

PMLevyCOLPEm Resource

From: Anderson, Brian
Sent: Friday, May 07, 2010 1:36 PM
To: robert.kitchen@pgnmail.com; david.waters@pgnmail.com; tillie.wilkins@pgnmail.com
Cc: PMLevyCOLPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 089 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Attachments: LNP RAI 089 - ML101270098.pdf
Importance: High

Attached is RAI Letter No. 089 related to SRP Section 2.4.3 for the Levy County Units 1 and 2 combined license application. The ADAMS Accession number is ML101270098.

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: 639

Mail Envelope Properties (B46615B367D1144982B324704E3BCEED21CE208A2F)

Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 089 RELATED TO
SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Sent Date: 5/7/2010 1:35:40 PM
Received Date: 5/7/2010 1:35:43 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	5/7/2010 1:35:43 PM
LNP RAI 089 - ML101270098.pdf		155284

Options

Priority: High

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received:

LevyCountyRAIsPEm Resource

From: Anderson, Brian
Sent: Friday, May 07, 2010 9:25 AM
To: LevyCountyRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 089 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Attachments: LNP-RAI-LTR-089.doc

Hearing Identifier: Levy_County_COL_eRAIs
Email Number: 91

Mail Envelope Properties (FD7C4204A01F6A4B9272CCA467DB3D037C91923300)

Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 089 RELATED TO SRP SECTION 2.4.3 FOR THE LEVY COUNTY UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Sent Date: 5/7/2010 9:25:28 AM
Received Date: 5/7/2010 9:25:29 AM
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	5/7/2010 9:25:29 AM
LNP-RAI-LTR-089.doc	57850	

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

May 7, 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. 089 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. 4628

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. 4628

Enclosure:
Request for Additional Information

Distribution:

Public	JCruz	TSimms	HJones
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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	04/12/10	04/23/10	05/07/10

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Request for Additional Information
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)

02.04.03-5

In response to staff's RAI 2.4.3-03, the applicant stated that application of a UH to predict runoff from the surface of a reservoir is acceptable. However, the UH theory is used to describe the time distribution of surface runoff at the outlet produced by a constant and uniform rainfall excess event over a watershed. The time delay and attenuation in discharge compared to the rainfall excess event occurs because of the physical obstruction to overland flow over the surface of the watershed. Within the watershed, overland flow also accumulates into channels and streams. Both of these characteristics (overland flow and presence of channels and streams) are not present when considering runoff from the surface of a lake or reservoir. Therefore, a UH is not an appropriate tool to describe its response to a rainfall event. The staff requests that the applicant provide a rainfall-runoff response function that is appropriate for the surface of Lake Rousseau, or justify its exclusion.

In response to staff's RAI 2.4.3-03, the applicant includes text quoted from Sivapalan et al. (2002). That same reference (Sivapalan et al., 2002) also states the following, which the applicant did not include in its response: "On the other hand, Robinson et al. [1995], using numerical simulations, showed that nonlinearity at small scales is dominated by the hillslope response, that nonlinearity at large scales is dominated by channel network hydrodynamics, and that nonlinearity does not really disappear at any scale." This statement appears to contradict the applicant's assertion that the response of the Withlacoochee River Basin can be considered linear. The staff requests that the applicant provide UHs 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 PMP event is likely to occur, or justify their exclusion.

References: Sivapalan, M., C. Jothiyangkoon, and M. Menabde, "Linearity and nonlinearity of basin response as a function of scale: Discussion of alternative definitions," *Water Resources Research*, Vol. 38, No. 2, 1012, 10.1029/2001WR000482, 2002.