

From: Sherwin Turk
To: PFS - ASLB (Farrar panel); PFS - parties
Date: 4/23/02 2:12AM
Subject: Attachments to Staff's response to the State of Utah's motion to strike Staff testimony and Exhibit
Place: HEARINGDOCKET

The Staff is providing copies of the following letters and E-mail messages, referred to in footnotes 6, 7, 8, 10, 12, 15, and 16, in the Staff's response to the State of Utah's motion to strike Staff testimony and proposed Staff Exhibit P, which the Staff filed on April 22, 2002, based on the Staff's concern that the Board may not have these documents in its possession in Salt Lake City. Copies of these documents are being provided by E-mail and telefax, in order to facilitate the Licensing Board's consideration of this matter during the telephone conference call to be held on April 25, 2002.

1. Letter from Sherwin E. Turk to Denise Chancellor, dated February 25, 2002 (without enclosures).
2. Letter from Sherwin E. Turk to Denise Chancellor, dated March 8, 2002 (without enclosure).
3. Letter from Sherwin E. Turk to Denise Chancellor, dated March 22, 2002.
4. Letter from Sherwin E. Turk to Denise Chancellor, dated April 17, 2002 (without enclosures).
5. Letter from Sherwin E. Turk to Denise Chancellor, dated April 22, 2002 (without enclosures).
6. E-mail message from Sherwin Turk to Denise Chancellor, dated April 16, 2002 (Subject: Additional Discovery) (by separate transmission).
7. E-mail message from Sherwin Turk to Denise Chancellor and Paul Gaukler, dated March 1, 2002 (by separate transmission).

In addition, the Staff is transmitting an additional E-mail message that is not cited in the Staff's response, as follows:

8. E-mail message from Sherwin Turk to Denise Chancellor, dated April 17, 2002 (Subject: E-mail message from Mike Waters), with attached file.

CC: Jack Whetstine; PFS- NRC staff, lawyers, & Anne; Sharon Perini

Utah L

February 25, 2002

Denise Chancellor, Esq.
Utah Attorney General's Office
160 East 300 South, 5th Floor
P.O. Box 140873
Salt Lake City, Utah 84114-0873

In the Matter of
Private Fuel Storage, L.L.C.
(Independent Spent Fuel Storage Installation)
Docket No. 72-22-ISFSI

Dear Ms. Chancellor:

Enclosed please find a copy of (1) "Summary Report on Seismic Analysis of HI-STORM 100 Casks at Private Fuel Storage (PFS) Facility," dated February 22, 2002, concerning the potential for tipover and sliding of the HI-STORM storage casks on the storage pads at the PFS Facility under 2,000 year and 10,000 year return period seismic events; and (2) the professional qualifications of Dr. Vincent K. Luk of Sandia National Laboratories, who served as the principal author of the enclosed summary report.

The enclosed documents are being produced in further response to the State of Utah's Seventeenth Set of Discovery Requests Directed to the NRC Staff, dated January 17, 2002. The Staff's initial response to that discovery request was filed on February 1, 2002.

Please be advised that the Staff is preparing a detailed report concerning the matters set forth in the enclosed summary report, and expects to be able to produce that detailed report within approximately two weeks. Further, the Staff intends to call Dr. Luk as a witness in the hearings on Contention Utah L/QQ, in support of the Staff's conclusion that sliding and tipover do not represent a concern for the proposed installation of the HI-STORM storage casks at the PFS Facility.

Sincerely,

Sherwin E. Turk
Counsel for NRC Staff

Enclosure: As stated
cc w/Encl.: Service List



OFFICE OF THE
GENERAL COUNSEL

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 8, 2002

Denise Chancellor, Esq.
Utah Attorney General's Office
160 East 300 South, 5th Floor
P.O. Box 140873
Salt Lake City, Utah 84114-0873

In the Matter of
Private Fuel Storage, L.L.C.
(Independent Spent Fuel Storage Installation)
Docket No. 72-22-ISFSI

Dear Ms. Chancellor:

In my letter of February 25, 2002, I produced two documents in response to the State of Utah's Seventeenth Set of Discovery Requests Directed to the NRC Staff, dated January 17, 2002: (1) "Summary Report on Seismic Analysis of HI-STORM 100 Casks at Private Fuel Storage (PFS) Facility," dated February 22, 2002; and (2) the professional qualifications of Dr. Vincent K. Luk of Sandia National Laboratories, the principal author of that report. I further indicated that the Staff is preparing a detailed report concerning the matters set forth in the summary report, which we expected to produce within about two weeks.

In accordance with my letter of February 25 and our subsequent conversations, enclosed please find Dr. Luk's detailed report entitled, "Seismic Analysis Report on HI-STORM 100 Casks at Private Fuel Storage (PFS) Facility," dated March 8, 2002. The enclosed report provides detailed bases for the conclusions stated in Dr. Luk's Summary Report of February 22, 2002, concerning the behavior of the HI-STORM casks at the PFS Facility under 2,000 year and 10,000 year return period seismic events. A CD Rom disk containing the enclosed report is also enclosed for your convenience.

Sincerely,

A handwritten signature in black ink that reads "Sherwin E. Turk".

Sherwin E. Turk
Counsel for NRC Staff

Enclosures: As stated
By Express Mail

cc w/Encls.: Jay Silberg, Esq.
cc w/out Encls.: Service List



OFFICE OF THE
GENERAL COUNSEL

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 22, 2002

Denise Chancellor, Esq.
Utah Attorney General's Office
160 East 300 South, 5th Floor
P.O. Box 140873
Salt Lake City, Utah 84114-0873

In the Matter of
Private Fuel Storage, L.L.C.
(Independent Spent Fuel Storage Installation)
Docket No. 72-22-ISFSI

Dear Ms. Chancellor:

This is to confirm our telephone conversation on March 20, 2002, with respect to the Staff's "Final Report" concerning the confirmatory tipover and sliding analysis that was conducted by Dr. Vincent Luk of Sandia National Laboratories on behalf of the NRC Staff. The Staff produced that report to the State of Utah by letter dated March 8, 2002, in partial response to the State of Utah's Seventeenth Set of Discovery Requests Directed to the NRC Staff, dated January 17, 2002.

In our conversation, I informed you that some of the exhibits in the Final Report contain an incorrect label. Specifically, the captions at the bottom of Figures II-2.1 to II-2.8 (Appendix II), and III-2.1 to III-2.8 (Appendix III), incorrectly state that a cask/pad coefficient of friction of 0.80 was utilized in those runs, whereas the captions above those exhibits correctly state this value as 0.20. Second, I indicated that the Staff is conducting two additional computer runs which we expect to conclude next week. Specifically, Dr. Luk is conducting two computer runs which utilize a cask/pad coefficient of friction of 0.80 for the 1971 San Fernando (Pacoima Dam record) and the 10,000-year earthquakes. The results of these runs will be reported in a revision to the Final Report, and would supplement the information contained in Tables 9 and 10 of the Final Report (at page 31).

Please do not hesitate to contact me if you have any questions in this regard.

Sincerely,

A handwritten signature in black ink that reads "Sherwin E. Turk".

Sherwin E. Turk
Counsel for NRC Staff

cc: Service List



OFFICE OF THE
GENERAL COUNSEL

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 17, 2002

Denise Chancellor, Esq.
Utah Attorney General's Office
160 East 300 South, 5th Floor
P.O. Box 140873
Salt Lake City, Utah 84114-0873

In the Matter of
Private Fuel Storage, L.L.C.
(Independent Spent Fuel Storage Installation)
Docket No. 72-22-ISFSI

Dear Ms. Chancellor:

In accordance with our telephone conversation of earlier today, I am transmitting herewith copies of documents in the possession of the NRC Staff, that relate to the prefiled testimony of Michael Waters:

1. Memo from Julia Myers to Jack Guttman and Mike Waters, Subject: "Dose Rate Observations for Various Concrete Densities in the Holtec HI-STORM 100 Storage Cask, 72-1014";
2. Input and output files for SAS-4 computer calculations, for 40 GWD/MTU and 10-year cooled fuel, for heated (horizontal) and unheated (vertical) HI-STORM 100 cask);
3. SAS-2H input file for 40 GWD/MTU and 10-year cooled fuel;
4. Title pages for SAS-2H and SAS4 shielding computer codes (NUREG/CR-0200);
5. Two color figures for the SAS4 shielding model;
6. Photocopies of selected pages from the HI-STORM 100 FSAR on shielding;
7. Portion of published article by R.G. Jaeger, *et al.*, entitled "Engineering Compendium on Radiation Shielding";
8. Summary by PNNL, entitled, "COBRA-SFS Analysis of the Holtec Hi-Storm 100 Storage System Following a Tip-Over;

Denise Chancellor, Esq.
April 17, 2002
Page Two

9. E-mail from Thomas Michener (PNNL) to Michael Waters (NRC) regarding heat load used in COBRA calculation;
10. COBRA-SFS Input File for HI-STORM 100 Cask - Blocked Vents"; and
11. E-mail message from Michael Waters to Sherwin Turk, dated April 17, 2002, Subject: "Computer output files for Thermal, Source Term, and Dose Calcs."

In addition, we have discussed the question of whether the State will require the deposition of Dr. Luk, or whether the production of documents related to his testimony and report will suffice, particularly in view of the travel demands that a deposition would impose on all parties at this time. In the interest of providing you with more complete information (and in the hope of obviating the need for a deposition), I am enclosing the following documents provided by Po Lam to Dr. Luk, concerning the deconvoluted time histories utilized in Dr. Luk's report:

1. Transmittal from Po Lam to Vincent Luk, dated August 27, 2001, Subject: "Analysis of Soil Foundation at Private Fuel Storage (PFS) Facilities";
2. Transmittal from Po Lam to Vincent Luk, dated October 17, 2001, Subject: "PFS, Reference Outcrop and Deconvoluted Second Set Motions"; and
3. Transmittal from Po Lam to Vincent Luk, dated January 22, 2002, Subject: "Private Fuel Storage Casks, 10,000-Year Event / First Revision on Report Dated January 11, 2002";

I expect to receive a list of additional documents from Dr. Luk shortly, and should be able to forward that to you tomorrow to assist you in identifying the documents you wish to obtain.

Sincerely,



Sherwin E. Turk
Counsel for NRC Staff

By: Federal Express

Enclosures: As stated

cc w/Encl.: Jay Silberg, Esq.
cc w/out Encl.: Service List



OFFICE OF THE
GENERAL COUNSEL

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 22, 2002

Denise Chancellor, Esq.
Utah Attorney General's Office
160 East 300 South, 5th Floor
P.O. Box 140873
Salt Lake City, Utah 84114-0873

In the Matter of
Private Fuel Storage, L.L.C.
(Independent Spent Fuel Storage Installation)
Docket No. 72-22-ISFSI

Dear Ms. Chancellor:

By letter dated April 17, 2002, the NRC Staff ("Staff") produced various documents to the State of Utah ("State") related to the March 31, 2002 report by Dr. Vincent Luk, concerning the potential for cask tipover or sliding at the proposed PFS Facility. In accordance with our telephone conversation of last week, the Staff is herewith producing or identifying additional documents related to Dr. Luk's report, as set forth in the attached list.

The documents identified herein consist of four types: (a) documents in paper format, which are enclosed herewith; (b) documents in electronic format, which I will transmit to you by E-mail later today or tomorrow; (c) computer files available in electronic format, which will be transmitted to you upon your request, and (d) documents which are being withheld by the Staff as privileged, predecisional documents. I trust that the Staff's production of these documents will further assist the State in preparing for hearings with respect to Dr. Luk's report and his prefiled testimony of April 1, 2002.

In our conversation last week, we discussed the State's renewed interest in taking Dr. Luk's deposition. While the Staff has not objected to the State's request to depose Dr. Luk, we believe that his report and prefiled testimony are self-explanatory -- and that the Staff's production of documents provides ample information for the State's use in preparing for hearing. Also, please recall that the Staff had previously expressed its willingness to make Dr. Luk available for a deposition during the last ten days of March, but that opportunity was not pursued by the State. Unfortunately, due to the travel demands that a deposition would impose on Dr. Luk and all parties at this time -- just a few days before the start of seismic hearings on Monday, April 28 -- I do not believe that we could make Dr. Luk available for a deposition at this late date. Accordingly, I am unable to respond favorably to your interest in conducting Dr. Luk's deposition at this time.

Denise Chancellor, Esq.
April 22, 2002
Page Two

Please do not hesitate to contact me if you have any questions about the attached list of documents, if you wish to receive copies of the computer files listed therein, or if I can provide any further assistance to the State in this regard.

Sincerely,

A handwritten signature in black ink that reads "Sherwin E. Turk". The signature is written in a cursive style with a prominent flourish at the end of the last name.

Sherwin E. Turk
Counsel for NRC Staff

By: Federal Express
Enclosures: As stated

cc w/Encl.: Service List

April 22, 2002

**Additional Documents Related to the
March 31, 2002 Report by Dr. Vincent Luk
Concerning Unified Contention Utah L/QQ**

A. Documents Produced by Letter of April 22, 2002

PFS Calculation Sheets, Pages 94-100, sent via telefax by Michael Waters (NRC) to Vincent Luk (SNL), on July 26, 2001 (providing design information concerning the PFS site) (transmittal sheet plus seven pages).

B. Documents Being Produced in Electronic Format

1. Luk, V. K., et al., "NRC Project on Seismic Behavior of Spent Fuel Storage Cask Systems - Final Report on Seismic Analysis of Three-Module Rectangular Transnuclear West Module/Cask," dated December 21, 2001. [This is Item 4 in the list of References in Dr. Luk's March 31, 2002 Report, which the State of Utah specifically requested during the week of April 15-19, 2002.]
2. Luk, V. K., et al., "NRC Project on Seismic Behavior of Spent Fuel Storage Cask Systems - Final Report on Seismic Analysis of HI-STORM 100 Casks at Hatch Nuclear Power Plant," dated June 28, 2001. [This is Item 5 in the list of References in Dr. Luk's March 31, 2002 Report, which the State of Utah specifically requested during the week of April 15-19, 2002.]
3. E-mail from Khalid Shaukat (NRC) to Vincent Luk (SNL), May 30, 2001.
 - Design information on HI-STORM 100 cask, including basic cask dimensions, weight, and C.G. location.
4. E-mail and computer disk from Mahendra Shah (NRC) to Vincent Luk (SNL), June 14, 2001.
 - Dimension and material properties of concrete pad
 - PFS soil profile data.
 - Response spectra of three independent components (two horizontal and one vertical) for the PFS site-specific seismic event based on a 2,000-year return period.
 - Time histories of three independent seismic acceleration components (two horizontal and one vertical) for the PFS site-specific seismic event based on a 2,000-year return period.
5. E-mail from Mahendra Shah (NRC) to Vincent Luk (SNL), November 28, 2001.
 - The PFS data on strain vs. shear modulus and damping for soil layers used in the seismic analysis for the site-specific seismic event based on a 10,000-year return period.

C. Computer Files Available in Electronic Format, Upon Request

Input files and associated earthquake excitation files. This list has been organized to coincide with Tables 8, 9, and 10 of the report of March 31, 2002. The files are listed in groups in the following order:

PfsfXscXX_dIX.inp Implicit dead load step input file, friction fX (cask/pad), friction scXX (soil cement surfaces), iteration number dIX, (32 printed pages)
PfsfXscXX_eqdX.inp Explicit earthquake dynamic step input file, friction fX (cask/pad), friction scXX (soil cement surfaces), iteration number eqdX, (10 pages)
XXXXXX.data Earthquake acceleration input data file, U1 (normal) direction, (36 pages)
XXXXXX.data Earthquake acceleration input data file, U2 (parallel) direction, (36 pages)
XXXXXX.data Earthquake acceleration input data file, U3 (vertical) direction, (36 pages)

1. Files Used in Analysis Included in Table 8, PFS 2000 Year Return Period Seismic Event.

For Friction $\mu=0.2$ (cask/pad), and Friction $\mu =1.0$ (all other surfaces), Best Estimated Soil Profile data, and the PFS 2000 Year Return Period Seismic Record, Model Type 1
(pfsf2sc1_dl2.inp, pfsf2sc1_eqd2.inp, pfsd072301h1.data, pfsd072301h2.data, pfsd072301v.data)

For Friction $\mu =0.2$ (cask/pad), and Friction $\mu =0.31$ (all other surfaces), Best Estimated Soil Profile data, and the PFS 2000 Year Return Period Seismic Record, Model Type 1
(pfsf2sc31_dl6.inp, pfsf2sc31_eqd6.inp, pfsd072301h1.data, pfsd072301h2.data, pfsd072301v.data)

For Friction $\mu =0.8$ (cask/pad), and Friction $\mu =1.0$ (all other surfaces), Best Estimated Soil Profile data, and the PFS 2000 Year Return Period Seismic Record, Model Type 1
(pfsf8sc1_dl4.inp, pfsf8sc1_eqd4.inp, pfsd072301h1.data, pfsd072301h2.data, pfsd072301v.data)

For Friction $\mu =0.2$ (cask/pad), and Friction $\mu =0.31$ (all other surfaces), Best Estimated Soil Profile data, and the PFS 2000 Year Return Period Seismic Record, Model Type 2
(smpfsf2sc31_dl5.inp, smpfsf2sc31_eqd5.inp, pfsd072301h1.data, pfsd072301h2.data, pfsd072301v.data)

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Best Estimated Soil Profile data, and the PFS 2000 Year Return Period Seismic Record, Model Type 3

(pfsf2sc31d7_dl4.inp, pfsf2sc31d7_eqd4.inp, pfsd072301h1.data, pfsd072301h2.data, pfsd072301v.data)

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Lower Bound Soil Profile data, and the PFS 2000 Year Return Period Seismic Record, Model Type 1

(pfsf2sc31l_dl1.inp, pfsf2sc31l_eqd1.inp, pfslbn_091801.data, pfslbp_091801.data, pfslbv_091801.data)

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Upper Bound Soil Profile data, and the PFS 2000 Year Return Period Seismic Record, Model Type 1

(pfsf2sc31u_dl1.inp, pfsf2sc31u_eqd1.inp, pfsubn_091801.data, pfsubp_091801.data, pfsubv_091801.data)

2. Files Used in Analysis Included in Table 9, San Fernando Earthquake Record.

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Best Estimated Soil Profile data, and the San Fernando Earthquake Record, Model Type 1

(pfsf2sc31sb_dl1.inp, pfsf2sc31sb_eqd1.inp, sfd101701-be-h1.data, sfd101701-be-h2.data, sfd101701-be-v.data)

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Lower Bound Soil Profile data, and the San Fernando Earthquake Record, Model Type 1

(pfsf2sc31sl_dl1.inp, pfsf2sc31sl_eqd1.inp, sfd101701-lb-h1.data, sfd101701-lb-h2.data, sfd101701-lb-v.data)

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Upper Bound Soil Profile data, and the San Fernando Earthquake Record, Model Type 1

(pfsf2sc31su_dl1.inp, pfsf2sc31su_eqd1.inp, sfd101701-ub-h1.data, sfd101701-ub-h2.data, sfd101701-ub-v.data)

For Friction $\mu = 0.8$ (cask/pad), and Friction $\mu = 1.0$ (all other surfaces), Best Estimated Soil Profile data, and the San Fernando Earthquake Record, Model Type 1

(pfsf8sc1sb_dl1.inp, pfsf8sc1sb_eqd1.inp, sfd101701-be-h1.data, sfd101701-be-h2.data, sfd101701-be-v.data)

3. Files Used in Analysis Included in Table 10, PFS 10,000 Year Return Earthquake Seismic Event.

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Best Estimated Soil Profile data, and the PFS 10,000 Year Return Earthquake Seismic Event, Model Type 1

(pfsf2sc31_10kbedl.inp, pfsf2sc31_10kbeeqd.inp, 10kdec-fn-1-15-02.data, 10kdec-fp-1-15-02.data, 10kdec-up-1-15-02.data)

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Lower Bound Soil Profile data, and the PFS 10,000 Year Return Earthquake Seismic Event, Model Type 1

(pfsf2sc31_10klbdl.inp, pfsf2sc31_10klbeqd.inp, 10kdec-fnlb-11502.data, 10kdec-fplb-11502.data, 10kdec-uplb-11502.data)

For Friction $\mu = 0.2$ (cask/pad), and Friction $\mu = 0.31$ (all other surfaces), Upper Bound Soil Profile data, and the PFS 10,000 Year Return Earthquake Seismic Event, Model Type 1

(pfsf2sc31_10kubdl.inp, pfsf2sc31_10kubeqd.inp, 10kdec-fnub-11502.data, 10kdec-fpub-11502.data, 10kdec-upub-11502.data)

For Friction $\mu = 0.8$ (cask/pad), and Friction $\mu = 1.0$ (all other surfaces), Lower Bound Soil Profile data, and the PFS 10,000 Year Return Earthquake Seismic Event, Model Type 1

(pfsf8sc1_10klbdl.inp, pfsf8sc1_10klbeqd.inp, 10kdec-fnlb-11502.data, 10kdec-fplb-11502.data, 10kdec-uplb-11502.data)

D. Predecisional Documents Withheld as Privileged

1. E-mail from Vincent Luk (SNL) to Khalid Shaukat and Mahendra Shah (NRC), dated July 27, 2001 (Subject: Information on details of coupled finite element model for review by the NRC Staff).
2. E-mail from Mahendra Shah (NRC) to Vincent Luk (SNL), dated August 2, 2001 (Subject: Dr. Shah's comments on the coupled finite element model of the PFS cask).
3. E-mail from Vincent Luk (SNL) to Khalid Shaukat and Mahendra Shah (NRC), August 21, 2001 (Subject: Coefficients of friction at the interfaces between cask/pad, pad/soil-cement layer, and soil-cement layer/soil foundation).
4. E-mail from Mahendra Shah (NRC) to Vincent Luk (SNL), dated September 19, 2001 (Subject: Time histories of the three components of seismic acceleration for the 1971 San Fernando Earthquake, Pacoima Dam Record).

5. E-mail from Mahendra Shah (NRC) to Vincent Luk (SNL), dated November 26, 2001 (Subject: Time histories of the three components of seismic acceleration for the PFS site-specific seismic event based on a 10,000-year return period).

From: Sherwin Turk
To: PFS - Utah (dchancel@att)
Date: 4/16/02 7:29PM
Subject: Additional Discovery

Denise - Based on our conversation earlier today, I have asked Dr. Luk to assemble a list of all documents in his possession relating to his report. I hope to receive that information tomorrow, and will then E-mail it to you. After you review it, please let us know which documents you want to see. Also, I have received a copy of the three deconvoluted time histories that were used in the analysis. I have asked for photocopies to be made, and hope to produce them to you tomorrow.

I have also asked Staff witness Michael Waters to put together the calculations and inputs used in his analysis, and I will provide that to you, as well.

As for your interest in deposing Dr. Luk, please recall that we discussed this in March while Dr. Luk was out of the country, at which time we considered scheduling his deposition during the ten-day period after his expected return to the U.S. on March 20, 2002. We would be willing to produce him for a deposition at a mutually convenient time and place next week, and I discussed with you the possibility of scheduling the deposition for Wednesday or Thursday (April 24 or 25), in Washington or Albuquerque, or Sunday, April 28, in Salt Lake City. I will discuss this further with other interested persons, and will call you tomorrow with more information.

Of course, I would expect that any agreement by the Staff in response to your requests would be matched by the State's agreement to withdraw, as moot, its motion in limine concerning Dr. Luk's testimony and report, and/or Mr. Waters' testimony.

From: Sherwin Turk
To: PFS - App -Gaukler, Paul; PFS - Utah (dchancel@att)
Date: 3/1/02 4:49PM
Subject: Staff witnesses
Place: SER - Chen, Rui

Denise and Paul:

This is to confirm our telephone conversation of this morning, regarding the Staff's proposed witnesses on Contention Utah L/QQ. The Staff intends to call the following individuals:

- 1 Goodluck Ofoegbu (soil stability, soil-structure interface)
- 2 Daniel Pomerening (foundation design and stability)
- 3 Vincent Luk (cask tipover and sliding)
- 4 Jack Guttmann (tentative) (with Luk - cask tipover and sliding)
- 5 Henry Lee (HI-STORM cask)
- 6 Michael Waters (tentative) (dose consequences, if needed)
- 7 John Stamatakos (exemption, return period)
- 8 Rui Chen (with Stamatakos - exemption, return period)
- 9 Martin McCann (with Stamatakos - exemption, return period)

Please note that the description of subject areas above represents my shorthand only, and is not meant to be definitional or comprehensive. The Staff will update its responses to the State's discovery requests next week, to formalize the Staff's identification of witnesses, and to send you any PQ statements that you do not already have.

Best regards, Sherwin

CC: NRC Staff - Seismic team

From: Sherwin Turk
To: internet: dchancel@att.state.ut.us
Date: 4/17/02 3:46PM
Subject: Fwd: Computer output files for Thermal, Source Term, and Dose Calcs.

E-mail message from Mike Waters.

CC: internet: paul.gaukler@shawpittman.com

From: Michael Waters
To: Turk, Sherwin
Date: 4/17/02 3:32PM
Subject: Computer output files for Thermal, Source Term, and Dose Calcs.

Shep,

As discussed, I gave you hardcopies of the data, computer input and output files, and Staff analyses that I relied upon in my response to Question 20. However, some of the computer output files are extremely large (> 1 Megabyte) and would be well over a 1000 pages each, if printed on paper. Below is a list of the Question 20 related computer output files not printed in hardcopy, but available electronically:

COBRA-SFS THERMAL CALCULATION (BLOCKED VENTS)

Temperature output file (>1000 pages)

SAS-2H SOURCE TERM CALCULATION (40 GWD/MTU and 10-years)

Source term output file (>1000 pages)

SAS-4 SHIELDING CALCULATIONS FOR (40 GWD/MTU and 10 Years)

"Unheated" Radial Gamma output file (Long Version) (>2000 pages)

"Unheated" Radial Neutron output file (Long Version) (>2000 pages)

"Heated" Radial Gamma output file (Long Version) (>2000 pages)

"Heated" Radial Neutron output file (Long Version) (>2000 pages)

Also, note that there were several other SAS-4 shielding calculations and SAS-2H computer runs that were not based on the design-basis 40 GWD/MTU and 10-year fuel. These runs were not used directly in my testimony. Rather, they were indirectly used by Staff to test the validity of some of the computer modeling assumptions for the 40 GWD/MTU SAS-4 dose calculations (i.e. benchmarking). Most of these results are also reported in the hardcopy memo from Myers to Guttman/Waters. These 30+ additional electronic files are available, but almost half are very large (several megabytes and >1000 pages) as discussed above.