February 22, 2000

Mr. J. A. Scalice
Chief Nuclear Officer
and Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT UNITS 2 AND 3 - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO THE ISSUANCE OF EXEMPTION TO 10 CFR PART 50, APPENDIX J (TAC NOS. MA6815 AND MA6816)

Dear Mr. Scalice:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption from certain requirements of *Title 10 Code of Federal Regulations*, Section 50.54(o), dated September 28, 1999. The proposed exemption would exempt the Tennessee Valley Authority from requirements to include main steam isolation valve leakage in (a) the overall integrated leakage rate test measurement required by Section III. A of Appendix J, Option B; and (b) the sum of local leak rate test measurements required by Section III. B of Appendix J, Option B.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

William O. Long, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-260, 50-296

Enclosure: Environmental Assessment

cc w/encl: See next page

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Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption from certain requirements of *Title 10 Code of Federal Regulations*, Section 50.54(o), dated September 28, 1999. The proposed exemption would exempt the Tennessee Valley Authority from requirements to include main steam isolation valve leakage in (a) the overall integrated leakage rate test measurement required by Section III.A of Appendix J, Option B; and (b) the sum of local leak rate test measurements required by Section III.B of Appendix J, Option B.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

William O. Long, Senior Project Manager, Section 2
Project Directorate II
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UNITED STATES NUCLEAR REGULATORY COMMISSION

TENNESSEE VALLEY AUTHORITY

DOCKET NOS. 50-260 AND 50-296

BROWNS FERRY NUCLEAR PLANT, UNITS 2 AND 3

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from 10 CFR Part 50.54(o) and 10 CFR Part 50, Appendix J, for Facility Operating Licenses Nos. DPR-52 and DPR-68, issued to the Tennessee Valley Authority (TVA) for operation of the Browns Ferry Nuclear Plant (BFN) Units 2 and 3, located in Limestone County, Alabama.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would exempt TVA from requirements to include main steam isolation valve (MSIV) leakage in (a) the overall integrated leakage rate test measurement required by Section III.A of Appendix J, Option B, and (b) the sum of local leak rate test measurements required by Section III.B of Appendix J, Option B.

The proposed action is in accordance with the licensee's application dated September 28, 1999, for exemption from certain requirements of Title 10, Code of Federal Regulations (10 CFR), Section 50.54(o) and 10 CFR Part 50, Appendix J.

The Need for the Proposed Action:

Section 50.54(o) of 10 CFR Part 50 requires that primary reactor containments for water cooled power reactors be subject to the requirements of Appendix J to 10 CFR Part 50.

Appendix J specifies the leakage test requirements, schedules, and acceptance criteria for tests of the leak tight integrity of the primary reactor containment and systems and components which penetrate the containment. Option B, Section III.A requires that the overall integrated leak rate must not exceed the allowable leakage (La) with margin, as specified in the Technical Specifications (TS). The overall integrated leak rate, as specified in the 10 CFR Part 50, Appendix J definitions, includes the contribution from MSIV leakage. By letter dated September 28, 1999, the licensee has requested an exemption from Option B, Section III.A, requirements to permit exclusion of MSIV leakage from the overall integrated leak rate test measurement. Option B, Section III.B of 10 CFR Part 50, Appendix J requires that the sum of the leakage rates of Type B and Type C local leak rate tests be less than the performance criterion (La) with margin, as specified in the TS. The licensee's September 28, 1999 letter also requests an exemption from this requirement, to permit exclusion of the MSIV contribution to the sum of the Type B and Type C tests.

The above-cited requirements of Appendix J require that MSIV leakage measurements be grouped with the leakage measurements of other containment penetrations when containment leakage tests are performed. These requirements are inconsistent with the design of the Browns Ferry facilities and the analytical models used to calculate the radiological consequences of design basis accidents. At Browns Ferry, and similar facilities, the leakage from primary containment penetrations, under accident conditions, is collected and treated by the secondary containment system, or would bypass the secondary containment. However, the leakage from MSIVs is collected and treated via an Alternative Leakage Treatment (ALT) path having different mitigation characteristics. In performing accident analyses, it is appropriate to group various leakage effluents according to the treatment they receive before being released to the environment, i.e., bypass leakage is grouped, leakage into secondary containment is grouped, and ALT leakage is grouped, with specific limits for each group defined in the TS.

The proposed exemption would permit ALT path leakage to be independently grouped with its unique leakage limits.

Environmental Impacts of the Proposed Action:

The proposed action will not significantly increase the probability or consequences of accidents. The NRC Staff has completed its evaluation of the proposed action and finds that the proposed exemption involves a slight increase in the total amount of radioactive effluent that may be released off site in the event of a design basis accident. However, the calculated doses remain within the acceptance criteria of 10 CFR Part 100 and Standard Review Plan Section 15 and there is no significant increase in occupational or public radiation exposure. The NRC Staff thus concludes that granting the proposed exemption would result in no significant radiological environmental impact.

The proposed action does not affect non-radiological plant effluents or historical sites, and has no other environmental impact. Therefore there are no significant non-radiological impacts associated with the proposed exemption.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Alternative to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no action" alternative). Denial of the exemption would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the Final Environmental Statement dated September 1, 1972 for BFN Units 2 and 3.

Agencies and Persons Consulted:

In accordance with its stated policy, on October 21, 1999, the NRC staff consulted with the Alabama State official, Mr. Kirk E. Whatley of the Alabama Office of Radiation Control, regarding the environmental impact of the proposed action. Mr. Walter had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to this action, see the licensee's letter dated September 28, 1999, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street NW., Washington, DC. Publically available records will be accessible electronically from the ADAMS Public Library component on the NRC Web site, http://www.nrc.gov (the Electronic Reading Room) and from the Agencywide Documents Access and Management System.

Dated at Rockville, Maryland, this 22nd day of February 2000.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William O. Long, Senior Project Manager, Section 2
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