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ND-10-1230

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

Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Units 3 and 4 Combined License Application  
Response to Request for Additional Information Letter No. 049, Supplement 1  
Fitness for Duty Program

Ladies and Gentlemen:

By letter dated March 28, 2008, Southern Nuclear Operating Company (SNC) submitted an application for combined licenses (COLs) for proposed Vogtle Electric Generating Plant (VEGP) Units 3 and 4 to the U.S. Nuclear Regulatory Commission (NRC) for two Westinghouse AP1000 reactor plants, in accordance with 10 CFR Part 52. During the NRC's detailed review of this application, the NRC identified a need for additional information required to complete their review of the COL application's Final Safety Analysis Report (FSAR) Section 13.7, "Fitness for Duty." By letter dated February 5, 2010, the NRC provided SNC with Request for Additional Information (RAI) letter No. 049 concerning this information need. SNC responded to the RAI letter No. 049 questions in a letter dated March 5, 2010. Based on NRC feedback provided in a phone call on June 8, 2010, SNC is providing a revision to its response to RAI 13.06-35, which was provided in the March 5<sup>th</sup> letter. The enclosure to this letter provides SNC's revised response to this RAI. The text that is revised by this response is annotated with a vertical change bar in the right-hand margin of the enclosure.

This letter identifies changes that will be made to a future revision of the VEGP Units 3 and 4 combined license application (COLA) to address NRC requirements in 10 CFR Part 26.

If you have any questions regarding this letter, please contact Mr. Wes Sparkman at (205) 992-5061.

DO92  
A021  
MRO

Mr. M. K. Smith states he is the Technical Support Director for Southern Nuclear Operating Company, 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



Michael K. Smith

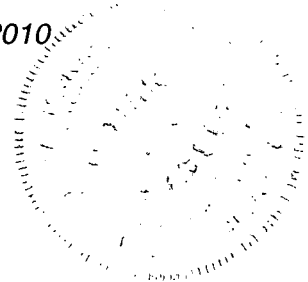
Sworn to and subscribed before me this 22<sup>nd</sup> day of June, 2010

Notary Public: Dana M. Williams

My commission expires: 12/29/2010

MKS/WAS

Enclosure: Revised Response to NRC RAI Letter No. 049 on the VEGP Units 3 and 4  
COL Application Involving the Fitness for Duty – Construction Phase  
Program



cc: Southern Nuclear Operating Company

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Mr. D. H. Jones, Site Vice President, Vogtle 3 & 4 (w/o enclosure)  
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Mr. T. C. Moorer, Manager, Environmental Affairs, Chemistry and Rad. Services  
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Document Services RTYPE: AR01.1053  
File AR.01.02.06

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Mr. N. T. Simms, Duke Energy

Mr. G. A. Zinke, NuStart & Entergy

Mr. R. H. Kitchen, PGN

Ms. A. M. Monroe, SCE&G

Mr. T. Beville, DOE/PM

**Southern Nuclear Operating Company**

**ND-10-1230**

**Enclosure**

**Revised Response to NRC RAI Letter No. 049**

**on the**

**VEGP Units 3 and 4 COL Application**

**Involving the**

**Fitness for Duty – Construction Phase Program**

NOTE: The enclosed document is six (6) pages in length.

By letter dated February 5, 2010, the U.S. Nuclear Regulatory Commission (NRC) provided Southern Nuclear Operating Company (SNC) with Request for Additional Information (RAI) letter No. 049. RAI letter No. 049 identified a need for additional information required to complete the NRC staff's review of SNC's Combined License (COL) application Final Safety Analysis Report (FSAR) Section 13.7, "Fitness for Duty," and the proposed Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) that are applicable to the Fitness for Duty Program. SNC provided responses to RAI letter No. 049 questions in a letter dated March 5, 2010. Based on NRC feedback provided in a phone call on June 8, 2010, SNC is providing a revision to its response to RAI 13.06-35, which was provided in the March 5<sup>th</sup> letter. This enclosure provides SNC's revised response to this RAI. The text that is revised by this response is annotated with a vertical change bar in the right-hand margin of this enclosure.

This revised response is provided due to an NRC question regarding whether a license condition will be necessary for the Fitness for Duty Program elements in consideration of the adequacy of the regulatory requirements that address this Program in 10 CFR Part 26.

**eRAI Tracking No. 4216**

**NRC RAI Number 13.06-35:**

Under 10 CFR 52.79(a)(44), the Applicant's FSAR must contain a description of the fitness for duty (FFD) program required by 10 CFR Part 26 and its implementation. Will the proposed license conditions described in the COL Application, Part 10, 3A, D and G comport with FSAR, Part 2, Table 13.4-201, item 15, (Sheet 5 of 7)?

**SNC Response:**

FSAR Table 13.4-201 will be modified to address the guidance in NRC's letter to the Nuclear Energy Institute dated December 2, 2009, entitled "Status of U.S. Nuclear Regulatory Commission Review and Endorsement of NEI 06-06, 'Fitness for Duty Program Guidance for New Nuclear Power Plant Construction Sites.'" The modified table will identify the regulatory source, implementation milestone, and implementation requirements for each of the phases of the FFD programs. The regulatory source that specifies when the FFD program phases are required and the personnel that will be covered by each program phase is 10 CFR 26.4. Because 10 CFR 26.4 provides implementation requirements that sufficiently describe the requirements for implementing each phase of the FFD programs, license conditions that duplicate these implementation requirements are unnecessary. Accordingly, the FFD program phase descriptions and associated implementation milestones will be deleted from COLA Part 10, License Condition 3, Operational Program Implementation.

A future revision of the COLA will reflect the changes discussed in this response.

This response is expected to be applicable to the AP1000 S-COLAs that also receive this question.

**Associated VEGP COL Application Revisions:**

1. COLA Part 2, FSAR, Table 13.4-201, will be revised from:

Item	Program Title	Program Source (Required by)	FSAR Section	Implementation	
				Milestone	Requirement
20.	Fitness for Duty Program (Construction - Mgt. & Oversight Personnel)	10 CFR Part 26 Subparts A – H, N, and O	13.7	Prior to initiating onsite construction	License Condition
	Fitness for Duty Program (Construction - Workers & First Line Supv.)	10 CFR Part 26 Subpart K	13.7	Prior to initiating onsite construction	License Condition
	Fitness for Duty Program (Operation)	10 CFR Part 26	13.7	Prior to initial fuel load	License Condition

To read:

Item	Program Title	Program Source (required by)	FSAR Section	Implementation	
				Milestone	Requirements
20.	Fitness for Duty (FFD) Program for Construction (workers and first-line supervisors)	10 CFR 26.4(f)	13.7	Prior to initiating 10 CFR Part 26 construction activities	10 CFR Part 26, Subpart K
	FFD Program for Construction (management and oversight personnel)	10 CFR 26.4(e)	13.7	Prior to initiating 10 CFR Part 26 construction activities	10 CFR Part 26, Subparts A - H, N, and O
	FFD Program for Security Personnel	10 CFR 26.4(e)(1)	13.7	Prior to initiating 10 CFR Part 26 construction activities	10 CFR Part 26, Subparts A - H, N, and O
		10 CFR 26.4(a)(5) or 26.4(e)(1)		Prior to the earlier of: A. Licensee's receipt of SNM in the form of fuel assemblies, or B. Establishment of a protected area, or C. The 10 CFR 52.103(g) finding	10 CFR Part 26, Subparts A - I, N, and O
	FFD Program for FFD Program personnel	10 CFR 26.4(g)	13.7	Prior to initiating 10 CFR Part 26 construction activities	10 CFR Part 26, Subparts A, B, D - H, N, O, and C per licensee's discretion
	FFD Program for persons required to physically report to the Technical Support Center (TSC) or Emergency Operations Facility (EOF)	10 CFR 26.4(c)	13.7	Prior to the conduct of the first full-participation emergency preparedness exercise under 10 CFR Part 50, App. E, Section F.2.a	10 CFR Part 26, Subparts A - I, N, and O, except for §§ 26.205 - 209
	FFD Program for Operation	10 CFR 26.4(a) and (b)	13.7	Prior to the earlier of: A. Establishment of a protected area, or B. The 10 CFR 52.103(g) finding	10 CFR Part 26, Subparts A - I, N, and O, except for individuals listed in § 26.4(b), who are not subject to §§ 26.205 - 209



2. COLA Part 10, Proposed License Conditions (Including ITAAC), Section 3, 2<sup>nd</sup> paragraph will be revised from:

**PROPOSED LICENSE CONDITION:**

The licensee shall implement the programs or portions of programs identified below on or before the associated milestones identified below.

- A. Construction Initiation – The licensee shall implement each operational program identified below prior to initiating construction of nuclear safety- or security-related structures, systems, or components.
  - A.1 – Fitness for Duty (Construction)
- B. 18 Months Prior to Fuel Load – The licensee shall implement each operational program identified below at least 18 months prior to scheduled date of initial fuel load.
  - B.1 – Reactor Operator Training
- C. Receipt of Materials – The licensee shall implement each operational program identified below prior to initial receipt of byproduct, source, or special nuclear materials onsite (excluding Exempt Quantities as described in 10 CFR 30.18).
  - C.1 – Radiation Protection (applicable portions)
  - C.2 – Fire Protection Program (applicable portions)
  - C.3 – Non Licensed Plant Staff Training Program (applicable portions)
  - C.4 – Emergency Planning (applicable portions)
  - C.5 – Security Program (applicable portions)
- D. Fuel Receipt – The licensee shall implement each operational program identified below prior to initial receipt of fuel onsite.
  - D.1 – Fire Protection (applicable portions)
  - D.2 – Radiation Protection (applicable portions)
  - D.3 – Security Program (applicable portions)
- E. Construction Testing – The licensee shall implement each operational program identified below prior to initial construction testing.
  - E.1 – Initial Test Program – Construction Testing
- F. Preoperational Testing – The licensee shall implement each operational program identified below prior to initial preoperational testing.
  - F.1 – Initial Test Program – Preoperational Testing
- G. Fuel Loading – The licensee shall implement each operational program identified below prior to initial fuel load.
  - G.1 – Environmental Qualification
  - G.2 – Pre-Service Testing
  - G.3 – Process and Effluent Monitoring and Sampling
  - G.4 – Radiation Protection (applicable portions)
  - G.5 – Motor-Operated Valve Testing
  - G.6 – Fire Protection
  - G.7 – Fitness for Duty (Operations)
  - G.8 – Containment Leakage Rate Testing
  - G.9 – Physical Security
  - G.10 – Cyber Security

To read:

**PROPOSED LICENSE CONDITION:**

The licensee shall implement the programs or portions of programs identified below on or before the associated milestones identified below.

- A. Construction Initiation – The licensee shall implement each operational program identified below prior to initiating construction of nuclear safety- or security-related structures, systems, or components.
  - None identified.
- B. 18 Months Prior to Fuel Load – The licensee shall implement each operational program identified below at least 18 months prior to scheduled date of initial fuel load.
  - B.1 – Reactor Operator Training
- C. Receipt of Materials – The licensee shall implement each operational program identified below prior to initial receipt of byproduct, source, or special nuclear materials onsite (excluding Exempt Quantities as described in 10 CFR 30.18).
  - C.1 – Radiation Protection (applicable portions)
  - C.2 – Fire Protection Program (applicable portions)
  - C.3 – Non Licensed Plant Staff Training Program (applicable portions)
  - C.4 – Emergency Planning (applicable portions)
  - C.5 – Security Program (applicable portions)
  - C.6 – Deleted
- D. Fuel Receipt – The licensee shall implement each operational program identified below prior to initial receipt of fuel onsite.
  - D.1 – Fire Protection (applicable portions)
  - D.2 – Radiation Protection (applicable portions)
  - D.3 – Security Program (applicable portions)
  - D.4 – Deleted
- E. Construction Testing – The licensee shall implement each operational program identified below prior to initial construction testing.
  - E.1 – Initial Test Program – Construction Testing
- F. Preoperational Testing – The licensee shall implement each operational program identified below prior to initial preoperational testing.
  - F.1 – Initial Test Program – Preoperational Testing
- G. Fuel Loading – The licensee shall implement each operational program identified below prior to initial fuel load.
  - G.1 – Environmental Qualification
  - G.2 – Pre-Service Testing
  - G.3 – Process and Effluent Monitoring and Sampling
  - G.4 – Radiation Protection (applicable portions)
  - G.5 – Motor-Operated Valve Testing
  - G.6 – Fire Protection
  - G.7 – Deleted
  - G.8 – Containment Leakage Rate Testing
  - G.9 – Physical Security
  - G.10 – Cyber Security

ND-10-1230  
Enclosure  
Revised Response to RAI 13.06-35

**ASSOCIATED ATTACHMENTS/ENCLOSURES:**

None.