

VoglecolRAIsPEm Resource

From: Patel, Chandu
Sent: Tuesday, January 13, 2015 10:42 AM
To: VoglecolRAIsPEm Resource
Subject: RAI LETTER NO. 05 RELATED TO FUKUSHIMA RECOMMENDATION 4.2, Vogle Units 3 and 4
Attachments: VOG-42-RAI-LTR-05.docx

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Vogtle Units 3 and 4
Sent Date: 1/13/2015 10:42:14 AM
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From: Patel, Chandu

Created By: Chandu.Patel@nrc.gov

Recipients:
"VogtlecolRAIsPEm Resource" <VogtlecolRAIsPEm.Resource@nrc.gov>
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January 13, 2015

Mr. B. H. Whitley, Director
Regulatory Affairs
Southern Nuclear Operating Company, Inc.
42 Inverness Center Parkway, B022
Birmingham, AL 35242

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 05 RELATED TO
FUKUSHIMA NEAR-TERM TASK FORCE RECOMMENDATION 4.2, "MITIGATION
STRATEGIES FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS"
FOR THE VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4
COMBINED LICENSES

Dear Mr. Whitley:

On March 12, 2012, the NRC staff issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events." Southern Nuclear Operating Company (SNC) responded to Order EA-12-049 by letter dated August 22, 2013 (ADAMS Accession No. ML13235A228). As part of the response, the licensee submitted a non-proprietary Westinghouse report, APP-GW-GLR-171, "AP1000 FLEX Integrated Plan". A proprietary version of APP-GW-GLR-171 was also submitted as an attachment to the August 22, 2013 letter and designated as APP-GW-GLR-170 (ADAMS Accession No. ML13235A229.)

In the course of reviewing the August 22, 2013 response to Order EA-12-049 and related correspondence the NRC staff has identified the need for additional information. The request for additional information (RAI) is enclosed. Please respond to this RAI within 30 days of receipt of this letter.

If you have any questions or comments concerning this matter, you may contact me at 301-415-3025 or chandu.patel@nrc.gov.

Sincerely,

/RA/

Chandu P. Patel, Senior Project Manager
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026
eRAI Tracking No. 7801

Enclosure:
Request for Additional Information 05

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-3025 or chandu.patel@nrc.gov.

Sincerely,

/RA/

Chandu P. Patel, Senior Project Manager
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026
eRAI Tracking No. 7801

Enclosure:
Request for Additional Information 05

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NAME	TDrzewiecki*	JMcKirgan*	CPatel *
DATE	12/23/14	12/24/14	1/9/15

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information 05

Issue Date: 01/09/2015

Application Title: Vogtle Nuclear Site, Units 3 and 4, Dockets 52-0025 and 52-0026

Operating Company: Southern Nuclear Operating Co.

Docket No. 52-0025 and 52-0026

Review Section: 01.05 - Other Regulatory Considerations

Application Section:

QUESTION

01.05-12

On December 4, 2014, the licensee of Vogtle Units 3 and 4 submitted its response to Request for Additional Information (RAI) 04-1 on the use of the automatic depressurization system (ADS) as part of the mitigation strategies for beyond design basis external events (BDBEEs). In RAI 04-1, the NRC staff requested the licensee to specify (a) the method of core cooling credited when entering the final phase for mitigating BDBEEs, and (b) whether the applicable Equipment Qualifications cover de-energizing, re-energizing, and firing of the ADS. In its response to RAI 04-1(a), the licensee indicated that the long-term core cooling safety function is provided by the passive residual heat removal heat exchanger while ADS actuation and in-containment refueling water storage tank injection provide a backup means of long-term core cooling. In its response to RAI 04-1(b), the licensee indicated that the environmental conditions for qualification of the ADS motor-operated valves (MOVs) and squib valves are shown in AP1000 Design Control Document (DCD) and Vogtle Units 3 and 4 Final Safety Analysis Report (FSAR) Table 3D.5-3, "Abnormal Operating Environments Inside Containment." The licensee also indicated that the Class 1E dc and uninterruptible power supply system (IDS) batteries are not qualified for de-energizing, re-energizing, and firing of the ADS system at a later time, but that the availability of ADS is assured by several specific aspects listed in the RAI response. On December 18, 2014, the NRC staff conducted a public telephone conference with the licensee to discuss its response to RAI 04-1. As a follow-up to RAI 04-1, the staff requests that the licensee:

(1) Provide the spectra over time of the abnormal operating environments inside containment for temperature, pressure, humidity, radiation, chemistry, and submergence based on Table 3D.5-3, and the spectra over time for those environmental conditions determined for the BDBEEs that are the subject of RAI 04-1 (i.e., post-Fukushima lessons learned scenarios), to allow a comparison of the environmental qualification of the ADS established through the AP1000 DCD to the environment conditions that might occur during a post-Fukushima lessons learned scenario.

(2) Make available (directly or by reference) the analysis supporting the licensee's determination that operation of the ADS Stage 4 squib valves during a post-Fukushima lessons learned scenario will be bounded by the structural analysis performed as part of probabilistic risk assessment (PRA) evaluations to demonstrate that the ADS Stage 4 squib valves may be operated without degradation of the AP1000 piping systems at a reactor coolant system (RCS) pressure above the RCS pressure specified in the original DCD analysis.

(3) Expand the discussions of the justification for the availability of the IDS batteries to perform their intended function during a post-Fukushima lessons learned scenario, and for the capability of the diverse actuation system (DAS) power independent actuation device located at the

secondary DAS station to actuate the ADS squib valves without the availability of the battery supplies.