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YANKEE ATOMIC ELECTRIC COMPANY

20 Turnpike Road Westborough, Massachusetts 01581

November 19, 1979

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Office of Nuclear Reactor Regulation
Mr. Harold Denton, Director

References: (a) License No. DPR-3 (Docket No. 50-29)
(b) USNRC Letter to YAEC dated October 30, 1979
(c) YAEC Letter to USNRC dated October 18, 1979
(d) USNRC Letter to YAEC dated September 13, 1979

Dear Sir:

Subject: Followup Actions Resulting from the NRC Staff Review Regarding The Three Mile Island Unit 2 Accident

This letter is in response to your letter, Reference (b).

Our initial response with regard to our followup actions, Reference (c), was based on your letter of September 13, 1979, Reference (d), and our perception of the clarifications provided at the regional and topical meetings that we attended. Several deficiencies have been identified in the attachment to our response to Reference (d). We have revised the attachment to address these items, and are forwarding the revised attachment herewith. We have not assessed any expansion to the scope of requirements which may be implied by Enclosure 1 of Reference (b) and reiterate that our current schedule is based on our understanding of your letter of September 13, 1979.

Our schedule for completing each of the followup requirements is firm. In the event of a delay in any of our implementation commitments, we will inform you of the degree of completion by January 1, 1980, including a detailed justification for the delay.

We trust this information is satisfactory; however, if you have any further questions, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

D. E. Moody

D. E. Moody
Manager of Operations

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ATTACHMENT

IMPLEMENTATION OF REQUIREMENTS FOR FOLLOWUP ACTIONS

Sect. No.	Abbreviated Title	Requirement	Implementation Commitment
2.1.1	Emergency Power Supply	Complete implementation.	Redundant capability to supply the pressurizer heaters from an offsite or from an emergency power source presently exists, and procedures are available. The breaker which provides the interface between the emergency bus and the non-emergency bus is an integral part of the emergency switchgear. The motor operated block valve on the pressurizer relief line will be connected to an emergency power source by January 1, 1980. The pressurizer solenoid-operated relief valve is already supplied by an emergency d-c power source, and the pressurizer level indication instrument channels are already supplied by the vital bus power source.
2.1.2	Relief and Safety Valve Testing	Submit program description and schedule.	YAEC is closely following the EPRI program, and presently intends to follow the industry commitment in regard to this test program. It is anticipated that the program description and schedule will be available by January 1, 1980.
		Complete test program.	The schedule for completion of the test program depends on the acceptability and availability of the EPRI program.

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2.1.3.a	Direct Indication of Valve Position	Complete implementation.	Yankee Rowe has always had an electronic sound surveillance channel in the pressurizer compartment and it provides reliable indication to the operator that there is flow in the discharge pipe. However, Yankee intends to enhance this capability with the installation of an acoustic accelerometer system. This will be installed during the 1980 refueling outage.
2.1.3.b	Instrumentation for Inadequate Core Cooling	Develop procedures describe existing inst.	In response to I&E Bulletin 79-06A, Yankee Rowe has already reviewed and revised plant procedures to provide a description of the existing instrumentation with regard to operator recognition of inadequate core cooling.
		New level instrument design submitted.	Methods for the detection of reduced coolant inventory are presently being investigated by the Owners Groups and Yankee intends to submit a level instrument design by January 1, 1980, provided a satisfactory resolution is developed by this generic approach.

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		Subcooling meter installed.	Yankee Rowe will install a primary coolant saturation instrument. A purchase order has been initiated and engineering design is in progress. The instrument will be connected to core exit thermocouples and a safety grade pressure channel by January 1, 1980.
		New level instrument installed.	Yankee intends to install a suitable device for detection of reduced coolant level or adapt existing instruments to accomplish this purpose by January 1, 1981, depending on the resolution of the generic approach.
2.1.4	Diverse Containment Isolation	Complete implementation.	Yankee is proceeding with a change to the design of the containment isolation system which will add a diverse initiation signal (SIAS), automatically isolate all non-essential systems, and require deliberate operator action to reopen isolation valves after resetting of the isolation signal. Every effort will be made to implement the design change by January 1, 1980, contingent upon delivery of new equipment and further input from Owners Groups. Identification of essential and non-essential systems will be submitted by January 1, 1980.

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2.1.5.a	Dedicated H_2 Control Penetrations	Description and implementation schedule.	Yankee will provide a description of the change and the implementation schedule by January 1, 1980.
		Complete installation.	Yankee will complete implementation of the change by January 1, 1981.
2.1.5.c	Recombiners	Review procedures and bases for recombiner use.	Yankee does not have recombiners. Per Reference (b) of the cover letter, no action is required at this time.
2.1.6.a	Systems Integrity for High Radioactivity	Immediate leak reduction program.	Yankee will implement a leak reduction program by January 1, 1980.
		Preventive maintenance program.	Yankee will establish a preventive maintenance program by January 1, 1980.
2.1.6.b	Plant Shielding Review	Complete the design review.	Yankee will perform a preliminary review of radiation and shielding design by January 1, 1980.
		Implement plant modifications.	Modifications to plant systems will depend upon the results of the design review and also upon the results of other reviews currently being conducted in the SEP review. Therefore, Yankee intends to factor implementation of shielding modifications into the SEP schedule, and will forward an identification of the modifications as soon as practicable after the completion of the shielding design review.

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2.1.7.a	Auto Initiation of Auxiliary Feed	Complete implementation of control grade.	As a result of the SEP safe shut-down review and the post-TMI review, Yankee had decided to install an entirely new auxiliary feedwater system. A review of accident analyses will be required to determine the mode of automatic initiation. The new system is being designed and the ordering of equipment is imminent. The new system will be installed and connected to normal plant power systems on a schedule which is as expeditious as equipment delivery will permit. The design will include an analysis for steam generator water hammer as required by the NRC letter of September 12, 1979.
		Complete implementation of safety grade.	The new auxiliary feedwater system will be connected to emergency power sources on a schedule which will allow consideration of all loads requiring emergency power sources as a result of the SEP review, and thus permit optimization of emergency power source capacities.
2.1.7.b	Auxiliary Feed Flow Indication	Complete implementation.	The new auxiliary feedwater system will have feed flow indications meeting the necessary safety-grade and power source requirements.

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Sect. No.	Abbreviated Title	Requirement	Implementation Commitment
2.1.8.a	Post Accident Sampling	Design review complete.	Yankee will review its capability to obtain the necessary samples by January 1, 1980.
		Preparation of revised procedures.	If the review indicates that the plant has the capability to obtain the necessary samples, procedures will be revised to implement the capability by January 1, 1980.
		Implement plant modifications.	If the review indicates that the plant does not have the capability to obtain the necessary samples, Yankee intends to implement the necessary modifications in conjunction with the SEP schedule.
		Description of proposed modification.	A description of design modifications will be submitted by January 1, 1980.
2.1.8.b	High Range Radiation Monitors	Installation complete.	Yankee will install noble gas effluent monitors and high range radiation level monitors by January 1, 1981, subject to instrument qualification and availability. Procedures for estimating releases by the use of installed equipment will be available for review by the emergency plan review team.
2.1.8.c	Improved Iodine Instrumentaton	Complete implementation.	Yankee presently has the capability to determine airborne iodine concen-ation. Procedures presently in effect require the use of charcoal for iodine sampling and the use of the plant's GeLi detector for gamma ray energy spectrum analysis which can

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2.1.9	Transient and Accident Analysis	Complete analysis procedures, and training in areas of: small break LOCA, inadequate core cooling, accidents and transients.	To accomplish this action item, Yankee Rowe will utilize generic work produced by the NSSS vendor in accordance with commitments made between the Westinghouse Owners' Group and the Commission. Implementation of emergency procedures and initiation of training programs will be accomplished expeditiously, consistent with the intent of Reference (b) of the cover letter. In addition, within one year of completion of the generic analytical work Yankee Rowe will validate independently the applicability of the generic guidelines and analyses for the Yankee Rowe plant.
	Containment Pressure Monitor	Installation complete.	Yankee Rowe will install a containment pressure monitor by January 1, 1981.
	Containment Water Level Monitor	Installation complete.	Yankee Rowe will install a containment water level monitor by January 1, 1981.
	Containment Hydrogen Monitor	Installation complete.	Yankee Rowe will install a containment hydrogen monitor by January 1, 1981.
	RCS Venting	Design submitted.	This area is being investigated by the Westinghouse Owners Group and Yankee intends to follow the recommendations of the Owners Group. A venting design will be submitted by January 1, 1980, provided this schedule is consistent with the resolution of Owners Group recommendations.

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		Installation complete.	Provided the necessary equipment is available, every effort will be made to meet the scheduled date for installation of the venting system.
2.2.1.a	Shift Supervisor Responsibilities	Complete implementation.	Actions required in relation to Shift Supervisors responsibilities will be implemented by January 1, 1980.
2.2.1.b	Shift Technical Advisor	Shift technical advisor on duty.	Shift technical advisor requirements will be implemented by January 1, 1980.
		Complete training.	Procedure and training requirements will be implemented by January 1, 1981.
2.2.1.c	Shift Turnover Procedures	Complete implementation.	Yankee Rowe will review and revise plant procedures for shift turnover as necessary by January 1, 1980.
2.2.2.a	Control Room Access Control	Complete implementation.	Yankee Rowe will establish the necessary controls to limit access to the control room by January 1, 1980.
2.2.2.b	Onsite Technical Support Center	Establish center.	An onsite technical support center will be established at Yankee Rowe by January 1, 1980. A description of the permanent onsite technical support center will be submitted by January 1, 1980.
2.2.2.c	Onsite Operational Support Center	Complete implementation.	An onsite operational support center will be established at Yankee Rowe by January 1, 1980.