUEST FOR ADMISSION NO. 10. Do you admit that it is common practice in design to use a minimum of three sets of time histories for nonlinear analysis?

REQUEST FOR ADMISSION NO. 11. Do you admit that the non-linear analysis in HI-2012640 is sensitive to phasing in the time histories and thus must use multiple sets of time histories?

REQUEST FOR ADMISSION NO. 12. Do you admit that HI-2012640 calculation assumes that the storage pad will act as a rigid mat?

REQUEST FOR ADMISSION NO. 13. Do you admit that the assumption of

pad rigidity used by Holtec in HI-2012640 is contradicted by Calculation No. 05996.02 G(P017)-2, *Storage Pad Analysis and Design* by International Civil Engineering Consultants?

REQUEST FOR ADMISSION NO. 14. Do you admit that the flexible behavior of the storage pad under dynamic loading invalidates the assumption of uniform coefficient of sliding friction between the cask and the pad due to local deformations of the pad?

REQUEST FOR ADMISSION NO. 15. Do you admit that the flexible behavior of the pad under dynamic loading invalidates the assumption that peak inertial forces can be estimated by multiplying peak ground acceleration times the mass of the pad?

REQUEST FOR ADMISSION NO. 16. Do you admit that proximity of the PFS site to major active faults requires evaluation of the effects of waves with spatial and temporal variation?

REQUEST FOR ADMISSION NO. 17. Do you admit that earthquake waves arriving at an angle may cause additional rocking and torsional motion of the structures above and beyond the vibration caused by the vertically propagating waves of the earthquake?

REQUEST FOR ADMISSION NO. 18. Do you admit that the design in Holtec's *Multi Cask Response at the PFS ISFSI from 2000 Year Seismic Event* and SWEC's calculation No. 05996.02, SC-5, *Seismic Analysis of Canister Transfer Building*, Stone and Webster is based on the assumption that only vertically propagating waves will strike the pads?

REQUEST FOR ADMISSION NO. 19. Do you admit that the analysis of the

sliding, uplift, or rocking of the HI-STORM 100 cask system is very sensitive to the local stiffness values used in the analysis?

REQUEST FOR ADMISSION NO. 20. Do you admit that the value for sliding displacement specified in Holtec Report No. HI-2012653 is not a unique solution?

REQUEST FOR ADMISSION NO. 21. Do you admit that the Holtec Report No. HI-2012653 did not consider the pad-to-pad interaction?

REQUEST FOR ADMISSION NO. 22. Do you admit that in the seismic analysis of the CTB (Cal. No. 05996.02-SC-5, *Seismic Analysis of the Carister Transfer Building*, (SWEC), PFS's contractor, Stone and Webster, assumes that the CTB foundation will behave as a rigid mat?

REQUEST FOR ADMISSION NO. 23. Do you admit that assuming the CTB foundation behaves as a rigid mat leads to an overestimation of foundation damping and to an underestimation of seismic loads for the design of the CTB?

REQUEST FOR ADMISSION NO. 24. Do you admit that PFS has not considered the effect that a large volume of soil cement around the CTB will have on the impedance functions and the kinematic motion of the foundation and the dynamic stresses developed in the soil cement at its interface with the mat foundation?

REQUEST FOR ADMISSION NO. 25. Do you admit that relatively large shear strain is required to develop the needed passive earth pressure from soil cement to resist seismic loads?

REQUEST FOR ADMISSION NO. 26. Do you admit that the use of the soil's peak shear strength may be inappropriate for cases where passive earth pressure is required

to resist sliding?

REQUEST FOR ADMISSION NO. 27. Do you admit that results from direct shear tests show that a 10 to 20 percent reduction in the clayey soil's peak shear strength is appropriate for cases where shear strains may be large?

REQUEST FOR ADMISSION NO. 28. Do you admit that 95 percent of peak shear strength of the clayey soil was used in the dynamic sliding analyses for the storage pads?

REQUEST FOR ADMISSION NO. 29. Do you admit that only a 5 percent reduction in peak strength is inconsistent with the 12.5 percent reduction used in the sliding calculations for the Canister Transfer Building?

REQUEST FOR ADMISSION NO. 30. Do you admit that soil cement will experience tensile and bending stresses under seismic loading?

REQUEST FOR ADMISSION NO. 31. Do you admit that PFS has not calculated the magnitude of the tensile and bending stresses that will develop in the soil and soil cement under seismic loading?

REQUEST FOR ADMISSION NO. 32. Do you admit that PFS has estimated a total settlement of 3 inches for the CTB due to static loading and consolidation settlement.

REQUEST FOR ADMISSION NO. 33. Do you admit that differential settlement between the foundation of the CTB and the surrounding soil cement will cause cracking of the soil cement and impact passive resistance of the soil cement?

REQUEST FOR ADMISSION NO. 34. Do you admit that PFS has estimated a total settlement of 1.7 inches for the storage pads due to static loading and consolidation

settlement?

REQUEST FOR ADMISSION NO. 35. Do you admit that differential settlement between the pad foundation and the surround soil cement will cause cracking of the soil cement and impact the passive resistance of the soil cement?

REQUEST FOR ADMISSION NO. 36. Do you admit that Holtec has filed with the NRC an amendment to the Holtec HI-STORM 100 cask system license/certificate of compliance for the inclusion of the HI-STORM 100S storage cask.

REQUEST FOR ADMISSION NO. 37. Do you admit that the HI-STORM 100S cask system is approximately 18 inches shorter than the HI-STORM 100 cask system.

REQUEST FOR ADMISSION NO. 38. Do you admit that one of the reasons for designing a shorter HI-STORM cask system is to make the storage cask less vulnerable to tip over from peak ground accelerations produced as a result of an earthquake.

B. INTERROGATORIES²

INTERROGATORY NO. 1 To the extent that PFS denies any or all of Requests for Admission Nos. 2 through 5, in whole or in part, explain in each and every respect the basis for the denial.

INTERROGATORY NO. 2. In Cal. No. G(B)-04 (Rev 9), *Stability Analyses of Cask Storage Pads*, SWEC, at p. 8, it states that Stone & Webster has “revised units weights of soil cement to reflect measured values obtained from ongoing laboratory testing program.” Describe with specificity any soil cement laboratory testing program that PFS has conducted

²Counsel for the Applicant and the State have agreed that within the scope of Utah QQ each party may propound up to 15 interrogatories on each other.

to date as well as any ongoing soil cement laboratory testing program, including a description of the objectives of the test program(s), any measured values obtained from any such laboratory testing program(s) and the conclusions drawn from the test program(s).

INTERROGATORY NO. 3. Name any PFS contractor, laboratory, or PFS representative who has performed, is performing, or will perform soil cement testing (hereafter "PFS contractor"), describe with specificity the engineering scope of work for each PFS contractor, and describe the qualifications of each PFS contractor to perform the work.

INTERROGATORY NO. 4 Describe the quality assurance and quality control procedures ("QA/QC") referring or relating to PFS's soil cement testing program to which any PFS contractor (see Interrogatory No. 2) must adhere.

INTERROGATORY NO. 5. Describe any audits and reviews of quality assurance program(s) -- for any PFS soil cement testing program -- that demonstrates that the program has been implemented to meet the standards in 10 CFR Part 21, Part 50 Appendix B, and Part 72; and Reg. Guide 1.138, Laboratory Investigations of Soils for Engineering Analysis and Design of Nuclear Power Plants, and the bases thereof.

INTERROGATORY NO. 6. To the extent that PFS denies either or both Requests for Admission No. 6 or 7, in whole or in part, explain in each and every respect the basis for the denial.

INTERROGATORY NO.7 To the extent that PFS denies any or all of Requests for Admission No. 13 through 15, in whole or in part, explain in each and every respect the basis for your denial.

INTERROGATORY NO. 8 To the extent that PFS denies any or all of Requests for Admission No. 17 through 19, in whole or in part, explain in each and every respect the basis for your denial.

INTERROGATORY NO. 9 To the extent that PFS denies any or all of Requests for Admission No. 19 through 21, in whole or in part, explain in each and every respect the basis for your denial.

INTERROGATORY NO. 10 Describe in each and every respect whether PFS takes issue or disagrees with the methodology, assumptions, analysis, and conclusions in *Analytical Study of Hi-Storm 100 Cask System For Sliding and Tip-Over Potential During High Seismic Activity* performed by Altran Corporation, dated November 30, 2001,³ and the bases thereof.

INTERROGATORY NO. 11 In modeling the sliding of the storage pad over the soil cement, describe how and to what extent Holtec took into account the effect of soil-cement around the pad and the unsymmetric loading that the soil-cement will impart on the pad once the pad undergoes sliding movement, the bases thereof, and if Holtec did not take the foregoing into account, the bases thereof.

INTERROGATORY NO. 12 Describe in detail and with specificity any other spent nuclear fuel storage facility that uses an unanchored dry cask storage systems resting on at-grade pads and has been designed to safely resist strong ground motions similar to those imposed by the design basis earthquake at the PFS site.

³See Attachment F to the Joint Declaration of Steven Bartlett, Mohsin Khan, and Farhang Ostadan, State's Response to the Applicant's Motion for Summary Disposition of Part B, Utah Contention L (December 7, 2001).

INTERROGATORY NO. 13 Describe with specificity what redundancies are built into Holtec's HI-STORM 100 cask design other than Holtec's assumption that the casks will slide on the pad in a controlled manner during an earthquake and the basis thereof.

INTERROGATORY NO. 14 Describe with specificity whether and to what extent PFS took into account the actual behavior of soil cement under tensile and bending stresses, caused by vibration of the CTB building and the impact of static and consolidation settlement in its computation of the passive resistance that PFS claims soil cement will provide to stabilize the building (CTB) under seismic loads.

INTERROGATORY NO. 15 For any issue in unified contention Utah L/QQ, describe in each and every respect, what additional studies, evaluations, or analyses, if any, PFS, its experts, or its consultants is conducting or plans to conduct prior to April 22, 2002.

C. DOCUMENT REQUESTS

Please produce the documents responsive to the following document requests:

DOCUMENT REQUEST NO. 1. All documents referring or relating to any PFS defenses to the claims made by the State in unified contention Utah L/QQ.

DOCUMENT REQUEST NO. 2. All documents, calculations, analyses, data or other information generated, reviewed, considered or relied upon by any expert or consultant with respect to unified contention Utah L/QQ.

DOCUMENT REQUEST NO. 3. All documents, data or other information referring or relating to any evaluation of the use of soil cement or cement-treated soil at the PFS site performed by any PFS expert, consultant or representative.

DOCUMENT REQUEST NO. 4. All documentation (e.g., QA/QC plans, inspections, audits, etc.) referring or relating to whether QA/QC procedures have meet the standards in 10 CFR Part 21, Part 50 Appendix B, and Part 72; and Reg. Guide 1.138, Laboratory Investigations of Soils for Engineering Analysis and Design of Nuclear Power Plants.

DOCUMENT REQUEST NO. 5. All documents, data, test results or other information obtained from or generated by any PFS-related soil-cement testing program.

DOCUMENT REQUEST NO. 6. All documents, data or other information relating to any evaluation performed by any PFS expert or consultant with respect to the seismic analysis of the storage pads, casks and their foundation soils at the PFS facility.

DOCUMENT REQUEST NO. 7. All documents, data or other information relating to any evaluation performed by any PFS expert or consultant with respect to the seismic analysis of the CTB and its foundation.

DOCUMENT REQUEST NO. 8. All documents referring or relating to any reviews or analysis conducted by PFS, its experts, consultants or representatives, of *Analytical Study of Hi-Storm 100 Cask System For Sliding and Tip-Over Potential During High Seismic Activity* performed by Altran Corporation, dated November 30, 2001. See footnote 2.

DOCUMENT REQUEST NO. 9. All documents not previously provided, referring or relating to the evaluation or analysis of the potential sliding or tipover of the HI-STORM 100 cask under seismic peak ground accelerations at the proposed PFS facility.

DOCUMENT REQUEST NO. 10. All documents not previously provided,

referring or relating to the evaluation or analysis of the potential for the HI-STORM 100 cask to crack as a result of peak ground acceleration at the proposed PFS facility.

DOCUMENT REQUEST NO. 11. All documents not previously provided, referring or relating to the Holtec's estimation or determination of the zero period acceleration for the HI-STORM 100 cask at the PFS site.

DATED this 7th day of February, 2002.

Respectfully submitted,

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

Denise Chancellor, Assistant Attorney General
Fred G Nelson, Assistant Attorney General
Connie Nakahara, Special Assistant Attorney General
Diane Curran, Special Assistant Attorney General
Laura Lockhart, Assistant Attorney General
Attorneys for State of Utah
Utah Attorney General's Office
160 East 300 South, 5th Floor, P.O. Box 140873
Salt Lake City, UT 84114-0873
Telephone: (801) 366-0286, Fax: (801) 366-0292

CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S FOURTEENTH SET OF DISCOVERY REQUESTS DIRECTED TO THE APPLICANT was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 7th day of February, 2002:

Rulemaking & Adjudication Staff
Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington D.C. 20555
E-mail: hearingdocket@nrc.gov
(original and two copies)

Mail Stop - 0-15 B18
U.S. Nuclear Regulatory Commission
Washington, DC 20555
E-Mail: set@nrc.gov
E-Mail: clm@nrc.gov
E-Mail: pfscase@nrc.gov

Michael C. Farrar, Chairman
Administrative Judge
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-Mail: mcf@nrc.gov

Jay E. Silberg, Esq.
Ernest L. Blake, Jr., Esq.
Paul A. Gaukler, Esq.
Shaw Pittman, LLP
2300 N Street, N. W.
Washington, DC 20037-8007
E-Mail: Jay_Silberg@shawpittman.com
E-Mail: ernest_blake@shawpittman.com
E-Mail: paul_gaukler@shawpittman.com

Dr. Jerry R. Kline
Administrative Judge
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, DC 20555
E-Mail: jrk2@nrc.gov
E-Mail: kjerry@erols.com

John Paul Kennedy, Sr., Esq.
David W. Tufts
Durham Jones & Pinegar
111 East Broadway, Suite 900
Salt Lake City, Utah 84111
E-Mail: dtufts@djplaw.com

Dr. Peter S. Lam
Administrative Judge
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, DC 20555
E-Mail: psl@nrc.gov

Joro Walker, Esq.
Land and Water Fund of the Rockies
1473 South 1100 East, Suite F
Salt Lake City, Utah 84105
E-Mail: utah@lawfund.org

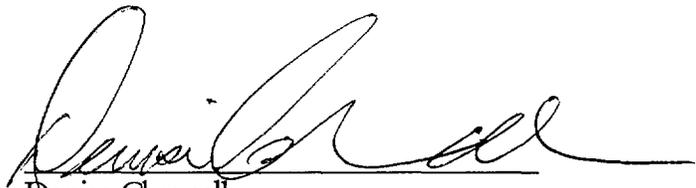
Sherwin E. Turk, Esq.
Catherine L. Marco, Esq.
Office of the General Counsel

Larry EchoHawk
Paul C. EchoHawk
Mark A. EchoHawk
EchoHawk Law Offices
151 North 4th Street, Suite A
P.O. Box 6119
Pocatello, Idaho 83205-6119
E-mail: paul@echohawk.com

Tim Vollmann
3301-R Coors Road N.W. # 302
Albuquerque, NM 87120
E-mail: tvollmann@hotmail.com

James M. Cutchin
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
E-Mail: jmc3@nrc.gov
(electronic copy only)

Office of the Commission Appellate
Adjudication
Mail Stop: O14-G-15
U. S. Nuclear Regulatory Commission
Washington, DC 20555

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

Denise Chancellor
Assistant Attorney General
State of Utah