

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

SOUTH CAROLINA ELECTRIC & GAS)
COMPANY)

(Virgil C. Summer Nuclear)
Station, Unit 1))

Docket No. 50-395

AFFIDAVIT OF WILLIAM F. KANE ON CONTENTION 3

I, William F. Kane, being duly sworn, state as follows:

1. I am employed by the U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation.

2. I am the project manager assigned to the Summer operating
license application.

3. Contention 3 states:

The Applicant has not met the requirements
of the NRC Staff to assure that the probability
of occurrence of an anticipated transient without
scram (ATWS) event is acceptably small.

4. As project manager for the Summer station, I participated in
and supervised the preparation of the NRC Staff Safety Evaluation Report
(SER) (NUREG-0717), including section 15.3.5 regarding anticipated
transients without scram (ATWS).

5. As stated in NUREG-0460 which is cited in the SER, '[t]he Staff
has maintained since 1973 and reaffirms today that the present
likelihood of severe consequences arising from an ATWS event is
acceptably small and presently there is no undue risk to the public from

ATWS. This conclusion is based on engineering judgment in view of: (a) the estimated arrival rate of anticipated transients with potentially severe consequences in the event of scram failure; (b) the favorable operating experience with current scram systems; and (c) the limited number of operating reactors." In view of these considerations and our expectation that the necessary plant modifications will be implemented in one to four years following a Commission decision on anticipated transients without scram, we have generally concluded that pressurized water reactors can continue to operate because the risk from anticipated transient without scram events in this time period is acceptably small.

6. To further reduce the risk from anticipated transients without scram events during the interim period before completing the plant modifications determined by the Commission to be necessary, we have required that the following steps be taken.

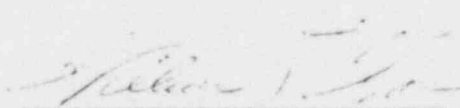
- a. Develop emergency procedures to train operators to recognize an anticipated transient without scram event, including consideration of scram indicators, rod position indicators, flux monitors, pressurizer level and pressure indicators, pressurizer relief valve and safety valve indicators, and any other alarms annunciated in the control room with emphasis on alarms not processed through the electrical portion of the reactor scram system.
- b. Train operators to take actions in the event of anticipated transients without scram events, including consideration of manually scrambling the reactor, prompt actuation of the auxiliary feedwater system to assure delivery to the full capacity of this system, and initiation of turbine trip. The operator should also be trained to initiate boration by actuation of the high pressure safety injection system to bring the facility to a safe shutdown condition.

We consider these procedural requirements an acceptable basis for interim operation of the facility based on our understanding of the plant response to postulated anticipated transients without scram events.

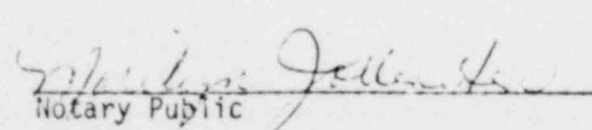
7. In response to our requirements on operator training and emergency procedures, the applicant in a letter from T. Nichols to H. Denton, dated January 28, 1981 submitted emergency operating procedures which include provisions for postulated anticipated transients without scram events. These procedures have been reviewed and modified and are now consistent with the currently accepted Westinghouse guidelines.

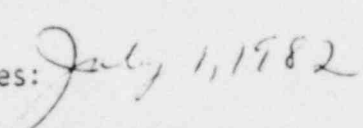
8. The applicant is required by regulations to train operators in the use of all procedures for normal and abnormal operations, including the procedure for anticipated transients without scram. Several ATWS training sessions have been held. See letter from T. Nichols to H. Denton, dated March 27, 1981. The applicable regulations are 10 CFR § 55.10(a)(6), 10 CFR § 55.12, 10 CFR § 55.33(a)(4), and 10 CFR Part 55, Appendix A. As stated in Section 13.2 of the SER, the Applicant has met the applicable requirements for a training program and there is reasonable assurance that qualified individuals will be available for safe operation of the facility.

9. As stated in Section 15.3.5 of the SER, we conclude that the actions taken to reduce the risk from anticipated transients without scram events are adequate to support interim operation of the facility to 100 percent of rated power.


William F. Kane

Subscribed and sworn to before me
this 28th day of April, 1981


Notary Public

My Commission expires: 

WILLIAM F. KANE

PROFESSIONAL QUALIFICATIONS

I am a senior project manager assigned to Licensing Branch No. 1, Division of Licensing, Office of Nuclear Reactor Regulation, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555. In this position I am responsible for planning and coordinating the NRC staff's technical reviews, analyses, and evaluations for licenses and authorizations for the construction and operation of assigned nuclear power plants. I have been employed as a project manager since 1973 by the Nuclear Regulatory Commission and its predecessor the Atomic Energy Commission.

Among the plants for which I have or had this responsibility include, Virgil C. Summer Unit 1, Waterford Unit 3, Watts Bar Units 1 and 2, Black Fox Station Units 1 and 2, Catawba Units 1 and 2, Comanche Peak Units 1 and 2, River Bend Units 1 and 2, Nine Mile Point Unit 2, Hartsville Units 1-4 and Zimmer Unit 1. I also had this responsibility for the GESSAR-238 and GESSAR-251 standard nuclear steam supply systems.

Following the accident at Three Mile Island (TMI) during the period May 1979 thru December 1979 I served as project group leader in the Office of Nuclear Reactor Regulation's Bulletins and Orders Task Force. This task force was responsible for reviewing and directing the TMI-related NRC staff activities associated with the NRC Office of Inspection and Enforcement bulletins, Commission Orders and generic evaluations of loss of feedwater transients and small-break loss-of-coolant accidents for all operating plants to assure their safe operation.

From 1963 to 1969 I was employed by the Allis-Chalmers Manufacturing Company. During this period I was responsible for the design, analysis, and testing of portions of the nuclear steam supply system. From 1969 to 1971 I was employed by Nuclear Associates International Corporation as a consultant in the area of fuel design and analysis. From 1971 to 1973 I was employed by Nuclear Fuel Service, Incorporated. During that period I was a lead engineer with responsibilities in design, analyses, fabrication and testing of fuel assemblies for nuclear power plants.

I received a Bachelor of Science in Mechanical Engineering degree from Widener University in 1961. I completed graduate courses in nuclear engineering at Catholic University in the period 1971-1973.

I am a registered professional engineer in the State of California, a member of the American Nuclear Society and the American Society of Mechanical Engineers. I have authored several technical publications.