

12/1/81

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)
SACRAMENTO MUNICIPAL UTILITY DISTRICT) Docket No. 50-312 SP
(Rancho Seco Nuclear Generating)
Station)

AFFIDAVIT OF MARK L. PADOVAN

I Mark L. Padovan, being duly sworn, depose and state that:

1. I am an employee of the U. S. Nuclear Regulatory Commission (NRC). My present position is Project Manager of the Rancho Seco facility, Operating Reactors Branch #4, Division of Licensing within the Office of Nuclear Reactor Regulation. A copy of my professional qualifications is attached.

2. The purpose of my affidavit is to respond to Item No. 6 of the Atomic Safety and Licensing Appeal Board Memorandum and Order dated October 7, 1981 (ALAB-655). Item No. 6 requests the following information:

"SMUD and staff schedules for HPI nozzle analysis"

More specifically, the ALAB request was for HPI nozzle analysis. This is addressed further in Item 3, below.

3. High Pressure Injection (HPI) Nozzle Analysis

In ALAB-655, the ASLAB indicated that the Licensing Board was correct in noting that the number of cycles permitted on each HPI nozzle was approaching the design basis for the life of the plant. The number of HPI cycles projected for the 40 year life of the plant was indicated to be 40. Additional 40 low pressure "test" cycles were projected, roughly converting to 30 cycles of HPI.

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SMUD and staff testimony given during the hearing acknowledged that the HPI nozzles had already been cycled about 30 times. However, the Board concluded, without elaboration, that the limit imposed on the number of allowable cycles "may be overly conservative, and that there are several ways to cope with the matter should it become evident that a real safety limit is being approached". 13 NRC at 607 (I.D., paragraph 125).

As indicated in ALAB-655, the ASLAB does not support the Board's optimistic appraisal, and finds that there is no real evidence to set a limit on the number of allowable HPI nozzle cycles. In addition, the ASLAB noted that the record does not show how to detect thermal cycle effects or how to prolong the life of the HPI nozzles.

Accordingly, the ASLAB concluded that further analysis by SMUD and the staff is warranted, and SMUD and the staff should submit a proposed schedule for supplying the following information:

- "(1) the maximum allowable number of thermal cycles on the HPI nozzles
- (2) methods of detecting thermal cycle effects on the nozzles
- (3) possible means of prolonging the useful life of the nozzles, and
- (4) Technical Specifications on operating procedures that might reduce the use of the HPI without endangering the core".

Regarding Items (1) through (4) above, the staff has not performed any analysis or review to date. In a meeting with SMUD on November 16, 1981, it was agreed that the staff would review the submittal after it is received from SMUD.

The above statements and opinions are true and correct to the best of my personal knowledge and belief.

Mark L. Padovan
Mark L. Padovan

Subscribed and sworn to before
me this 1st day of December,
1981.

Judy L. Butler, Notary Public

My Commission Expires: July 1, 1982

STATEMENT OF PROFESSIONAL QUALIFICATIONS

MARK L. PADOVAN

Since July 1980 I have been employed by the U. S. Nuclear Regulatory Commission (NRC) as a Project Manager in Operating Reactors Branch #4, Division of Licensing, Office of Nuclear Reactor Regulation. In October 1980 I was assigned to manage the NRC licensing functions on the Rancho Seco nuclear plant. I am responsible for overseeing the review of all plant licensing actions to assure compliance with Federal regulations for protection of the environment and safe operation of the Rancho Seco plant.

I have a B.S. degree (1974) in Nuclear Engineering from the University of Arizona. While employed at the NRC, I have attended numerous pressurized water reactor technology courses, including reactor control room simulator training.

From June 1975 through January 1980 I was employed by the Public Service Company of Colorado as a nuclear licensing engineer for the Fort St. Vrain gas cooled reactor. My duties included engineering design of plant modifications, and overseeing consultant analysis work. I established corporate licensing positions and prepared reports for submittal and presentation to the NRC. Following the accident at Three Mile Island, Unit 2, I prepared, reviewed and coordinated corporate responses to NUREG-0578 "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" and associated NRC clarifications and directives.

From January 1980 to July 1980, I was employed by Stone and Webster Engineering Corporation as a Licensing Engineer. In that capacity I compiled and annotated state laws and regulations governing the permitting and licensing of power plants and transmission lines for several western states. In addition, I held a short-term field assignment at the Fort Calhoun Nuclear Generating Station to field check plant systems. I am a member of the American Nuclear Society.