VogtlecolRAIsPEm Resource

From: Ravindra Joshi
Sent: Wednesday, April 22, 2009 7:02 AM
To: VogtlecolRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 033 RELATED TO SRP SECTION 19 FOR THE VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 COMBINED LICENSE APPLICATION
Attachments: VOG-RAI-LTR-033.doc

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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 033 RELATED TO SRP SECTION 19 FOR THE VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 COMBINED LICENSE APPLICATION
Sent Date: 4/22/2009 7:02:17 AM
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From: Ravindra Joshi

Created By: Ravindra.Joshi@nrc.gov

Recipients:
"VogtlecolRAIsPEm Resource" <VogtlecolRAIsPEm.Resource@nrc.gov>
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April 22, 2008

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. 033 RELATED TO SRP SECTION 19 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 60 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 301-415-6191 or you may contact Christian Araguas, the lead project manager for the Vogtle Electric Generating Plant combined license at 301-415-3637.

Sincerely,

/**RA**/

Ravindra G. Joshi, 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 301-415-6191 or you may contact Christian Araguas, the lead project manager for the Vogtle Electric Generating Plant combined license at 301-415-3637.

Sincerely,

/**RA**/

Ravindra G. Joshi, Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026
eRAI Tracking No. 2306

Enclosure:
Request for Additional Information

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NAME	LMrowca*	RJoshi*	AHodgdon*	RJoshi forCAraguas*
DATE	3/24/09	3/25/09	3/31/09	4/1/09

*Approval captured electronically in the electronic RAI system.

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Vogtle
Southern Nuclear Operating Co.
Docket No. 52-0025 and 52-0026
SRP Section: 19- Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: 19

QUESTIONS FROM PRA Licensing, Operational Support and Maintenance Branch 1 (SPLA)

19-3
(Follow-up to Question 19-1) The response to Question 19-1 provides detailed information on screening of high winds, external floods, and transportation and pipeline accidents for inclusion in the Vogtle Electric Generating Plant (VEGP) Units 3 and 4 probabilistic risk assessment (PRA). Regulatory Guide (RG) 1.206 indicates that combined license (COL) applicants' final safety analysis reports (FSAR) should include a description of the external events evaluated and the methods used to conduct screening and bounding analyses. Therefore, please revise section 19.58 of the FSAR to include the external events screening approach and results. In addition, the response to Question 19-1 should be supplemented in the following areas before inclusion in the FSAR:

a. The criteria used to screen the external events should be clearly identified. These criteria should be consistent with the expectation stated in Standard Review Plan (SRP) section 19.0 that results of the PRA should indicate that the design represents a reduction in risk compared to existing operating plants.

b. The screening should address a broad set of potential site-specific contributors, not only the events identified in APP-GW-GLR-101. Additional events include biological effects, temperature and drought effects on the ultimate heat sink, and turbine missiles. Many of these events can be screened based on the criteria identified above; however, this screening should be documented in the FSAR.

19-4
(Follow-up to Question 19-1) Section 2.3.1.3.3 of the Site Safety Analysis Report (SSAR) prepared for the VEGP early site permit (ESP) lists 77 "tropical cyclones" of lesser magnitude than hurricanes occurring over a 154-year period. Of these, five are the "extra-tropical storms," identified in the response to Question 19-1. However, the impact of hurricanes downgraded to tropical storms (or less) before reaching the VEGP site is not addressed in the response. Please revise the FSAR to discuss the level of risk associated with these storms and the systematic method used to assess or screen the hazard (for example, by demonstrating that the resulting CDF is less than 1E-8/yr), including the basis for numerical values used.

19-5
(Follow-up to Question 19-1) The response to Question 19-1 addresses external flooding only with respect to the Savannah River maximum flood elevation (178.10 feet) and the probable maximum precipitation (PMP) flood level (219.45 feet), compared to site grade of 220 feet. For risk from external flooding, expand the discussion to address all potential causes of elevated water levels (e.g., precipitation, dam failure), including credible combinations of sources. Please revise the FSAR to discuss the level of risk associated with external flooding and the systematic method used to assess or screen the hazard (for example, by demonstrating that the frequency of a flood higher than site grade is

less than 1E-7/yr or that the resulting CDF is less than 1E-8/yr), including the basis for any numerical values used.

19-6
(Follow-up to Question 19-1) The DCD calls for the applicant to “reevaluate the qualitative screening of external fires” and perform a risk assessment if it cannot be demonstrated that the frequency of hazard is less than 1E-7/yr. However, the response to Question 19-1 includes only a reference to the external fires section of the SSAR. Please document this reevaluation or assessment in the FSAR.

19-7
(Follow-up to Question 19-1) The response to Question 19-1 refers to the discussion of on-site chemical storage in SSAR subsection 2.2.3.2.3, but on-site chemical storage is not explicitly addressed in the treatment of external events. The SSAR was supplemented by the COL application in this area (COL items 2.2-1 and 2.2-2). Please revise the FSAR to discuss the level of risk associated with on-site chemical storage and the systematic method used to assess or screen the hazard, including the basis for numerical values used.

19-8
(Follow-up to Question 19-1) The response to Question 19-1 refers to the discussion of major depots and storage areas in SSAR subsection 2.2.3.2.2, but “nearby facility accidents” (identified in the DCD as manmade external hazards) are not explicitly addressed in the treatment of external events. Please revise the FSAR to discuss the level of risk associated with nearby facilities and the systematic method used to assess or screen the hazard, including the basis for numerical values used.

19-9
(Follow-up to Question 19-1) In APP-GW-GLR-101, the assessment of railroad and truck accidents states that toxic material releases were considered in the marine accident evaluation; however, the marine accident evaluation uses an IEF of 1E-6/yr and a CCDP of 6.26E-8/yr (reactor trip without operator actions) to develop a CDF below the screening value of 1E-8/yr. As the response to Question 19-1 refers only to the evaluation in the SSAR, it is unclear whether the IEF and associated CDF for toxic releases from marine accidents are bounding for toxic releases from railroad and truck accidents near the VEGP site. Please revise the FSAR to discuss the level of risk associated with toxic material releases from railroad and truck accidents and the systematic method used to assess or screen the hazard, including the basis for numerical values used.