



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

May 8, 2013

Mr. Joe W. Shea
Vice President, Nuclear Licensing
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 (TAC NOS. MF0481 AND MF0482)

Dear Mr. Shea:

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 licenses DPR-77 and DPR-79 for Sequoyah Nuclear Plant, Units 1 and 2, for review by the U.S. Nuclear Regulatory Commission (NRC) 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.

These requests for additional information were discussed with Gary Adkins, 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,

A handwritten signature in black ink, appearing to read "R. Plasse", is located below the "Sincerely," text.

Richard 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

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

Scoping and Screening Methodology

RAI 2.1-1

Background:

Title 10 of the *Code of Federal Regulations* (CFR) 54.4, "Scope," states, in part:

(a) Plant systems, structures and components [(SSCs)] within the scope of this part are –

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions –

- (i) The integrity of the reactor coolant pressure boundary;
- (ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or
- (iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in 10 CFR 50.34(a)(1), 10 CFR 50.67(b)(2), or 10 CFR 100.11, as applicable.

Issue:

During the on-site scoping and screening methodology audit, the staff determined that the applicant had used a plant equipment database, which provides the component quality classification, as an information source used in identifying SSCs within the scope of license renewal. The plant equipment database uses the terms "safety-related" or "SR" to identify safety-related SSCs. However, during the audit the staff determined that not all components identified as safety-related in the plant equipment database were included with the scope of license renewal in accordance with 10 CFR 54.4(a)(1).

Request:

The staff requests that the applicant perform a review of this issue and provide a description of the process used to evaluate components identified as safety-related in the plant equipment database and the basis for not including components identified as safety-related within the scope of license renewal in accordance with 10 CFR 54.4(a)(1). Indicate if the review concludes that use of the scoping methodology precluded the identification of SSCs that should have included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1). Describe any additional scoping evaluations performed to address the 10 CFR 54.4(a)(1) criteria. List any additional SSCs included within the scope of license renewal as a result of the review, and any structures and components (SCs) for which aging management reviews were performed.

ENCLOSURE

RAI 2.1-2

Background:

10 CFR 54.4, "Scope," states, in part:

(a) Plant systems, structures and components [(SSCs)] within the scope of this part are –

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions –

- (i) The integrity of the reactor coolant pressure boundary;
- (ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or
- (iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in 10 CFR 50.34(a)(1), 10 CFR 50.67(b)(2), or 10 CFR 100.11, as applicable.

License renewal application (LRA) Section 2.1.1.1, "Application of Safety-Related Scoping Criteria," states, in part:

A [Tennessee Valley Authority (TVA)] procedure provides the criteria and methodology for determining and evaluating the safety and quality classification of systems, structures and components. The procedure defines safety-related or quality assurance category SR as:

Those structures systems and components which are important to safety because they perform a function necessary to ensure either:

- The integrity of the reactor coolant pressure boundary
- The capability to shutdown the reactor and maintain it in a safe condition
- The capability to prevent or mitigate the consequences of an incident which could result in potential offsite exposures comparable to those specified in 10 CFR Part 100.

Update final safety analysis report (UFSAR) Section 3.2.1, "Seismic Qualifications," states, in part:

The Sequoyah Nuclear Plant structures, systems, and components important to safety have been designed to remain functional in the event of a Safe Shutdown Earthquake (SSE). These structures, systems, and components, designated as Category I, are those necessary to assure:

1. The integrity of the reactor coolant pressure boundary.
2. The capability to shut down the reactor and maintain it in a safe shutdown condition

ENCLOSURE

3. The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of 10 CFR Part 100.

Issue:

During the on-site scoping and screening methodology audit, the staff reviewed the definitions of the term safety-related contained in the fleet procedures, the UFSAR and the LRA, used to identify SSCs within the scope of license renewal. The staff determined that the LRA Section 2.1.1.1 definition of safety-related is equivalent to the criteria in 10 CFR 54.4(a)(1) and the UFSAR definition of the function of SSCs designated as Category I. However, during its audit, the staff determined that there were structures designated as Category I that were not included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1).

Request:

The staff requests that the applicant perform a review of this issue and provide a description of the process used to evaluate structures identified as Category I and the basis for not including the structures within the scope of license renewal in accordance with 10 CFR 54.4(a)(1). Indicate if the review concludes that use of the scoping methodology precluded the identification of SSCs that should have included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1). Describe any additional scoping evaluations performed to address the 10 CFR 54.4(a)(1) criteria. List any additional SSCs included within the scope of license renewal as a result of the review, and any SCs for which aging management reviews were performed.

RAI 2.1-3

Background:

10 CFR 54.4, "Scope," states, in part:

(a) Plant systems, structures and components [(SSCs)] within the scope of this part are –

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions –

- (i) The integrity of the reactor coolant pressure boundary;
- (ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or
- (iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in 10 CFR 50.34(a)(1), 10 CFR 50.67(b)(2), or 10 CFR 100.11, as applicable.

(2) All nonsafety-related systems, structures and components whose failure could prevent satisfactory accomplishment of any of the functions identified in (a)(1)(i), (ii), or (iii) of this section.

Issue:

During the on-site scoping and screening methodology audit the staff reviewed the LRA, license renewal implementing documents, as-built drawings, and current licensing basis documentation. The staff determined that the service building that is immediately adjacent to the control building (within the scope of license renewal in accordance with 10 CFR 54.4(a)(1)), is not included within the scope of license renewal in accordance with 10 CFR 54.4(a)(2).

During the audit the applicant indicated that the determination to not include the service building within the scope of license renewal in accordance with 10 CFR 54.4(a)(2) was based on an analysis that demonstrated that the service building would not impact the control building during or following design bases events. However, the applicant did not provide information that demonstrated that the service building would not be subject to the effects of aging similar to other buildings of the same construction that the applicant had included within the scope of license renewal and made subject to an aging management program.

Request:

The staff requests that the applicant provide a technical basis for not including the service building, which is located adjacent to the control building (within the scope of license renewal in accordance with 10 CFR 54.4(a)(1)), within the scope of license renewal in accordance with 10 CFR 54.4(a)(2). If an analysis is cited as the technical basis for not including the service building within the scope of license renewal, demonstrate how the analysis considers the effects of aging relative to other buildings of similar construction that are included within the scope of license renewal. The staff requests that the applicant perform a review of this issue and indicate if the review concludes that use of the scoping methodology precluded the identification of SSCs that should have included within the scope of license renewal in accordance with 10 CFR 54.4(a)(2). Describe any additional scoping evaluations performed to address the 10 CFR 54.4(a)(2) criteria. List any additional SSCs included within the scope of license renewal as a result of the review, SCs for which aging management reviews were performed.

May 8, 2013

Mr. Joe W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
P.O. Box 2000
Soddy-Daisy, TN 37384

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Sincerely,

/RA/

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

Docket Nos. 50-327 and 50-328

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Letter to J. Shea from R. Plasse dated May 8, 2013

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APPLICATION (TAC NOS. MF0481 AND MF0482)

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