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Energy to Serve Your WorldSM

January 11, 2001

LCV-1494

Docket Nos. 50-424
50-425

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

Ladies and Gentlemen:

**VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
CONTAINMENT LEAKAGE RATE TESTING PROGRAM
CONCRETE VISUAL EXAMINATIONS**

In accordance with the requirements of 10 CFR 50.90, Southern Nuclear Operating Company (SNC) proposes to revise the Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 Technical Specifications (TS). The proposed change would revise TS 5.5.17, Containment Leakage Rate Testing Program, to add an exception to Regulatory Guide 1.163, "Performance-Based Containment Leak-Testing Program," dated September 1995. Technical Specification 5.5.17 requires the Containment Leakage Rate Testing Program to be in accordance with the guidelines contained in Regulatory Guide 1.163. Regulatory Guide 1.163 states, in part, that in order to allow for early uncovering of evidence of structural deterioration, visual examination of accessible interior and exterior surfaces should be conducted prior to initiating a Type A leak test and during two other refueling outages before the next Type A test if the interval for the Type A test has been extended to 10 years. This involves visual examinations of both the concrete outside of containment and the steel liner plate inside containment.

However, ASME Section XI, Subsection IWL requires a visual examination of concrete surfaces every five years, and this visual examination is more rigorous than that required for Regulatory Guide 1.163. In addition, the visual examinations performed pursuant to the IWL can be performed during power operation or during a refueling outage; whereas, Regulatory Guide 1.163 would have the visual examinations performed during a refueling outage. Rather than perform a series of concrete visual examinations pursuant to Regulatory Guide 1.163 and a separate series of concrete visual examinations pursuant to the IWL, SNC proposes to take exception to Regulatory Guide 1.163, with respect to the concrete visual examinations, and rely on the concrete visual examination requirements and frequency specified in the IWL to meet the intent of Regulatory 1.163. The steel liner plate inside

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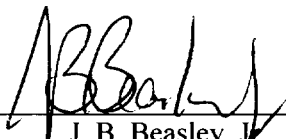
containment will continue to be visually examined three times in a 10-year period in accordance with ASME Section XI, Subsection IWE. The visual examination requirements and frequency specified by the IWE for the liner plate meet the intent of Regulatory Guide 1.163 without exception.

The basis for the proposed change is provided in Enclosure 1. Pursuant to 10 CFR 50.92, an evaluation that demonstrates that the proposed change does not involve a significant hazard consideration is provided in Enclosure 2. The proposed change is marked on the affected TS pages provided in Enclosure 3. In addition, clean-typed TS pages are provided in Enclosure 4.

SNC requests approval of the proposed change by July 31, 2001.

Mr. J. B. Beasley, Jr. states that he is a Vice President of Southern Nuclear Operating Company and is authorized to execute this oath on behalf of Southern Nuclear Operating Company and that, to the best of his knowledge and belief, the facts set forth in this letter are true.

SOUTHERN NUCLEAR OPERATING COMPANY

By: 
J. B. Beasley, Jr.

Sworn to and subscribed before me this 11th day of January, 2001.


Notary Public

My commission expires: 11/10/02

JBB/NJS

- Enclosure 1 – Basis for Proposed Changes
- Enclosure 2 – Significant Hazards Consideration Evaluation
- Enclosure 3 – Marked-Up TS Pages
- Enclosure 4 – Clean-Typed TS Pages

xc: Southern Nuclear Operating Company
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Mr. L. C. Barrett, Commissioner, Department of Natural Resources

Enclosure 1

Vogtle Electric Generating Plant Request to Revise Technical Specifications Containment Leakage Rate Testing Program Concrete Visual Examinations

Basis for Proposed Change

Proposed Change

The proposed change would revise Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 Technical Specification (TS) 5.5.17 to add the following exception to Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Testing Program."

"The visual examination of containment concrete surfaces intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWL, except where relief has been authorized by the NRC. At the discretion of the licensee, the containment concrete visual examinations may be performed during either power operation, e.g., performed concurrently with other containment inspection-related activities such as tendon testing, or during a maintenance/refueling outage."

Basis

Technical Specification 5.5.17 contains requirements for the Containment Leakage Rate Testing Program, and it specifies that the program shall be in accordance with the guidelines contained in RG 1.163. Regulatory Position C.3 of RG 1.163 states that Section 9.2.1, "Pretest Inspection and Test Methodology," of NEI 94-01 provides guidance for the visual examination of accessible interior and exterior surfaces of the containment system for structural problems. In order to allow for early uncovering of evidence of structural deterioration, these examinations should be conducted prior to initiating a Type A test, and during two other refueling outages before the next Type A test if the interval for the Type A test has been extended to 10 years. There are no specific requirements in NEI 94-01 for the visual examination except that it is to be a general visual examination of accessible interior and exterior surfaces of the primary containment and components.

In addition to the requirements of RG 1.163 and NEI 94-01, the concrete surfaces of the containment must be visually examined in accordance with the ASME Section XI Code, Subsection IWL, and the liner plate inside containment must be visually examined in accordance with Subsection IWE. The frequency of visual examination of the concrete surfaces per the IWL is once every five years, and the frequency of visual examination of the liner plate per the IWE is, in general, three visual examinations over a 10-year period. The visual examinations performed pursuant to the IWL may be performed at any time during power operation or during shutdown, and the visual examinations performed pursuant to the IWE are performed during refueling outages since this is the only time that the liner plate is fully accessible.

In addition, the visual examinations performed pursuant to the IWL and the IWE are more rigorous than those performed pursuant to RG 1.163 and NEI 94-01. For example, Subarticle IWE-3510.1 requires the following for the general visual examination of the liner plate:

"The General Visual Examination shall be performed by, or under the direction of, a Registered Professional Engineer or other individual, knowledgeable in the requirements for design, inservice inspection, and testing of Class MC and metallic liners of Class CC components. The examination shall be performed either directly or remotely, by an examiner

Enclosure 1

Vogtle Electric Generating Plant Request to Revise Technical Specifications Containment Leakage Rate Testing Program Concrete Visual Examinations

Basis for Proposed Change

with visual acuity sufficient to detect evidence of degradation that may affect either the containment structural integrity or leak tightness.”

Similarly, Subarticle IWL-2320 states that:

“The Responsible Engineer shall be a Registered Professional Engineer experienced in evaluating the inservice condition of structural concrete. The Responsible Engineer shall have knowledge of the design and Construction Codes and other criteria used in design and construction of concrete containments in nuclear power plants.

The Responsible Engineer shall be responsible for the following:

- (a) development of plans and procedures for examination of concrete surfaces;
- (b) approval, instruction, and training of concrete examination personnel;
- (c) evaluation of examination results;
- (d) preparation of repair procedures;
- (e) submittal of report to the Owner documenting results of examinations and repairs.”

Based on the above, the Responsible Engineer will ensure that a comprehensive visual examination of the concrete is performed in accordance with Code requirements except where relief has been granted by the NRC. Furthermore, with respect to examinations performed pursuant to both the IWL and the IWE, visual examinations of both the concrete surfaces and the liner plate must be reviewed by an Inspector employed by a State or Municipality of the United States or an Inspector regularly employed by an insurance company authorized to write boiler and pressure vessel insurance, in accordance with IWA-2110 and IWA-2120. The combination of the Code requirements for the rigor of the visual examinations plus the third-party review will more than offset the fact one fewer visual examination of the concrete will be performed during a 10-year interval. The fact that the concrete visual examination pursuant to the IWL may be performed during power operation as opposed to during a refueling outage will have no effect on the quality of the examination and will provide flexibility in scheduling of the visual examinations.

Conclusion

Recently, an extra visual examination of the Unit 1 containment concrete had to be performed approximately three months after the required IWL visual examination was performed. The IWL visual examination was performed during power operation, and it was determined that, in order to meet the letter of the requirements of RG 1.163 and NEI 94-01, the extra visual examination was needed during the outage. The next integrated leak rate (Type A) test for Unit 1 is scheduled to be performed in 2002, and the extra visual examination was performed during the last refueling outage to meet the requirement that visual examinations be performed during two other refueling outages prior to the next Type A test. The extra visual examination was performed solely for the purpose of meeting a regulatory requirement. This type of unnecessary activity can be avoided by the addition of the proposed exception to RG 1.163, while continuing to ensure the structural integrity of the concrete that comprises the containments for the VEGP.

Enclosure 2

Vogtle Electric Generating Plant Request to Revise Technical Specifications Containment Leakage Rate Testing Program Concrete Visual Examinations

Significant Hazard Consideration Evaluation

Evaluation

The proposed change has been evaluated against the criteria of 10 CFR 50.92 as follows:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

No. The proposed change affects the frequency of visual examinations that will be performed for the concrete surfaces of the Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 containments for the purpose of the Containment Leakage Rate Testing Program. In addition, the proposed change allows those examinations to be performed during power operation as opposed to during a refueling outage. The frequency of visual examinations of the concrete surfaces of the containments and the mode of operation during which those examinations are performed has no relationship to or adverse impact on the probability of any of the initiating events assumed for the accident analyses. Therefore, the proposed change does not involve a significant increase in the probability of any accident previously evaluated. The proposed change would allow visual examinations that are performed pursuant to NRC-approved ASME Section XI Code requirements (except where relief has been granted by the NRC) to meet the intent of visual examinations required by Regulatory Guide 1.163, without requiring additional visual examinations pursuant to the Regulatory Guide. The intent of early detection of deterioration will continue to be met by the more rigorous requirements of the Code-required visual examinations. Therefore, the safety function of the VEGP containments as a fission product barrier will be maintained, and there will not be a significant increase in the consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any previously evaluated?

No. The proposed change affects the frequency of visual examinations that will be performed for the concrete surfaces of the Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 containments for the purpose of the Containment Leakage Rate Testing Program. In addition, the proposed change allows those examinations to be performed during power operation as opposed to during a refueling outage. The proposed change does not adversely affect or otherwise alter plant operation. No new equipment is introduced, and no new limiting single failures are created. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

No. The proposed change affects the frequency of visual examinations that will be performed for the concrete surfaces of the Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 containments for the purpose of the Containment Leakage Rate Testing Program. In addition, the proposed change allows those examinations to be performed during power operation as opposed to during a refueling outage. The proposed change would allow visual examinations that are performed pursuant to NRC-approved ASME Section XI Code requirements (except where relief has been granted by the NRC) to meet the intent of visual examinations required by Regulatory Guide 1.163, without requiring

Enclosure 2

Vogtle Electric Generating Plant Request to Revise Technical Specifications Containment Leakage Rate Testing Program Concrete Visual Examinations

Significant Hazard Consideration Evaluation

additional visual examinations pursuant to the Regulatory Guide. The intent of early detection of deterioration will continue to be met by the more rigorous requirements of the Code-required visual examinations. Therefore, the safety function of the VEGP containments as a fission product barrier will be maintained, and there will not be a significant reduction in a margin of safety.

Conclusion

Based on the above evaluation, the proposed change does not involve a significant hazard as defined in 10 CFR 50.92.

Enclosure 3

**Vogtle Electric Generating Plant
Request to Revise Technical Specifications
Containment Leakage Rate Testing Program
Concrete Visual Examinations**

Marked-Up TS Pages

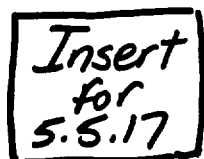
5.5 Programs and Manuals (continued)

5.5.17 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Testing Program," dated September 1995, as modified by the following exceptions:

1. Leakage rate testing for containment purge valves with resilient seals is performed once per 18 months in accordance with LCO 3.6.3, SR 3.6.3.6 and SR 3.0.2.
2. Containment personnel air lock door seals will be tested prior to reestablishing containment integrity when the air lock has been used for containment entry. When containment integrity is required and the air lock has been used for containment entry, door seals will be tested at least once per 30 days during the period that containment entry(ies) is (are) being made.

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for
5.5.17



The peak calculated primary containment internal pressure for the design basis loss of coolant accident, P_a , is 37 psig.

The maximum allowable containment leakage rate, L_a , at P_a , is 0.2% of primary containment air weight per day.

Leakage rate acceptance criteria are:

- a. Containment overall leakage rate acceptance criteria are $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_a$ for the combined Type B and Type C tests, and $\leq 0.75 L_a$ for Type A tests;
- b. Air lock testing acceptance criteria are:
 - 1) Overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$.
 - 2) For each door, the leakage rate is $\leq 0.01 L_a$ when pressurized to $\geq P_a$.

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3. The visual examination of containment concrete surfaces intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWL, except where relief has been authorized by the NRC. At the discretion of the licensee, the containment concrete visual examinations may be performed during either power operation, e.g., performed concurrently with other containment inspection-related activities such as tendon testing, or during a maintenance/refueling outage.

Enclosure 4

**Vogtle Electric Generating Plant
Request to Revise Technical Specifications
Containment Leakage Rate Testing Program
Concrete Visual Examinations**

Clean-Typed TS Pages

5.5 Programs and Manuals (continued)

5.5.17 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Testing Program," dated September 1995, as modified by the following exceptions:

1. Leakage rate testing for containment purge valves with resilient seals is performed once per 18 months in accordance with LCO 3.6.3, SR 3.6.3.6 and SR 3.0.2.
2. Containment personnel air lock door seals will be tested prior to reestablishing containment integrity when the air lock has been used for containment entry. When containment integrity is required and the air lock has been used for containment entry, door seals will be tested at least once per 30 days during the period that containment entry(ies) is (are) being made.
3. The visual examination of containment concrete surfaces intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by ASME Section XI Code, Subsection IWL, except where relief has been authorized by the NRC. At the discretion of the licensee, the containment concrete visual examinations may be performed during either power operation, e.g., performed concurrently with other containment inspection-related activities such as tendon testing, or during a maintenance/refueling outage.

The peak calculated primary containment internal pressure for the design basis loss of coolant accident, P_a , is 37 psig.

The maximum allowable containment leakage rate, L_a , at P_a , is 0.2% of primary containment air weight per day.

Leakage rate acceptance criteria are:

- a. Containment overall leakage rate acceptance criteria are $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_a$ for the combined Type B and Type C tests, and $\leq 0.75 L_a$ for Type A tests;

(continued)

5.5 Programs and Manuals

5.5.17 Containment Leakage Rate Testing Program (continued)

- b. Air lock testing acceptance criteria are:
- 1) Overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$.
 - 2) For each door, the leakage rate is $\leq 0.01 L_a$ when pressurized to $\geq P_a$.

The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

5.5.18 Configuration Risk Management Program

The Configuration Risk Management Program (CRMP) provides a proceduralized risk-informed assessment to manage the risk associated with equipment inoperability. The program applies to technical specification structures, systems, or components for which a risk-informed allowed outage time has been granted. The program shall include the following elements:

- a. Provisions for the control and implementation of a Level 1 at power internal events PRA-informed methodology. The assessment shall be capable of evaluating the applicable plant configuration.
- b. Provisions for performing an assessment prior to entering the LCO Condition for preplanned activities.
- c. Provisions for performing an assessment after entering the LCO Condition for unplanned entry into the LCO Condition.
- d. Provisions for assessing the need for additional actions after the discovery of additional equipment out of service conditions while in the LCO Condition.
- e. Provisions for considering other applicable risk significant contributors such as Level 2 issues and external events, qualitatively or quantitatively.