Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

CNL-15-158

August 3, 2015

10 CFR 50.4
10 CFR Part 54

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Sequoyah Nuclear Plant, Units 1 and 2
Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327 and 50-328

Subject: **Supplement to TVA Letter, "Sequoyah Nuclear Plant – Revision to Commitment No. 28 and Review of Impacts to the SQN Reactor Vessel Internals Aging Management Program Due to Dislodged Reactor Vessel Surveillance Capsules in Unit 1 Reactor"**

Reference:

TVA Letter to NRC, "Sequoyah Nuclear Plant – Revision to Commitment No. 28 and Review of Impacts to the SQN Reactor Vessel Internals Aging Management Program Due to Dislodged Reactor Vessel Surveillance Capsules in Unit 1 Reactor," dated July 10, 2015

In the referenced letter dated July 10, 2015, Tennessee Valley Authority (TVA) notified the Nuclear Regulatory Commission (NRC) that License Renewal Commitment 28 was being revised due to the loss of reactor pressure vessel (RPV) material surveillance capsules S and W. Additionally, TVA provided the Westinghouse evaluation of the effect of the failed specimen capsules on the Reactor Internals Aging Management Program Plan at Sequoyah Nuclear Plant (SQN) Unit 1.

In a teleconference on July 22, 2015, the NRC requested that TVA provide additional details regarding the information contained in the July 10, 2015 letter. This letter provides the requested information.

Potential Aging Management mechanisms involved in the damaged capsules

The TVA Root Cause Analysis (RCA) for the damaged reactor vessel surveillance capsules in the SQN Unit 1 reactor vessel is complete. The direct cause of this event is installation errors and installation procedural inadequacies. Capsule and capsule basket failure due to unanticipated potential aging effects was not identified as a direct or contributing cause based on the following considerations:

1. The two capsules that were damaged in the Unit 1 reactor vessel are the two capsules that had been relocated in the prior outage (1R19). The two capsules that were not relocated during this outage remain intact and secured.

2. A visual inspection of the accessible areas of the two remaining installed reactor vessel surveillance capsules and their respective baskets was conducted. There were no signs of degradation. The damaged surveillance capsules are equivalent in design, fabrication and operating time in service as the remaining intact Unit 1 capsules. There is no known industry OE supporting this type of failure of a Westinghouse surveillance capsule.

3. Visual inspection of the external surfaces of the surveillance capsule baskets in which the damaged capsules were intended to be inserted in the EOC R19 outage have no signs of degradation. There is no known industry OE supporting failure of a Westinghouse surveillance capsule basket.

Condition Report - Extent of Condition (SQN Unit 2)

To address extent of condition, TVA plans to perform visual inspections of the two relocated Unit 2 reactor vessel surveillance capsules in Unit 2 Refueling Outage 20 (Fall 2015) to provide positive verification of their insertion in the surveillance capsule basket. This inspection will confirm that the two previously relocated Unit 2 surveillance capsules are seated into the groove in the top of the basket holder by confirming (1) the capsules are recessed in the upper specimen holder and (2) the four slots in the tops of the specimens are of equal width. A capsule pull test is being evaluated by TVA as a potential procedural enhancement if future "blind" capsule relocations are required. A decision to employ a pull test for future capsule installations will be made after the potential failure modes and effects associated with the pull test have been thoroughly investigated.

Please address any questions regarding this submittal to Erin Henderson, SQN Site Licensing Manager, at (423) 843-7170.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 3rd day of August 2015.

Respectfully,

J. W. Shea
Vice President Nuclear Licensing

cc: See Page 2

cc:

Regional Administrator, RII
NRC Project Manager, Sequoyah License Renewal Project
NRC Senior Resident Inspector, Sequoyah Nuclear Plant