



FPL

MAR 15 2010

L-2010-048
10 CFR 50.90

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

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Response to Request for Additional Information (RAI) Regarding Alternative
Source Term (AST) License Amendment Request (LAR) 196 (TAC NOS.
ME1624 and ME1625)

References:

- (1) W. Jefferson (FPL) to U.S. Nuclear Regulatory Commission (L-2009-133),
"License Amendment Request 196: Alternative Source Term and Conforming
Amendment," Accession No. ML092050277, June 25, 2009.
- (2) J. Paige (NRC) to M. Nazar, "Turkey Point Units 3 and 4 – Request for Additional
Information Regarding Request to Adopt Alternate Source Term (TAC Nos.
ME1624 and ME1625)," Accession No. ML100560388, February 25, 2010

By letter L-2009-133 dated June 25, 2009 [Reference 1], Florida Power and Light (FPL) requested to amend Facility Operating Licenses DPR-31 and DPR-41 and revise the Turkey Point Units 3 and 4 Technical Specifications. The proposed amendments revise the Technical Specifications to adopt the alternative source term (AST) as allowed in 10 CFR 50.67.

Additional information was requested by the NRC staff by letter dated February 25, 2010 [Reference 2]. The attachment to this letter provides the FPL response to the questions from the NRC staff.

In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the State Designee of Florida.

This submittal does not alter the significant hazards consideration or the environmental assessment previously submitted by FPL letter L-2009-133 [Reference 1].

This letter contains no new commitments and no revisions to existing commitments.

Should you have any questions regarding this submittal, please contact Mr. Robert J. Tomonto, Licensing Manager, at (305) 246-7327.

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

Executed on March 15, 2010.

Very truly yours,

Michael Kiley
Site Vice President
Turkey Point Nuclear Plant

A001
NRK

Attachment

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Resident Inspector, Turkey Point Nuclear Plant
Mr. W. A. Passetti, Florida Department of Health

Attachment

Response to 2/25/2010 RAI Regarding Request to Adopt AST

Response to Request for Additional Information

The following information is provided by Florida Power & Light (FPL) in response to the Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI). This information was requested to support License Amendment Request (LAR) 196, "Alternative Source Term (AST) and Conforming Amendment," submitted by FPL letter L-2009-133 dated June 25, 2009 [Reference 1].

In a letter dated February 25, 2010 [Reference 2], the NRC staff requested additional information regarding FPL's request to adopt the Alternative Source Term. The questions consisted of three (3) RAIs from the NRC Electrical Engineering Branch on AST LAR 196. Each of these questions is documented below with the applicable FPL response.

- 1. Describe how loads being added to the Turkey Point emergency diesel generators (EDGs) (if applicable), whether automatically (sequencer) or manually (per operating procedure), affect the capability and capacity of the EDGs (e.g., describe the impact of the proposed change on the EDG ratings) to support this LAR. Describe any changes to the EDG surveillance testing and/or how the surveillance testing demonstrates the EDG capability to supply the necessary accident loading. In addition (if load has been added), describe EDG design load margin and how that design margin is managed.***

In the AST LAR, only the proposed modification to delete the current Emergency Containment Filtration (ECF) System affects the Emergency Diesel Generator (EDG) loading. Deletion of the ECF System will remove all three ECF fans from operation resulting in the removal of one dedicated ECF fan and one swing ECF fan from each EDG load sequencer. This will result in an approximately 110 kw reduction in each EDG load. Therefore, the available margin on the EDGs will be increased. No changes to the EDG surveillance testing are proposed.

- 2. Provide a list and description of components being added to your 10 CFR 50.49 program due to this LAR (if applicable). Confirm that these components are qualified for the environmental conditions they are expected to be exposed to.***

No new electrical/instrumentation and control (I&C) equipment is being added to the 10 CFR 50.49 program as a result of the AST implementation since no new electrical/I&C equipment is being added or credited in the AST LAR.

- 3. The licensee proposed utilizing sodium tetraborate decahydrate stored in stainless steel baskets inside containment to control pH at 7.0 or higher, crediting Containment Spray for post-LOCA iodine removal and not crediting the Containment Filtration System in the AST dose consequences analyses. Describe the impact of the above proposed actions on environmental conditions and any impact on equipment qualification.***

The utilization of the new passive system of sodium tetraborate decahydrate (NaTB) baskets to control post-LOCA (Loss-of-Coolant Accident) sump pH will continue to assure the appropriate sump pH is maintained in the post-LOCA environment during the sump recirculation phase consistent with and bounded by the current Equipment Qualification (EQ) pH profiles. As stated in Enclosure 1 of LAR 196 [Reference 1], chloride induced stress corrosion cracking (SCC) of austenitic stainless steel components is reduced if the pH of the sump is maintained greater than 7.0. Short term exposure of less than one hour to a pH less than 7.0 prior to the onset of the recirculation phase will not result in significant SCC, but long term exposure of several days during the recirculation phase may result in significant damage. NUREG-0800,

Standard Review Plan Section 6.1.1.1 (Branch Technical Position MTEB 6-1) (Reference 3) recommends that the long term containment sump pH should be maintained between 7.0 to 9.5. PTN EQ Documentation Packages establish the minimum (7.0) and maximum (8.5) pH limits assumed for equipment qualification. The pH analysis shows that the pH will be adjusted above 7.0 very early into the event, well before the recommended time to prevent SCC of stainless steel components and will be maintained within the specified EQ limits. Substitution of Containment Spray (CS) for ECF for the post-LOCA iodine removal function will not impact environmental conditions within containment or impact any existing environmental qualification requirements.

This information supports implementation of the Alternative Source Term (AST) LAR.

References

1. W. Jefferson (FPL) to U.S. Nuclear Regulatory Commission (L-2009-133), "License Amendment Request 196: Alternative Source Term and Conforming Amendment," Accession No. ML092050277, June 25, 2009.
2. J. Paige (NRC) to M. Nazar, "Turkey Point Units 3 and 4 – Request for Additional Information Regarding Request to Adopt the Alternative Source Term (TAC Nos. ME1624 and ME1625)," Accession No. ML100560388, February 25, 2010.
3. NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, Section 6.1.1, Engineered Safety Features Materials.