FPL.

AUG 1 1 2011
L-2011-277
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
Confirmatory Dose Assessment for Control Room Emergency Ventilation System Air Intake Modification to Satisfy Operating License Conditions 3.H.1 for DPR-31 and 3.I.1 for DPR-41

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) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-137), "Revised Radiological Dose Consequences for Alternative Source Term and Conforming License Amendment Request 196," Accession No. ML101800222, June 25, 2010.

(3) J. Paige (NRC) to M. Nazar (FPL), "Turkey Point Units 3 and 4 – Issuance of Amendments Regarding Alternative Source Term (TAC NOS. ME1624 and ME1625)," Accession No. ML110800666, June 23, 2011.

By letter L-2009-133 dated June 25, 2009 [Reference 1], the Florida Power and Light Company (FPL) requested to amend Facility Operating Licenses DPR-31 and DPR-41 and revise the Turkey Point Nuclear Plant (PTN) Units 3 and 4 Technical Specifications (TS). The proposed amendments were to revise the TS to adopt the alternative source term (AST) as allowed in 10 CFR 50.67. On June 25, 2010, FPL submitted a supplement to AST License Amendment Request (LAR) No. 196 that revised the radiological dose consequence analyses due to required changes in the supporting meteorological data for 2005-2009 [Reference 2]. The revised design basis radiological dose consequences analyses included Loss-of-Coolant Accident (LOCA), Main Steam Line Break (MSLB), Steam Generator Tube Rupture (SGTR), Locked-Rotor, Rod Cluster Control Assembly (RCCA) Ejection, Fuel Handling Accident (FHA), Waste Gas Decay Tank (WGDT) Rupture, and Spent Fuel Cask Drop.

On June 23, 2011, the NRC approved LAR No. 196, Alternative Source Term (AST) and Conforming Amendment, and issued Amendments 244 and 240 [Reference 3]. Per Operating License Condition 3.H.1 for DPR-31 and 3.I.1 for DPR-41:

> *"FPL will provide to the NRC a confirmatory assessment which demonstrates that the requirements of 10 CFR 50 Appendix A, GDC 19 will be met. The confirmatory assessment will follow the methodology in Amendment 244/240 [alternative source term amendment] including the methods used for the establishment of the atmospheric dispersion factors (X/Q values)."*

The required confirmatory dose assessment is provided in the Attachment to this letter.

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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 submittal 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 August 11, 2011.

Very truly yours,

Michael Kiley
Site Vice President
Turkey Point Nuclear Plant

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

Turkey Point Units 3 and 4

CONFIRMATORY DOSE ASSESSMENT FOR CONTROL ROOM EMERGENCY VENTILATION SYSTEM AIR INTAKE MODIFICATION TO SATISFY OPERATING LICENSE CONDITIONS 3.H.1 FOR DPR-31 AND 3.I.1 FOR DPR-41

ATTACHMENT

Response to Request for Additional Information

The following information is provided by Florida Power & Light (FPL) to the U. S. Nuclear Regulatory Commission (NRC) in accordance with the requirements of Turkey Point Nuclear Plant (PTN) Units 3 and 4 Operating License Conditions 3.H.1 and 3.I.1 of DPR-31 and DPR-41, respectively. This information is required to support the implementation of License Amendment Nos. 244 and 240 on Alternative Source Term as issued by the NRC on June 23, 2011 [Reference 1].

By letter L-2009-133 dated June 25, 2009 [Reference 2], FPL requested to amend Facility Operating Licenses DPR-31 and DPR-41 and revise the PTN Technical Specifications (TS). The proposed amendments were to revise the TS to adopt the AST as allowed in 10 CFR 50.67. On June 25, 2010, FPL submitted a supplement to AST LAR No. 196 that revised the radiological dose consequence analyses due to required changes in the supporting meteorological data for 2005-2009 [Reference 3]. The revised design basis radiological dose consequences analyses included the Loss-of-Coolant Accident (LOCA), Main Steam Line Break (MSLB), Steam Generator Tube Rupture (SGTR), Locked-Rotor, Rod Cluster Control Assembly (RCCA) Ejection, Fuel Handling Accident (FHA), Waste Gas Decay Tank (WGDT) Rupture, and Spent Fuel Cask Drop.

On June 23, 2011, the NRC approved AST LAR No. 196 and issued Amendments 244 and 240 [Reference 1]. These amendments established three license conditions for each unit associated with the plant modifications required to implement the alternative source term including the relocation of the control room emergency ventilation system (CREVS) emergency air intakes, the installation of ten stainless steel baskets containing NaTB in each containment, and the installation of a CREVS compensatory filtration unit. Per Operating License Condition 3.H.1 for DPR-31 and 3.I.1 for DPR-41:

> *"FPL will provide to the NRC a confirmatory assessment which demonstrates that the requirements of 10 CFR 50 Appendix A, GDC 19 will be met. The confirmatory assessment will follow the methodology in Amendment 244/240 [alternative source term amendment] including the methods used for the establishment of the atmospheric dispersion factors (X/Q values)."*

During the relocation of the control room emergency air intakes construction interferences were encountered that resulted in changes to the original intended design locations for the Southeast and Northeast air intake structures. These changes in the location of the air intake structures caused recalculation of the onsite atmospheric dispersion factors (X/Qs) and design basis accident dose consequences. The net impact of these changes on the radiological dose consequences was a small increase in the integrated control room dose except in the cases of LOCA, FHA, and RCCA Ejection – Containment Release where the dose consequences decreased.

As indicated in Figure 1, the final location of the Southeast air intake was moved some 8 ft West and 59 ft further South of its originally indicated position to the Southeast corner of the access and dress facility at Elevation 24 ft. The final location of the Northeast air intake was moved some 84 ft West and 64 ft further North of its originally indicated position to the Northeast corner of the Unit 4 emergency diesel generator building at Elevation 38 ft. Although the Southeast air intake is still considered limiting for the dose analyses, the actual differences in X/Q values for the two air intakes is now much closer. The resulting onsite X/Qs used in the accident analyses are provided in Table 1. The revised integrated 30 day control room radiological doses and the resulting dose differences from those reported in Reference 3 are provided in Table 2. The methodology used in the confirmatory dose assessment is the same as that previously used for AST Amendments 244 and 240 including the methods used for the establishment of the X/Qs. The integrated control room radiological doses continue to be well within the limits established in 10 CFR 50 Appendix A GDC-19.

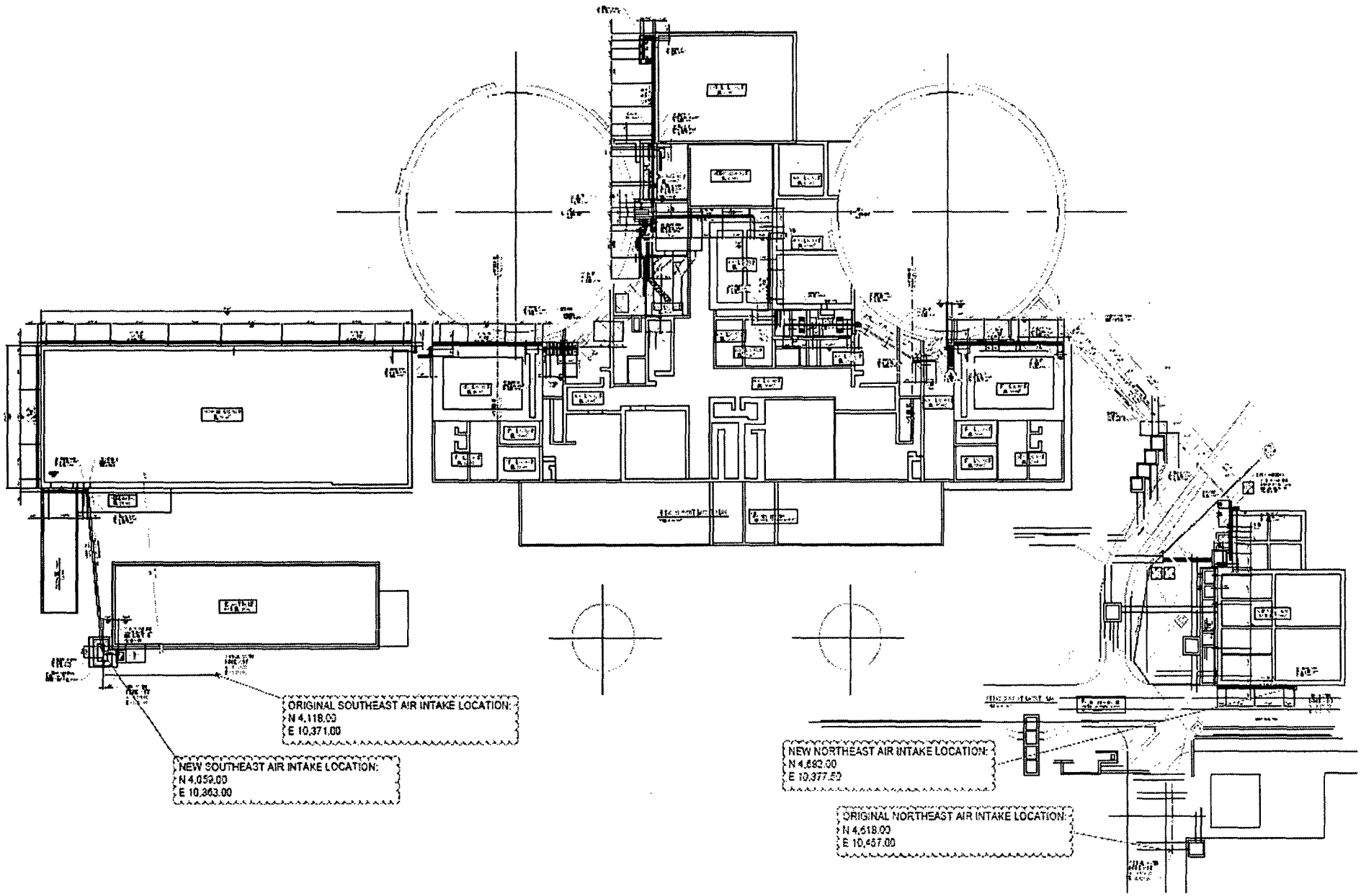

Figure 1: Routing and Location of CREVS Air Intakes

Table 1: Onsite Atmospheric Dispersion (X/Q) Factors for Analysis Events

Release-Receptor Pair	Release Point	Receptor Point	0-2 hour X/Q (sec/m^3)	2-8 hour X/Q (sec/m^3)	8-24 hour X/Q (sec/m^3)	1-4 days X/Q (sec/m^3)	4-30 days X/Q (sec/m^3)
A	Plant stack	Normal intake	1.86E-03				
B	Plant stack	SE Emergency intake	7.52E-04	6.22E-04	2.32E-04	1.80E-04	1.34E-04
C	Unit 4 RWST	Normal intake	9.87E-04				
D	Unit 4 RWST	SE Emergency intake	1.21E-03	9.53E-04	4.25E-04	2.98E-04	2.31E-04
E	Unit 4 Closest MSSV (RV-4-1402)	Normal intake	1.37E-02				
F	Unit 4 Closest MSSV (RV-4-1413)	SE Emergency intake	6.94E-04	4.74E-04	1.82E-04	1.43E-04	1.02E-04
G	Unit 4 Main Steam Line Closest Point	Normal intake	1.59E-02				
H	Unit 4 Main Steam Line Closest Point	SE Emergency intake	6.82E-04	4.99E-04	1.95E-04	1.51E-04	1.11E-04
I	Unit 4 Personnel Hatch	Normal intake	1.04E-02				
J	Unit 4 Emergency Escape Lock	SE Emergency intake	1.10E-03	8.61E-04	3.15E-04	2.59E-04	2.03E-04
K	Unit 4 Spent Fuel Building (NW corner)	Normal intake	2.36E-03				
L_1	Unit 4 Spent Fuel Building (SE corner)	SE Emergency intake		1.61E-03		4.90E-04	3.78E-04
L_2	Unit 3 Spent Fuel Building (NE corner)	NE Emergency intake	2.43E-03		6.87E-04		
M	Unit 4 SJAE	Normal intake	5.81E-02				
N	Unit 4 Westernmost Electrical Penetration	Normal intake	1.15E-02				
O	Aux Building Vent Supply (V-10)	Normal intake	2.84E-03	2.58E-03	1.28E-03	1.19E-03	8.45E-04

***Table 1 revises the information previously provided in Table 1.8.1-2 of L-2010-137 Attachment, "AST Licensing Technical Report NAI-1396-045 Revision 2 [Reference 3].**

Table 2: Summary of Radiological Consequences (rem TEDE)

Accident	CR[(1)(2)]
Loss of Coolant Accident	**3.64 (-0.83Δ)**
MSLB Pre-Accident Iodine Spike	**1.59**
SGTR Pre-Accident Iodine Spike	**3.10**
MSLB Concurrent Iodine Spike	**1.60**
SGTR Concurrent Iodine Spike	**1.28**
Locked Rotor - (CR Auto-Isolation)	**1.29 (+0.05Δ)**
Locked Rotor - (CR Manual Isolation)	**1.25**
FHA – Containment Release	**1.22 (-0.11Δ)**
FHA – Fuel Bldg Release	**3.70 (-0.22Δ)**
Spent Fuel Cask Drop[3]	**N/A**
RCCA Ejection – Containment	**2.07 (-0.22Δ)**
RCCA Ejection – Secondary Release (CR Auto-Isolation)	**1.18 (+0.05Δ)**
RCCA Ejection – Secondary Release (CR Manual Isolation)	**3.44 (+0.03Δ)**
WGDT Rupture	**0.34 (+0.01Δ)**
Acceptance Criteria	**≤ 5**

Notes:
1. Integrated 30-day dose.
2. Parenthetical values are the dose difference from those reported in Reference 3.
3. Spent Fuel Cask Drop no longer considered credible event (ISFSI Amendments 243 and 239).

References

(1) J. Paige (NRC) to M. Nazar (FPL), "Turkey Point Units 3 and 4 – Issuance of Amendments Regarding Alternative Source Term (TAC NOS. ME1624 and ME1625)," Accession No. ML110800666, June 23, 2011.

(2) 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.

(3) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-137), "Revised Radiological Dose Consequences for Alternative Source Term and Conforming License Amendment Request 196," Accession No. ML101800220, June 25, 2010.