

# YANKEE ATOMIC ELECTRIC COMPANY



20 Turnpike Road Westborough, Massachusetts 01581

June 12, 1980

United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Attention: Office of Nuclear Reactor Regulation  
Division of Licensing  
Darrell G. Eisenhut, Director

References: (a) License No. DPR-3 (Docket No. 50-29)  
(b) USNRC Letter to All Operating Reactor Licensees, dated  
March 7, 1980

Dear Sir:

Subject: Five Additional TMI-2 Related Requirements

Your letter, Reference (b), transmitted five items from the NRC TMI Action Plan which, applicable to operating reactors, constitute a second set of requirements for operating reactors. Yankee was requested to reply within 30 days of stating our commitments to meet the additional requirements and associated schedules. The attachment to this letter provides a tabulation of the items from Enclosure 1 of Reference (b) which are applicable to the Yankee Rowe plant and our implementation commitment for each item.

Please note the following comments relative to specific items:

Item I.A.1.3 - Yankee will respond to this item, Shift Manning, within 30 days of receipt of the material to be provided by your staff through separate correspondence.

Item II.K.3.9 - This item is not applicable to Yankee Rowe as the plant does not have a PID type of controller on the PORV.

Item II.K.3.25, II.K.3.29, and II.K.3.44 - In accordance with discussions with your staff, these items are applicable to BWR's and, therefore, are not applicable to Yankee Rowe.

Item III.D.3.4 - It should be noted that this item is also under review at Yankee Rowe as SEP Topic VI-8 with a site visit scheduled for April, 1981, and the safety assessment scheduled for completion in August, 1981. Although we have committed to meet the accelerated review schedule required by Enclosure 1 of Reference (b), we would prefer to keep this as an SEP topic on the SEP schedule as it would be more compatible with our manpower scheduling.

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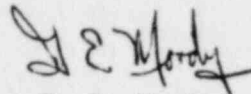
U. S. Nuclear Regulatory Commission  
Attention: Darrell G. Eisenhut, Director

June 12, 1980  
Page 2

We trust you will find this information satisfactory. However, if you have any questions, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY



D. E. Moody  
Manager of Operations

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Implementation Schedule and Summary

<u>Item No.</u>	<u>Title</u>	<u>Requirement</u>	<u>Implementatic-</u>
I.A.1.3	Shift Manning		Yankee will make its commitment as to the scope and schedule of this requirement within 30 days of receipt of the details of the requirement.
I.A.3.1	Revise Scope and Criteria for Licensing Examination	Submit revised programs.	Yankee's training programs were modified in conformance to the revised criteria forwarded in the USNRC Letter of March 28, 1980 and were implemented prior to May 1, 1980 as requested. Revised programs will be submitted to OLB for review by August 1, 1980.
I.C.5	Licensee Dissemination of Operating Experience to Plant Staff	Perform an operating experience assessment to assure that important information is continually provided to operators.	<p>Yankee will review and revise all applicable procedures as necessary to assure that operating information pertinent to plant safety, originating both within and outside the organization, is continually supplied to operator and other personnel and is incorporated into plant training and retraining programs in accordance with the guidance provided in Enclosure 2 of the USNRC Letter of May 7, 1980.</p> <p>Yankee will complete the review and revision of applicable procedures by January 1, 1981.</p>
II.K.3.1	Isolation and Testing of Automatic PORV Isolation System	<p>(1) Licensee to document proposed changes for staff approval prior to implementation. Documentation to be submitted by scheduled date.</p> <p>(2) Licensee to implement modifications and perform conformatory test at the next refueling outage following staff approval of the design unless this outage is scheduled within six months of the approval date. In this event, modifications will be completed during the following refueling outage.</p>	<p>If the results of the PORV failure studies specified in Action Item II.K.3.2 indicate that it is necessary to install a system to automatically isolate the PORV, Yankee will design and install such a system.</p> <p>Yankee will submit a proposed design by July 1, 1981 and implement and test at the next refueling outage following staff approval of the design, provided Action Item II.K.3.2 is completed as scheduled.</p>

Implementation Schedule and Summary

<u>Item No.</u>	<u>Title</u>	<u>Requirement</u>	<u>Implementation</u>
II.K.3.2	Vendor Report on PORV Failure Reduction	Provide report to staff.	Yankee intends to participate in the vendor review of PORV failure rates and will submit the report by January 1, 1981 if the vendor provides the report to Yankee in that timeframe. The results of this review will be used to determine the necessity for the action requested in Item II.K.3.1 above.
II.K.3.3	Reporting Safety and Relief Valve Failures and Challenges	Provide an annual report on SRV and RV failures and challenges as of Jan. 1, 1981.	In the event of safety valve and relief valve failures and challenges, Yankee will provide an annual report as of January 1, 1981.
II.K.3.5	Automatic Trip of RCP During a LOCA	Provide the results of an evaluation of alternative solutions to RCP trips.	<p>The existing rationale for tripping reactor coolant system pumps during a small LOCA is based solely upon the results of vendor sensitivity studies of pump operating phenomena during a LOCA. Any conclusions derived from these results should carry with them the same uncertainty associated with the models and methods used to achieve the results.</p> <p>Currently, NRC is requiring small break model verification against semiscale and LOFT experiments to prove the validity of vendor models. Yankee intends to verify its small break LOCA models against experimental data and upgrade them as required. However, to date, no conclusive evidence has been gained in the semiscale program to support the automatic tripping of the reactor coolant pumps. The earliest pump effects test data from LOFT will not be available until December 1980.</p>

Implementation Schedule and Summary

<u>Item No.</u>	<u>Title</u>	<u>Requirement</u>	<u>Implementation</u>
II.K.3.5 (Cont'd)	Automatic Trip of RCP During a LOCA		<p>It is currently counterintuitive to automatically trip the RCP's based upon the results to date. Yankee desires to pursue other alternatives to tripping the pumps -- improved ECCS, plant specific analysis to determine operability of our RCP's. However, any serious plant modification such as the automatic tripping of reactor coolant pumps should be based on <u>believable</u> and <u>approvable</u> models. Therefore, Yankee will at this time commit to study the RCP problem and institute any design changes deemed necessary <u>only</u> after the small break LOCA methodology has been proven and experimentally verified through our participation in the action plans specified in II.K.3.30 and 31.</p> <p>In the interim, the manual reactor coolant pump trip procedure will remain in place. This is the most prudent, safety conscious action at this time. It provides <u>ample</u> protection against detrimental RCP operation during a small break LOCA while at the same time maintaining the probability of a complete loss of flow accident at existing levels. This is a crucial item for Yankee Rowe since the RCP's have no fly wheels and very limited coastdown capability.</p>
II.K.3.9	PID Controller Modification		<p>The item does not apply to Yankee as Yankee does not have a PID controller.</p>
II.K.3.10 II.K.3.12	Anticipatory Trip	Document proposed change and implement modification.	<p>Yankee confirms that it has an anticipatory reactor trip on turbine trip which is effective at power levels above 15 MWe. Yankee has no plans to change this set point.</p>

Implementation Schedule and Summary

<u>Item No.</u>	<u>Title</u>	<u>Requirement</u>	<u>Implementation</u>
II.K.3.17	Report on Outage of ECCS During the Last Five Years	Provide a report detailing outage dates, and lengths of outages for all ECCS for the last five years of operation.	Yankee intends to submit a report on the outage of ECC Systems by January 1, 1981.
II.K.3.30	Revised SB-LOCA Methods to Show Compliance with 10 CFR 50, Appendix K	Submit analysis model for staff approval.	Yankee intends to revise small break LOCA methods to show compliance with 10 CFR 50, Appendix K by July 1, 1983.
II.K.3.31	Plant Specific Calculations to Show Compliance with 10 CFR 50.46	Submit the results of an evaluation to the staff.	Yankee intends to perform these plant specific calculations one year after NRC approval of small break LOCA methods revised in accordance with Item II.K.3.30 above.
III.D.3.4	Control Room Habitability	Assure that control room operators will be adequately protected against the effects of accidental release of toxic and radioactive gases.	Yankee intends to perform a study of control room habitability in conformance with the guidance provided in Enclosure 4 of the NRC Letter of May 7, 1980. The results of the study will be submitted by January 1, 1981. In order that the implementation of changes may be coordinated with the modifications resulting from other SEP Topic reviews, Yankee intends to implement any modifications on the SEP schedule.