

FEB 26 1981



Mr. Thomas Dotzler
Chairman
"The Nuclear Regulatory Commission"
The Farm
Summertown, Tennessee 38483

Dear Mr. Dotzler:

This refers to your letter of October 16, 1980 addressed to Chairman Ahearne. We find that your letter and enclosures contain no information on hydrogen control measures for Sequoyah of a type not already fully considered in my Decision of October 8, 1980 pursuant to Section 2.206, and by the NRC staff, the ACRS and the Commission itself prior to the issuance of the full power license for this facility. Let me take this opportunity however, to inform you of the progress that has been made in this area.

There are three conditions in the operating license for Sequoyah to assure that hydrogen control measures are undertaken. The enclosed Supplement No. 4 to the Safety Evaluation Report addresses the first condition which states:

"By January 31, 1981, TVA shall by testing and analysis show to the satisfaction of the NRC staff that an interim hydrogen control system will provide with reasonable assurance protection against breach of containment in the event that a substantial quantity of hydrogen is generated."

The staff has previously determined that, without a reliable ignition system ice condenser plants could tolerate the burning of only that amount of hydrogen that would be released by approximately a 25 percent zirconium cladding-water reaction. The analyses presented in the SSER No. 4, which examined operation of the Interim Distributed Ignition System (IDIS), were performed for an accident which was allowed to proceed to the point where 80 percent of the zirconium cladding reacted. The analyses demonstrated that containment integrity was maintained for this larger amount of clad-water reaction. This increased capability to accommodate hydrogen releases represents a substantial improvement over the design basis capability. The increased capacity of the containment to tolerate the energy addition due to hydrogen burning is due to the distributed ignition system which allows for a more controlled burning of hydrogen mixtures in the containment. Moreover, the actuation of igniters will preclude formation of a detonable concentration of large volumes of hydrogen in the event of large hydrogen releases. There is agreement among the NRC staff, ACRS, and the Commissioners that the licensee has met this condition.

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Mr. Thomas Dotzler

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It is recognized that further work is needed before we can say the current system is the preferred permanent hydrogen control system for the Sequoyah units. This effort is currently underway and will be completed later this year, in time to permit a decision to be made with respect to the second Sequoyah license condition which requires such a permanent system to be installed by January 31, 1982. Condition No. 3 deals with the issuance of quarterly reports and program plans that are not related to the concerns raised in your letter.

Sincerely,
Original Signed by
H. R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
As stated

See attached sheet for distribution
*See Previous page for Concurrences

Handwritten signature and date:
2/25

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*CStahle:ph	*ASchwencer	*McGurren/ *Hoefling	*RTedesco	*DEisenhut	H. Denton
2/16/81	2/20/81	2/20/81	2/20/81	2/24/81	2/25

DISTRIBUTION:

Docket File 22/227
NRC PDR
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S. Cavanaugh
E. Hughes
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Tedesco's Secretary
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M. Service
R. Lazo, ASLB
I&E (3)
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Mr. Thomas Dotzler

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Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
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DATE	2/ 16 /81	2/ 20 /81	2/ 20 81	2/ 21 /81	2/ 24 /81	2/ /81

Mr. Thomas Dotzler

- 2 -

~~Having confirmed that the licensee has met this first condition, the staff authorized the licensee to use its IDIS for a one-year period.~~ It is recognized that further work is needed before we can say the current system is the preferred permanent hydrogen control system for the Sequoyah units. This effort is currently under way and will be completed later this year, in time to permit a decision to be made with respect to the second Sequoyah license condition which requires such a permanent system to be installed by January 31, 1982. Condition No. 3 deals with the issuance of quarterly reports and program plans that are not related to the concerns raised in your letter.

Sincerely,

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
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FROM Thomas Jotzler The Nuclear Regulatory Commission		ACTION CONTROL	DATES	CONTROL NO. 09898
TO: Chairman Ahearne		COMPL DEADLINE		DATE OF DOCUMENT 10/1/80
DESCRIPTION <input type="checkbox"/> LETTER <input type="checkbox"/> MEMO <input type="checkbox"/> REPORT <input type="checkbox"/> OTHER		ACKNOWLEDGMENT		PREPARE FOR SIGNATURE OF <input type="checkbox"/> CHAIRMAN <input type="checkbox"/> EXECUTIVE DIRECTOR OTHER: _____
req the Commission review Denton's decision re petition for revocation of operating license for Sequoyah		INTERIM REPLY		SPECIAL INSTRUCTIONS OR REMARKS JOC requests staff answer as appropriate
CLASSIFIED DATA				
DOCUMENT/COPY NO.		CLASSIFICATION		
NUMBER OF PAGES		CATEGORY		
POSTAL REGISTRY NO.		<input type="checkbox"/> NSI <input type="checkbox"/> RD <input type="checkbox"/> FRD		
ASSIGNED TO	DATE	INFORMATION ROUTING	LEGAL REVIEW	<input type="checkbox"/> FINAL <input type="checkbox"/> COPY
Denton	11/26/80	Shapar Ross	ASSIGNED TO:	DATE
f/a, prop action		R Case Schroeder		
Elvechat	11/28/80	Denton Saylor		
		PPMS Wollmer		
		Lanauer		
			JCAE NOTIFICATION RECOMMENDED:	<input type="checkbox"/> YES <input type="checkbox"/> NO

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EXECUTIVE DIRECTOR FOR OPERATIONS

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