

June 3, 2004

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

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - ENVIRONMENTAL
ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
(TAC NOS. MB7321 AND MB7322)

Dear Mr. Singer:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application dated September 6, 2002, as supplemented on December 19, 2002, March 28, June 24, September 3, October 22, and December 18, 2003, requesting an exemption from the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix G, "Fracture Toughness Requirements. The proposed exemption would allow use of the methods described in WCAP-15984, Revision 1, "Reactor Vessel Closure Head/ Vessel Flange Requirements Evaluation for Sequoyah Units 1 and 2," instead of the requirements in 10 CFR Part 50, Appendix G, footnote 2 to Table 1, "Pressure and Temperature Requirements for the Reactor Pressure Vessel," for the Sequoyah Nuclear Plant.

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

Sincerely,

/RA/

Michael L. Marshall, Jr., Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: Environmental Assessment

cc w/encl: See next page

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Mr. Karl W. Singer
Tennessee Valley Authority

SEQUOYAH NUCLEAR PLANT

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UNITED STATES NUCLEAR REGULATORY COMMISSION
TENNESSEE VALLEY AUTHORITY
DOCKET NO. 50-327 AND 50-328
SEQUOYAH NUCLEAR PLANT
ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix G, "Fracture Toughness Requirements" for Facility Operating License Nos. DPR-77 and DPR-79, issued to Tennessee Valley Authority (the licensee), for operation of the Sequoyah Nuclear Plant (SQN), located in Hamilton County, Tennessee. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed exemption would allow use of the methods described in WCAP-15984, Revision 1, "Reactor Vessel Closure Head/ Vessel Flange Requirements Evaluation for Sequoyah Units 1 and 2," instead of the requirements in 10 CFR Part 50, Appendix G, footnote 2 to Table 1, "Pressure and Temperature Requirements for the Reactor Pressure Vessel," for the SQN.

The proposed action is in accordance with the licensee's application dated September 6, 2002, as supplemented on December 19, 2002, March 28, June 24, September 3, October 22, and December 18, 2003. The supplemental letters provided clarifying information that did not expand the scope of the original request.

The Need for the Proposed Action:

The licensee's exemption request was made in support of an associated licensing action, submitted in the same letter, to adopt a Pressure-Temperature Limit Report for SQN, Units 1 and 2. Section 50.12(a) of 10 CFR allows licensees to apply for an exemption from the requirements of Part 50 if, (1) the exemption will not present an undue risk to the protection of public health and safety and common defense and security and (2) the application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule. The licensee has stated that compliance with the reactor pressure vessel (RPV) flange minimum temperature requirements of Appendix G to 10 CFR Part 50 is not necessary to meet the underlying purpose of the rule (i.e., to provide adequate margins of safety with regard to pressure boundary integrity for any condition of normal operation for the service life of the RPV).

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action and concludes that the exemption described above would continue to satisfy the underlying purpose of 10 CFR 50.68(b)(1). The details of the staff's safety evaluation will be provided with the letter to the licensee approving the exemption to the regulation.

The proposed action will not significantly increase the probability or consequences of accidents. No changes are being made in the types of effluents that may be released off site. There is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not have a potential to affect any historic sites. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

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

Environmental Impacts of the Alternatives 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 application 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:

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement for the Sequoyah Nuclear Plant, Units 1 and 2 dated February 13, 1974.

Agencies and Persons Consulted:

On April 28, 2004, the staff consulted with the Tennessee State official, Elizebeth Flannagin of the Tennessee Bureau of Radiological Health, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

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

For further details with respect to the proposed action, see the licensee’s letter dated September 6, 2002, as supplemented on December 19, 2002, March 28, June 24, September 3, October 22, and December 18, 2003. Documents may be examined, and/or copied for a fee, at the NRC’s Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible

electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff at 1-800-397-4209 or 301-415-4737, or send an email to pdr@nrc.gov.

Dated at Rockville, Maryland, this 3rd day of June 2004.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William F. Burton, Acting Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation