



L-2013-243  
10 CFR 52.3

August 16, 2013

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. 78  
(eRAI 7129) - Related to SRP Section 10.04.05 Circulating Water Systems

References:

1. NRC Letter to FPL dated July 23, 2013, Request for Additional Information Letter No. 078 Related to SRP Section 10.04.05 Circulating Water Systems for the Turkey Point Nuclear Plant Units 6 and 7 Combined License Application
2. FPL Letter L-2013-170 to NRC dated June 20, 2013, Voluntary Submittal of Proposed Final Safety Analysis Report - Changes in Section 10.04.05 - Circulating Water System

Florida Power & Light Company (FPL) provides, as an attachment to this letter, its response to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) 10.04.05-2 provided in the referenced letter. 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). Reference 2 provided a voluntary submittal that described revisions to FSAR Subsection 10.4.5.2.2.

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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 August 16, 2013.

Sincerely,

A handwritten signature in black ink, appearing to read 'WDM', with a long horizontal flourish extending to the right.

William Maher  
Senior Licensing Director – New Nuclear Projects

WDM/ETC

Attachment: FPL Response to NRC RAI No.10.04.05-2 (eRAI 7129)

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

**NRC RAI Letter No. PTN-RAI-LTR-078 Dated July 23, 2013**

**SRP Section: 10.04.05 – Circulating Water Systems**

**NRC RAI Number: 10.04.05-2 (eRAI 7129)**

In FSAR section 10.4.5.2.2, PTN COL 10.4-1 describes that piping is routed from each waterbox to the condenser water box drain pump, which in turn pumps the water back to the cooling tower basin. GDC 60 requires plants to be designed to control the release of radioactive materials in gaseous and liquid effluents. To comply with GDC 60, the design and routing of the waterbox drains must conform to GDC 60, so that it prevents an inadvertent transfer of contaminated fluids to the noncontaminated cooling tower basin. Based on the information provided in the FSAR, the staff is unable to reach conclusion regarding compliance to GDC 60, because it cannot verify that the effluents routed to the cooling tower basin through the waterbox drains will be monitored for radiation prior to disposition. Therefore, the staff requests the applicant to provide additional information verifying that radioactive sources, such as the waterbox drains, that will drain downstream to the cooling tower basin are appropriately monitored, and if contamination is detected that the effluent is appropriately routed to the radioactive waste system.

**FPL RESPONSE:**

The RAI makes reference to FSAR section 10.4.5.2.2, PTN COL 10.4-1. On June 20, 2013, FPL provided a voluntary submittal that will revise that section of the FSAR in a future COLA revision. Per the submittal, the revised COLA text will be:

“Condenser water box drain lines allow the condenser to be drained to the turbine building sumps. Condenser water box drain lines can also be aligned to the cooling tower basin. Administrative controls prevent the release of circulating water radioactivity from a condenser water box to the cooling tower basin. Each water box contains drain valves and vents so that a water box can be drained individually. Piping is sized to support an adequate drain down in the event of emergency maintenance.”

The standard design features are described in the Design Control Document, Revision 19:

Section 10.4.1.3, Safety Evaluation

“During normal operation and shutdown, the main condenser has no significant inventory of radioactive contaminants.”

Section 10.4.5.2.3, System Operation

“Passage of condensate from the main condenser into the circulating water system through a condenser tube leak is not possible during power generation operation, since the circulating water system operates at a greater pressure than the condenser.”

Section 11.5.2.3.3, Liquid and Gaseous Effluent Monitors, Turbine Island Vent Discharge Radiation Monitor

“The turbine island vent discharge radiation monitor (TDS-JE-RE001A/B) measures the concentration of radioactive gases in the steam and non-condensable gases that are discharged by the condenser vacuum pumps and the gland seal steam condenser. This measurement provides early indication of leakage between the primary and secondary sides of the steam generators. The monitor provides an alarm in the main control room if concentrations exceed a predetermined setpoint.”

Section 9.2.9.5, Waste Water System, Instrumentation Applications

“A radiation monitor located on the turbine building sump common discharge piping initiates an alarm and trips the turbine building sump pumps when radioactivity above a preset high level point is detected in the waste stream.”

The standard design features of the turbine building sump system (WWS) and additional administrative controls provided in the voluntary submittal, e.g. grab samples, will prevent an inadvertent transfer of contaminated fluids from the condenser water box to the noncontaminated cooling tower basin. If radioactivity is detected, the condenser water box drains will be appropriately routed to the radioactive waste system via the turbine building sumps.

This response is PLANT SPECIFIC.

**References:**

None

**ASSOCIATED COLA REVISIONS:**

No COLA changes have been identified as a result of this response.

**ASSOCIATED ENCLOSURES:**

None