

May 28, 2004

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: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 — ENVIRONMENTAL
ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
(TAC NOS. MC1871 AND MC1872)

Dear Mr. Scalice:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application dated February 20, 2004, as supplemented on April 27, 2004, requesting an exemption from the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 68, "Criticality Accident Requirements," Subsection (b)(1). The proposed exemption would allow the handling and storage of spent nuclear fuel in a 10 CFR Part 72, licensed spent fuel storage container in the Sequoyah Nuclear Plant spent fuel pool with credit for soluble boron in the criticality analysis.

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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OFFICIAL RECORD COPY

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UNITED STATES NUCLEAR REGULATORY COMMISSIONTENNESSEE VALLEY AUTHORITYDOCKET NOS. 50-327 AND 50-328SEQUOYAH NUCLEAR PLANTENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 68, "Criticality Accident Requirements," Subsection (b)(1) 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 ASSESSMENTIdentification of the Proposed Action:

The proposed action would exempt the licensee from the requirements of 10 CFR 50.68, "Criticality Accident Requirements," Subsection (b)(1) during the handling and storage of spent nuclear fuel in a 10 CFR Part 72 licensed spent fuel storage container that is in the SQN spent fuel pool.

The proposed action is in accordance with the licensee's application dated February 20, 2004, as supplemented on April 27, 2004. The supplemental letter provided clarifying information that did not expand the scope of the original request.

The Need for the Proposed Action:

Under 10 CFR 50.68(b)(1), the Commission sets forth the following requirement that must be met, in lieu of a monitoring system capable of detecting criticality events.

Plant procedures shall prohibit the handling and storage at any one time of more fuel assemblies than have been determined to be safely subcritical under the most adverse moderation conditions feasible by unborated water.

The licensee is on a time-critical path to load spent nuclear fuel into a 10 CFR Part 72 licensed spent fuel storage container in June 2004. Section 50.12(a) allows licensees to apply for an exemption from the requirements of 10 CFR Part 50 if the regulation is not necessary to achieve the underlying purpose of the rule and other conditions are met. The licensee has stated that compliance with 10 CFR 50.68(b)(1) is not necessary for handling the 10 CFR Part 72 licensed contents of the cask system to achieve the underlying purpose of the rule.

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 February 20, 2004, as supplemented on April 27, 2004. 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 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 e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 28th day of May 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