

October 7, 1997

T-503

Mr. Donald A. Reid  
Senior Vice President, Operations  
Vermont Yankee Nuclear Power Corporation  
Ferry Road  
Brattleboro, VT 05301

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING SAFETY AND RELIEF VALVE  
SETPOINT TOLERANCE AND POWER OPERATION WITH AN INOPERABLE VALVE -  
VERMONT YANKEE NUCLEAR POWER STATION (TAC NO. M98087)

Dear Mr. Reid:

By letter dated September 11, 1996, Vermont Yankee Atomic Nuclear Power Corporation submitted proposed changes to the safety and relief valve (SRV) setpoint tolerance and power operation with an inoperable SRV.

The NRC staff has reviewed the submittal, and, based on its review, finds that responses to the enclosed request for additional information are needed before we can complete our review.

Please provide your responses within 30 days from the date of this letter. If you have any questions regarding this matter, please contact me at (301) 415-1496.

Sincerely,

ORIGINAL SIGNED BY

Kahtan N. Jabbour, Sr. Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure: Request for Additional  
Information

cc w/encl: See next page

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Vermont Yankee Nuclear Power Station

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REQUEST FOR ADDITIONAL INFORMATION BY THE

OFFICE OF NUCLEAR REACTOR REGULATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1. Discuss the original basis for 95% power limitation in technical specifications?
2. Does Vermont Yankee (VY) Corporation use the GESTAR methodology for reload analysis? If not, what is the approved methodology? List the computer codes that are used for reload analysis and confirm that all codes and methodology have been previously approved by NRC. Does the fuel vendor or Vermont Yankee Nuclear Power Corporation perform the reload analysis? Explain the use of the FROSSTEY code and confirm that the use of this code has been approved.
3. Regarding the main steam isolation valve closure pressurization event, clarify the assumptions regarding the event, including whether credit is taken for the relief mode of operation for the safety relief valves (SRVs). Are the two SRVs considered operable? Is there any dependence on which SRV is chosen inoperable? It appears that the most conservative case would be to choose the SRV with the lowest setpoint as inoperable. Please discuss this case.
4. The high pressure systems performance must be evaluated with the proposed technical specifications changes. The impact on high pressure coolant injection, reactor core isolation cooling, and standby liquid control systems' performance must be evaluated, in addition to any other systems with the potential for injection to the vessel at the higher pressures.
5. Discuss the impact of the proposed changes on any plant specific alternate operating modes (e.g., increased core flow, extended operating domain, etc.)
6. From page 19 of submittal, what is base case Peak Clad Temperature (PCT)? Also, has the main steam line break outside containment been addressed? Has PCT for this event been analyzed with the proposed changes?
7. Please explain the quote from page 7 of the submittal dated September 11, 1996:  
"The plant model is changed to reflect the expected tolerances of the SRVs and SVs [safety valves]. As found testing has demonstrated the expected tolerances of the SRVs and SVs to be less than 1%. For purposes of demonstration of no SV lift with an inoperable SV, a +1% tolerance is applied to the SRVs and a -1% tolerance to the SVs."

Why are the tolerance assumptions reduced from  $\pm 3\%$  to 1% for evaluating SRV challenges?

ENCLOSURE

8. Page 3 of the cover letter provides the sequence to be followed for implementing the relaxed setpoint tolerance. Item no. 5 states that subsequent to the 1998 refueling outage, all SRVs and SVs will be as-found/as-left tested within  $\pm 3\%/\pm 1\%$  of the technical specification limit. Confirm that this statement means that all SRVs/SVs will be tested at least at every 18 months.
9. One SRV inoperable implies that the automatic depressurization system (ADS) mode of the SRV would also be inoperable. Is ADS affected in any way by the proposed changes? If so, is there an impact on PCT for any ADS blowdown scenario?
10. Has the anticipated transient without scram event been addressed for the case of one inoperable SRV? In particular, is the American Society of Mechanical Engineers Code Service Level C value of 1500 psig satisfied for one inoperable SRV?
11. On page 22 of Attachment C to the submittal, it is stated that mechanical loads on the SRV piping/supports and Torus have been evaluated for the proposed increase in the SRV setpoint tolerance to  $\pm 3\%$ . The setpoint tolerance of the SVs are similarly proposed to be increased. Please verify that the loads on the main steam and SV piping/supports have also been evaluated for the increased SV setpoint tolerance.
12. Please verify that the capability of various motor-operated valves (MOVs) to operate open or closed, as necessary during peak transient differential pressure loads, has been evaluated for the proposed increased SV and SRV setpoint tolerance.

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DATE	10/6/97	10/7/97	10/6/97	10/07/97	10/7/97

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