UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	Docket No. 72-22-ISFSI
PRIVATE FUEL STORAGE, LLC (Independent Spent Fuel Storage Installation)	)	ASLBP No. 97-732-02-ISFSI
	)	January 26, 2000

DECLARATION OF DR. MARVIN RESNIKOFF IN SUPPORT OF STATE OF UTAH'S REQUEST FOR ADMISSION OF LATE-FILED MODIFICATION TO BASIS 2 OF UTAH CONTENTION L

I, Dr. Marvin Resnikoff, declare under penalty of perjury that:

1. I am the Senior Associate at Radioactive Waste Management Associates, a private consulting firm based in New York City. A statement of my qualifications has been filed previously in this proceeding. *See e.g.*, Exhibit 2 to State of Utah Contentions filed November 23, 1997. I am an expert in the field of radioactive waste management, including spent nuclear power plant fuel storage.

2. I am familiar with Private Fuel Storage's ("PFS's") license application and Safety Analysis Report in this proceeding, as well as the applications for the storage and transportation casks PFS plans to use. I am also familiar with NRC regulations, guidance documents, and environmental studies relating to the transportation, storage, and disposal of spent nuclear power plant fuel, and with NRC decommissioning requirements.

3. I assisted in the preparation, in part, of State of Utah's Request for Admission of Late-Filed Modification to Basis 2 of Utah Contention L, filed on January 26, 2000 ("Modification to Basis 2")

4. As stated in Modification to Basis 2, a loaded HI-TRAC overpack is not designed to withstand a 30-foot drop. The HI-TRAC transfer cask is designed to withstand a drop from a horizontal lift height of 42 inches.[1] This is at least in part because the HI-TRAC overpack does not have impact limiters. For this reason, PFS has

[1] Table 2.2.8, HI-STORM TSAR, Holtec.

not provided a reasonable assurance that NRC dose limits would not be exceeded in an accident involving the drop of a loaded HI-TRAC overpack. PFS is relying on the single failure-proof crane to prevent a drop of the HI-TRAC, but safety cannot be assured if the crane fails in a 2,000-year return earthquake.

5. There are other reasons why the PFS facility may exceed NRC dose limits. For example, PFS's accident evaluation does not bound the design basis accident, because the accidents considered by PFS are not design basis accident DE IV under ANSI/ANS-57.9-1999.

6. Furthermore, the assumed accident leak rate is too small and the assumed breach hole in the canister considered by PFS is too small. This leakage rate is consistent with Table 4-1, NUREG-1617, "Standard Review Plan for Transportation Packages for Spent Nuclear Fuel," that is based on another NRC document, NUREG/CR-6487, "Containment Analysis for Type B Packages Used to Transport Various Contents."[2]

7. The leakage rate and calculation methodology in NUREG/CR-6487 are based on ANSI standard N14.5 for transportation casks.[3] But the assumed leakage rate is not conservative because it is based on testing requirements that will not be met for storage casks. ANSI standard N14.5[4] assumes that casks will be leak-tested periodically, before shipment and after maintenance and repair. But some ISFSI's, such as the PFS facility, have no provisions for testing helium leakage during storage and no provisions for repairing and maintaining casks and testing for leakage after repair and maintenance. Thus, these ISFSI's cannot satisfy the leak testing requirements of N14.5, and NUREG-1617 does not provide a conservative basis for detecting leakage rates.

8. Further, the methodology employed in NUREG/CR-6487 may not apply for certain accidents that exceed the design basis accident. NUREG/CR-6487 calculates the leak hole diameter that corresponds to a regulatory-allowable release rate under accident conditions. This leak hole size can easily be exceeded in accidents involving sabotage. Impact with a MILAN or TOW-2 hand held anti-tank device can produce a leak hole

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[2] Anderson, BL et al, "Containment Analysis for Type B Packages Used to Transport Various Contents," Lawrence Livermore National Laboratory, NUREG/CR-6487, November 1996.

[3] NUREG/CR-6487, p. 1.

[4] American National Standards Institute, ANSI N14.5, "Leakage Tests on Packages for Shipment," Table 1.

larger than calculated in NUREG/CR-6487. Impact with a jet engine or a hanging bomb at 600mph can also produce leak holes larger than estimated in NUREG/CR-6487.

9. If Modification to Basis 2 is admitted, I am prepared to provide expert testimony regarding these matters. I expect that my testimony would follow the general outline of the statements in paragraphs 4 through 6 above. In addition, I would provide additional detail regarding the PFS facility design based on information gathered in discovery, as well as additional detail regarding my analysis of the size of the breach hole considered by PFS in its accident analysis.

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Dr. Marvin Resnikoff

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/s/ Marvin Resnikoff

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