T/C

MAINE YANKEE
ENGINEERING OFFICE
TURNPIKE ROAD (RT. 9)
WESTBORO, MASSACHUSETTS 01581
617-366-9011

B.4.1.1
WMY 79-132

November 14, 1979

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Attention: Mr. Boyce H. Grier, Director

References: (a) License No. DPR-36 (Docket No. 50-309)
(b) USNRC Letter to MYAPC dated March 8, 1979
I&E Bulletin 79-02
(c) USNRC Letter to MYAPC dated June 21, 1979
I&E Bulletin 79-02, Revision 1
(d) MYAPC Letter to USNRC dated July 5, 1979
(e) MYAPC Letter to USNRC dated October 11, 1979

Dear Sir:

Subject: Second Supplementary Response to I&E Bulletin 79-02, Revision 1

At the request of I&E we submit the following breakdown of expansion anchor bolts tested in various systems:

Table 1

System	Number Tested
Reactor Coolant	10
HPSI	3
Chemical Volume & Control	3
RHR	3
Seal H_2O System	2
Second Component Cooling	27
Primary Component Cooling	12
Containment Spray	15
Totals	75

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The following list identifies the total number of anchor bolts we estimate exist at Maine Yankee:

Table 2

FP Drawing Title	Estimated Total Anchor Bolts
Containment Annuluis Piping	209
Containment Spray Piping	81
Secondary Component Cooling Piping	118
Pressure Spray Safety & Quench Tank Piping	60
Residual Heat Removal	112
Primary Component Cooling	475
Safety Injection Piping	37
Steam Generator Feedwater Piping	26
Chemical Volume Containment Piping	788
Total Anchor Bolts	1906

The sampling philosophy we followed in our test effort at Maine Yankee is the same one we used at both Vermont Yankee and Yankee Rowe. This sampling plan was derived from evidence that failures are not related to the systems which the anchors are supporting, but are related to the lack of adherence to installation procedures by the individuals installing anchors.

Thus, failures tend to be more area related than system related. Failures we found in other plants tended to occur in discrete areas. If several systems were located in that area, each system would have anchor bolts exhibiting failures at about the same rate. We, therefore, looked for a statistical approach based on a large population of features without a known failure rate. The Poisson Methodology was selected, and to assure ourselves of its validity, we employed the services of a consultant knowledgeable in industrial statistics who independently verified the theory.

Application of the theory results in random sampling of anchor bolts in numbers larger than 60 out of a large total population. If no failures are found sampling is complete and a 95% confidence of 5% or less defects is assured. If failures are found, sampling continues to approximately 90. Twelve failures in a sample of ninety requires 100% inspection. One failure in ninety gives 95% confidence of 5% or less defects. Defects numbering between 1 and 12 require some additional decision to be made.

The important fact is that the random sample of 75 anchor bolts tested at Maine Yankee without failures affords better than a 95% confidence that 5% or less defective anchors exists in the remaining population.

We trust this provides you with sufficient information to fully describe our sampling program on expansion anchor bolts at Maine Yankee and its results. If additional information is required, please contact us.

Very truly yours,

MAINE YANKEE ATOMIC POWER COMPANY

Robert H. Groce
Senior Engineer - Licensing

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