

August 26, 1999

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
	)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

**APPLICANT'S SECOND SUPPLEMENTAL RESPONSE  
TO STATE'S FIRST REQUESTS FOR DISCOVERY**

Applicant Private Fuel Storage L.L.C. ("Applicant" or "PFS") files this Supplemental Response to "State of Utah's First Set of Discovery Requests Directed to the Applicant ("State's First Discovery Requests"). The Applicant files this Supplemental Response pursuant to 10 C.F.R. § 2.740(e), to name additional witnesses it expects to call at hearing. The Applicant's original response to the State's First Discovery Requests noted that it would file such supplemental responses as it identified additional witnesses.<sup>1</sup>

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<sup>1</sup> Applicant's Objections and Non-Proprietary Responses to State's First Requests for Discovery, dated April 21, 1999, at 17.

**I: GENERAL DISCOVERY REQUESTS**

**A. GENERAL INTERROGATORIES**

Pursuant to agreement between the State and PFS, these general interrogatories apply to all Utah admitted contentions, are in addition to the ten interrogatories per contention allowed by the Board's Order dated April 22, 1998 (LBP-98-7), and are continuing in accordance with 10 CFR § 2.740(e).

**GENERAL INTERROGATORY NO. 3.** For each admitted Utah contention, 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.

**APPLICANT'S RESPONSE:** The Applicant supplements its response to the State's First Discovery Requests by identifying the following additional persons whom the Applicant expects to call as witnesses at the hearing with respect to the State's admitted contentions.

**Utah K – Credible Accidents**

<u>Name and Address:</u>	Wayne O. Jefferson
<u>Profession:</u>	Consultant, Retired Air Force Major General
<u>Employer:</u>	Burdeshaw Associates, Ltd.
<u>Professional Expertise:</u>	U.S. Air Force senior executive, military aircraft operations and quantitative probabilistic analysis
<u>Educational, Scientific Experience, and Professional Qualifications:</u>	See Attached Resume
<u>Publications in the last ten years:</u>	None
<u>Testifying experience in last</u>	

four years:

None

Subject matter of testimony:

Hazards posed to the PFSF by military aircraft operations and weapons testing activities on the Utah Test and Training Range and Dugway Proving Ground and by nearby commercial and general aviation, including probabilistic calculations of potential aircraft hazards to the PFSF.

Documents reviewed and/or relied upon:

The documents reviewed and relied upon by General Jefferson include the PFSF SAR and Responses to NRC dated June 30, 1999, "Aircraft Crashes, Air-Delivered Ordnance at the PFSF" and Responses to NRC dated August 13, 1999, "Potential Aircraft Crashes at the PFSF," including references therein and attachments thereto, and documents previously identified as being reviewed and relied upon by General Cole. In addition, General Jefferson may review and rely upon documents produced by the State as well as any new information that may come into PFS's possession.

Name and Address:

Jeffrey R. Johns  
Stone & Webster  
7677 Berry Avenue  
Denver, Colorado 80111-2137

Profession:

Licensing Engineer

Employer:

Stone & Webster Engineering Corp.

Professional Expertise:

The engineering, design, construction, operation and maintenance of nuclear power plants and Independent Spent Fuel Storage Installations, including the performance of accident analyses for nuclear power plants and ISFSIs.

Educational and Scientific Experience, and Professional Qualifications:

See Attached Resume

Publications in the last ten years: None

Testifying experience in last four years: None

Subject matter of testimony: Resistance provided by the spent fuel cask storage systems to be used at the PFSF to the effects of an aircraft crash impact.

Documents reviewed and/or relied upon: The documents reviewed and relied upon by Mr. Johns include those portions of the August 13, 1999 response to NRC on "Potential Aircraft Crashes at the PFSF" pertaining to the "PFSF Spent Fuel Storage Cask Resistance to Aircraft Impact," the references cited therein, and the supporting information and calculation at Tab H thereto. In addition, Mr. Johns may review and rely upon new information that may come into PFS's possession.

**Utah R – Emergency Plan**

Name and Address: Jeffrey R. Johns  
See Contention Utah K for information

Subject matter of testimony: The ability of the PFSF to withstand the effect of credible fires.

Documents reviewed and/or relied upon: The documents reviewed and relied upon by Mr. Johns include the PFSF SAR and the documents cited to and referred to in his declaration of June 28, 1999 filed in support of Applicant's Motion for Summary Disposition of Utah R.

The Applicant is still in the process of identifying the witnesses that it expects to call at the hearings and will supplement this response in accordance with 10 C.F.R.

§ 2.740(e).

**GENERAL INTERROGATORY NO. 4.** For each admitted Utah contention, 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.

**APPLICANT'S RESPONSE:** See Response to General Interrogatory 3 above.

The Applicant is still in the process of identifying expert witnesses that it expects to call at the hearings and will supplement this response in accordance with 10 C.F.R.

§ 2.740(e).

**GENERAL INTERROGATORY NO. 5.** For each admitted Utah contention, 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.

**APPLICANT'S RESPONSE.** See Applicant's Response to General

Interrogatory No. 3 above. Applicant will supplement this response in accordance with 10 C.F.R. § 2.740(e) as it obtains further information.

Respectfully submitted,



Jay E. Silberg

Ernest L. Blake, Jr.

Paul A. Gaukler

SHAW PITTMAN

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Counsel for Private Fuel Storage L.L.C.

Dated: August 26, 1999

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**CERTIFICATE OF SERVICE**

I hereby certify that copies of the Applicant's Supplemental Response to State's First Requests For Discovery, the accompanying Declaration of Paul A. Gaukler and the attached resumes of Wayne O. Jefferson and Jeffrey Johns were served on the persons listed below (unless otherwise noted) by e-mail with conforming copies by U.S. mail, first class, postage prepaid, this 26th day of August 1999.

G. Paul Bollwerk III, Esq., Chairman  
Administrative Judge  
Atomic Safety and Licensing Board Panel  
U.S. Nuclear Regulatory Commission  
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Dr. Jerry R. Kline  
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Dr. Peter S. Lam  
Administrative Judge  
Atomic Safety and Licensing Board Panel  
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Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
Attention: Rulemakings and Adjudications  
Staff  
e-mail: hearingdocket@nrc.gov  
(Original and two copies)

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Directorate, Spent Fuel Project Office  
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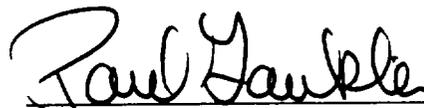
\* Adjudicatory File  
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\* By U.S. mail only

  
Paul A. Gaukler

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DECLARATION OF PAUL A. GAUKLER

Paul A. Gaukler states as follows under penalties of perjury:

1. I am counsel with Shaw Pittman in Washington, D.C.
2. I am duly authorized to verify Applicant's Second Supplemental Response to State's First Requests for Discovery; specifically, those supplemental responses to General Interrogatory Nos. 3-5.
3. I certify that the statements in such responses are true and correct to the best of my personal knowledge and belief.

I declare under penalty and perjury that the foregoing is true and correct.

Executed on August 25, 1999.

  
Paul A. Gaukler

Major General Wayne O. Jefferson, Jr., USAF (Ret.)

Major General Jefferson is currently an Associate with Burdeshaw Associates, Ltd. (BAL).

From 1994 until the present, General Jefferson has been a consultant in management, management training, and quantitative probabilistic analysis.

From May 1992 to May 1994, General Jefferson was employed in private industry as Executive Director of LCC, Inc. and responsible for the accounting and finance, human resources and training functions of that company. He also served as the acting chief financial officer for 6 months. From May 1991 to May 1992, he was the General Manager of TSI, Inc., with total profit and loss responsibility for this rapidly growing company. Both of these companies were involved with engineering design support and deployment of the wireless elements of cellular telephone systems.

From 1989 to 1991, General Jefferson was President of Jefferson Associates, Inc., a consulting firm, and an Associate with Burdeshaw Associates, Ltd. (BAL).

General Jefferson retired from the U.S. Air Force on 11 July 1989 after more than 30 years of highly successful experience in leadership, decision-making, planning and management.

From April 1988 until completing service, General Jefferson served as the Joint Staffs Deputy Director for Defense-Wide C3 Support. In this position, he ensured the integrity, interoperability, evolutionary capability and technical efficiency of all systems employed in the Defense Department's entire command, control and communications system.

From 1985 to 1988, he headed NATO's Communications and Information Systems Division on the International Military Staff in Brussels, directing NATO's highest level military C3 policy structure.

From 1984 to 1986, General Jefferson headed the Joint Staff's first Deputy Directorate for C3 Connectivity and Evaluation, directing the exercise and evaluation of the Defense Department's command and control systems in order to assure their operational capability under severe stress.

From 1980 to 1984, General Jefferson held positions of rapidly increasing responsibility with the Strategic Air Command (SAC). In 1983-84, he was Assistant Deputy Chief of Staff for Operations, overseeing the entire scope of SAC's worldwide bomber, tanker, missile and reconnaissance operations, including training range development and flight operations. In 1982-83 he was SAC's Director of Command Control, responsible for the operation of SAC's tight command and control system, including the underground command center in Omaha and the airborne command post. In 1981, as SAC's Assistant Director of Plans and Policy, he was responsible for the analysis and development of SAC's future force requirements, the preparation of SAC's annual budget, and basing plans for new weapons systems. In 1980-81, he commanded a B-52 bomb wing with 17 B-52H bombers and 22 KC-135 tankers.

Prior experience included nuclear test and evaluation, Air Staff mission area planning, Vietnam flight operations, and faculty member at both the US Air Force Academy and the National War College in simulation, economics and management, focusing on operations research and quantitative decision making involving probabilistic methods.

#### **Educational Background**

Senior Managers in Government Program, Harvard University

M.S. in Operations Research, Stanford University

M.B.A., Auburn University

Technical University of Munich, Germany. Two years E.E. (in German)

B.S., U. S. Air Force Academy (distinguished graduate)

National War College (graduate and faculty member)

**Air Command and Staff College (distinguished graduate)**

**Overseas experience**

**Belgium, Germany, Vietnam**

**Language capability in German, French, and Spanish**

# JEFFREY R. JOHNS

## Licensing Engineer

### **EXPERIENCE SUMMARY**

Mr. Johns has 21 years of experience in the nuclear power industry, including 4 years as an officer in the U.S. Naval Nuclear Power Program and 17 years in nuclear licensing-engineering at Public Service Company of Colorado's (PSCo) Fort St. Vrain (FSV) nuclear power plant and ISFSI. He has been actively involved with ISFSI licensing work since plans were first formulated to license and construct the FSV ISFSI in 1990. Mr. Johns joined Stone & Webster recently as a permanent employee to assist in the licensing effort for the Private Fuel Storage Facility ISFSI.

Mr. Johns was Supervisor of PSCo Nuclear Licensing from 1981 to 1991. He was responsible for the performance of 10 CFR Part 50.59 safety evaluations, for maintaining the FSV plant SAR up-to-date to reflect plant modifications and the current safety basis, and preparing amendments to the facility technical specifications. He was instrumental in helping PSCo comply with major regulatory changes, such as those stemming from the accident at Three Mile Island and the environmental qualification and fire protection rules. Mr. Johns developed acceptance criteria specific to FSV and interfaced with the NRC to obtain their approval.

He was responsible for directing the reactor vendor in accident analyses, which were necessary to license major modifications and determine compliance with new regulations. Mr. Johns received a \$1,000 award for providing the analytical basis for the FSV plant symptom-oriented emergency operating procedures. He assisted in accident analyses for the ISFSI, was responsible for determining event classification of accidents assessed in the ISFSI SAR, and helped to prepare ISFSI emergency procedures.

Mr. Johns was PSCo's lead in developing the FSV decommissioning accident analyses and preparing major portions of the decommissioning plan (licensing basis for decommissioning). He chaired the Hazards Analysis Review of Decommissioning Committee, consisting of personnel with expertise in the areas of construction, nuclear safety, health physics and industrial safety. Mr. Johns served on the team appointed to revise station procedures to make the FSV ISFSI a "stand-alone" facility, in preparation for termination of the Part 50 license.

### **RELEVANT PROJECT EXPERIENCE**

**Private Fuel Storage Facility, Private Fuel Storage, LLC** - As Licensing Engineer, responsible for the preparation of the Safety Analysis Report (SAR), including accident analysis and radiation protection involving both of the selected storage system vendors.

**Fort St. Vrain ISFSI, Public Service Company of Colorado** - The FSV ISFSI is a Foster-Wheeler storage vault system. Mr. Johns assisted in licensing the FSV ISFSI under 10 CFR Part 72. He interfaced with the NRC on the ISFSI accident analysis, specifically resolving a licensing issue related to the source term and consequences of the ISFSI Maximum Credible Accident, postulated breach of a fuel storage container.

He was responsible for ISFSI SAR updates to maintain the ISFSI licensing basis up-to-date. He substantially revised the SAR to incorporate results of new analyses for reduced decay heat removal, following the occurrence of a natural convection cooling flow path blockage event in 1992 that exceeded the design basis.

He was also responsible for the performance of safety evaluations (per 10 CFR Part 72.48) on ISFSI design modifications, and prepared a safety evaluation concerning modifications which make the ISFSI cask load/unload port compatible with new spent fuel shipping casks. Mr. Johns

had the lead role in licensing the new spent fuel shipping casks, designed by Transnuclear Inc., to transport loaded fuel storage containers from the ISFSI without the need for transfer of fuel elements into a special cask liner.

He developed two amendment packages to the FSV ISFSI license. The first permitted installation of pipelines in the vicinity of the ISFSI that supply natural gas at high pressures to the combustion turbines used to repower the FSV plant. Mr. Johns directed analyses to determine natural gas plume dispersion under various meteorological conditions, pressures at the ISFSI resulting from postulated detonation of the natural gas cloud, and structural effects on the ISFSI. The second amendment permitted storage of low-level radioactive waste and radioactive sources for instrument calibration at the ISFSI. Mr. Johns prepared the safety analyses for both amendment packages. The safety analyses were reviewed and accepted by the NRC and their contractor without questions, and the NRC issued the license amendments.

Mr. Johns provided assistance to the FSV Emergency Planning Coordinator with ISFSI emergency procedures, event classification, and in creating realistic drill scenarios for the annual examinations of emergency preparedness, observed by the NRC.

### ***EDUCATION***

B.S., Biological Science - Stanford University

### ***LICENSES AND REGISTRATIONS***

Professional Engineer - Colorado