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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

2002 APR 29 AM 10: 28

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

April 15, 2002

**STATE OF UTAH'S MOTION IN LIMINE TO STRIKE  
APPLICANT'S PREFILED DIRECT TESTIMONY  
(Unified Contention Utah L/QQ)**

The State of Utah moves the Board to strike the Applicant's prefiled direct testimony, relating to Unified Contention Utah L/QQ. This motion is based on the following grounds: the prefiled testimony is inexcusably late and should be stricken; portions of the testimony of Singh and Soler and that of Trudeau and Wissa<sup>1</sup> are based on facts not in evidence and are otherwise unreliable and should be stricken.

## DISCUSSION

Admissibility of evidence in an NRC adjudicatory proceeding specifies that “[o]nly relevant, material, and reliable evidence which is not unduly repetitious will be admitted.” 10 CFR § 2.743(c). Since NRC Rules of Practice do not expressly address expert testimony, the Federal Rules of Evidence (“FRE”) provide appropriate guidance.<sup>2</sup> In response to Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), FRE 702 was amended in 2000 to provide:

If scientific, technical, or other specialized knowledge will assist the trier of fact to

<sup>1</sup> Testimony of Krishna P. Singh and Alan I. Soler on Unified Contention Utah L/00; Joint Testimony of Paul J. Trudeau and Anwar E. Z. Wissa on Section C of Unified Contention Utah L/00.

<sup>2</sup> See, e.g., Duke Power Company (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 N.R.C. 453, 475 (1982).

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SECY-02

understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

**I. PFS's Testimony Was Prefiled Inexcusably Late and as Such it Prejudices the State.**

In this proceeding the parties have been instructed to file simultaneous prefiled testimony. *Sæ* Private Fuel Storage Proceeding General Schedule, as revised 9/20/01. April 1, 2002 was the date by which electronic copies of prefiled testimony for Unified Contention Utah L/QQ were to be filed with the Licensing Board. *Id.* PFS did not commence filing its electronic pre-filed testimony until 5:34 am EST (3:34 am MDT) April 2, 2002 and did not conclude filing its electronic pre-filing testimony until 6:16 pm EST on April 2. *Sæ* email list, Exhibit 1, and email message, Exhibit 2, attached hereto. While the State recognizes the hardship involved in meeting the Board's deadline on such a broad and technically challenging issue as Unified Contention Utah L/QQ, nonetheless PFS's inexcusable lateness has unduly prejudiced the State.

Of particular concern to the State is the fact that PFS had many hours to read, review and have its witnesses analyze the State's prefiled testimony prior to the time PFS filed its testimony. PFS therefore had the opportunity to change its testimony in response to the State's testimony. PFS's testimony of Singh and Soler on Section D of the unified contention, for example, was filed at 8:25am EDT (6:25 am MST), five hours after the State filed its testimony of Bartlett and Ostadan on Section D. *Sæ* Exh. 1. Likewise, PFS's testimony of Trudeau on Section C of the unified contention was filed at 9:34 am EST (7:34 am MST), more than 9 hours after the State filed its testimony for Bartlett on Section C. *Id.* Yet another example is PFS's Key Determinations, filed at 6:16 pm EST and more than 15 hours after the State filed its Key Determinations. *Sæ* Exh. 2. Of course, all parties would have relished more time to continue writing testimony, gather

exhibits and complete the additional documents requested by the Board (*i.e.*, prefaces to testimony and key determinations). But this is a fast-paced proceeding – primarily at the urging of the Applicant – and with simultaneous electronic filings, a party's inexcusable lateness may prejudice another party who has made every effort to meet the filing deadline.

In this case, the State has been unduly prejudiced by PFS's opportunity to respond to the State's prefiled testimony and by the additional time (up to 15 hours) PFS has had to complete filing its testimony. The State should not be penalized by making a good faith effort to meet the Board's filing deadline. Accordingly, the State requests the Board to strike PFS's inexcusable late pre-filed testimony or enter such orders as would create a level playing field.

**II. Portions of PFS's Testimony Contains Unreliable Testimony Based on Unsupported or Misleading Facts and Data or on Documents Not Produced to the State, and Should Be Stricken.**

Portions of the opinions rendered in the Singh and Soler testimony are based on facts and data that are not contained in their testimony. Furthermore, documents relating to those facts, data, and methodology have not been produced to the State. As such, the testimony is not based upon sufficient facts or data, the testimony may not be the product of reliable principles and methods, and the reliability of the witnesses' application of the principles and methods to the facts and data cannot be ascertained. If the testimony is being offered as expert opinion, it does not meet FRE 702, is unreliable, and should be stricken.

**A. Singh & Solar Testimony – Additional Re-runs**

In Answer 40 of the Singh and Soler testimony, Dr. Soler states: "In conjunction with the preparation for this testimony, we ran additional simulations to test alleged deficiencies that the State's experts claimed might affect our previous analysis by re-running our analyses using different

assumptions than those used in the above described analyses.”<sup>3</sup> Singh/Soler Testimony A.40 at 28.

The re-runs were conducted using VisualNastran (“VN”) computer code. Id. A.113 at 62.

Answers 112 through 121 relate to these additional VN re-runs. In Answer 120 (no designated witness sponsor), either one or both of the witnesses claim that certain results of the VN re-run “agree with the results predicted by DYNAMO.” Id. at A.120 at 68; *see also id.* at A.40 at 28.

There is no basis for the foregoing statement. PFS did include a computer animated video on CD-ROM as part of this testimony<sup>4</sup> but these animations – or anything else in the testimony -- do not contain any rigorous analysis to confirm that the VN re-run agree with the DYNAMO results.<sup>5</sup> Accordingly, Answers 40 and 120 should be stricken.

If the witnesses’ responses to Questions 112-121 are permitted to stand, then the State will have to elicit newly developed information from these witnesses during cross examination – just like the State will have to do with some of the Staff’s witness. In addition to lengthening the proceeding, it will not allow the State to develop its case for trial. In addition to the unreliability of the answers – which do not comport with FRE 702 – those answers also prejudice the State’s preparation of its case for trial. Accordingly, Answers 112 through 121 should be stricken.

#### B. Singh & Soler TVA Pad Flexibility Analysis

In answer to Question 60, Dr. Soler claims that Holtec has analyzed the pad flexibility of the proposed Sequoyah Nuclear Power plant for the Tennessee Valley Authority (“TVA”). In

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<sup>3</sup>The above described analyses refers to Holtec reports that had been produced to the State and on which the State had the opportunity to depose these witnesses.

<sup>4</sup>The video files on the CD-ROM were identified as PFS Exhibit MM; the exhibit the State received of the CD-ROM is identified as PFS Exhibit OO.

<sup>5</sup>On April 12 the State received a copy of Holtec Report No. HI-2022854, PFSF Beyond Design Basis Scoping Analyses, dated April 12, 2002. This report is probably based on the re-runs but because it post-dates the testimony by eleven days and has just been produced to the State, it does not change the argument that the testimony is not based on known facts and data, or reliable application of principles and methods to the facts and data.

Answer 61, Dr. Soler draws conclusions about the flexibility of the pad at the PFS site based on the TVA pad flexibility analysis. Singh/Soler Testimony at 39. Yet the TVA pad flexibility report is not included as an exhibit to the testimony nor has the TVA pad flexibility report been produced to the State.<sup>6</sup> Moreover, there is a significant dispute between PFS and the State as to the flexibility or rigidity of the cask storage pad. Dr. Soler's opinions are not based on facts or data that are offered into evidence; the reliability of the methods he used to reach his opinion are unknown; and the conclusions drawn therefrom are unreliable. Accordingly, Answers 60 and 61 do not comply with FRE 702 and are otherwise unreliable and should be stricken in their entirety.

C. Trudeau & Wissa Testimony - Sulfates Test Results

In the Trudeau and Wissa Testimony on Section C of the unified contention, Mr. Trudeau presents a summary of sulfate test results. Trudeau/Wissa Testimony A64 at 44. The table is misleading and unreliable because it does not contain all of the sulfate test results from PFS's soil cement testing program. While Mr. Trudeau mentions that the table excludes tests on two samples, Mr. Trudeau fails to mention that the excluded samples show sulfates in the range of 13,800 ppm sulfates. See page 2 from calculation PO-38 (PFS bates number 68218), attached hereto as Exhibit 3. The results in the testimony table range from a low of <10 to a high of 560 ppm sulfates. Accordingly, Answer 64 should be struck in its entirety because it contains the

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<sup>6</sup>On various occasions, the State has requested from PFS all documents supporting witness testimony. See e.g., State of Utah's Fourteenth Set of Discovery Requests Directed to the Applicant" dated February 7, 2002 at 9 in which the State propounded the following discovery request:

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.

PFS did not produce the TVA pad flexibility report in response to this document request.

misrepresentation that site soils at PFS contain very low levels of sulfates. There is no evidence or data presented that the excluded test samples are from the Upper Bonneville clays and not from the eolian soil layer.

### CONCLUSION

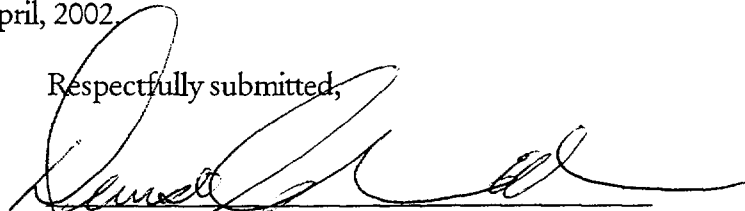
The Board should strike PFS's inexcusably late pre-filed testimony because, *inter alia*, it has given PFS the opportunity to respond to the State's prefiled testimony, or the Board could enter such orders as would create a level playing field.

The Board should strike Answers 40 and 112-120 of the Singh/Soler Testimony as being unreliable. The Board should also strike from the Singh/Soler Testimony Answers 60 and 61 in their entirety because the opinions rendered are derived from facts and data and methods not in evidence or contained in documents not produced to the State and are otherwise unreliable.

Finally, the Board should strike from the Trudeau/Wissa Testimony Answer 64 in its entirety because it is misleading and unreliable.

DATED this 15<sup>th</sup> day of April, 2002

Respectfully submitted,

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

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CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S MOTION IN LIMINE TO STRIKE APPLICANT'S PREFILED DIRECT TESTIMONY (Unified Contention Utah L/QQ) was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 15<sup>th</sup> day of April, 2002:

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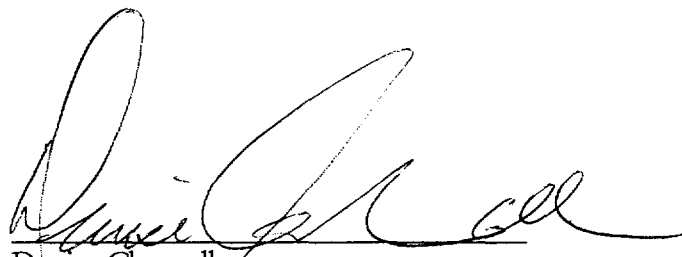
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A handwritten signature in black ink, appearing to read "Denise Chancellor", written over a horizontal line.

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Assistant Attorney General  
State of Utah



# EXHIBIT 1

Mailbox

File Edit View Tools Window Help

Display **Received Items**

	From	Subject	Date
	Jean Braxton	State's testimony of Barry Solomon on	04/01/02 09:51 PM
	Connie Nakahara	Proprietary filing	04/01/02 09:52 PM
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	Jean Braxton	Exh. 95-96	04/01/02 10:16 PM
	Jean Braxton	Exh. 97	04/01/02 10:18 PM
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	Jean Braxton	State's Misc	04/02/02 12:25 AM
	Jean Braxton	State's Testimony of Drs. Bartle	04/02/02 01:32 AM
	Jean Braxton	Exhibits 110-118	04/02/02 01:32 AM
	Connie Nakahara	State's Testimony of Dr. Walter	04/02/02 01:32 AM
	Connie Nakahara	State's Testimony of Dr. Marvin	04/02/02 01:40 AM
	Jean Braxton	State's Testimony Utah L/QQ (I	04/02/02 01:41 AM
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	Jean Braxton	State's Key Determinations and	04/02/02 01:45 AM
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	<Paul.Gaukler@shawpittmz	Cornell Testimony Preface	04/02/02 12:38PM
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	<Paul.Gaukler@shawpi	<b>Youngs, Tseng Exhibit MM</b>	<b>04/02/02 01:33PM</b>
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	"Sherwin Turk" <SET@nrc	Staff Exhibit P - attached (in WORD tr	04/02/02 03:05PM
	Jean Braxton	<b>State's Notice of Errata</b>	<b>04/02/02 03:14PM</b>
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## EXHIBIT 2

**From:** Diane Curran <dcurran@harmoncurran.com>  
**To:** Denise Chancellor <dchancel@att.state.ut.us>  
**Date:** 4/9/02 11:29AM  
**Subject:** [Fwd: Key Determinations and Certificate of Service]

----- Original Message -----

Subject: Key Determinations and Certificate of Service  
Date: Tue, 2 Apr 2002 18:16:15 -0500  
From: Paul.Gaukler@shawpittman.com  
To: PFS\_SERVICE\_LIST\_Chairman\_Farrar@shawpittman.com

Dear Sir/Madam:

Attached to this e-mail are the above-referenced documents in the Matter of Private Fuel Storage L.L.C. (Private Fuel Storage Facility) Docket No. 72-22 which are being filed today via first class mail and e-mail. If you have any questions please give Mr. Gaukler a call at (202) 663-8304.

(See attached file: #1229037 v1 - PFS Prefiled Testimony Certificate of Service.doc)(See attached file: Key Determinations.doc)

These documents are not being filed by way of the NRC's EIE pilot program because of difficulties that we have had in accessing that program due to incompatible internet server differences. We are working with the NRC's EIE program personnel to resolve this difficulty and will be participating in the program upon its resolution.

Sincerely,  
Paul Gaukler

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# EXHIBIT 3

October 31, 2001

Stone and Webster Project No. J.O. 05996.02

Page 2

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## Applied Geotechnical Engineering Consultants, Inc.

Table I  
Summary of Laboratory Testing

Test Pit No.	Sample No.	Depth (Feet)	Bucket	Water Soluble Sulfate (ppm)
1	1	0-2	1 of 4	65
4	1	0-2	4 of 4	
3	1	0-2	3 of 4	100
3	1	0-2	4 of 4	
2	1	0-2	3 of 4	530
2	2	2-4	3 of 4	13,800
4	2	2-4	2 of 4	
13	1	0-2	n/a	560
14	1	0-2	n/a	
1b	1	0-2	n/a	120
16	1	0-2	n/a	
5	1	0-2	n/a	110
6	1	0-2	n/a	140
7	1	0-2	n/a	375
8	1	0-2	n/a	<10
9	1	0-2	n/a	210
10	1	0-2	n/a	250
11	1	0-2	n/a	430
12	1	0-2	n/a	110