May 28, 2014

Mr. John T. Carlin
Site Vice President
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy-Daisy, TN 37384

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION – SET 21 (TAC NOS. MF0481 AND MF0482)

Dear Mr. Carlin,

By letter dated January 7, 2013, Tennessee Valley Authority submitted an application pursuant to Title 10 of the *Code of Federal Regulations* (CFR) Part 54, to renew the operating license DPR-77 and DPR-79 for Sequoyah Nuclear Plant, Units 1 and 2, for review by the U.S. Nuclear Regulatory Commission staff. The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

This request for additional information, outlined in the enclosure were discussed with Henry Lee, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-1427 or by e-mail at Richard.Plasse@nrc.gov.

Sincerely,

/RA/

Richard A. Plasse, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure:
Requests for Additional Information

cc w/encl: Listserv

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DATE	5/27/2014	5/27/2014	5/28/2014	5/28/2014

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SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2
LICENSE RENEWAL APPLICATION
REQUESTS FOR ADDITIONAL INFORMATION

RAI 2.5-4

Background:

Title 10 of the *Code of Federal Regulations* (10 CFR) 54.4(a)(3) requires that all systems, structures, and components (SSCs) relied on in safety analyses or plant evaluation to perform a function that demonstrates compliance with U.S. Nuclear Regulatory Commission regulations for station blackout (SBO) (10 CFR 50.63) be included within the scope of license renewal. The Standard Review Plan for License Renewal (SRP-LR), Section 2.5.2.1.1 provides the guidance to identify electrical and I&C systems components that are relied upon to meet the requirements of the SBO Rule for license renewal. This includes equipment that is required to cope with an SBO (e.g., alternate ac power sources) meeting the requirements in 10 CFR 54.4(a)(3) and the plant system portion of the offsite power system, including the electrical distribution equipment out to the first circuit breaker with the offsite distribution system (i.e., equipment in the switchyard), that is used to connect the plant to the offsite power source meeting the requirements under 10 CFR 54.4(a)(3). In addition, General Design Criteria 17 of 10 CFR Part 50, Appendix A, requires that electric power from the transmission network to the onsite electric distribution system is supplied by two physically independent circuits to minimize the likelihood of their simultaneous failure. SSCs that are relied upon to meet the requirements of the SBO Rule in both circuits are to be included within the scope of license renewal.

The applicant revised the scoping boundaries for SBO in the license renewal application (LRA) Section 2.5, "Scoping and Screening Results: Electrical and Instrumentation and control Systems," to state:

The Unit 1 and Unit 2 preferred off-site power sources required to support SBO recovery are supplied by two physical and electrically independent circuits from the 161-kV and 500-kV switchyards through separate transformers to the electrical distribution system (see LRA Drawing LRA-E-001). The two physically and electrically independent circuits consist of the normal and alternate offsite power sources. The Sequoyah Nuclear Plant (SQN), 500-kV switchyard is the source of one of the physically and electrically independent circuits […]. Specifically, this offsite power recovery path includes the 500-kV switchyard circuit breakers feeding the unit station service transformers (USSTs) (1A or 1B) via the Unit 1 (U1) main transformer […]. The SQN 161-kV switchyard is the source of one of the physically and electrically independent circuits […]. Specifically, this offsite power recovery path includes the 161-kV switchyard circuit breakers feeding the USSTs (2A or 2B) via the Unit 2 (U2) main transformer.

In the updated final safety analysis report for the SQN, Figure 8.1.2-1 shows three power sources for the 6.9 kV shutdown boards of both Units 1 and 2. One power source is from the 500-kV switchyard via the U1 main transformer and two power sources are from 161-kV switchyard via the U2 main transformer and the common station service transformers (A, B, C).

ENCLOSURE

Issues:

The applicant did not identify which of the 161-kV and 500-kV offsite power sources are the normal and alternate power sources for SQN Unit 1 and Unit 2.

The applicant did not identify the 500-kV switchyard circuit breakers feeding the USSTs 1A or 1B and the 161-kV switchyard circuit breakers feeding the USSTs 2A or 2B.

The applicant did not include an updated LRA drawing LRA-E-001 in the annual update submittal.

Requests:

1. Clarify which of the 161-kV and 500-kV offsite power sources are the normal and alternate power sources for SQN Unit 1 and Unit 2.

2. Provide an updated LRA drawing LRA-E-001 that shows components (e.g., breakers, transformers, metal enclosed bus), which are (1) included in the SBO power recovery path, (2) included within the scope of license renewal, and (3) subject to an aging management review, starting from the onsite electrical distribution equipment (i.e.,6.9 kV shutdown boards) up to and including the first circuit breakers of the offsite distribution system (i.e., switchyard equipment) under the requirements of 10 CFR 54.4(a)(1) and 10 CFR 54.4(a)(3).

Letter to J. Carlin from R. Plasse dated May 28, 2014

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION – SET 21 (TAC NOS. MF0481 AND MF0482)

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