LevyCountyRAIsPEm Resource

From: Brian Anderson
Sent: Friday, May 08, 2009 11:26 AM
To: LevyCountyRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 029 RELATED TO SRP SECTION 2.5.4 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Attachments: LNP-RAI-LTR-029.doc

Importance: High

Hearing Identifier: Levy_County_COL_eRAIs
Email Number: 30

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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 029 RELATED TO SRP SECTION 2.5.4 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Sent Date: 5/8/2009 11:25:48 AM
Received Date: 5/8/2009 11:25:49 AM
From: Brian Anderson

Created By: Brian.Anderson@nrc.gov

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

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Files	**Size**	**Date & Time**
MESSAGE	3	5/8/2009 11:25:49 AM
LNP-RAI-LTR-029.doc	63994	

Options
Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

May 8, 2009

Mr. Garry Miller
General Manager, Nuclear Plant Development
Progress Energy Florida, Inc.
PO Box 1551
411 Fayetteville Street Mall
Raleigh, NC 27602

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 029 RELATED TO SRP SECTION 2.5.4 FOR THE LEVY COUNTY NUCLEAR PLANT, UNITS 1 and 2 COMBINED LICENSE APPLICATION

Dear Mr. Miller:

By letter dated July 28, 2008, as supplemented by a letter dated September 12, 2008, Progress Energy Florida, Inc. submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advanced 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 30 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 301-415-9967.

Sincerely,

/**RA**/

Brian C. Anderson, Lead Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-029
52-030

eRAI Tracking No. 2099

Enclosure:
Request for Additional Information

If you have any questions or comments concerning this matter, you may contact me at 301-415-9967.

Sincerely,

/**RA**/

Brian C. Anderson, Lead Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-029
52-030

eRAI Tracking No. 2099

Enclosure:
Request for Additional Information

Distribution:

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NRO-002

OFFICE	RGS1/BC	NWE1/PM	OGC	NWE1/L-PM
NAME	CMunson *	BAnderson *	JMartin*	BAnderson*
DATE	03/16/09	03/20/09	04/09/09	05/08/09

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information
Levy County, Units 1 and 2
Progress Energy Florida, Inc.
Docket No. 52-029 and 52-030
SRP Section: 02.05.04 - Stability of Subsurface Materials and Foundations
Application Section: 2.5.4.10

QUESTIONS for Geosciences and Geotechnical Engineering Branch 1 (RGS1)

02.05.04-10

AP 1000 DCD, Revision 17, Table 2.5-1 provides the limits of acceptable settlement without additional evaluation. The table states that the total settlement for the nuclear island foundation mat is 3 inches and the differential settlement across the nuclear island foundation mat is limited to ½ inch in 50 ft. Additionally, Westinghouse response to RAI-TR85-SEB1-36 corrects Table 2.5-1 of Rev 17, to state that the differential settlement between the nuclear island and the turbine building is limited to 3 inches, and the differential settlement between the nuclear island and other buildings is also limited to 3 inches. The FSAR states that LNP1 and LNP2 nuclear island will be founded on the RCC bridging mat supported by Avon Park limestone, and the turbine building and other buildings surrounding the nuclear island on drilled piers socketed into the Avon Park limestone. The FSAR further states that the design of the drilled piers will be performed during detailed design based on borings located at each drilled pier. Estimates of settlement and monitoring plans for non-safety related structures were not provided in the FSAR, since it was submitted before the settlement criteria of Rev. 17.

Please provide estimates of non-safety related structure settlements and a description of the monitoring program that you will implement to ensure that the actual settlements and differential settlements of the structures relative to the nuclear island do not exceed the DCD settlement criteria.

02.05.04-11

The description provided of the finite element analysis of the coupled RCC bridging mat and rock/void materials does not provide information on the sensitivity of the computed responses (stresses developed in and around the rock mass) to uncertainties and variability in material properties.

Please provide information on sensitivity of calculated stresses and displacements in the Avon Park rock foundation to (a) variability in assumed elastic properties and uniformity of the rock material, and (b) impact of potential void sizes and shapes on calculated stresses and safety factors, and (c) boundary conditions.

02.05.04-12

Cross-sections are not indicated on Figure 201A as stated in FSAR Section 2.5.4.1.1

Please correct this inconsistency.

02.05.04-13

Section 2.5.4.2.1.3 states “An aquifer pumping test was performed in one well (PW-1), and the locations of the pumping and observation wells are shown on FSAR Figure 2.4.12-223.

Please note that this figure does not show the location of the pump test well and observation wells. Please correct this apparent inconsistency.

02.05.04-14

The Hoek-Brown method was used to obtain Mohr-Coulomb strength parameters for stability analyses. The Hoek-Brown methodology differentiates between carbonate limestone and micritic limestone as options in determining the value of mi. You selected a value of mi equal to 0.8 from a range of micritic limestone values of 0.5 to 0.11.

Please provide justification for selecting mi = 0.8.