LevyCountyRAIsPEm Resource

From: Simms, Tanya
Sent: Monday, September 21, 2009 9:00 AM
To: LevyCountyRAIsPEm Resource
Subject: Request for Additional Information Letter No. 067 Related To SRP Section 09.02.01 for The Levy County Nuclear Plant Units 1 and 2 Combined License Application
Attachments: LEVY-RAI-LTR-067.doc

Hearing Identifier: Levy_County_COL_eRAIs
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Subject: Request for Additional Information Letter No. 067 Related To SRP Section 09.02.01 for The Levy County Nuclear Plant Units 1 and 2 Combined License Application
Sent Date: 9/21/2009 8:59:51 AM
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From: Simms, Tanya

Created By: Tanya.Simms@nrc.gov

Recipients:
"LevyCountyRAIsPEm Resource" <LevyCountyRAIsPEm.Resource@nrc.gov>
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September 21, 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. 067 RELATED TO SRP SECTION 09.02.01 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 301-415-1387 or you may contact Brian Anderson, the lead project manager for the Levy County Nuclear Plant Units 1 and 2 combined license application at 301-415-9967.

Sincerely,

/**RA**/

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

Docket Nos. 52-029
52-030

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-1387 or you may contact Brian Anderson, the lead project manager for the Levy County Nuclear Plant Units 1 and 2 combined license application at 301-415-9967.

Sincerely,

/**RA**/

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

Docket Nos. 52-029
52-030

eRAI Tracking No. 3737
Enclosure:
Request for Additional Information

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NAME	JMcKirgan *	TSimms*	BAnderson*
DATE	9/11/09	9/16/09	9/21/09

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 3737 Revision 0
Levy County, Units 1 and 2
Progress Energy Florida, Inc.
Docket No. 52-029 and 52-030
SRP Section: 09.02.01 - Station Service Water System
Application Section: 9.2.11 Raw Water System

QUESTION from Balance of Plant Branch 1 (SBPA)

09.02.01-6

The raw water system (RWS) is relied upon for achieving and maintaining cold shutdown conditions which is necessary for satisfying Technical Specification requirements. In accordance with NRC policy considerations for passive plant designs, non-safety related active systems that are relied upon for achieving and maintaining cold shutdown conditions (i.e., transitioning from Mode 4 to Mode 5) should be highly reliable and able to accommodate single active failures without a loss of the cooldown capability that is needed. The staff found that Section 9.2.11 of the Final Safety Analysis Report (FSAR) does not provide a clearly defined design basis with respect to the RWS cooldown function, and the reliability and capability of the RWS to perform this function for the most limiting situations were not adequately described and addressed. For example, the minimum RWS flow rate, water inventory, temperature limitations, and corresponding bases for providing SWS makeup for the two Levy County units were not described. Also, the suitability of RWS materials for the plant-specific application and measures being implemented to resolve vulnerabilities and degradation mechanisms to assure RWS functionality over time were not addressed. Consequently, Section 9.2.11 of the FSAR needs to be revised to properly describe and address the RWS design bases in this regard and to include design specifications that are necessary to ensure the reliability and capability of the RWS to perform its cooldown function.

As a following up to the applicant response to RAI 09.02.01-3 (LNP-RAI-LTR-052) the following question were developed since the staff was unable to determine if the raw waters system is considered highly reliable and able to accommodate single active failure.

- Provide clarification in the FSAR since Figure 10.4-201, “Circulating Water System and Raw Water System (Saltwater Subsystem),” indicates a cross-tie is available between Unit s 1 and 2. The saltwater subsystem cross-tie discussion should also appear in the FSAR along with a discussion on GDC 5, “Sharing of Structures, Systems, and Components”.

- Provide clarification in the FSAR based on the RAI response, “the power supplies for the raw water well and booster pumps, discharge valves, and automatic strainer are powered from the normal ac power system and have a back-up power supply from the diesel generators.” It appears by this sentence that the discharge valve and strainer have backup power; however, the FSAR text markup does not indicate that the discharge valve and strainer have backup power. The staff did note that RAI supplies markup of Figure 9.2-101, “Raw Water System,” had added note 1 indicating backup power for the well pumps and discharge motor operated valve but not the strainer. Raw water components that are diesel backed should be discussed in Section 9.2.11 of the FSAR.

- Provide clarification in the FSAR the approximate water volume of the raw water storage tank or provide how many hours are available to supply water to the SWS cooling tower basin if both well pumps are not available to support cooldown.

- Provide clarification in the FSAR the booster pump controls or interlocks with the raw water storage tanks relate to pump trips or pump automatic starts, for example pump trips on low water level. Provide a discussion on net positive suction head requirements relevant to pump performance and tank level.

- Provide clarification in the FSAR the material to be used in the raw water system. American Society of Mechanical Engineering (ASME) B31.1, “Power Piping,” and high-density polyethylene (HDPE) were discussed in the RAI; however, it was not discussed in the text of the FSAR.