

TurkeyPointRAIsPEm Resource

From: Comar, Manny
Sent: Thursday, October 27, 2011 10:26 AM
To: TurkeyPointRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 043 RELATED TO SRP SECTION: 02.05.01 FOR THE TURKEY POINT UNITS 6 AND 7 COMBINED LICENSE APPLICATION
Attachments: PTN-RAI-LTR-043.doc

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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 043 RELATED TO
SRP SECTION: 02.05.01 FOR THE TURKEY POINT UNITS 6 AND 7 COMBINED LICENSE
APPLICATION

Sent Date: 10/27/2011 10:26:17 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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Recipients Received:

October 27, 2011

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. 043 RELATED
TO SRP SECTION 02.05.03 SURFACE FAULTING 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 and December 21, 2010, 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. 5875

Enclosure:
Request for Additional Information

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NAME	CCook*	MComar*	MComar*
DATE	10/11/11	10/12/11	10/20/11

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 5875

10/27/2011

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: 02.05.03 - Surface Faulting
Application Section: 2.5.3

QUESTIONS from Geosciences and Geotechnical Engineering Branch 2 (RGS2)

02.05.03-1

FSAR Section 2.5.3.8.2.1 "Potential Sources of Non-Tectonic, Geologic Deformation" passage, concludes that shallow depressions preserved at the surface, recognized in the site vicinity, are formed by gradual top-down, subaerial dissolution and that they are unlikely to have underlying cavity voids with potential for rapid collapse. The staff notes the presence of similar-sized and -shaped features on the sea floor of Biscayne Bay within 3 km to the east of Units 6 and 7 in publically available satellite images such as presented by Google Earth software. In order for the staff to completely understand the geologic setting of the TPNPP site and in support of 10 CFR 100.23 please address the following:

- a) Discuss how you evaluated the apparent semi-circular alignments of individual off-shore depressions. Discuss if the features may be consistent with incipient collapse into a larger underlying void, such as the cenotes of the Yucatan or the filled sink in nearby Key Largo Marine Sanctuary reported by Shinn et al., 1996, Ref 228.
- b) Discuss a possible timeframe when such features could have formed and whether they could have formed at similar elevations below Units 6 and 7.

02.05.03-2

FSAR Section 2.5.3.7, the "Designation of Zones of Quaternary Deformation in the Site Region" passage states that "Within the site region, seismicity and potential Quaternary tectonic deformation are restricted to the Cuba areal source zone, approximately 160 miles south of the site." The staff notes that assessment of other tectonic features outside the Cuba Areal zone were not included in the FSAR. In order for the staff to determine the adequacy of the regional geologic characterization and in support of 10 CFR 100.23 please address the following:

- a) Describe the presence of the Quaternary-active Walkers Cay fault, the Santaren Anticline, and the Straits of Florida normal faults within the site region but outside the Cuba Area Source Zone.
- b) Provide a figure, centered on the site region, which reflects all potential Quaternary active features in the site region.
- c) FSAR Section 2.5.3.7, states that the Cuba Area Source is 160 miles from the site. However FSAR Section 2.5.2.4.4.3.2.1, Cuba Areal Source Zone, states

that the source zone is 140 miles from the site (p 2.5.2-60, rev 2). Please clarify the inconsistency.

02.05.03-3

FSAR Section 2.5.3.2, “Geological Evidence, or Absence of Evidence, for Surface Deformation”, states that published geologic mapping at a range of scales show no bedrock faults mapped within the site vicinity (References 211, 213, 224, and 226). However, the staff note, that Figure 2.5.1-253 depicts a strike-slip fault within 25 miles of the site; this feature is also shown as a high-rank lineament on Figure 2.5.3-204.

In order for the staff to completely understand the geologic setting of the site and in support of 10 CFR 100.23 please discuss the high-rank lineament shown on Figure 2.5.3-204, and clarify it’s relationship with the strike-slip fault north of TPNPP shown on Figure 2.5.1-253. Include a discussion regarding how these figures are in agreement with the FSAR Section 2.5.3.2 statement that no faults have been mapped in the site vicinity. Finally, please clarify this apparent disagreement between the text and figures in the appropriate FSAR section(s).

02.05.03-4

FSAR Section 2.5.3.2, states in the “Geological Evidence, or Absence of Evidence, for Surface Deformation passage”, that “the second feature beyond the site vicinity investigated as part of geologic field reconnaissance includes possible faults identified from borehole data in the McGregor Isles area near Ft. Myers, 120 miles northwest of the site. Based on gamma-ray logs from several wells, Sproul et al. (Reference 230) interpret faulting of pre-upper Hawthorn (Miocene) strata. In spite of their interpretation that overlying upper Hawthorn and younger strata are unfaulted, Sproul et al. (Reference 230) suggest possible geomorphic indicators of faulting.” The staff notes that possible geomorphic indicators of faulting appear to be inconsistent with the finding that upper Hawthorn and younger strata are unfaulted at the McGregor Isles are.

In order for the staff to understand evidence for or against tectonic deformation in Florida Platform specific geology and in support of 10 CFR 100.23, please clarify the apparent inconsistent conclusions that Sproul et al (Reference 230) drew regarding these possible faults. Describe the geomorphic features that Sproul et al referred to and provide more details of your field reconnaissance examination of this area completed for this application.