



December 31, 2009
L-2009-295

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

Re: Turkey Point Unit 3
Docket No. 50-250
Spent Fuel Pool Boraflex Actions

References:

1. Letter from Michael Kiley (FPL) to USNRC, "Implementation Date Change for License Amendments 234 and 229," L-2009-200, September 1, 2009.
2. Letter from Michael Kiley (FPL) to USNRC, "Withdrawal of License Amendment Request No. 201 for Turkey Point Unit 3," L-2009-260, November 9, 2009.
3. Letter from Michael Kiley (FPL) to USNRC, "License Amendment No. 234 for Turkey Point Unit 3, Notice of Inability to Implement," L-2009-268, November 13, 2009.
4. Letter from T. F. Plunkett (FPL) to USNRC, "Soluble Boron Credit for Spent Fuel Pool and Fresh Fuel Rack Criticality Analyses Fuel Rack Surveillance Testing 2001 Report and Commitment Change for Fuel Rack Surveillance Testing Frequency," L-2001-115, dated May 16, 2001.
5. Letter from T. O. Jones (FPL) to USNRC, "License Amendment Request No. 178, Spent Fuel Pool Boraflex Remedy," L-2005-247, dated January 27, 2006.
6. Letter from B. L. Mozafari (USNRC) to J. A. Stall (FPL), "Turkey Point Plant Units 3 and 4 - Issuance of Amendments Regarding Spent Fuel Boraflex Remedy (TAC No. MC9740 and MC9741)," July 17, 2007.

Florida Power and Light Company (FPL) submitted an application for license amendment in Reference 1 to change the implementation date of License Amendment Nos. 234 and 229 for Turkey Point Units 3 and 4, respectively. FPL withdrew the Reference 1 request for Unit 3 by Reference 2. In Reference 3, FPL informed the NRC of the inability to implement Unit 3 Amendment 234 by the specified implementation date. The purpose of this letter is to inform the NRC of FPL actions taken or to be taken to address the status of the Boraflex[®] neutron absorber in the Unit 3 Spent Fuel Pool (SFP) until Amendment 234 can be implemented.

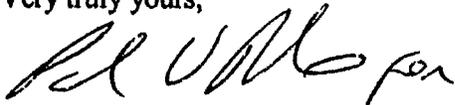
In 2001 FPL identified (Reference 4), through Boron-10 Areal Density Gauge for Assessing Racks (BADGER) testing, an instance of Boraflex panel degradation in the Unit 3 SFP that

exceeded an assumption regarding the maximum degradation of Boron-10 areal density in the criticality analysis for a Region II storage rack. Upon discovery, FPL performed criticality analyses to ascertain measures to compensate for the reduced efficacy of Boraflex. In addition, FPL established administrative controls and instituted a predictive tool (EPRI RACKLIFE) to predict Boraflex degradation in both the Unit 3 and 4 SFPs to ensure that criticality limits in the Technical Specifications were met.

FPL identified a solution to Boraflex degradation involving the use of Metamic[®] inserts, rod control cluster assemblies, or empty storage cells, as appropriate, and requested NRC approval in Reference 5. The NRC approved this request in Reference 6. FPL's inability to implement Amendment 234 for Unit 3 within the specified time resulted in the submission of References 1, 2 and 3. FPL intends to complete the implementation of Amendment 234 no later than September 30, 2012. In the interim, the actions outlined in the attachment to this letter that FPL has taken or will take regarding protection from criticality provide additional safety margin beyond that already afforded by FPL's historical treatment of Boraflex degradation.

If you have any questions or require additional information, please contact Robert Tomonto at 305-246-7327.

Very truly yours,



Michael Kiley
Vice President
Turkey Point Nuclear Plant

Attachment: Spent Fuel Pool Boraflex Actions

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

Attachment

FPL has implemented the following measure which will remain in place until Amendment No. 234 is implemented or until the NRC approves the license amendment request discussed in Item (a) below.

The Unit 3 Spent Fuel Pool (SFP) boron concentration was increased from 1950 ppm to 2100 ppm and will be maintained at no less than 2100 ppm.

FPL will implement the following measures which will remain in place until Amendment No. 234 is implemented or until the NRC approves the license amendment request discussed in Item (a) below.

- (a) FPL will submit a license amendment request updating the Unit 3 SFP licensing basis by February 28, 2010.
- (b) FPL will increase the current MWD/MTU burnup requirements for SFP Region II storage by 10% for any storage cells that rely on Boraflex as a neutron absorber and will configure the SFP to comply with these requirements or insert an RCCA in any fuel assembly not in compliance with these requirements. These measures will be completed by February 28, 2010.
- (c) FPL will configure Region I of the Unit 3 SFP to comply with Amendment 234 by June 19, 2010.
- (d) FPL will configure one storage rack in Region II to comply with Amendment 234 by June 19, 2010. Additional storage racks will be configured to comply with Amendment 234 as Metamic inserts become available.
- (e) For the remaining Region II SFP storage racks, FPL will continue to administratively restrict the use of storage cells that have Boraflex panels whose B-10 areal density have degraded below 0.006 gm/cm^2 . These administrative controls prohibit the storage of a fuel assembly in any SFP storage cell that has Boraflex panel dissolution predicted to be beyond the assumption in the licensing basis criticality analysis unless an alternate storage configuration has been demonstrated to compensate for the loss of Boraflex and satisfy Technical Specification requirements for K_{eff} . These alternate storage configurations use RCCAs or available Metamic inserts as substitute neutron poisons or use empty storage cells.
- (f) FPL will load additional fuel assemblies into the Unit 3 SFP only into storage cells for which the presence of Boraflex is not credited.
- (g) FPL will revise the Turkey Point UFSAR by March 15, 2010 to address measures that compensate for the loss of Boraflex.