

YANKEE ATOMIC ELECTRIC COMPANY



ROWE, MASSACHUSETTS 01367

August 23, 1972



Regulatory File Cy.



United States Atomic Energy Commission
Washington, D. C. 20545

Attention: Directorate of Licensing

Dear Sirs:

Reference: Operating License DPR-3 (Docket No. 50-29)

We are reporting the following Technical Specification violations as:

- AO-72-9 Low Nitrogen Overpressure in the Safety Injection Accumulator
- AO-72-11 Failure of Control Rod No. 19 to Fall Completely Into Core

AO-72-11 was reported in writing to the Directorate of Licensing on August 7, 1972 by Mr. Donald E. Vandenburg, Vice President, Yankee Atomic Electric Company.

AO-72-9

Change 97 specifies a minimum overpressure of 410 psig for the safety injection accumulator. A leak in the upper diaphragm of the SI-PR-58 nitrogen pressure regulator pilot caused the regulator to close allowing nitrogen to leak through the diaphragm into the regulator upper body and out into the atmosphere through a vent. The redundant regulator SI-PR-59 did not maintain the overpressure above 410 psig. Later investigation indicated that the regulator set point was incorrect.

Regulator SI-PR-58 was isolated from service while Regulator SI-PR-59 was readjusted to maintain the normal nitrogen overpressure. The regulator SI-PR-58 diaphragm was replaced.

The Plant Operations Review Committee recommendations of raising the operating pressure control band to 435 psig and adjusting the accumulator low pressure alarm to 420 psig has been followed.

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AO-72-11

During the July 29, 1972 control rod drop surveillance tests, Rod No. 19 failed to drop fully into the core from a fully withdrawn position of 90 inches. The control rod dropped to 23 inches. From this position the rod was driven in to 15 inches using the pulldown coil; the scram breakers were opened and the rod fell into the core. Subsequently Rod No. 19 was withdrawn to 90 inches and successfully dropped into the core with a measured drop time of 2.51 seconds.

During this surveillance, control rod No. 18 (the control rod that previously experienced difficulty) dropped into the core with a measured drop time of 2.35 seconds which is below the 2.4 second limit. The plant was returned to service following a safety review by the plant and Westboro Management; this review consisted of the following:

1. The plant is presently operating in a mode to provide protection for the plant during any accident condition resulting from the failure of two maximum worth control rods to scram. During the surveillance program the plant hasn't experienced difficulty with two rods either scrambling or dropping in less than 2.5 seconds simultaneously.
2. The difficulties that have been experienced involved two group D control rods; surveillance testing and previous history indicate that these problems do not exist with other control rods. Protection has been afforded for failure to scram for two maximum worth rods, a total of 3.0% $\Delta K/K$. The worth of the entire group D (8 rods) is approximately 4.0% $\Delta K/K$. Therefore, the afforded protection is very conservative.
3. Control rod No. 18 during the surveillance testing has been dropped successfully 14 of the last 14 times and during each test the drop time has shown improvement. The measured drop time is now below the 2.40 second limit.

On July 31, 1972 the Directorate of Licensing and Region I of the Directorate of Regulatory Operations was informed of the aforementioned occurrence and actions.

As a result of the above discussions and a complete review of the entire situation, Yankee offers the following:

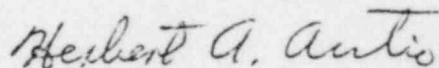
1. A tabulation of control rod drop times for all control rods measured during the Core X startup and surveillance program.
2. A scheduled outage shall commence no later than October 31, 1972 for the installation of replacement control rods.

3. Until control rods are replaced Yankee shall:

- a. Increase the frequency of the control rod surveillance program from every fourth weekend to every third weekend.
- b. Supply the Commission with the results of all surveillance drop time results.

Control rod drop surveillance tests were performed again on August 19, 1972. At this time all control rods dropped into the core from a fully withdrawn position in less than the specified 2.4 seconds.

Very truly yours,



Herbert A. Autio
Plant Superintendent

HAA/jb

FROM: Yankee Atomic Elec. Co. Rowe, Mass. 01367 Herbert A. Autio		DATE OF DOC: 8-23-72	DATE REC'D 8-29-72	LTR X	MEMO	RPT	OTHER
TO: DRL		ORIG 1 signed	CC	OTHER	SENT AEC PDR ✓ SENT LOCAL PDR		
CLASS: U PROP INFO		INPUT	NO CYS REC'D 1	DOCKET NO: 50-29			
DESCRIPTION: Ltr rept 2 problems as Abnormal Occurrences.....one as AO-72-9 involving low nitrogen overpressure in the Safety Injection Accumulator & one as AO-72-11 involving failure of Control Rod No. 19 to fall completely into core.....		ENCLOSURES:					
PLANT NAMES: YAEC Plant		ACKNOWLEDGED DO NOT REMOVE					

FOR ACTION/INFORMATION 8-30-72

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