

PMVogtleCOLPEm Resource

From: Simms, Tanya
Sent: Friday, May 07, 2010 12:23 PM
To: PMVogtleCOLPEm Resource
Cc: Joshi, Ravindra
Subject: Telcon Summary - Telcon with Vogtle 4/28/10 -UPDATE
Attachments: ND-10-0813 RAI Ltr 053 Resp - DRAFT for 4-28.pdf

On April 28, 2010, NRC staff (Tanya Simms, Ravindra Joshi, Om Chopra and Amar Pal) participated in a telephone conference call with Vogtle representatives and observers (see below) regarding the staff's detailed review of the Vogtle Units 3 and 4 COL application. The purpose of the call was to provide clarity for the requests for additional information (RAI) #4525.

The discussion focused on the clarity of the level of detail related the underground control and power cables that support equipment and other systems within the scope of 10 CFR 50.65 as reviewed in FSAR chapter 8, Section 8.2. A draft of the proposed RAI response was presented to the Staff to get an understanding of what the applicant intended to submit. Attached is the draft copy presented to the staff.

At the conclusion of the call, Vogtle indicated that they had a clearer perspective of the staffs request and would provide the response in about a week.

Bob Hirmanpour - NuStart

Amy Aughtman – SNC

Duane Brock - SNC

Mike Flack - SNC

Wesley Sparkman - SNC

Julie Giles – SCE&G

James Fender – SCE&G

James LaBorde – SCE&G

Ken Pigg – Progress

Ray Burski – FPL

Tom Cognetti - FPL

Joe Fazio - FPL

Jim Stoner- Duke

Tom Spink - TVA

Jim Hesler – Bechtel

Michael Snyderman – Bechtel

Bob Prunty - Bechtel

John Disosway - Dominion

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ND-10-0813

Enclosure

Response to NRC RAI Letter No. 053

on the

VEGP Units 3 and 4 COL Application

DRAFT

FSAR Section 8.2, Offsite Power Systems

eRAI Tracking No. 4525

NRC RAI Number 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.

SNC Response:

This RAI requested additional information based on Generic Letter (GL) 2007-01, 10 CFR 50.65 and recently released NUREG/CR-7000. GL 2007-01 is addressed in COLA Part 02, Chapter 01. GL 2007-01 will be considered as part of 10 CFR 50.65 Maintenance Rule (MR) Program implementation. The MR program will not be implemented until prior to Fuel Load; as such, specific information necessary to determine appropriate monitoring is not available at this time. In order to determine method and frequency, a review of detailed design and procurement information is needed. NUREG/CR-7000 provides detailed recommendations on implementing a

cable condition monitoring program. This NUREG was released in January of 2010, but has not received regulatory endorsement nor has been evaluated by SNC. However, SNC will consider the latest industry experience and available information in setting up cable condition monitoring program in the future. A description of the cable condition monitoring program will be added to the FSAR in response to this RAI as shown below.

This response is expected to be STANDARD for the S-COLAs.

The information shown below will be incorporated into a future application revision.

Associated VEGP COL Application Revisions:

COLA Part 2, FSAR Chapter 17, Section 17.6, will be revised to include the following new paragraph at the end of the section with a left margin annotation (LMA) of VEGP SUP 17.6-2:

Condition monitoring of underground or inaccessible cables is part of the maintenance rule program. Industry operating experience, regulatory guidance, detailed design, and procurement information are used to identify risk significant underground and inaccessible cables and establish monitoring criteria. The program considers Generic Letter 2007-01.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

None

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