FPL.

L-2012-233
10 CFR 52.3

May 23, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Response to NRC Request for Additional Information Letter No. 054
(eRAI 6340) - SRP Section 06.04 - Control Room Habitability System

Reference:

1. NRC Letter to FPL dated March 28, 2012, Request for Additional Information Letter No. 054 Related to SRP Section: 06.04 - Control Room Habitability System for the Turkey Point Nuclear Plant Units 6 and 7 Combined License Application

Florida Power & Light Company (FPL) provides, as attachment to this letter, its response to the Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI) 06.04-1 provided in Reference 1. The attachment identifies changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

If you have any questions, or need additional information, please contact me at 561-691-7490.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 23, 2012.

Sincerely,

William Maher
Senior Licensing Director – New Nuclear Projects

WDM/RFB

Attachment: FPL Response to NRC RAI No. 06.04-1 (eRAI 6340)

cc:
PTN 6 & 7 Project Manager, AP1000 Projects Branch 1, USNRC DNRL/NRO
Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant 3 & 4

D097
NRO

NRC RAI Letter No. PTN-RAI-LTR-054 Dated March 28, 2012

SRP Section: 6.4 – Control Room Habitability System Application Section

Questions for Radiation Protection & Accident Consequences Branch (RPAC)

NRC RAI Number: 06.04-1 (e-RAI 6340)

In STD SUP 6.4-1, the FSAR subsection 6.4.4.1 dual unit analysis discusses the potential dose impact to an AP1000 unit's control room due to a design basis accident with radiological releases at an adjacent AP1000 unit on the site. The Turkey Point site also includes two currently operating nuclear units, Turkey Point Units 3 and 4, which are located adjacent to the Turkey Point Units 6 and 7 plant area. Discuss the impact of an accident with radiological releases at any of the adjacent Turkey Point nuclear units on the control room radiological habitability at Units 6 and 7.

FPL RESPONSE:

The effect on the control rooms of Turkey Point Units 6 and 7 of a postulated design basis accident (DBA) in Units 3 or 4 was evaluated based on a LOCA in Units 3 or 4, at uprated conditions, using the releases produced from the alternate source term (AST) methodology (FPL 2010). The dose at the Units 6 and 7 control rooms were determined considering the time-dependent source terms, the atmospheric dispersion factors (*X*/Q values for the 2005-2009 meteorological dataset) (FPL 2009), the assumed occupancy rates, and the operator breathing rates.

Based on the ARCON96 computer program *X*/Q analysis, a composite set of limiting *X*/Q values was developed using the meteorological dataset. Doses from immersion/inhalation and shine doses were calculated using the RADTRAD-NAI computer program. For this analysis, the receptor was assumed to be outside the control rooms at the locations of the air intakes. This assumption is conservative in that it does not account for any dose reduction due to control room filtration or shielding. For the entire duration of the event (720 hours), the occupancy factor for the control room was assumed to be 1.0 and the receptor was assumed to be breathing at 3.5E-04 m^3/sec. The calculated total dose, which included the containment leak and emergency core cooling system leak inhalation/immersion and containment shine doses, was calculated to be 1.0 rem TEDE, which is less than the GDC 19 limits.

This response is PLANT SPECIFIC.

References:

FPL 2010. Revised Radiological Dose Consequences for Alternative Source Term and Conforming License Amendment Request 196. FPL Letter Number L-2010-137. ADAMS Accession No. ML 101800222, June 25, 2010.

FPL 2009. Transmittal of Meteorological Data CD Supporting Alternative Source Term and Conforming License Amendment Request 196 - Supplemental Information. FPL Letter Number L-2009-163. Accession No. ML 100680718, July 21, 2009.

ASSOCIATED COLA REVISIONS:

The following paragraph will be added to the end of FSAR Subsection 6.4.4.1 in a future revision to the COLA (LMA PTN SUP 6.4-2 added):

> **The radiological dose(s) at Units 6 and 7 due to a Design Basis Accident (DBA) from Units 3 and 4 is discussed in Subsection 2.2.3.1.6.1.**

ASSOCIATED ENCLOSURES:

None