

RAS 2458

SEPARATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

NOV 27 4 11 13

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:)	Docket No. 72-22-ISFSI
PRIVATE FUEL STORAGE, LLC)	ASLBP No. 97-732-02-ISFSI
(Independent Spent Fuel)	
Storage Installation))	November 27, 2000

**STATE OF UTAH'S TENTH SET OF DISCOVERY REQUESTS
DIRECTED TO THE NRC STAFF**

Pursuant to the Board's Orders dated April 22, 1998 (LBP-98-7), August 20, 1998, February 2, 2000, September 5, 2000 and accompanying revised schedule, and 10 CFR §§ 2.720, 2.740, 2.742, and 2.744, Intervenor State of Utah, hereby requests that the Staff of the Nuclear Regulatory Commission ("Staff") answer the following Interrogatories and Requests for Admissions separately, fully, in writing, and under oath within 10 days after service of this discovery request, and answer the following Document Requests within 15 days after service of this discovery request.

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

I. INSTRUCTIONS

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

Template = SECY-035

SECY-02

(collectively "NRC" or "Staff"). The interrogatories cover all information in the possession, custody and control of NRC Staff, including information in the possession of officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by NRC Staff, or anyone else acting on their behalf or otherwise subject to NRC Staff's control.

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

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

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

Such supplementation shall include, but not be limited to:

1. The identity and location of persons having knowledge of discoverable matters;
2. The identity of each person expected to be called as an expert witness

at any hearing, the subject matter on which she/he is expected to testify, and the substance of her/his testimony; and

3. New information which makes any response hereto incorrect.

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

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

II. DEFINITIONS

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

A. "NRC," "Staff," "you" and "your" refers to the officers, employees, agents, servants, representatives, attorneys, or other persons directly or indirectly employed or retained by the Staff of the U.S. Nuclear Regulatory Commission, or anyone else acting on its behalf or otherwise subject to the Staff's control.

B. "PFS," or "Applicant," refers to Private Fuel Storage, LLC and the PFS members and their officers, employees, agents, servants, representatives, attorneys, or other

persons directly or indirectly employed or retained by them, or anyone else acting on their behalf or otherwise subject to their control.

C. The term “documents” means the originals as well as copies of all written, printed, typed, recorded, graphic, photographic, and sound reproduction matter however produced or reproduced and wherever located, over which you have custody or control or over which you have the ultimate right to custody or control. By way of illustration, but not limited thereto, said term includes: records, correspondence, 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, spreadsheets, working papers, computer tapes, computer printout sheets, information stored in computers or other data storage or processing equipment, electronic mail, microfilm, microfiche, corporate minutes, blueprints, drawings, contracts and any other agreements, rough drafts, and all other writings and papers similar to any of the foregoing, however designated by you. If the document has been prepared and several copies or additional copies have been made that are not identical (or are no longer identical by reason of the subsequent addition of notations or other modifications), each non-identical copy is to be construed as a separate document.

D. “All documents referring or relating to” means all documents that in whole or in part constitute, contain, embody, reflect, identify, state, interpret, discuss, describe, explain, apply to, deal with, evidence, or are in any way pertinent to a given subject.

E. The words “describe” or “identify” shall have the following meanings:

1. In connection with a person, the words “describe” or “identify”

mean to state the name, last known home and business address, last known home and business telephone number, and last known place of employment and job title;

2. In connection with a document, the words “describe” or “identify” mean to give a description of each document sufficient to uniquely identify it among all of the documents related to this matter, including, but not limited to, the name of the author of the document, the date, title, caption, or other style by which the document is headed, the name of each person and entity which is a signatory to the document, the date on which the document was prepared, signed, and/or executed, any relevant bates numbers on the document, the person or persons having possession and/or copies thereof, the person or persons to whom the document was sent, all persons who reviewed the document, the substance and nature of the document, the present custodian of the document, and any other information necessary to adequately identify the document;

3. In connection with an entity other than a natural person (*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.

4. In connection with any activity, occurrence, or communication, the words “describe” or “identify” mean to describe the activity, occurrence, or communication, the date of its occurrence, the identify of each person alleged to have had any involvement with or knowledge of the activity, occurrence, or communication, and the identity of any document recording or documenting such

activity, occurrence, or communication.

F. "Date" shall mean the exact day, month, and year, if ascertainable, or if not, the best approximation thereof (including by relationship to other events), and the basis for such approximation.

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

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

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

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

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

L. The discovery sought by this request encompasses material contained in, or which might be derived or ascertained from, the personal files of NRC Staff employees, representatives, investigators, and agents.

III. DISCOVERY REQUESTS

This set of discovery against the Staff relates to the NRC Staff's recently issued Safety Evaluation Report ("SER") released to the public in October 2000. Specifically, these

discovery requests relate to SER section 2.1.6, Geology and Seismology. The State is unaware of some of the Staff's basis or rationale for the representations in the SER. Moreover, the State is unaware of what documents support the Staff's representations. All of these Requests for Admissions and Documents are necessary to a proper decision in this proceeding for Contention Utah L. Accordingly, the documents requested are unavailable from another source. Instead of producing the actual document, the Staff may list documents by title and date if they are publicly available.

CONTENTION UTAH L - Geotechnical

A. Requests for Admissions - Contention Utah L.

REQUEST FOR ADMISSION NO. 1 - UTAH L. Do you admit that the soil-cement subgrade proposed by PFS is still at the conceptual stage? See SER at 2-49.

REQUEST FOR ADMISSION NO. 2 - UTAH L. Do you admit that the soil-cement subgrade proposed by PFS has not yet reached the design stage? See SER at 2-49.

REQUEST FOR ADMISSION NO. 3 - UTAH L. Do you admit that a nearby major fault capable of generating a large magnitude earthquake could impact the PFS site?

REQUEST FOR ADMISSION NO. 4 - UTAH L. Do you admit that the NRC staff has not evaluated near fault effects in the ground motion due to the PFS site being located in close proximity to a major fault?

REQUEST FOR ADMISSION NO. 5 - UTAH L. Do you admit that proximity to a major fault causes a directivity effect from a large pulse in the ground motion time history which effectively carries a large amount of energy in a short period making an earthquake excitation similar to a blast?

REQUEST FOR ADMISSION NO. 6 - UTAH L. Do you admit that pulses in the design time histories may be (a) one sided (e.g., half sine wave); or (b) two sided (e.g., full sine wave); or (c) symmetrical; or (d) unsymmetrical?

REQUEST FOR ADMISSION NO. 7 - UTAH L. Do you admit that Calculation No. 05996.02 G(P018)-3, Development of Time Histories for 2000-Year Return Period Design Spectra, August 24, 1999 (Geomatrix Consultants), provides only one set of acceleration time histories (2000-year response spectrum) for the dynamic analysis of the casks and the pad and canister transfer building ("CTB") foundations?

REQUEST FOR ADMISSION NO. 8 - UTAH L. Do you admit that PFS's development of design time histories does not account for a variation in pulse shapes?

REQUEST FOR ADMISSION NO. 9 - UTAH L. Do you admit that the Staff relied on PFS's development of design time histories?

REQUEST FOR ADMISSION NO. 10 - UTAH L. Do you admit that the SER does not account for any variation in the period of the pulse in the design time histories?

REQUEST FOR ADMISSION NO. 11 - UTAH L. Do you admit that the SER does not consider multiple time histories in characterizing the effects of potential pulses?

REQUEST FOR ADMISSION NO. 12 - UTAH L. Do you admit that the Staff has not considered how fault normal and fault parallel components of design time histories lined up with the longitudinal and transverse directions of the pad.

REQUEST FOR ADMISSION NO. 13 - UTAH L. Do you admit that a major faults dips under the proposed PFS site? *Sæ e.g., SAR 2.6-3.*

REQUEST FOR ADMISSION NO. 14 - UTAH L. Do you admit for near-fault

sites like PFS, where a major fault dips under the site, earthquake waves are likely to arrive at an angle?

REQUEST FOR ADMISSION NO. 15 - UTAH L. 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. 16 - UTAH L. Do you admit that such rocking and torsional effects additional to the vibration caused by the vertically propagating waves of the earthquake affect the stability of components such as casks?

REQUEST FOR ADMISSION NO. 17 - UTAH L. Do you admit that the Staff's evaluation of seismic load for the pads and canister transfer building, did not account for (a) a variation in seismic waves and (b) an angle of incidence?

REQUEST FOR ADMISSION NO. 18 - UTAH L. Do you admit that the SER relies on Multi Cask Response at the PFS ISFSI from 2000 Year Seismic Event by Holtec dated August 20, 1999 ("Holtec Multi Cask Response")?

REQUEST FOR ADMISSION NO. 19 - UTAH L. Do you admit that the SER relies on calculation No. 05996.02 SC-5, Rev. 1, Seismic Analysis of Canister Transfer Building, Stone and Webster ("Calculation No. 05996.02 SC-5")? See SER at 2-64.

REQUEST FOR ADMISSION NO. 20 - UTAH L. Do you admit that design of the PFS facility structures, systems and components important to safety ("SSCs") is based on the vertically propagating waves only?

REQUEST FOR ADMISSION NO. 21 - UTAH L. Do you admit that the Staff did

not evaluate the adverse effect of inclined waves on the seismic response of the SSCs at the PFS facility?

REQUEST FOR ADMISSION NO. 22 - UTAHL. Do you admit that in the Holtec Multi Cask Response the analysis of the casks on the pad is a nonlinear analysis?

REQUEST FOR ADMISSION NO. 23 - UTAHL. Do you admit that a non-linear sliding analysis of the casks sliding on the pad is sensitive to phasing of the design time histories?

REQUEST FOR ADMISSION NO. 24 - UTAHL. Do you admit that it is common practice in performing nonlinear analysis to use a minimum of three sets of time histories (each set having three components) representing the seismic setting and local geology of the site to cover potential variation in phasing of the time histories?

REQUEST FOR ADMISSION NO. 25 - UTAHL. Do you admit that the Staff relies on a nonlinear analysis which is based on one set of ground motions only?

REQUEST FOR ADMISSION NO. 26 - UTAHL. Do you admit the Staff did not account for the effect of time history phasing on the cask response.

REQUEST FOR ADMISSION NO. 27 - UTAHL. Do you admit that in calculating soil spring and damping, the Staff assumed the pads are rigid?

REQUEST FOR ADMISSION NO. 28 - UTAHL. Do you admit that PFSF Calculation No. 05996.02 G(P017)-2, Storage Pad Analysis and Design by International Civil Engineering Consultants, at page 214, table 5.2.5-1, shows that the vertical displacement of the pad varies by a factor larger than 2.5 from one node to the other?

REQUEST FOR ADMISSION NO. 29 - UTAHL. Do you admit that based on the

variation shown in Table 5.2.5-1 that the pad cannot be assumed to be rigid?

REQUEST FOR ADMISSION NO. 30 - UTAH L. Do you admit that the Staff relied upon the method used in Holtec Multi Cask Response to calculate foundation spring and damping?

REQUEST FOR ADMISSION NO. 31 - UTAH L. Do you admit that the analysis in Holtec Multi Cask Response did not account for the frequency dependency of the foundation spring and damping?

REQUEST FOR ADMISSION NO. 32 - UTAH L. Do you admit that the Staff relied on Calculation 05996.02 SC-4, Soil Springs and Dashpots for the Canister Transfer Building to show the effect of layered soil and frequency dependency of the foundation parameters.

REQUEST FOR ADMISSION NO. 33 - UTAH L. Do you admit that the Staff did not consider the flexibility of the mat and frequency-dependency of soil spring and damping in its analysis of the pads?

REQUEST FOR ADMISSION NO. 34- UTAH L. Do you admit that the Staff relied on Holtec's analysis of cask sliding in Holtec Multi Cask Response?

REQUEST FOR ADMISSION NO. 35 - UTAH L. Do you admit in analyzing cask sliding in Holtec Multi Cask Response, Holtec has used a range of coefficients of friction from 0.20 to 0.80?

REQUEST FOR ADMISSION NO. 36 - UTAH L. Do you admit that Holtec Multi Cask Response assumed each coefficient of friction value to be constant at all contact points between the casks and the pad as the casks slide and move on the pad?

REQUEST FOR ADMISSION NO. 37 - UTAHL. Do you admit that local deformation of the pad makes hard spots on the pad preventing smooth sliding of the casks?

REQUEST FOR ADMISSION NO. 38 - UTAHL. Do you admit that if casks are prevented from smooth sliding then the overturning moment may increase?

REQUEST FOR ADMISSION NO. 39 - UTAHL. Do you admit that long term contact between the cask with the pad may cause cold bonding?

REQUEST FOR ADMISSION NO. 40 - UTAHL. Do you admit that if cold bonding occurred, the coefficient of friction could be larger than 0.80?

REQUEST FOR ADMISSION NO. 41 - UTAHL. Do you admit that PFS's design is based on the assumption that the casks slide on the pad?

REQUEST FOR ADMISSION NO. 42 - UTAHL. Do you admit that if sliding does not occur, the factor of safety for sliding and overturning of the pads is decreased?

REQUEST FOR ADMISSION NO. 43 - UTAHL. Do you admit that the Staff relied on Calculation No. 05996.02 G(P017)-2, Storage Pad Analysis and Design by International Civil Engineering Consultants (" Calculation No. 05996.02 G(P017)-2")?

REQUEST FOR ADMISSION NO. 44 - UTAHL. Do you admit that the pads are only five feet apart in longitudinal direction?

REQUEST FOR ADMISSION NO. 45 - UTAHL. Do you admit that because the pads are only 5 feet apart in longitudinal direction, there can be pad-to-pad interaction?

REQUEST FOR ADMISSION NO. 46 - UTAHL. Do you admit that pad-to-pad interaction causes additional unsymmetrical vertical motion of the pad and the casks, thus causing the overturning moment of the casks?

REQUEST FOR ADMISSION NO. 47 - UTAHL. Do you admit that the analysis of overturning and sliding stability of the pads are based on the maximum peak ground acceleration (such as 0.53g in vertical direction)? See Calculation No. 05996.02 G(P017)-2.

REQUEST FOR ADMISSION NO. 48 - UTAHL. Do you admit using maximum peak ground acceleration to analyze overturning and sliding stability of pads is only valid for rigid systems?

REQUEST FOR ADMISSION NO. 49 - UTAHL. Do you admit that Calculation No. 05996.02 G(P017)-2 shows that the vertical frequency of the cask-pad-soil system varies from below 5 cycles/sec to above 8 cycle/sec depending on the soil properties considered?

REQUEST FOR ADMISSION NO. 50 - UTAHL. Do you admit that at frequencies from below 5 cycles/sec to above 8 cycle/sec the accelerations in the design response spectrum are larger than 1g?

REQUEST FOR ADMISSION NO. 51 - UTAHL. Do you admit that the SER relies on peak ground acceleration to calculate the foundation seismic loads?

REQUEST FOR ADMISSION NO. 52 - UTAHL. Do you admit that use of peak ground acceleration values severely underestimates the seismic loads for stability analysis of the casks?

REQUEST FOR ADMISSION NO. 53 - UTAHL. Do you admit that in the stability analysis of the pads, only the shear stress caused by the inertia load of the cask plus pad is considered?

REQUEST FOR ADMISSION NO. 54 - UTAHL. Do you admit that the results of seismic free-field analysis (Calculation No. 05996.02-G(P018)-2, Soils and foundation

parameters for dynamic soil-structure interaction, 200-year return period ground motions, Geomatrix Consultants), show that in the shallow depth in the upper 10 ft over 1 ksf of shear strength is already mobilized on account of free-filed wave propagation?

REQUEST FOR ADMISSION NO. 55 - UTAHL. Do you admit that the full shear strength is no longer available to resist the inertia load of the structure?

REQUEST FOR ADMISSION NO. 56 - UTAHL. Do you admit that the Staff relied on the seismic analysis of the canister building in Calculation No 05996.02-SC-5, Seismic Analysis of Canister Transfer Building, Stone and Webster ("Calculation No 05996.02-SC-5")?

REQUEST FOR ADMISSION NO. 57 - UTAHL. Do you admit that in Calculation No 05996.02-SC-5 the best estimate shear modulus of the soil was increased by 50% and reduced by 30% to account for variation of soil properties?

REQUEST FOR ADMISSION NO. 58 - UTAHL. Do you admit that the variation considered in Calculation No 05996.02-SC-5 is inconsistent with the variation considered for development of soil properties for the canister storage pads?

REQUEST FOR ADMISSION NO. 59 - UTAHL. Do you admit that the Staff relies on Calculation 05996.02 G(P018)-1 Soil and Foundation Properties for Dynamic Soil-Structure Interaction Analysis by Geomatrix Consultants ("Calculation 05996.02 G(P018)-1")?

REQUEST FOR ADMISSION NO. 60 - UTAHL. Do you admit that Calculation No. 05996.02 G(P018)-1, Soil and foundation parameters for dynamic soil-structure interaction analyses (August 26, 1999), considers that 45 feet below the ground surface the

soil properties are not well defined and that an appropriate variation of shear modulus varies by a factor of 2?

REQUEST FOR ADMISSION NO. 61 - UTAHL. Do you admit that the range of soil properties used for pad design is different from the range used for the canister transfer building?

REQUEST FOR ADMISSION NO. 62 - UTAHL. Do you admit that concrete may crack under seismic loads?

REQUEST FOR ADMISSION NO. 63 - UTAHL. Do you admit that the lower stiffness of the structure under cracked condition shifts the frequency of the structure and may cause additional seismic load in the structure?

REQUEST FOR ADMISSION NO. 64 - UTAHL. Do you admit that the Staff did not analyze the effects of concrete cracking in the design of the canister transfer building?

REQUEST FOR ADMISSION NO. 65 - UTAHL. Do you admit that the concrete design at the PFS facility must be in accordance with ASCE 4-98?

REQUEST FOR ADMISSION NO. 66 - UTAHL. Do you admit that ASCE 4-98 requires consideration of concrete cracking in design?

REQUEST FOR ADMISSION NO. 67 - UTAHL. Do you admit that the SER does not explain how the mass points in the CTB model were computed?

REQUEST FOR ADMISSION NO. 68 - UTAHL. Do you admit that the SER does not explain what percentage of operating load and live load was considered?

REQUEST FOR ADMISSION NO. 69 - UTAHL. Do you admit that the Staff did not analyze the effects of accidental mass eccentricity in the CTB design?

REQUEST FOR ADMISSION NO. 70 - UTAHL. Do you admit that ASCE 4-98 requires consideration of accidental eccentricity in the design?

REQUEST FOR ADMISSION NO. 71 - UTAHL. Do you admit that the Staff did not consider the effect of mass moment inertia in calculating the seismic load?

REQUEST FOR ADMISSION NO. 72 - UTAHL. Do you admit that the Staff relied on the CTB stability analysis (Calculation No. 05996-02, G(B)-13, S&W)?

REQUEST FOR ADMISSION NO. 73 - UTAHL. Do you admit that in Calculation No. 05996-02, G(B)-13, S&W, seismic loads are obtained by multiplying the mass at each elevation by the acceleration response from the dynamic analysis?

REQUEST FOR ADMISSION NO. 74 - UTAHL. Do you admit that the in the CTB analysis the Staff did not consider the effect of the rotational mass moment of inertia?

REQUEST FOR ADMISSION NO. 75 - UTAHL. Do you admit that the Staff did not consider the effect of mass moment of inertia in calculating the seismic load?

REQUEST FOR ADMISSION NO. 76 - UTAHL. Do you admit that estimating seismic load by multiplying mass times acceleration ignores the coupling from the two horizontal directions?

REQUEST FOR ADMISSION NO. 77 - UTAHL. Do you admit that the seismic loads from the dynamic analysis of the building including the coupling from the two horizontal directions should be used in the stability analysis?

REQUEST FOR ADMISSION NO. 78 - UTAHL. Do you admit that the Staff did not take into consideration the effect of coupling between horizontal responses in the design?

REQUEST FOR ADMISSION NO. 79 - UTAHL. Do you admit that the Staff relied on the finite element analysis (Calculation No. 05996.02, SC-6, Finite Element Analysis of Canister Transfer Building, Stone and Webster)?

REQUEST FOR ADMISSION NO. 80 - UTAHL. Do you admit that in developing foundation parameters for the CTB, the Staff did not considered the finite element analysis in determining whether the rigid mat assumption is appropriate for the actual pad size?

REQUEST FOR ADMISSION NO. 81 - UTAHL. Do you admit that PFS used a shear key one-foot deep around the Canister Transfer Building to improve the shear resistance against sliding?

REQUEST FOR ADMISSION NO. 82 - UTAHL. Do admit that the revised calculation (Calculation Number 05996-02, G(B)-13, S&W), estimates a factor of safety as low as 1.1?

REQUEST FOR ADMISSION NO. 83 - UTAHL. Do you admit that the Staff relied on Calculation Number 05996-02, G(B)-13?

REQUEST FOR ADMISSION NO. 84 - UTAHL. Do you admit that Calculation Number 05996-02, G(B)-13 relies on the passive resistance behind the 1-foot shear key to develop the resisting forces against sliding?

REQUEST FOR ADMISSION NO. 85 - UTAHL. Do you admit that the Staff relied on Calculation No. 05996.02-G(P018)-2, Soil and Foundation Parameters for Dynamic Soil-Structure Interaction, 2000-Year Return Period Ground Motion, Geomatrix Consultants?

REQUEST FOR ADMISSION NO. 86 - UTAHL. Do you admit that Calculation No. 05996.02-G(P018)-2, shows part of the shear strength has already been mobilized due to the free-field wave propagation?

REQUEST FOR ADMISSION NO. 87 - UTAHL. Do you admit that the full soil shear strength is not available to resist the inertia load of the structure?

REQUEST FOR ADMISSION NO. 88 - UTAHL. Do you admit that a shear strength value of 1.8 ksf was used in Calculation Number 05996-02, G(P018)-2?

REQUEST FOR ADMISSION NO. 89 - UTAHL. Do you admit that the shear strength value of 1.8 ksf does not account for mobilized shear strength?

REQUEST FOR ADMISSION NO. 90 - UTAHL. Do you admit that passive soil pressure is acting on one side of the shear key?

REQUEST FOR ADMISSION NO. 91 - UTAHL. Do you admit that static seismic soil pressure is acting on the other side of the shear key and mat?

REQUEST FOR ADMISSION NO. 92 - UTAHL. Do you admit that for stability analysis, passive soil pressure has not been used?

REQUEST FOR ADMISSION NO. 93 - UTAHL. Do you admit that the Staff has not considered static and seismic soil pressure on the other side of the mat and shear key?

REQUEST FOR ADMISSION NO. 94 - UTAHL. Do admit that the soil behind the face of the mat has low overburden pressure?

REQUEST FOR ADMISSION NO. 95 - UTAHL. Do you admit that the passive resistance will actually develop behind the key on the inner side of the mat where the

overburden of the building confines the soil?

REQUEST FOR ADMISSION NO. 96 - UTAH L. Do you admit that the passive resistance under the mat mobilizes the passive zone and develops vertical loads acting locally under the mat?

REQUEST FOR ADMISSION NO. 97 - UTAH L. Do you admit that the Staff did not consider the passive soil and its reaction under the mat in the stability analysis of the CTB and design of the mat?

REQUEST FOR ADMISSION NO. 98 - UTAH L. Do you admit that the seismic loads used in the SER do not consider the coupling between the horizontal directions?

REQUEST FOR ADMISSION NO. 99 - UTAH L. Do you admit that the Staff relied on the overturning analysis (Calculation Number 05996-02, G (B)-13, S&W)?

REQUEST FOR ADMISSION NO. 100 - UTAH L. Do you admit that the overturning analysis calculated a factor of safety of 1.13?

REQUEST FOR ADMISSION NO. 101 - UTAH L. Do you admit that in calculating the resisting moment, the Staff assumed the mass center of the building is at the center of the mat?

B. Document Requests - Contention Utah L

To the extent that responsive documents are publicly available, instead of producing the documents to the State, the Staff may describe such documents by title and date.

DOCUMENT REQUEST NO. 1 - UTAH L: Please produce all documents referenced or relied upon in answering all of the above Requests for Admission.

DOCUMENT REQUEST NO. 2 - UTAH L: Please produce all documents that the

Staff relied on in developing and reaching its conclusions in SER Section 2.1.6.1, Basic Geologic and Seismic Information.

DOCUMENT REQUEST NO. 3 - UTAHL: Please produce all documents that the Staff relied on in developing and reaching its conclusions in SER Section 2.1.6.2, Ground Vibration and Exemption Request.

DOCUMENT REQUEST NO. 4 - UTAHL: Please produce all documents that the Staff relied on in developing and reaching its conclusions in SER Section 3.1.6.3, Surface Faulting.

DOCUMENT REQUEST NO. 5 - UTAHL: Please produce all documents that the Staff relied on in developing and reaching its conclusions in SER Section 2.1.6.4.

DOCUMENT REQUEST NO. 6 - UTAHL: The SER at 2-49 states “[i]ndependent calculations were performed by the staff using a procedure suggested by Meyerhof (1956, 1965) to determine the SPT values (N) or CPT tip resistance values (Q) that are required to satisfy a safety factor of 3.0 against bearing failure under the cask-pad bearing pressure of 1.94 ksf.”

Please produce all documents relating to or relied upon for the above referenced independent calculations.

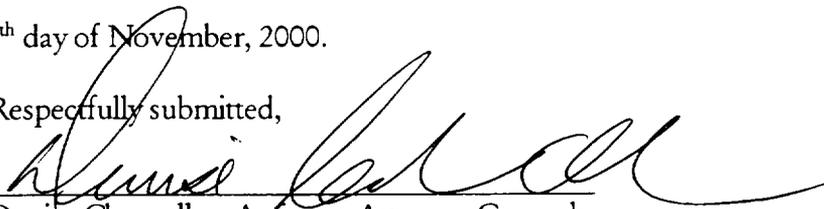
DOCUMENT REQUEST NO. 7 - UTAHL: The SER at 2-49, states: “... the requirement that the soil-cement subgrade extend to at least 4 feet from the edge of each pad, which was determined by NRC staff through a consideration of the minimum cross-sectional area of soil-cement required to prevent sliding of a storage pad.”

Please produce all documents relating to or relied upon for the above referenced

requirement.

DATED this 27th day of November, 2000.

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 TENTH SET OF DISCOVERY REQUESTS DIRECTED TO THE NRC STAFF was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 27th day of November, 2000:

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)

G. Paul Bollwerk, III, Chairman
Administrative Judge
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, DC 20555
E-Mail: gpb@nrc.gov

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

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

William D. Travers
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

Jay E. Silberg, Esq.
Ernest L. Blake, Jr., Esq.
Paul A. Gaukler, Esq.
Shaw, Pittman, Potts & Trowbridge
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

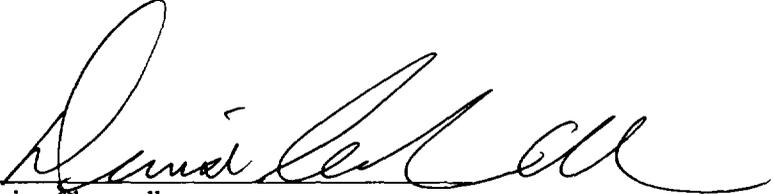
John Paul Kennedy, Sr., Esq.
1385 Yale Avenue
Salt Lake City, Utah 84105
E-Mail: john@kennedys.org

Joro Walker, Esq.
Land and Water Fund of the Rockies
2056 East 3300 South Street, Suite 1
Salt Lake City, Utah 84109
E-Mail: joro61@inconnect.com

Danny Quintana, Esq.
Danny Quintana & Associates, P.C.
68 South Main Street, Suite 600
Salt Lake City, Utah 84101
E-Mail: quintana@xmission.com

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

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*)



Denise Chancellor
Assistant Attorney General
State of Utah