

## TurkeyPointRAIsPEm Resource

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**From:** Comar, Manny  
**Sent:** Wednesday, September 26, 2012 3:55 PM  
**To:** TurkeyPointRAIsPEm Resource  
**Subject:** REQUEST FOR ADDITIONAL INFORMATION LTR. No: 65 RELATED TO SRP: 08.03  
STABILITY OF OFFSITE POWER SYSTEM FOR THE TURKEY POINT UNITS 6 AND 7  
COMBINED LICENSE APPLICATION  
**Attachments:** PTN-RAI-LTR-065.doc

**Hearing Identifier:** TurkeyPoint\_COL\_eRAIs  
**Email Number:** 77

**Mail Envelope Properties** (377CB97DD54F0F4FAAC7E9FD88BCA6D0B0FD42A0B5)

**Subject:** REQUEST FOR ADDITIONAL INFORMATION LTR. No: 65 RELATED TO SRP:  
08.03 STABILITY OF OFFSITE POWER SYSTEM FOR THE TURKEY POINT UNITS 6 AND 7  
COMBINED LICENSE APPLICATION

**Sent Date:** 9/26/2012 3:55:16 PM

**Received Date:** 9/26/2012 3:55:17 PM

**From:** Comar, Manny

**Created By:** Manny.Comar@nrc.gov

**Recipients:**

"TurkeyPointRAIsPEm Resource" <TurkeyPointRAIsPEm.Resource@nrc.gov>

Tracking Status: None

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**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

September 26, 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. 065 RELATED  
TO SRP SECTION.08.03 BRANCH TECHNICAL POSITION –STABILITY OF  
OFFSITE POWER SYSTEMS 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 45 days of the date of this letter. If you are unable to provide a response within 45 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](mailto:manny.comar@nrc.gov).

Sincerely,

**/RA/**

Manny Comar, Lead Project Manager  
AP1000 Licensing Branch 4  
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 Licensing Branch 4  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos. 52-040  
52-041  
eRAI Tracking No. 6750

Enclosure:  
Request for Additional Information

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NRO-002

OFFICE	RPAC/BC	LB4/PM	LB4/L-PM
NAME	JAnderson*	MComar*	MComar*
DATE	9/17/12	9/20/12	9/26/12

\*Approval captured electronically in the electronic RAI system.

**OFFICIAL RECORD COPY**

### **Request for Additional Information 065**

Issue Date: 9/26/2012

Application Title: Turkey Point Units 6 and 7

Operating Company: Florida Power and Light

Docket No. 52-040 and 52-041

Section: 08-03 Branch Technical Position - Stability of Offsite Power Systems

Application Section: Chapter 8

## **QUESTIONS**

08-1

To confirm that the proposed Florida Power and Light facility namely Turkey Point Units 6 and 7 will comply with 10 CFR 50.55a(h)(3), and Appendix A to 10 CFR Part 50, GDC 17, the NRC requests the Applicant to address the following two issues related to its electric power systems:

Given the requirements above, describe how the protection scheme for ES-1 and ES-2 buses is designed to detect and automatically respond to a single-phase open circuit condition or high impedance ground fault condition on a credited off-site power circuit or another power source. Also, include the following information:

- a. The sensitivity of protective devices to detect abnormal operating conditions and the basis for the protective device setpoint(s).
- b. The differences (if any) of the consequences of a loaded (i.e., ES bus normally aligned to offsite power transformer) or unloaded (e.g., ES buses normally aligned to unit auxiliary transformer) power source.
- c. If the design does not detect and automatically respond to all single-phase open circuit condition or high impedance ground fault conditions on a credited offsite power circuit or another power source, describe the consequences of such an event and the plant response.
- d. Describe the offsite power transformer (e.g., start-up, reserve, station auxiliary) winding and grounding configurations.

Briefly describe the operating configuration of the ES-1 and ES-2 buses at power (normal operating condition). Include the following details:

- a. Are the ES buses powered by offsite power sources? If so, explain what major loads are connected to the buses including their ratings.
- b. If the ES buses are not powered by offsite power sources, explain how surveillance tests are performed to verify that a single-phase open circuit condition or high impedance ground fault condition on an off-site power circuit is detected.
- c. Confirm that the operating configuration of the ES buses is consistent with the current

licensing basis. Describe any departures in offsite power source alignment to the ES buses from the original plant licensing.

d. Do the plant operating procedures, including off-normal operating procedures, specifically call for verification of the voltages on all three phases of the ES buses?

e. If a common or single offsite circuit is used to supply redundant ES buses, explain why a failure, such as a single-phase open circuit or high impedance ground fault condition, would not adversely affect redundant ES buses.