October 27, 1986

Dockets Nos. 50-259/260/296

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Mr. S. A. White
Manager of Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

RE: REACTOR VESSEL MATERIALS SURVEILLANCE PROGRAM FOR BROWNS FERRY NUCLEAR POWER PLANT, UNITS 1, 2, AND 3

By letter to the Commission dated July 23, 1985, the Tennessee Valley Authority documented their plan for withdrawing reactor vessell surveillance capsules from the Browns Ferry Nuclear Plant, Units 1, 2, and 3. The Technical Specifications for the units require that surveillance capsules be withdrawn from the reactor at one-fourth and three-fourth service life. Based on the licensee's interpretation, one-fourth service life was equivalent to eight effective full-power years (8.0 EFPY), and, similarly, three-fourths service life was equivalent to twenty-four effective full-power years (24.0 EFPY), assuming 80% capacity factor for the forty year reactor design life.

Pursuant to paragraph II.B.3 of Appendix H of 10 CFR Part 50, the licensee requested Commission approval of the proposed surveillance withdrawal program.

The staff has reviewed the Browns Ferry FSAR and two supporting documents "Brown Ferry Core Region Materials Information (Units 1, 2, and 3)", BAW-1845, August 1984, and "Analysis of the Vessel Wall Neutron Dosimeter from Browns Ferry Unit 1 Pressure Vessel", Final Report SWRI Project 02-4884-001, August 1978. The results of dosimetry measurements indicate an average flux at the vessel wall for the three units of 1.1×10^{9} n/cm^{2}. The EOL fluence (32.0 EFPY) is 1.12×10^{18} nvt (16% uncertainty) instead of 3.8×10^{17} nvt (40.0 EFPY) as calculated in NEDO-10115, "Mechanical Property Surveillance of General Electric BWR Vessels", July 1969, and the FSAR. Therefore, the measured fluence is 3.7 times larger than the calculated fluence.

Since the measured fluence is 3.7 times larger than the calculated fluence, your proposed interpretation of the Technical Specification does not achieve the objectives of Appendix H to 10 CFR Part 50. Instead of the literal withdrawal schedule you proposed, we suggest that you develop an integrated surveillance program for all three Browns Ferry units that is more related to estimated fluence than to a set time (e.g. 24 EFPY), particularly since the

present licenses expire in the next 21 to 22 years. In accordance with paragraph II.B.3 of Appendix H, this program should be submitted for our approval. Appropriate changes to the Technical Specifications to reflect your proposed program should also be provided.

Sincerely,

Original signed by
Richard J. Clark

Richard J. Clark, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

cc w/enclosure:
See next page

DBL:PD#2	DBL:PD#2	DBL:PD#2	DBL:PD#2
SNorris	RClark:jch	MGrotenhuis	DMuller
10/22/86	10/22/86	10/29/86	10/27/86

Mr. S. A. White
Tennessee Valley Authority

Browns Ferry Nuclear Plant
Units 1, 2, and 3

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