



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

December 18, 2003

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

**SEQUOYAH NUCLEAR PLANT (SQN) - ADDITIONAL INFORMATION
REGARDING TECHNICAL SPECIFICATION (TS) CHANGE 00-14,
"PRESSURE TEMPERATURE LIMITS REPORT (PTLR) AND REQUEST FOR
EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 50, APPENDIX G,"
(TAC NOS. MB6436 AND MB6437)**

Reference: TVA letter to NRC dated March 28, 2003,
"Sequoyah Nuclear Plant (SQN) - Response to
Request for Additional Information (RAI)
Regarding Technical Specification (TS) Change
00-14, 'Pressure Temperature Limits Report
(PTLR) and Request for Exemption From the
Requirements of 10 CFR 50, Appendix G,' (TAC
Nos. MB6436 and MB6437)"

Enclosed is additional information to support NRC review of
SQN TS Change 00-14. The additional information supplements
the information provided in the reference letter and responds
to two NRC follow-up questions from a September 16, 2003
telephone conference call with your staff.

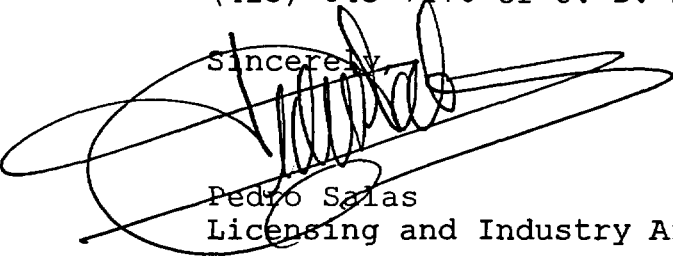
There is no additional information provided in this letter to
address the NRC's questions regarding the PTLR and the
request for exemption from the requirements of 10 CFR 50,
Appendix G. The information provided in this letter is
intended to support the NRC's review of the PTLR and the
request for exemption from the requirements of 10 CFR 50,
Appendix G.

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There are no commitments contained in this submittal.
Please direct questions concerning this issue to me at
(423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,



Pedro Salas
Licensing and Industry Affairs Manager

I declare under penalty of perjury that the foregoing is true
and correct. Executed on this 18 day of December, 2003

Enclosure

cc (Enclosure):

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ENCLOSURE

SEQUOYAH NUCLEAR PLANT (SQN)
ADDITIONAL INFORMATION FOR
TECHNICAL SPECIFICATION (TS) CHANGE NO. 00-14,
DOCKET NOS. 50-327 AND 50-328

The following additional information is provided in response to NRC staff questions from review of Westinghouse Topical Report WCAP-15984-P, Revision 1, "Reactor Vessel Closure Head/Vessel Flange Requirements Evaluation for Sequoyah Units 1 and 2."

NRC Question 1

Provide a more precise estimate of when (in minutes into the heatup transient) the stress intensity factor (SIF) for the 0.1T outside diameter flaw at the location to which Figure 4-2 applies will exceed 33.2 ksi-in^{0.5}.

TVA Response

Figure 4-2 of WCAP-15984-P, Revision 1, provides a summary of all the time steps in the heatup/cooldown transient for the governing location in the head. For a postulated flaw of depth equal to 0.1T, the stress intensity factor exceeds the value of 33.2 ksi-in^{0.5} at a time of 344 minutes into the transient, which is at the end of the heatup. Other time steps where the stress intensity factor exceeds 33.2 ksi-in^{0.5} include 355, 375, and 405 minutes. For these times, the reactor vessel is at least 500 degrees Fahrenheit, so the toughness is on the upper shelf, at least 200 ksi-in^{0.5}. This value is far above the minimum lower-shelf toughness, thus, fracture could not occur in this region. This provides a simple and conclusive demonstration that there is no need for a flange requirement.

NRC Question 2

Identify whether or not a 0.1T outside diameter flaw at any location other than that to which Figure 4-2 applies will exceed a SIF of 33.2 ksi-in^{0.5} at a time step earlier in the heatup transient. If so, provide the time (in minutes into the heatup transient) when the other location exceeds 33.2 ksi-in^{0.5}.

TVA Response

As stated in the report, the location covered by Figure 4-2 of WCAP-15984, Revision 1, is the governing location for the heatup/cooldown transient. Therefore, there are no other locations in the head where the stresses could be higher at a given temperature.