

DCS

DEC 26 1990

Docket No. 50-29

Yankee Atomic Electric Company  
ATTN: Mr. Jay K. Thayer  
Vice President and  
Manager of Operations  
580 Main Street  
Bolton, Massachusetts 01740-1398

Gentlemen:

Subject: Inspection Report No. 50-29/90-16

This refers to your letter dated December 6, 1990, in response to our letter dated November 6, 1990.

Our letter dated November 6, 1990 requested that you describe your actions regarding problems noted during main coolant pump maintenance, transient materials, and fuse inspection assessments. We have discussed the absence of the requested information and understand that a supplemental response will be submitted by January 31, 1991.

Your cooperation with us is appreciated.

Sincerely,

ORIGINAL SIGNED BY:

*Jon R. Johnson*  
Jon R. Johnson, Chief  
Reactor Projects Branch No. 3  
Division of Reactor Projects

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cc:

N. St. Laurent, Plant Superintendent

G. Papanic, Jr., Senior Project Engineer - Licensing

R. Hallisey, Department of Public Health, Commonwealth of Massachusetts (w/cy of Licensee's Reply Letter)

Yankee Rowe Hearing Service List (w/cy of Licensee's Reply Letter)

Public Document Room (PDR)

Local Public Document Room (LPDR)

Nuclear Safety Information Center (NSIC)

NRC Resident Inspector (w/cy of Licensee's Reply Letter)

Commonwealth of Massachusetts (2) (w/cy of Licensee's Reply Letter)

bcc w/cy of Licensee's Reply Letter:

Region I Docket Room (with concurrences)

J. Rogge, DRP

T. Koshy, SRI - Yankee (with concurrences)

R. Barkley, DRP

J. Johnson, DRP

H. Eichenholz, SRI, Vermont Yankee

J. Macdonald, SRI, Pilgrim

P. Sears, NRR

R. Bores, DRSS

R. Keimig, DRSS

RI:DRP

*[Signature]*  
Koshy/meo  
12/26/90

RI:DRP

*[Signature]*  
Rogge  
12/26

RI:DRP

*[Signature]*  
Johnson  
12/26

RI:DRP  
*[Signature]*  
Barkley  
12/26/90

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YANKEE HEARING SERVICE ST

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# YANKEE ATOMIC ELECTRIC COMPANY

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580 Main Street, Bolton, Massachusetts 01740-1398

December 6, 1990  
BYR 90-159

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Attention: Director, Office of Enforcement

References: (a) License No. DPR-3 (Docket No. 50-29)  
(b) Inspection Report No. 50-29/90-16, dated November 6, 1990

Subject: Reply to Notice of Violation; 50-29/90-16-02

Dear Sir:

Reference (b) documents a routine safety inspection by Messrs. T. Koshy and M. Markley, at the Yankee Nuclear Power Station (YNPS) Rowe, Massachusetts on August 21, 1990 - October 1, 1990. Reference (b) contains a Notice of Violation resulting from this routine safety inspection, identified as a Severity Level IV (Supplement I). The violation is as follows:

"10 CFR 50, Appendix B, Criterion XVI, Corrective Action, requires measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Contrary to the above, corrective action implemented as a result of the four consecutive failures of the emergency lighting surveillance test on December 7, 1989, did not assure that defective equipment was promptly identified and corrected in that corrective actions did not include sufficient additional testing of emergency lighting. As a result, on June 29, 1990, additional failures of the emergency lighting occurred, identifying that corrective actions had failed to preclude repetition."

In accordance with 10CFR2.201, we hereby submit the following information:

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1. Admission or Denial of the Alleged Violation

We concur with the Notice of Violation as described above and in Reference (b).

2. The Reason for the Violation if Admitted

During the performance of procedure OP-5635, Rev. 2, "Annual Surveillance of Appendix R Lights", maintenance supervision noted a higher than normal failure rate of the Appendix R lighting. The surveillance results indicated that while the lights failed the 8-hour discharge test, they were capable of providing about 5-hours light before it would shut down on low battery voltage. Additional units were selected for testing, as required by the surveillance procedure, until two lighting units met the acceptance criteria.

Upon noting the higher than normal failure rate of the emergency lighting, Maintenance supervision requested the Maintenance Support Department (MSD) evaluate the failures. MSD evaluated the failures and based on information provided by the battery manufacturer, identified two suspected causes:

- 1) The batteries for the lighting units had reached their end of life (3 to 4 years based on our service).
- 2) The battery float voltage is out of specified range, either high or low, which would result in shortened battery life.

Based on this information, MSD recommended to Maintenance supervision that the surveillance procedure, OP-5635 be revised to include a check of the battery float voltage on an annual basis. Additionally, it was recommended that the date code for the emergency lighting batteries be recorded and OP-5635 be revised such that batteries be replaced at a maximum interval of 4 years.

An engineering evaluation had been performed and concluded that since the Appendix R emergency lights were capable of providing about 5 hours of lighting, they would still be capable of performing their emergency function of providing lighting to start the Safe Shutdown System and stabilize the plant. However, the reliance on this evaluation led to our untimely corrective action since there was no requirement to immediately restore the 8-hour supply capability. Maintenance supervision had initiated changes to the annual surveillance as recommended by MSD and scheduled it for implementation during the next scheduled surveillance in late 1990.

However, prior to the next annual surveillance, during a planned outage of the stations 480 volt bus 5-2 and Motor Control Center No. 4, Bus 1, the resident inspectors identified several Appendix R emergency lighting units which had not remained functional for the required 8 hours. Upon reassessing these failures, the original corrective action deficiency was discovered.

3. The Corrective Steps That Have Been Taken and the Results Achieved

All Appendix R Emergency Lighting Units have been subjected to a full 8 hour discharge test. Those units that did not pass the test, had their batteries replaced, and were retested for another 8 hour discharge test. Those emergency lighting units that passed the 8 hour discharge test, but contained batteries that were older than 3 years, also had their batteries replaced.

4. The Corrective Steps That Will be Taken to Avoid Further Violation

Procedure OP-5635, "Annual Surveillance of Appendix R Emergency Lights" will be revised to require a full 8 hour discharge test be performed on each unit on an annual basis. Additionally, the manufacturers date code will be recorded for all in service batteries, and once they reach 3 years old they will be scheduled for replacement prior to becoming 4 years old.

This event will be reviewed by Maintenance and Maintenance Support supervision with emphasis placed on the importance of ensuring that defective equipment is identified and that corrective actions preclude repetition of the deficiency. Additionally, it will be emphasized that in evaluating failures of plant equipment, care must be taken in reviewing licensing commitments beyond those contained in Technical Specifications to ensure that none are overlooked.

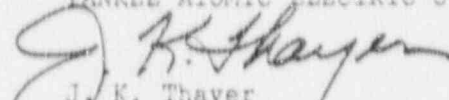
5. The Date When Full Compliance Will Be Achieved

The revision to procedure OP-5635, "Annual Surveillance of Appendix R Emergency Lights" will be completed by December 31, 1990. The review of this event with maintenance and maintenance support supervision will also be completed by December 31, 1990.

Reference (b) also describes three different observations which were noted as problems; these concerns will be addressed with the resident inspector. If you have any questions or desire additional information, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

  
J. K. Thayer  
Vice President and Manager of Operations

WPP53/23

cc: USNRC Region I  
USNRC Resident Inspector, YNPS

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