

TurkeyPointRAIsPEm Resource

From: Comar, Manny
Sent: Thursday, March 29, 2012 10:50 AM
To: TurkeyPointRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LTR. No: 53 RELATED TO SRP 09.02.01
FOR THE TURKEY POINT UNITS 6 AND 7 COMBINED LICENSE APPLICATION
Attachments: PTN-RAI-LTR-053.doc

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Subject: REQUEST FOR ADDITIONAL INFORMATION LTR. No: 53 RELATED TO SRP
09.02.01 FOR THE TURKEY POINT UNITS 6 AND 7 COMBINED LICENSE APPLICATION
Sent Date: 3/29/2012 10:49:38 AM
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From: Comar, Manny

Created By: Manny.Comar@nrc.gov

Recipients:
"TurkeyPointRAIsPEm Resource" <TurkeyPointRAIsPEm.Resource@nrc.gov>
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March 29, 2012

Mano K. Nazar
Senior Vice President and Chief Nuclear Officer
Florida Power & Light Company
Mail Stop NNP/JB
700 Universe Blvd
Juno Beach, FL 33408-0420

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 053 RELATED
TO SRP SECTION 09.02.01 STATION SERVICE WATER SYSTEM FOR THE
TURKEY POINT NUCLEAR PLANT UNITS 6 AND 7 COMBINED LICENSE
APPLICATION

Dear Mr. Nazar:

By letter dated June 30, 2009, as supplemented by letters dated August 7, 2009, September 3, 2010, December 21, 2010 and December 16, 2011, Florida Power and Light 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 you are unable to provide a response within 30 days, please state when you will be able to provide the response. In the event the response submitted is incomplete, please indicate in the response when the complete response will be provided. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes. Your response should also indicate whether any of the information provided is to be withheld as exempt from public disclosure pursuant to 10 CFR 2.390.

If you have any questions or comments concerning this matter, you may contact me at 301-415-3863 or manny.comar@nrc.gov.

Sincerely,

/RA/

Manny Comar, Lead Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-040
52-041

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-3863 or manny.comar@nrc.gov.

Sincerely,

/RA/

Manny Comar, Lead Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-040
52-041
eRAI Tracking No. 6346

Enclosure:
Request for Additional Information

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NAME	EMcKenna*	MComar*	MComar*
DATE	12/2/11	12/15/11	12/21//11

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 6346

3/28/2012

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: 09.02.01 - Station Service Water System
Application Section: 9.2.11

QUESTIONS for Balance of Plant and Technical Specifications Branch (BPTS)

09.02.01-6

Based on the applicant's response to Letter 29, RAI 5491, Question 09.02.01-3, the staff had follow-up questions related to the raw water system (RWS).

This RAI response stated that:

It is unlikely that a failure of raw water system (RWS) to provide adequate makeup flow to the SWS cooling tower basins would occur during the short time period in which the service water system (SWS) is performing a regulatory treatment of nonsafety-related system (RTNSS) function, as described above. However, if a failure were to occur, the remaining available inventory in the service water cooling tower basins and the stored water, which is available in the additional excess volume of the secondary fire water tank, would provide ample time (more than 24 hours) to restore the RWS makeup flow or take the procedural actions necessary to exit the conditions for RTNSS applicability. Therefore, the RWS is not required to be a RTNSS system or subject to investment protection short-term availability controls. The RWS is designed to be a highly reliable and robust system capable of operating during a loss of normal alternating current (ac) power to provide makeup flow to the SWS under normal and abnormal conditions. Procedural controls, which provide for continued operation of the RWS or re-establishment of operations under off normal conditions, will be described in the operating procedures, where appropriate.

An ample inventory of raw water is available to provide makeup to the SWS cooling tower basins. As noted in Turkey Point Nuclear (PTN) COL FSAR Section 9.2.11.2.2.3, a raw water storage tank serving both PTN Units 6 and 7 (Note: GDC 5, "Sharing of Structures, Systems, and Components," does not apply since the RWS is not an important to safety system as discussed previously) receives potable water supplied from the Miami-Dade Water and Sewer Department (MDWASD). The potable water supply piping enters the PTN Units 6 and 7 plant area from the north and is routed to the raw water storage tank located to the east of PTN Units 6 and 7 (FSAR Figure 1.1-201). The raw water ancillary pumps are located at grade elevation in close proximity to the above ground raw water storage tank, which continually receives makeup from the potable water supply. Should the potable water supply to the raw water storage tank be interrupted, the volume of water in the tank would provide sufficient time to temporarily supply water from another onsite water source, such as reclaimed water from the makeup water reservoir (MWR). The MWR has a capacity well in excess of that needed to support cooldown to cold shutdown conditions and maintain the station in Mode 5 for greater than 7 days.

Follow-up questions that should be addressed in the COL FSAR or RAI response.

1. Provide the volume of the RWS storage tank. A bounding volume of the RWS storage tank could be provided to support 'sufficient time to restore the potable water supply' for various flow requirements; such as, power operations, support for shutdown conditions and SWS RTNSS conditions.
2. The flow rate of the RWS pumps was not provided and reviewed to the AP1000 required flow rate (to support RWS being adequate designed). Established AP1000 raw water makeup flow requirements can be found in ML090760819 (publicly available).
3. The reclaimed water connections and system line-up from the MWR to support the SWS is not clearly defined in the FSAR (drawings or text does not show interconnections). If temporary equipment is needed for this water makeup source, provide statement that supports 'sufficient time to restore the potable water supply'.
4. Flow rate of the reclaimed makeup water pumps to support SWS makeup is not defined.
5. Since the MWR is a backup water source for the ESWS cooling tower, describe any negative SWS system performance issues with the cleanliness of the MWR water. Describe if the SWS cooling tower efficiency is affected by the change in water supply.

09.02.01-7

COL FSAR Table 1.8-203, Plant Interface Item 9.5, Requirements for location and arrangement of raw and sanitary water systems.

- Section is missing 9.2.6