



Florida Power and Light Company, 9760 SW 344<sup>th</sup> St., Homestead, FL 33035

L-2011-492  
10 CFR 50.36

NOV 23 2011

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

Re: Turkey Point Unit 3  
Docket No. 50-250  
Response to Request for Additional Information Regarding the  
2010 Steam Generator Tube Inspection

By letter L-2011-119, dated April 19, 2011, Florida Power and Light Company (FPL) submitted the Turkey Point Unit 3 steam generator tube inspection 180 day report pursuant to Technical Specification 6.8.4.j, Steam Generator (SG) Program, documenting the results of the Turkey Point Unit 3 Refueling Outage 25 steam generator tube inspections performed between October 7, 2010 and October 12, 2010.

On October 27, 2011, the NRC issued a request for additional information regarding the referenced report. The attachment documents FPL's response to the request for additional information.

Should there be any questions, please contact Robert J. Tomonto, Licensing Manager, at (305) 246-7327.

Sincerely,

Michael Kiley  
Vice President  
Turkey Point Nuclear Plant

Attachment

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

A001  
NRC

**Response to NRC Request for Additional Information  
2010 Steam Generator (SG) Tube Inspections  
Turkey Point Nuclear Power Station, Unit 3  
Docket Number 50-250**

**NRC RAI # 1**

Confirm that the tube in Row 32, Column 47 was not expanded and that the tube in Row 32, Column 14 was expanded.

**FPL Response:** The tube identified as R32 C47 in SG A was not expanded, and was plugged in 2010. The tube identified as R32 C14 in SG A is a normal (expanded) tube, and remains in service.

**NRC RAI # 2**

Discuss whether the tubes in Row 6, Column 45 and Row 7, Column 45 were stabilized.

**FPL Response:** Tubes R6 C45 and R7 C45 in SG B were plugged, but not stabilized. Both of these tubes had shallow wear indications near the upper edge of the 2nd tube support plate on the cold leg side (02C). The indications were due to a suspected foreign object, however, the presence of a foreign object at the 02C location could not be confirmed visually because that location in the bundle is inaccessible for inspection. These two tubes were preventatively removed from service due to the lack of a qualified sizing technique for wear coincident with a possible foreign object. These tubes were plugged without the need for stabilization for the following reasons:

- A historical review of past bobbin data indicated that the suspected foreign object was present since at least 1990. The wear depths at 2010 inspection from the +Point™ exam were only 8% through-wall (TW) for R6 C45 and 14% TW for R7 C45.
- The projected wear based on the historical data (indication depth versus time) is not significant. The observed multi-cycle wear rate for these two tubes was on the order of 1% TW per effective full power year (EFPY) or less.
- The direction of flow in this region of the bundle is primarily vertical with minimal cross-flow conditions. Low cross-flow velocities at this location mitigate the potential for high wear rates, which would be necessary to cause a tube sever event.
- The tubes surrounding R6 C45 and R7 C45 at the 02C location will be examined during the refueling outage for Cycle 27 in 2013 and during future inspections to monitor for degradation and for migration of the suspected foreign object. This required action has been documented in the plant's corrective action program.

**NRC RAI # 3**

Discuss why the tube in Row 33, Column 44 was de-plugged, stabilized, and subsequently re-plugged.

**FPL Response:** Tube R33 C44 in SG A was de-plugged, stabilized, and re-plugged based on Westinghouse's evaluation of prior plugged tubes for 60 years of service. This would mitigate the possibility of initiating tube-to-tube contact for extended lifetime operation.

**NRC RAI # 4**

The basis for the conclusion in Item J is not clear since the preceding information is summarizing the condition monitoring assessment and not the operational assessment (which is what is addressed in the conclusion). Clarify the conclusion in Item J (i.e., was the intent of the sentence to indicate that neither the normal operating or accident induced leakage limits were exceeded in the cycle preceding the 2010 inspections).

**FPL Response:** Yes, that was the intent. There was no operational leakage detected during Cycle 24 preceding the 2010 inspection, therefore, normal operating leakage limits were satisfied. Calculations for accident-induced leakage were performed for Cycle 24 as part of condition monitoring, and projected for the future operation for Cycles 25 and 26 as part of the end of cycle 24 operational assessment. These calculations concluded that accident-induced leakage limits were not exceeded for Cycle 24 (the cycle preceding the 2010 inspection), and the projected accident-induced leakage for the limiting SG at the next tube examination currently planned for October 2013 will meet the limit requirements.