

August 18, 2005

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

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 — ISSUANCE OF
AMENDMENTS REGARDING DELETION OF VACUUM RELIEF FLOW
REQUIREMENTS FROM AUXILIARY BUILDING GAS TREATMENT SYSTEM
SURVEILLANCE REQUIREMENTS (TAC NOS. MC4197 AND MC4198)

Dear Mr. Singer:

The Commission has issued the enclosed Amendment No. 303 to Facility Operating License No. DPR-77 and Amendment No. 293 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant, Units 1 and 2, respectively. These amendments are in response to your application dated August 12, 2004 (TVA-SQN-TS-03-11).

The amendments revise Surveillance Requirement (SR) 4.7.8.d.3 of the Auxiliary Building Gas Treatment System (ABGTS) by deleting vacuum relief flow requirements. The change removes criteria from the SR that is not necessary to verify the operability of the ABGTS and eliminates confusion regarding the basis for the vacuum relief flow requirement.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Douglas V. Pickett, 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

Enclosures: 1. Amendment No. 303 to
License No. DPR-77
2. Amendment No. 293 to
License No. DPR-79
3. Safety Evaluation

cc w/enclosures: See next page

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Mr. Karl W. Singer
Tennessee Valley Authority

SEQUOYAH NUCLEAR PLANT

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TENNESSEE VALLEY AUTHORITY
DOCKET NO. 50-327
SEQUOYAH NUCLEAR PLANT, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 303
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated August 12, 2004, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 303, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance, to be implemented no later than 45 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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

Attachment: Changes to the Technical
Specifications

Date of Issuance: August 18, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 303

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

3/4 7-20

INSERT

3/4 7-20

TENNESSEE VALLEY AUTHORITY
DOCKET NO. 50-328
SEQUOYAH NUCLEAR PLANT, UNIT 2
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 293
License No. DPR-79

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated August 12, 2004, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 293, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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

Attachment: Changes to the Technical
Specifications

Date of Issuance: August 18, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 293

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

3/4 7-20

INSERT

3/4 7-20

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 303 TO FACILITY OPERATING LICENSE NO. DPR-77
AND AMENDMENT NO. 293 TO FACILITY OPERATING LICENSE NO. DPR-79

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

1.0 INTRODUCTION

By application dated August 12, 2004, the Tennessee Valley Authority (TVA, the licensee) proposed amendments to the Technical Specifications (TSs) for Sequoyah Nuclear Plant (SQN), Units 1 and 2. The requested changes would revise Surveillance Requirement (SR) 4.7.8.d.3 of the Auxiliary Building Gas Treatment System (ABGTS) by deleting vacuum relief flow requirements. The proposed change will remove criteria from the SR that are not necessary to verify the operability of the ABGTS. Additionally, the requested change would eliminate confusion regarding the basis for the vacuum relief flow with respect to ABGTS operability.

The revision to SR 4.7.8.d.3 for ABGTS operability verification removes the phrase “a vacuum relief flow greater than 2000 cfm” from the surveillance criteria. The resulting requirement for 4.7.8.d.3 reads:

Verifying that the system maintains the spent fuel storage area and the ESF pump rooms at a pressure equal to or more negative than minus 1/4-inch water gauge relative to the outside atmosphere while maintaining a total system flow of 9000 cfm \pm 10%.

2.0 REGULATORY EVALUATION

The staff used the Commission’s regulatory requirements for TS changes set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36 for this evaluation. The TS requirements in 10 CFR 50.36 include the following categories: (1) safety limits, limiting safety systems settings and control settings, (2) limiting conditions for operation (LCO), (3) surveillance requirements (SRs), (4) design features, and (5) administrative controls. The SRs for the ABGTS are included in the TSs in accordance with 10 CFR 50.36(c)(3), “Surveillance Requirements.” The licensee fulfilled the requirements of 10 CFR 50.59(c)(1)(i), necessitating the submittal of a license amendment pursuant to 10 CFR 50.90 when a change to the TSs is required and calling for U. S. Nuclear Regulatory Commission (NRC) approval before the TS changes are implemented.

The staff also used General Design Criterion (GDC) 60, "Control of Releases of Radioactive Materials to the Environment," and GDC 61, "Fuel Storage and Handling and Radioactivity Control," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50. These criteria provide requirements for systems that control the release of radioactive materials during normal and accident conditions. The ABGTS supports these requirements by providing postaccident conditions that limit the release of radioactive effluents. The proposed change will not result in a deviation from the expectations of these general design criteria. In addition, the staff considered information from NUREG-1431, Revision 3, "Standard Technical Specifications Westinghouse Plants" and 10 CFR Part 100, "Reactor Site Criteria." The proposed change to the Sequoyah Nuclear Plant TSs removes a provision for ABGTS operability that is not required to verify the availability of the associated safety function, and, therefore, is consistent with and continues to meet the intent of both NUREG-1431, Revision 3 and 10 CFR Part 100.

3.0 TECHNICAL EVALUATION

The TS change will eliminate the criterion regarding minimum vacuum relief flow from the operability surveillance requirements for the ABGTS (SR 4.7.8.d.3). The current TS requires "a vacuum relief flow greater than 2000 cfm" to confirm ABGTS operability. The ABGTS is a fully redundant air cleanup network intended to reduce the radioactive nuclide releases from the auxiliary building secondary containment enclosure (ABSCE) during accidents. The system pulls air from various parts of the auxiliary building to establish a negative pressure with respect to the outside atmosphere. Operation of the ABGTS begins automatically upon receipt of (1) a Phase A containment isolation signal from either reactor unit, (2) a high-radiation signal from the fuel handling area radiation monitors, (3) a high-radiation signal from the auxiliary building exhaust vent monitor, or (4) a high-temperature signal from the auxiliary building air intakes.

Although the ability to establish a 2000 cfm vacuum relief flow, while maintaining the required negative pressure and total required flow is a good indication of ABGTS and ABSCE performance, it is not necessary for the ABGTS to perform its accident mitigation function. The ABGTS can perform the required safety functions as long as the system can maintain the -0.25 inch water gauge condition or more negative in the ABSCE at a total flow of 9000 cfm plus or minus 10 percent, regardless of the associated vacuum relief flow rate. The deletion of the vacuum relief flow requirements will remove an overly conservative criterion from the TS surveillance with respect to ABGTS operability. This change is consistent with the latest version of NUREG-1431, Revision 3, "Standard Technical Specifications Westinghouse Plants."

The requested TS change does not alter the system performance or operating provisions such that the safety function of the ABGTS is affected. The removal of the vacuum relief provision does not weaken the operability verifications for this system below an acceptable level. The proposed surveillance continues to ensure the safety function as well as meeting NUREG-1431, Revision 3 for acceptable methods to maintain the ABGTS safety function. Therefore, the proposed change is acceptable from a nuclear safety standpoint and will not impact the health and safety of the public. TVA has evaluated the potential dose impacts resulting from the TS change. The events potentially affected are loss of coolant and fuel handling accidents, as these are expected to release radioactivity to the auxiliary building. These accidents are discussed in the Updated Final Safety Analysis Report Section 15.5. The proposed TS will continue to maintain the requirement for the ABGTS to control ABSCE pressure, and, therefore, assure radioactive material is processed through the filter trains. Since this change will not alter this function the offsite dose is not affected.

The NRC staff has reviewed the proposed change to SR 4.7.8.d.3 and finds it complies with 10 CFR 50.36. Also, revising the current statements to conform with NUREG-1431, Revision 3, retains the safety function of the ABGTS, eliminates confusion and is, therefore, acceptable to the staff.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (69 FR 60687). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: M. Vaaler

Dated: August 18, 2005