



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 8, 1994

Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: EXEMPTION TO APPENDIX J OF 10 CFR PART 50, SCHEDULAR
REQUIREMENTS FOR TYPE B AND C LOCAL LEAK RATE TESTS
SEQUOYAH NUCLEAR PLANT UNIT 1 (TAC NO. M90876)

Dear Mr. Kingsley:

By letter dated November 10, 1994, the Tennessee Valley Authority (TVA) requested an exemption for the Sequoyah Nuclear Plant (SQN) Unit 1, from the requirements of 10 CFR Part 50, Appendix J, Section III.D.3. This section requires performance of the Primary Containment Type C local leak rate tests (LLRTs) at intervals no greater than 2 years. TVA indicated that the exemption to exceed the 2-year interval is needed to support the Unit 1 Cycle 7 refueling outage.

On March 2, 1993, SQN Unit 1 entered a forced outage and started the Cycle 6 refueling outage. All Type B and Type C LLRTs were performed during the outage, which ended in December 1993. The unit returned to service on April 20, 1994. Due to the length of the outage, a number of LLRTs that were performed early in the outage were reperformed prior to conducting the containment integrated leak rate test (CILRT) in December 1993. LLRTs of valves that were initially tested between April 3 and July 19, 1993, however, were not retested because of schedule restraints associated with the CILRT. Since the 2-year time interval for the Type C valve penetrations that were not retested will expire starting in April 1995, Unit 1 would be forced to shut down at that time to perform the tests unless a schedular exemption is granted. The next Unit 1 refueling outage is scheduled to start in September 1995. Therefore, the exemption was proposed to allow a one-time deferment of the Appendix J interval requirement for the affected Type C valve penetration tests from April 3, 1995, until October 1, 1995, a total of approximately 181 days for the first valves tested during the Cycle 6 outage.

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O. Kingsley

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Enclosed is the Exemption for Unit 1 from the requirements of 10 CFR Part 50, Appendix J, Section III.D.3 that require performance of the local leak rate tests at intervals no greater than 2 years. The Exemption states that the tests will be performed during the Cycle 7 refueling outage.

A copy of the exemption has been forwarded to the Office of the Federal Register for Publication.

Sincerely,

ORIGINAL SIGNED BY:

Frederick J. Hebdon, Director
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-327

Enclosure: Exemption

cc w/enclosure: See next page

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SEQUOYAH NUCLEAR PLANT

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
TENNESSEE VALLEY AUTHORITY)	Docket No. 50-327
(Sequoyah Nuclear Plant, Unit 1))	

EXEMPTION

I.

The Tennessee Valley Authority (TVA) is the holder of Facility Operating License No. DPR-77, which authorizes operation of the Sequoyah Nuclear Plant, Unit 1 (the facility, Unit 1). The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility consists of a pressurized water reactor located on TVA's Sequoyah site in Soddy Daisy, Hamilton County, Tennessee.

II.

Section III.D.3 of Appendix J to 10 CFR Part 50 requires that Type C local leak rate tests (LLRTs) be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years.

On March 2, 1993, SQN Unit 1 entered a forced outage and started the Cycle 6 refueling outage. All Type B and Type C LLRTs were performed during the outage, which ended in December 1993. The unit returned to

service on April 20, 1994. Due to the length of the outage, a number of LLRTs that were performed early in the outage were reperformed prior to conducting the containment integrated leak rate test (CILRT) in December 1993. LLRTs of valves that were initially tested between April 3 and July 19, 1993, however, were not retested because of schedule restraints associated with the CILRT. Since the 2-year time interval for the Type C valve penetrations that were not retested will expire starting in April 1995, Unit 1 would be forced to shut down at that time to perform the tests unless a schedular exemption is granted.

The next Unit 1 refueling outage is scheduled to start in September 1995. Therefore, the licensee has proposed an exemption to allow a one-time deferment of the Appendix J interval requirement for the affected Type C valve penetration tests from April 3, 1995, until October 1, 1995, a total of approximately 181 days for the first valve tested during the Cycle 6 outage.

The extension would affect 126 isolation valves of 242 valves in the leak rate test program and are listed in the submittal. They are considered by the licensee to be leak tight and in good condition, which was verified by the leak rate tests performed during the Cycle 5 refueling outage. Based on the present total integrated containment leak rate that accounts for less than 93 percent of the 0.75 La limit, the licensee believes that the remaining margin is sufficient to ensure that any incremental increase in leakage because of the extension, will not result in unacceptable as-found test results. Also, based on historical data, the licensee believes that any incremental increase in leakage from these valves because of the extension would be small. In addition, the valves

were included in the boundary for the last Type A test that was performed in December 1993, and have been subjected to improved maintenance practices that provide increased assurance that they will be capable of performing their intended safety function.

III.

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. Special circumstances are present whenever, according to 10 CFR 50.12(a)(2)(ii), "Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule...."

The underlying purpose of the requirement to perform Type C containment leak rate tests at intervals not to exceed 2 years, is to ensure that any potential leakage pathways through the containment boundary are identified within a time span that prevents significant degradation from continuing or being unknown, and long enough to allow the tests to be conducted during scheduled refueling outages. This interval was originally published in Appendix J when refueling cycles were conducted at approximately annual intervals and has not been changed to reflect 18-month or 2-year operating cycles. It is not the intent of the regulation to require a plant shutdown solely for the purpose of conducting the periodic leak rate tests. Based on historical data at SQN, any incremental increase in leakage because of the extension would be small. Improved maintenance

practices implemented during the Unit 1 Cycle 5 outage, and continued in the Unit 1 Cycle 6 outage, provide increased assurance that these components will perform their safety function. Therefore, since the maximum extension is relatively short (approximately 181 days for the first valve tested during the Cycle 6 outage) compared to the 2-year test interval requirement, it is unlikely that substantial degradation of the valves leading to the failure of the containment to perform its safety function would occur. As a result, the application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

IV.

For the foregoing reasons, the NRC staff has concluded that the licensee's proposed increase of the 2-year time interval for performing the Type C Leak Rate Tests of the valves specified in the application until the Cycle 7 refueling outage will not present an undue risk to public health and safety and is consistent with the common defense and security. The NRC staff has determined that there are special circumstances present, as specified in 10 CFR 50.12(a)(2), such that application of 10 CFR Part 50, Appendix J, Section III.D.3 is not necessary in order to achieve the underlying purpose of this regulation.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the exemption is authorized by law, will not endanger life or property or common defense and security, and is, otherwise, in the public interest. Therefore, the Commission hereby grants the Tennessee Valley Authority exemption from the requirements of Section III.D.3 of Appendix J to 10 CFR Part 50 for Unit 1 as requested in the submittal.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not result in any significant adverse environmental impact (59 FR 63387).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 8th day of December 1994