

B. H. Whitley  
Director  
Regulatory Affairs

Southern Nuclear  
Operating Company, Inc.  
42 Inverness Center Parkway  
Birmingham, AL 35242  
Tel 205.992.7079  
Fax 205.992.5296



September 23, 2016

Docket Nos.: 52-025  
52-026

ND-16-1779  
10 CFR 50.90  
10 CFR 52.63

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Units 3 and 4  
Supplement to Request for License Amendment and Exemption:  
Nuclear Instrumentation System Excore Detector  
Surface Material Inspection Clarification (LAR-16-010S1)

Ladies and Gentlemen:

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, by letter ND-16-0920, dated July 25, 2016 [ADAMS Accession Number ML16207A496], Southern Nuclear Operating Company (SNC), the licensee for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, requested an amendment to Combined License (COL) Numbers NPF-91 and NPF-92, for VEGP Units 3 and 4, respectively. This license amendment request (LAR), LAR-16-010, proposed changes to COL Appendix C information (with corresponding changes to the associated plant-specific Tier 1 information) and involved associated Tier 2 information in the Updated Final Safety Analysis Report (UFSAR) related to the inspections of the excore (source range, intermediate range, and power range) detectors. This letter supplements LAR-16-010 to address a comment provided by the NRC Staff during the acceptance review of LAR-16-010.

Enclosure 4 provides additional information relative to the comment that was provided by the NRC Staff on September 1, 2016.

The supplemental information provided in Enclosure 4 does not impact the scope or conclusions of the Technical Evaluation, Regulatory Evaluation (including the Significant Hazards Consideration Determination), or Environmental Considerations of the original LAR or exemption request.

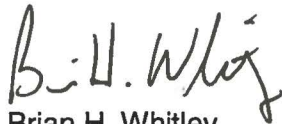
This letter contains no regulatory commitments. In accordance with 10 CFR 50.91, SNC is notifying the State of Georgia of this LAR supplement by transmitting a copy of this letter and enclosure to the designated State Official.

Should you have any questions, please contact Ms. Paige Ridgway at (205) 992-7516.

Mr. Brian H. Whitley states that: he is the Regulatory Affairs Director of Southern Nuclear Operating Company; he is authorized to execute this oath on behalf of Southern Nuclear Operating Company; and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

  
Brian H. Whitley



BHW/PTR/ljs

Sworn to and subscribed before me this 23<sup>rd</sup> day of September, 2016  
Notary Public: Lisa Myrick Spears  
My commission expires: June 18, 2019

- Enclosures: 1) - 3) (previously submitted with the original LAR, LAR-16-010, in SNC letter ND-16-0920)
- 4) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Response to NRC Staff Comment Regarding the LAR-16-010 Review (LAR-16-010S1)

U. S. Nuclear Regulatory Commission

ND-16-1779

Page 3 of 4

cc:

Southern Nuclear Operating Company / Georgia Power Company

Mr. S. E. Kuczynski (w/o enclosure)

Mr. M. D. Rauckhorst

Mr. D. G. Bost (w/o enclosure)

Mr. M. D. Meier (w/o enclosure)

Mr. D. H. Jones (w/o enclosure)

Ms. K. D. Fili (w/o enclosure)

Mr. D. L. McKinney (w/o enclosure)

Mr. T.W. Yelverton (w/o enclosure)

Mr. B. H. Whitley

Mr. C. R. Pierce

Mr. D. L. Fulton

Mr. M. J. Yox

Mr. J. C. Haswell

Mr. T. R. Takats

Mr. W. A. Sparkman

Mr. J. P. Redd

Ms. A. C. Chamberlain

Document Services RTYPE: VND.LI.L00

File AR.01.02.06

Nuclear Regulatory Commission

Ms. C. Haney (w/o enclosure)

Mr. S. Lee (w/o enclosure)

Mr. L. Burkhart (w/o enclosure)

Ms. J. Dixon-Herrity (w/o enclosure)

Mr. P. Kallan

Mr. C. Patel

Mr. W. C. Gleaves

Mr. B. M. Bovol

Ms. R. Reyes

Ms. M. A. Sutton

Mr. M. E. Ernestes

Mr. G. Khouri

Mr. J. D. Fuller

Ms. S. Temple

Ms. J. Uhle

Mr. T.E. Chandler

Ms. P. Braxton

Mr. T. Brimfield

Mr. M. Kowal

Mr. A. Lerch

State of Georgia

Mr. R. Dunn

U. S. Nuclear Regulatory Commission

ND-16-1779

Page 4 of 4

Oglethorpe Power Corporation

Mr. M. W. Price

Mr. K. T. Haynes

Ms. A. Whaley

Municipal Electric Authority of Georgia

Mr. J. E. Fuller

Mr. S. M. Jackson

Dalton Utilities

Mr. T. Bundros

WECTEC

Ms. K. Stoner (w/o enclosure)

Mr. C. A. Castell

Westinghouse Electric Company, LLC

Mr. R. Easterling (w/o enclosure)

Mr. J. W. Crenshaw (w/o enclosure)

Mr. C. D. Churchman (w/o enclosure)

Mr. L. Woodcock

Mr. P. A. Russ

Mr. A. F. Dohse

Mr. M. Y. Shaqqo

Other

Mr. J. E. Hesler, Bechtel Power Corporation

Ms. L. A. Matis, Tetra Tech NUS, Inc.

Dr. W. R. Jacobs, Jr., Ph.D., GDS Associates, Inc.

Mr. S. Roetger, Georgia Public Service Commission

Ms. S. W. Kernizan, Georgia Public Service Commission

Mr. K. C. Greene, Troutman Sanders

Mr. S. Blanton, Balch Bingham

Mr. R. Grumbir, APOG

Mr. N. R. Kellenberger, South Carolina Electric & Gas Company

Mr. D. Kersey, South Carolina Electric & Gas Company

Mr. B. Kitchen, Duke Energy

Mr. S. Franzone, Florida Power & Light

**Southern Nuclear Operating Company**

**ND-16-1779**

**Enclosure 4**

**Vogtle Electric Generating Plant (VEGP) Units 3 and 4**

**Response to NRC Staff Comment  
Regarding the LAR-16-010 Review (LAR-16-010S1)**

(Enclosure 4 consists of 4 pages, including this cover page)

The following is a comment provided by the NRC Staff regarding the review of Southern Nuclear Operating Company (SNC) License Amendment Request (LAR) 16-010, which was submitted by letter ND-16-0920 on July 25, 2016.

**NRC Comment:**

The staff's review of LAR-16-010 suggest that the proposed wording used throughout the LAR may be inconsistent.

The proposed wording for COL Appendix C, Table 2.2.3-4, and Plant-Specific Tier 1 Table 2.2.3-4 (i.e., tables of facility ITAAC) states that it is to be shown, "that the detector aluminum surface is encased in stainless steel or titanium," and the proposed wording for UFSAR Table 14.3-2 states that, "The aluminum surfaces of the excore detectors are encased in stainless steel or titanium." However, UFSAR Section 6.1.1.4 states more specifically that, "to avoid sump water contact with the excore detectors, they are enclosed in stainless steel or titanium housings."

The proposed ITAAC and UFSAR Table 14.3-2 wording does not explicitly state that the detector needs to be encased so that the aluminum surface is not in contact with sump water. Without containing the wording related to the sump water, it is not clear that the stainless steel or titanium encasement needs to be essentially leak tight. UFSAR Table 14.3-2 references back to UFSAR Section 6.1.1.4 that has this additional detail. However, the ITAAC itself does not reference back to UFSAR Section 6.1.1.4. In order to meet the safety analysis assumptions in UFSAR Section 6.1.1.4, the aluminum surface of the excore detectors cannot be exposed to the sump water.

- a. Provide a revised proposal for the ITAAC and UFSAR Table 14.3-2 wording to state that the aluminum surfaces of the excore detectors are encased in stainless steel or titanium so that they are not in contact with sump water.

In addition, the staff notes that proposed wording for COL Appendix C, Table 2.2.3-4 and Plant-Specific Tier 1 Table 2.2.3-4 (i.e., tables of facility ITAAC), as well as the wording in UFSAR Section 7.1.2.7.2, uses the terms, "source range, intermediate range, and power range detectors." However, UFSAR Section 6.1.14 and the proposed revision to UFSAR Table 14.3-2 use the term, "the excore detectors."

- b. Clarify within the proposed wording of COL Appendix C, Table 2.2.3-4, Plant-Specific Tier 1 Table 2.2.3-4, and UFSAR Table 14.3-2 that excore detectors describes the source, intermediate, and power range detectors.

**SNC Response:**

**Response 1a:** UFSAR Table 14.3-2 "Design Basis Accident Analysis," and COL Appendix C (and associated plant-specific Tier 1) Table 2.2.3-4, "Inspections, Tests, Analyses, and Acceptance Criteria," should not contain the level-of-detail requested. UFSAR Table 14.3-2 references UFSAR Subsection 6.1.1.4, which discusses that "To avoid sump water contact with the excore detectors, they are enclosed in stainless steel or titanium housings." The stainless steel or titanium housings covering the aluminum surfaces of the excore detectors are sealed watertight.

The purpose of UFSAR Table 14.3-2 is not to describe why a design feature is in place (i.e.; to prevent contact with sump water). The purpose of UFSAR Table 14.3-2 is to summarize the design material that has been incorporated from the certified design in the Design Basis Accident Analysis and to provide a reference to the source of this design material.

COL Appendix C (and associated plant-specific Tier 1) Table 2.2.3-4 should not be changed to include the reason for enclosing the excore detector aluminum surfaces in stainless steel or titanium. UFSAR Subsection 14.3.2.1 addresses the level of detail required in the Certified Design Material stating, "The Certified Design Material design description is intended to be self-contained and does not make direct reference to the Tier 2 Material, industrial standards, regulatory requirements, or other documents." This is consistent with the Style Guidelines for ITAAC provided in NUREG-0800, Standard Review Plan, Chapter 14.3, which states, "Reference to the ITAAC may be included in Tier 2. Reference should not be made from Tier 1 to Tier 2 because this effectively makes Tier 2 part of Tier 1."

Accordingly, UFSAR Table 14.3-2 and COL Appendix C (and associated plant-specific Tier 1) Table 2.2.3-4 will not be updated to include additional wording to state that the aluminum surfaces of the excore detectors are encased in stainless steel or titanium so that they are not in contact with sump water. Information related to the design functions of the stainless steel or titanium casings of the excore detectors is appropriately found in UFSAR Subsection 6.1.1.4, which is referenced by UFSAR Table 14.3-2. The ITAAC contained in COL Appendix C (and associated plant-specific Tier 1) Table 2.2.3-4 is not updated to reference UFSAR Subsection 6.1.1.4 because the certified design material should be stand-alone and should not make a direct reference to Tier 2 material in the UFSAR.

**Response 1b:** COL Appendix C (and associated plant-specific Tier 1) Table 2.2.3-4 and UFSAR Table 14.3-2 are revised, as shown below, to clarify that the term “excore detectors” describes the source range, intermediate range and power range detectors. The response to NRC Comment 1b replaces the licensing basis markups included in Enclosure 3 of ND-16-0920.

**COL Appendix C (and associated Plant-Specific Tier 1) Table 2.2.3-4 (cont.)  
Inspections, Tests, Analyses, and Acceptance Criteria**

| Design Commitment  | Inspections, Tests, Analyses  | Acceptance Criteria  |
|--|---|--|
| ***  | ***   | ***  |
| 8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events. | ***<br><br>xiv) Inspections will be conducted of the <b>exposed surfaces of the excore</b> (source range, intermediate range, and power range) detectors. | ***<br><br>xiv) <b>A report exists and concludes that the detector aluminum. These surfaces are made of is encased in</b> stainless steel or titanium. |

**UFSAR Table 14.3-2  
Design Basis Accident Analysis**

| Reference       | Design Feature  | Value |
|-----------------|---|-------|
| ***             | ***   | ***   |
| Section 6.1.1.4 | The <b>exposed aluminum</b> surfaces of the excore (source range, intermediate range, and power range) detectors are <b>made of encased in</b> stainless steel or titanium. |       |
| ***             | ***   | ***   |