VogtlecolRAIsPEm Resource

From: Simms, Tanya
Sent: Thursday, March 25, 2010 3:35 PM
To: VogtlecolRAIsPEm Resource
Subject: Request for Additional Information Letter No. 053 Related to SRP Section 08.02 for the Vogtle Units 3 and 4 Combined License Application
Attachments: VOG-RAI-LTR-053.doc

Hearing Identifier: Vogtle_COL_eRAIs
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Subject: Request for Additional Information Letter No. 053 Related to SRP Section 08.02 for the Vogtle Units 3 and 4 Combined License Application
Sent Date: 3/25/2010 3:34:59 PM
Received Date: 3/25/2010 3:34:53 PM
From: Simms, Tanya

Created By: Tanya.Simms@nrc.gov

Recipients:
"VogtlecolRAIsPEm Resource" <VogtlecolRAIsPEm.Resource@nrc.gov>
Tracking Status: None

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VOG-RAI-LTR-053.doc	50170	

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Reply Requested: Yes
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Expiration Date:
Recipients Received:

March 25, 2010

Mr. Joseph A. (Buzz) Miller
Senior Vice President
Southern Nuclear Operating Company
P.O. Box 1295
Birmingham, AL 35201

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 053 RELATED TO SRP SECTION 08.02 FOR THE VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 COMBINED LICENSE APPLICATION

Dear Mr. Miller:

By letter dated March 28, 2008, Southern Nuclear Operating Company (SNC), submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advance passive pressurized water reactors pursuant to 10 CFR Part 52. The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 45 days of the date of this letter. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-1387 or you may contact Ravindra Joshi, the lead project manager for the Vogtle Electric Generating Plan combined license at 301-415-6191.

Sincerely,

/**RA**/

Tanya Simms, Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-1387 or you may contact Ravindra Joshi, the lead project manager for the Vogtle Electric Generating Plan combined license at 301-415-6191.

Sincerely,

/**RA**/

Tanya Simms, Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026
eRAI Tracking No. 4525

Enclosure:
Request for Additional Information

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OFFICE	EEB/BC	NWE1/PM	NWE1/L-PM
NAME	RJohnson*	TSimms*	RJoshi*
DATE	3/18/10	3/18/10	3/25/10

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 4525 Revision 0
Vogtle
Southern Nuclear Operating Co.
Docket No. 52-0025 and 52-0026
SRP Section: 08.02 - Offsite Power System
Application Section: 08.02

QUESTION from Electrical Engineering Branch (EEB)

08.02-14

RAI-SRP 08.02-14

Describe the inspection, testing and monitoring program to detect degradation of inaccessible or underground control and power cables that support equipment and other systems that are within the scope of 10 CFR 50.65. The description should include the frequency of testing and inspection. Guidance on the selection of electric cable condition monitoring can be found in Sections 3 and 4.5 of NUREG/CR-7000.

The design criteria for nuclear plant systems, structures, and components, which include electric power cables and instrumentation and controls cables, are given in Appendix A to 10 CFR 50. More specifically, as related to the safety functions of electric cables, 10 CFR 50, Appendix A, General Design Criterion 4, ”Environmental and Dynamic Effects Design bases,” states that “structures, systems, and components important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation.” 10 CFR 50.65 (a)(1) states that, “Each holder of a license to operate a nuclear plant …shall monitor the performance or condition of structures, systems, or components…in a manner sufficient to provide reasonable assurance that such structures , systems, and components…are capable of fulfilling their intended functions.” Standard Review Plan Section 8.2III.L, states, “Operating experience has shown that undetected degradation of underground …could result in multiple equipment failures. Underground or inaccessible power and control cable runs that are susceptible to protracted exposure to wetted environments or submergence … should be reviewed. Additionally, Generic Letter 2007-01, “Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients,” identifies instances where cable insulation degradation due to continuous wetting or submergence could affect multiple underground cable circuits at a plant site.

Cables failures have a variety of causes: manufacturing defects, damaged cause by shipping and installation and exposure to electrical transients or abnormal environmental conditions during operation. Electrical cables in nuclear power plants are usually located in dry environment, but some cables are exposed to wetted environments or submergence in inaccessible locations such as buried conduits, cable trenches, cable troughs, underground duct banks, underground vaults, and direct buried installations.

Other Design Centers such as ESBWR (8.3.3.2), and EPR (Table 1.8-2, item 8.3-2) have identified cable monitoring as Combine Operating License (COL) action item for COL applicants to describe their inspection, testing and monitoring program to detect the degradation of inaccessible or underground cables that support diesel generators, offsite power, essential service water system that are within the scope of 10 CFR 50.65.