PMLevyCOLPEm Resource

From: Anderson, Brian
Sent: Monday, October 04, 2010 3:01 PM
To: robert.kitchen@pgnmail.com; david.waters@pgnmail.com; tillie.wilkins@pgnmail.com
Cc: PMLevyCOLPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 093 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Attachments: LNP RAI 093 - ML102770467.pdf

Importance: High

Attached is RAI Letter No. 093 related to SRP Section 2.4.3 for the Levy County Units 1 and 2 combined license application. The ADAMS Accession number is ML102770467.

Brian Anderson
301-415-9967
Senior Project Manager, AP1000 Projects Branch 1
Office of New Reactors
U.S. Nuclear Regulatory Commission

Hearing Identifier: Levy_County_COL_Public
Email Number: 683

Mail Envelope Properties (B46615B367D1144982B324704E3BCEED305AD1BD52)

Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 093 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Sent Date: 10/4/2010 3:00:39 PM
Received Date: 10/4/2010 3:00:38 PM
From: Anderson, Brian

Created By: Brian.Anderson@nrc.gov

Recipients:
"PMLevyCOLPEm Resource" <PMLevyCOLPEm.Resource@nrc.gov>
Tracking Status: None
"robert.kitchen@pgnmail.com" <robert.kitchen@pgnmail.com>
Tracking Status: None
"david.waters@pgnmail.com" <david.waters@pgnmail.com>
Tracking Status: None
"tillie.wilkins@pgnmail.com" <tillie.wilkins@pgnmail.com>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	328	10/4/2010 3:00:38 PM
LNP RAI 093 - ML102770467.pdf	150794	

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

LevyCountyRAIsPEm Resource

From: Anderson, Brian
Sent: Monday, October 04, 2010 2:11 PM
To: LevyCountyRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 093 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Attachments: LNP-RAI-LTR-093.doc

Importance: High

Hearing Identifier: Levy_County_COL_eRAIs
Email Number: 93

Mail Envelope Properties (B46615B367D1144982B324704E3BCEED305AD1BD0B)

Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 093 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Sent Date: 10/4/2010 2:10:56 PM
Received Date: 10/4/2010 2:10:57 PM
From: Anderson, Brian

Created By: Brian.Anderson@nrc.gov

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

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	2	10/4/2010 2:10:57 PM
LNP-RAI-LTR-093.doc	58874	

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

October 4, 2010

Mr. John Elnitsky
Vice President, Nuclear Plant Development
Progress Energy Florida, Inc.
P.O. Box 14042
Saint Petersburg, FL 33733

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 093 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY NUCLEAR PLANT, UNITS 1 and 2 COMBINED LICENSE APPLICATION

Dear Mr. Elnitsky:

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

Docket Nos. 52-029
52-030

eRAI Tracking No. 5106

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

Docket Nos. 52-029
52-030

eRAI Tracking No. 5106

Enclosure:
Request for Additional Information

Distribution:

Public	JCruz	TSimms	HJones
RidsNroDnrlNwe1	JSebrosky	SGoetz	NTiruneh
RidsNroLAKGoldstein	BHughes	DHabib	MMcBride
RidsOgcMailCenter	MComar	JMartin	RRaione
RidsAcrsAcnw_MailCenter	DMcGovern	TSpicher	
RidsRgn2MailCenter	RJoshi	BAnderson	

NRO-002

OFFICE	RHEB/BC	NWE1/PM	NWE1/L-PM
NAME	RRaione *	BAnderson *	BAnderson*
DATE	09/22/10	09/28/10	10/04/10

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Levy County, Units 1 and 2
Progress Energy Florida, Inc.
Docket No. 52-029 and 52-030
SRP Section: 02.04.03 - Probable Maximum Flood (PMF) on Streams and Rivers
Application Section: FSAR Section 2.4

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.03-6

In RAI 2.4.3-05 (RAI ID 4628, Question 17566), the staff requested the applicant to provide a probable maximum flood (PMF) analysis for the Withlacoochee River watershed that used (1) an appropriate rainfall-runoff response function for Lake Rousseau and (2) unit hydrographs for the subbasins of the Withlacoochee River watershed that are appropriately representative of overland flow and runoff generation conditions in the basin and conservative in predicting the discharge in the Withlacoochee River at the time a probable maximum precipitation (PMP) event is likely to occur.

The applicant's response, dated May 7, 2010, stated that the applicant's approach to a unit hydrograph for generation of runoff from the precipitation falling on the surface of Lake Rousseau would result in a conservative estimate of the probable maximum flood because the lag times associated with subbasins upstream of Lake Rousseau are larger than a day. Therefore, the applicant stated that use of the alternative approach of assuming no lag in generation of runoff from precipitation falling on the surface of Lake Rousseau would not be conservative because peak runoff from the upstream subbasins would not coincide with the peak runoff from Lake Rousseau. While NRC agrees that using a unit hydrograph for Lake Rousseau would be more conservative, the analysis that supports safety conclusions in the FSAR must be representative of the hydrologic characteristics of the study area, in addition to being conservative. The applicant must provide an appropriate rainfall-runoff response function for Lake Rousseau and update the PMF analysis based on this response function.

The applicant's May 7, 2010 response also described a sensitivity analysis that was performed to determine the ability of the subbasin unit hydrographs to predict large floods including the standard project flood. The applicant stated that Snyder peak coefficient, the parameter C_p, was increased from its regional value of 0.6 to 0.8, a 33 percent increase that would result in a corresponding increase of 33 percent to peak discharge. The FSAR Rev 1 Table 2.4.3-221 shows that a C_p value of 0.8 was used for all subbasins. However, the text in FSAR Rev 1 Section 2.4.3.3.1 states that a value of 0.6 was used for C_p.

While the applicant has demonstrated that the unit hydrographs it employs estimate the peak discharge of relatively large floods conservatively, the literature guidance also recommends reduction in time to peak for the unit hydrographs that are used to predict large floods such as the PMF. NRC requests that the applicant:

(1) verify that the value of Snyder peaking coefficient, C_p, used in the PMF analysis is 0.8
(2) adjust time to peak discharge appropriately for each subbasin unit hydrograph
(3) update the PMF analysis
(4) provide input files for the PMF analysis, and
(5) provide related updates to FSAR Section 2.4.3, ensuring that the text is consistent with the analysis performed.