



L-2011-170  
10 CFR 50.90  
10 CFR 2.390

**MAY 19 2011**

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 NRC Request for Additional Information Regarding  
Extended Power Uprate License Amendment Request No. 205 and Nuclear  
Performance and Code Review Issues

References:

- (1) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-113), "License Amendment Request No. 205: Extended Power Uprate (EPU)," (TAC Nos. ME4907 and ME4908), Accession No. ML103560169, October 21, 2010.
- (2) Email from J. Paige (NRC) to T. Abbatiello (FPL), "Turkey Point EPU – Nuclear Performance and Code Review (SNPB) Request for Additional Information - Round 1.2 (Part 2.)," April 19, 2011.

By letter L-2010-113 dated October 21, 2010 [Reference 1], Florida Power and Light Company (FPL) requested to amend Renewed Facility Operating Licenses DPR-31 and DPR-41 and revise the Turkey Point Units 3 and 4 Technical Specifications (TS). The proposed amendment will increase each unit's licensed core power level from 2300 megawatts thermal (MWt) to 2644 MWt and revise the Renewed Facility Operating Licenses and TS to support operation at this increased core thermal power level. This represents an approximate increase of 15% and is therefore considered an extended power uprate (EPU).

By email from the U.S. Nuclear Regulatory Commission (NRC) Project Manager (PM) dated April 19, 2011 [Reference 2], additional information regarding Nuclear Performance and Code Review issues was requested by the NRC staff in the Nuclear Performance and Code Review Branch (SNPB) to support their review of the EPU License Amendment Request (LAR). The Request for Additional Information (RAI) consisted of five questions regarding detailed technical input and design information related to the boron precipitation analyses. The RAI questions and the FPL responses are documented in Attachment 1 (non-proprietary) and Attachment 2 (proprietary) to this letter.

Attachment 2 contains information proprietary to Westinghouse Electric Company, LLC (Westinghouse). An affidavit signed by Westinghouse, as owner of the information, sets forth the basis for which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of §2.390 of the Commission's regulations. Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR 2.390 of the Commission's regulations. Attachment 1 contains a non-proprietary version of the RAI responses.

A001  
NRC

Correspondence with respect to the copyright or proprietary aspects of items in response to RAI questions 1.1 and 1.2 in Attachment 2 of this letter or the supporting Westinghouse affidavit should reference CAW-11-3163 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, PA 16066.

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 environmental assessment previously submitted by FPL letter L-2010-113 [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 May 19, 2011.

Very truly yours,



Michael Kiley  
Site Vice President  
Turkey Point Nuclear Plant

#### Attachments

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 (without Attachment 2)

Turkey Point Units 3 and 4  
RESPONSE TO NRC RAI REGARDING EPU LAR NO. 205  
AND NUCLEAR PERFORMANCE AND CODE REVIEW ISSUES

**Non-Proprietary Responses**

**ATTACHMENT 1**

Response to Request for Additional Information

The following information is provided by Florida Power and Light Company (FPL) in response to the U. S. Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI). This information was requested to support License Amendment Request (LAR) No. 205, Extended Power Uprate (EPU), for Turkey Point Nuclear Plant (PTN) Units 3 and 4 that was submitted to the NRC by FPL letter L-2010-113 on October 21, 2010 [Reference 1].

In an email dated April 19, 2011 [Reference 2], the NRC staff requested additional information regarding FPL's request to implement the EPU. The RAI consisted of five questions from the NRC Nuclear Performance and Code Review (SNPB) branch regarding the technical inputs and design information related to the boron precipitation analysis. The RAI questions and non-proprietary FPL responses are documented in this attachment.

**SNPB-1.2.1 Provide the following information for the Turkey Point nuclear steam supply system:**

- a. **Volume of the lower plenum, core and upper plenum below the bottom elevation of the hot leg, each identified separately. Also provide heights of these regions and the hot leg diameter.**

<b>Table SNPB-1.2.1a-1: Lower Plenum, Core, and Upper Plenum Volumes</b>	
	Volume (ft <sup>3</sup> )
Lower Plenum	[ ] <sup>a,c</sup>
Core	[ ] <sup>a,c</sup>
Upper Plenum Below the Bottom Elevation of the Hot Leg	[ ] <sup>a,c</sup>

<b>Table SNPB-1.2.1a-2: Lower Plenum, Core, and Upper Plenum Heights</b>	
	Height (ft)
Lower Plenum	[ ] <sup>a,c</sup>
Core	12.000
Upper Plenum Below the Bottom Elevation of the Hot Leg	[ ] <sup>a,c</sup>

<b>Table SNPB-1.2.1a-3: Hot Leg Diameter</b>	
	Diameter (ft)
Hot Leg Diameter	[ ] <sup>a,c</sup>

- b. **Loop friction and geometry pressure losses from the core exit through the steam generators to the inlet nozzle of the reactor vessel. Also, provide the locked rotor reactor coolant pump (RCP) k-factor. Provide the mass flow rates, flow areas, k-factors, and coolant temperatures for the pressure losses provided (upper plenum,**

hot legs, steam generators (SGs), suction legs, RCPs, and discharge legs). Include the reduced SG flow areas due to plugged tubes. Provide the loss from each of the intact cold legs through the annulus to a single broken cold leg. Also, provide the equivalent loop resistance for the broken loop and separately for the intact loop.

<b>Table SNPB-1.2.1b-1: Loop Friction and Geometry Pressure Losses from the Core Exit Through the Steam Generators to the Inlet Nozzle of the Reactor Vessel</b>				
	k (dimensionless)	Flow Area (in <sup>2</sup> )	0% SGTP Loss Coefficient (ft/gpm <sup>2</sup> )	10% SGTP Loss Coefficient (ft/gpm <sup>2</sup> )
Upper Plenum to Hot Leg Nozzle	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same
Hot Leg Nozzle	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same
Hot Leg	N/A	N/A	[ ] <sup>a,c</sup>	Same
Steam Generator Inlet	N/A	N/A	[ ] <sup>a,c</sup>	Same
Steam Generator Tubes, Inlet to U-Bend	N/A	N/A	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>
Steam Generator U-Bend	N/A	N/A	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>
Steam Generator Tubes, U-Bend Outlet	N/A	N/A	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>
Steam Generator Outlet	N/A	N/A	[ ] <sup>a,c</sup>	Same
Pump Suction Leg	N/A	N/A	[ ] <sup>a,c</sup>	Same
Cold Leg	N/A	N/A	[ ] <sup>a,c</sup>	Same
Cold Leg Nozzle	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same
Intact Cold Leg to Broken Cold Leg	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same

<b>Table SNPB-1.2.1b-2: Locked Rotor Reactor Coolant Pump (RCP) k-factor</b>				
	k (dimensionless)	Flow Area (in <sup>2</sup> )	0% SGTP Loss Coefficient (ft/gpm <sup>2</sup> )	10% SGTP Loss Coefficient (ft/gpm <sup>2</sup> )
Locked Rotor (Forward Flow)	N/A	N/A	[ ] <sup>a,c</sup>	Same
Locked Rotor (Reverse Flow)	N/A	N/A	[ ] <sup>a,c</sup>	Same

Table SNPB-1.2.1b-3: Loop Resistance Data		
Analysis	Parameter	Loss Coefficient (ft/gpm <sup>2</sup> )
Large Break – The limiting condition that could lead to a buildup and potential precipitation of boric acid in the core is for a cold leg break.	Broken Loop: Upper Plenum to Hot Leg	[ ] <sup>a,c</sup>
	Broken Loop: Hot Leg to Downcomer at Cold Leg Inlet	[ ] <sup>a,c</sup>
	Intact Loop: Upper Plenum to Downcomer at Cold Leg Inlet	[ ] <sup>a,c</sup>
Small Break – The limiting condition that could lead to a buildup and potential precipitation of boric acid in the core is for a cold leg break.	Broken Loop: Upper Plenum to Cold Leg	[ ] <sup>a,c</sup>
	Intact Loop: Upper Plenum to Downcomer at Cold Leg Inlet	[ ] <sup>a,c</sup>

a, c



<b>Table SNPB-1.2.1b-4: Mass flow rates, flow areas, k-factors, and coolant temperatures for the pressure losses provided</b>					
	Mass Flow Rate (lbm/hr)	0% SGTP Flow Area (in <sup>2</sup> )	10% SGTP Flow Area (in <sup>2</sup> )	k-factor (ft/gpm <sup>2</sup> )	Coolant Temperature (°F)
Upper Plenum to Hot Leg Nozzle	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	620.8
Hot Leg Nozzle	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	616.8
Hot Leg	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	616.8
Steam Generator Inlet	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	616.8
Steam Generator Tubes, Inlet to U-Bend	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	583.0
Steam Generator U-Bend	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	583.0
Steam Generator Tubes, U-Bend Outlet	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	583.0
Steam Generator Outlet	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	548.9
Pump Suction Leg	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	548.9
Cold Leg	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	549.2
Cold Leg Nozzle	[ ] <sup>a,c</sup>	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	549.2
Intact Cold Leg to Broken Cold Leg	Not Modeled	[ ] <sup>a,c</sup>	Same	[ ] <sup>a,c</sup>	549.2

**c. Capacity and boron concentration of the refueling water storage tank.**

<b>Table SNPB-1.2.1c-1: Capacity and boron concentration of the RWST</b>		
	Capacity (gal)	Boron Concentration (ppm)
RWST, Minimum	320,000	2,400
RWST, Maximum (accident unit)	332,000	2,600
RWST, Maximum (non-accident unit)	177,000 <sup>(1)</sup>	2,600

<sup>(1)</sup> Due to the shared safety features, the non-accident unit RWST will not be isolated until the level is drawn down to the Low-level set point.

**d. Capacity of the condensate storage tank**

<b>Table SNPB-1.2.1d-1: Capacity of the condensate storage tank</b>	
	Volume (ft <sup>3</sup> )
Condensate Storage Tank, Post-LOCA Analysis	Not Modeled

**e. Flushing flow rate at the time of switch to simultaneous injection.**

<b>Table SNPB-1.2.1e-1: Flushing Flow Rate<sup>(1)</sup></b>	
	Flushing Flow Rate (lbm/sec)
LBLOCA Flushing Flow, Minimum <sup>(2)</sup>	11

<sup>(1)</sup> The normal hot leg switchover alignment only provides flow to two of the three hot legs. The normal hot leg switchover alignment does not utilize simultaneous injection.

<sup>(2)</sup> Flushing flow is calculated as  $\dot{m}_{SI} - \dot{m}_{boil}$ .

**f. High Pressure Safety Injection (HPSI) runout flow rate**

<b>Table SNPB-1.2.1f-1: High Head Safety Injection System– Runout Minimum Resistance<sup>(1)</sup></b>	
	Pump Flow (gpm)
Original HHSI Pump	625
Replacement HHSI Pump	700

<sup>(1)</sup> Run-out flow is not explicitly modeled in the post-LOCA boron precipitation analysis.



**g. Capacities and boron concentrations for high concentration boric acid storage tanks.**

<b>Table SNPB-1.2.1g-1: Capacities and boron concentrations of the high concentration boric acid storage tanks</b>		
	Capacity (gal)	Boron Concentration (ppm)
Boron Injection Tank <sup>(1)</sup>	Not Modeled	Not Modeled

<sup>(1)</sup> Since the high concentration boric acid storage tank is bypassed, it is not modeled in the post-LOCA boric acid precipitation analysis.

**h. Flow rate into the reactor coolant system (RCS) from the boric acid storage tank.**

<b>Table SNPB-1.2.1h-1: Flow Rate into RCS from Boric Acid Storage Tank</b>		
	Flow Rate (gpm)	Boric Acid Concentration (ppm)
Boric Acid Storage Tank <sup>(1)</sup>	Not Modeled	Not Modeled

<sup>(1)</sup> Since the high concentration boric acid storage tank is bypassed, it is not modeled in the post-LOCA boric acid precipitation analysis.

**i. Time to empty the refueling water storage tank (all pumps operating).**

<b>Table SNPB-1.2.1i-1: Time to Empty the RWST</b>	
	Drain Down Time (min)
RWST Lo-Level	[ ] <sup>a,c</sup>
RWST Lo-Lo Level	[ ] <sup>a,c</sup>

The start of the transient is the reference point for all times reported in Table SNPB-1.2.1i-1.

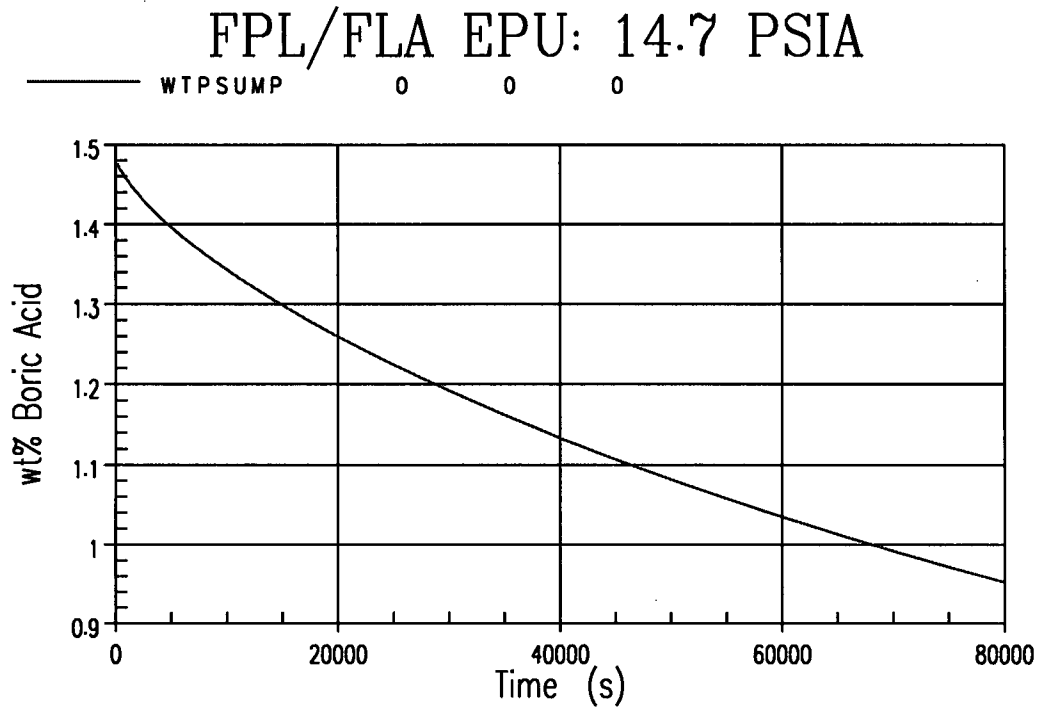
**j. Minimum Containment Pressure.**

<b>Table SNPB-1.2.1j-1: Minimum Containment Pressure, Post-LOCA Boric Acid Precipitation Analysis</b>	
	Containment Pressure (psia)
Containment Pressure, Minimum	14.7

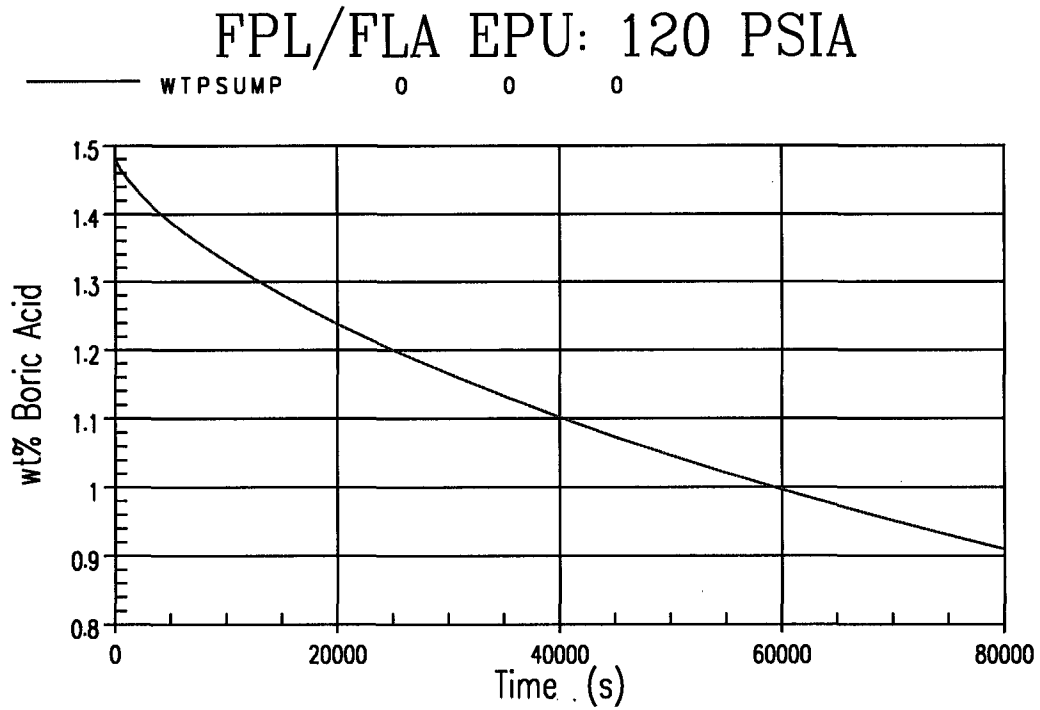
**k. Sump boric acid concentration vs. time.**

The sump boric acid concentration vs. time is shown in Figure SNPB-1.2.1k-1 for the

LBLOCA scenario (14.7 psia) and Figure SNPB-1.2.1k-2 for the SBLOCA scenario (120 psia).



**Figure SNPB-1.2.1k-1**  
**LBLOCA Scenario (14.7 psia) : Sump Boric Acid Concentration vs. Time**



**Figure SNPB-1.2.1k-2**  
**SBLOCA Scenario (120 psia) : Sump Boric Acid Concentration vs. Time**

**1. Minimum refueling water storage tank temperature.**

<b>Table SNPB-1.2.1l-1: Minimum RWST Temperature</b>	
	Temperature (°F)
RWST Temperature, Minimum	34

**m. Injection temperature vs. time from sump during recirculation.**

<b>Table SNPB-1.2.1m-1: Sump Recirculation Injection Temperature<sup>(1)</sup></b>	
	Temperature (°F)
Sump Recirculation Temperature, Boric Acid Precipitation Control	[ ] <sup>a,c</sup>
Sump Recirculation Temperature, Decay Heat Removal	[ ] <sup>a,c</sup>

<sup>(1)</sup> The sump recirculation temperature is conservatively assumed to remain constant over the transient.

**SNPB-1.2.2 Provide the following elevation data:**

- a. Bottom elevation of the suction leg horizontal leg piping, cold leg diameter.
- b. Top elevation of the cold leg at the reactor coolant pump discharge.
- c. Top elevation of the core (also height of core).
- d. Bottom elevation of the downcomer.

<b>Table SNPB-1.2.2-1: Elevation Data</b>	
	Elevation (ft) <sup>(1)</sup>
Bottom of Suction Leg Horizontal Piping	[ ] <sup>a,c</sup>
Cold Leg Diameter	2.2917
Top of Cold Leg at Reactor Coolant Pump Discharge	[ ] <sup>a,c</sup>
Top of the Core (also Core Height)	[ ] <sup>a,c</sup> (12.000)
Bottom of the Downcomer	[ ] <sup>a,c</sup>

<sup>(1)</sup> All elevations referenced from the bottom of the reactor vessel.

**SNPB-1.2.3 Provide the limiting bottom and top skewed axial power shapes.**

The limiting Best Estimate LOCA (BELOCA) bottom skewed power shape is shown in Figure SNPB-1.2.3-1 with an axial offset of -17.054%. The limiting BELOCA top skewed power shape is shown in Figure SNPB-1.2.3-2 with an axial offset of 12.325%. Table SNPB-1.2.3-1 depicts the tabular data that is presented graphically in Figure SNPB-1.2.3-1 and Figure SNPB-1.2.3-2.

## Bottom Skewed

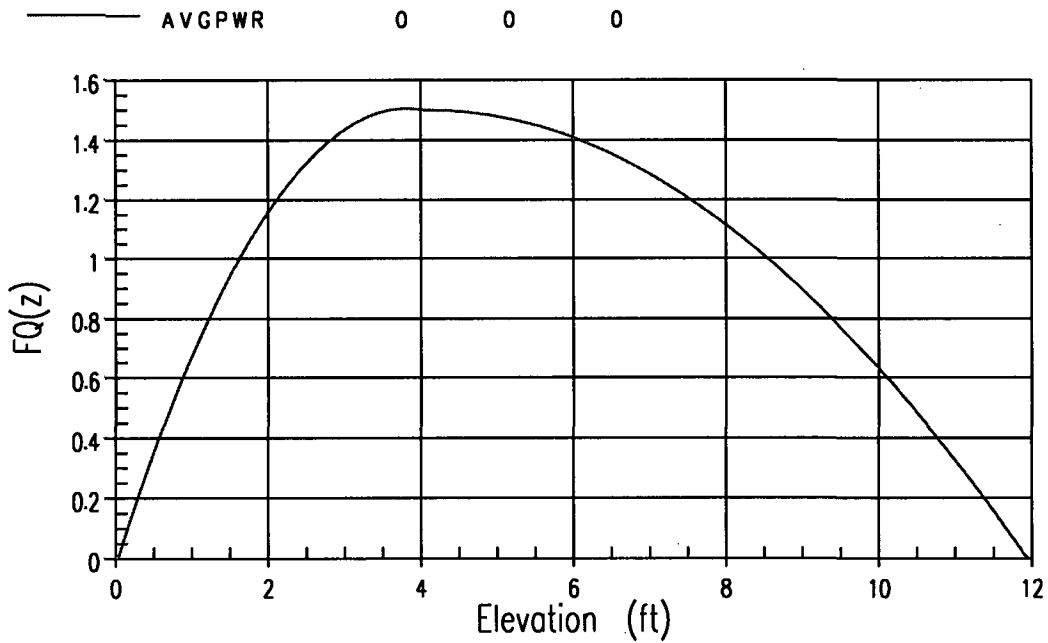


Figure SNPB-1.2.3-1  
Limiting Bottom Skewed Power Shape for Average Power Rod

## Top Skewed

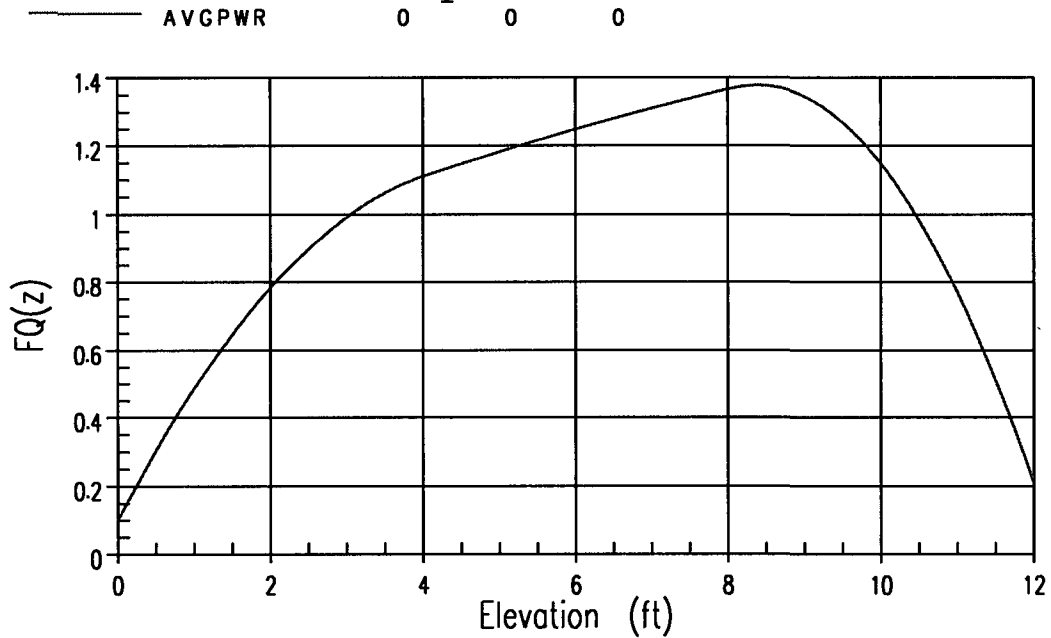


Figure SNPB-1.2.3-2  
Limiting Top Skewed Power Shape for Average Power Rod

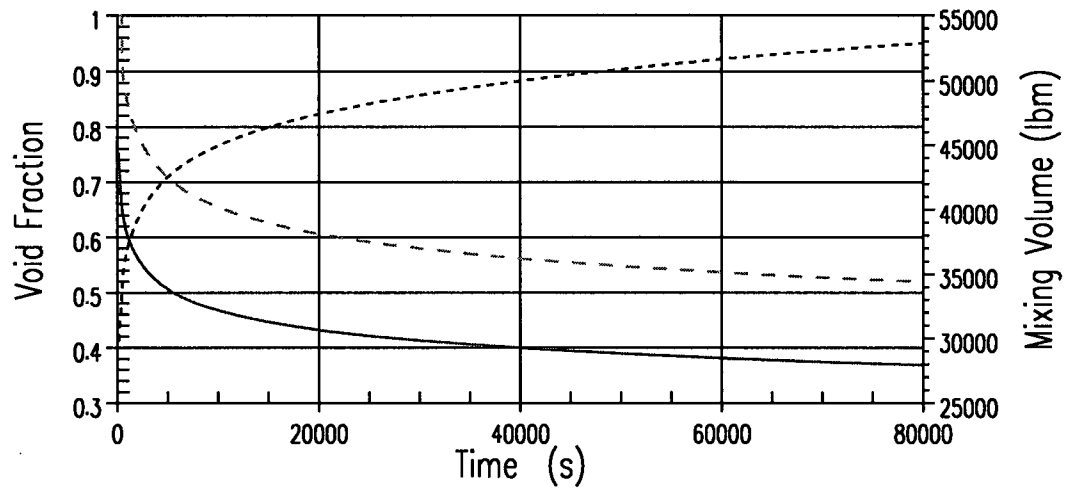
<b>Table SNPB-1.2.3-1: Limiting Power Shape Tabular Data for Average Power Rod</b>					
Elevation (ft)	Bottom Skewed Average Rod Power (Figure SNPB-1.2.3-1)	Top Skewed Average Rod Power (Figure SNPB-1.2.3-2)	Elevation (ft)	Bottom Skewed Average Rod Power (Figure SNPB-1.2.3-1)	Top Skewed Average Rod Power (Figure SNPB-1.2.3-2)
0.0000	0.0010	0.1000	6.0000	1.4096	1.2494
0.2500	0.1728	0.2049	6.2500	1.3840	1.2652
0.5000	0.3530	0.3043	6.5000	1.3552	1.2807
0.7500	0.5202	0.3981	6.7500	1.3232	1.2959
1.0000	0.6743	0.4864	7.0000	1.2880	1.3108
1.2500	0.8153	0.5690	7.2500	1.2497	1.3253
1.5000	0.9432	0.6461	7.5000	1.2081	1.3395
1.7500	1.0580	0.7176	7.7500	1.1633	1.3534
2.0000	1.1597	0.7836	8.0000	1.1153	1.3669
2.2500	1.2483	0.8440	8.2500	1.0644	1.3763
2.5000	1.3238	0.8988	8.5000	1.0109	1.3774
2.7500	1.3862	0.9481	8.7500	0.9546	1.3680
3.0000	1.4356	0.9918	9.0000	0.8956	1.3472
3.2500	1.4718	1.0299	9.2500	0.8340	1.3151
3.5000	1.4949	1.0624	9.5000	0.7697	1.2716
3.7500	1.5050	1.0894	9.7500	0.7027	1.2168
4.0000	1.5019	1.1108	10.0000	0.6331	1.1507
4.2500	1.4991	1.1293	10.2500	0.5607	1.0732
4.5000	1.4959	1.1474	10.5000	0.4857	0.9844
4.7500	1.4895	1.1653	10.7500	0.4080	0.8843
5.0000	1.4799	1.1827	11.0000	0.3277	0.7728
5.2500	1.4671	1.1999	11.2500	0.2446	0.6500
5.5000	1.4511	1.2167	11.5000	0.1589	0.5158
5.7500	1.4319	1.2332	11.7500	0.0705	0.3703
			12.0000	0.0010	0.2135

**SNPB-1.2.4 Provide the mixing volume vs. time.**

The mixing volume vs. time for both the large break (14.7 psia) and small break (120 psia) post-LOCA scenarios are presented in Figures SNPB-1.2.4-1 and Figure SNPB-1.2.4-2 respectively. The core average void fraction and upper plenum (i.e. exit) void fraction have also been included for completeness.

**FPL/FLA EPU: 14.7 PSIA**

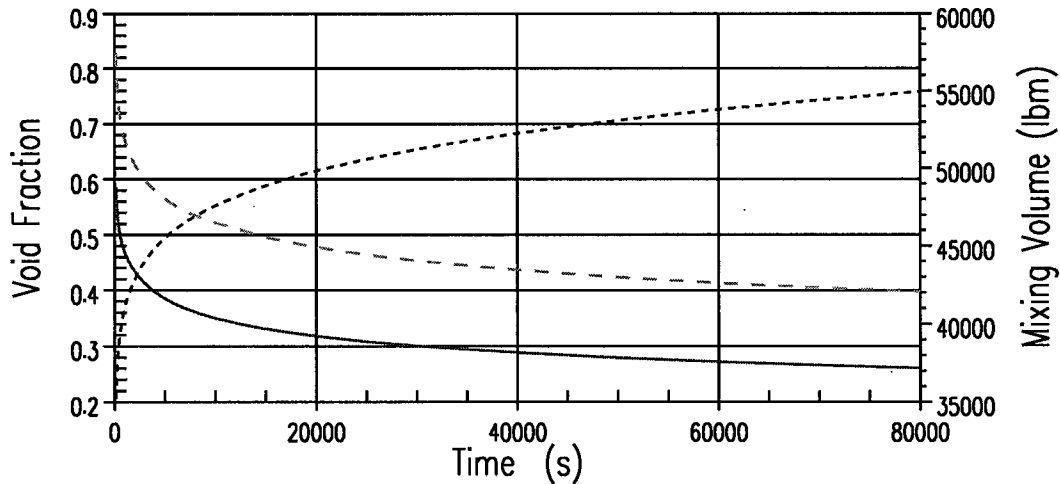
Void Fraction				
—	COREVOID	0	0	0
- - -	UPVOID	0	0	0
Mixing Volume (lbm)				
- - -	MTCORE	0	0	0



**Figure SNPB-1.2.4-1**  
**Core Mixing Volume and Void Fraction vs. Time for the LBLOCA Scenario (14.7 psia)**

## FPL/FLA EPU: 120 PSIA

Void Fraction	COREVOID	0	0	0
UPVOID	0	0	0	
Mixing Volume (lbm)	MTCORE	0	0	0



**Figure SNPB-1.2.4-2**

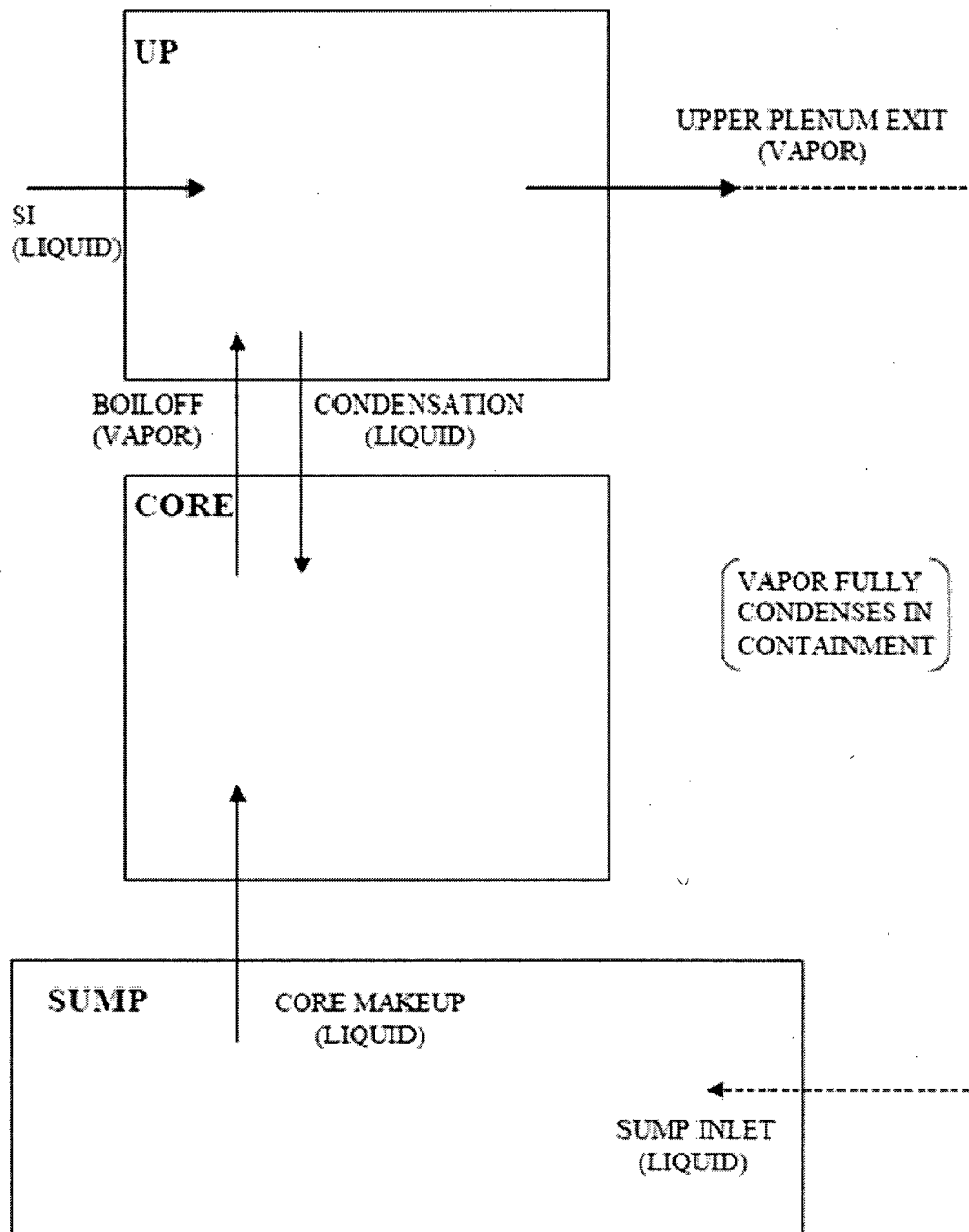
**Core Mixing Volume and Void Fraction vs. Time for the SBLOCA Scenario (120 psia)**

### **SNPB-1.2.5 Justification and description of the methodology used to compute the sump boric acid concentration vs. time.**

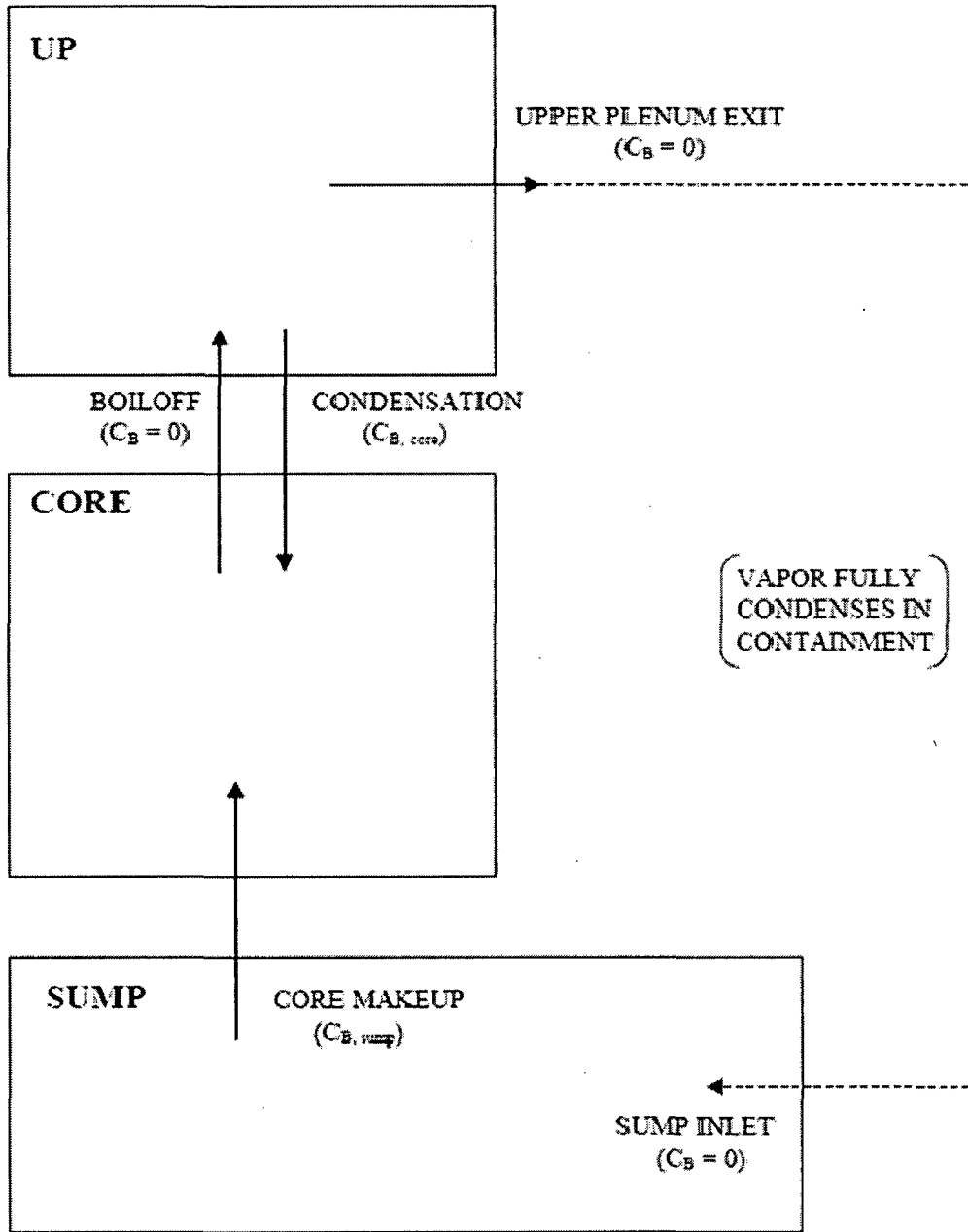
A typical SKBOR calculation considers two volumes: one representing the effective vessel mixing volume (denoted as the CORE), and one representing the remaining system inventory (denoted as the SUMP). The CORE and SUMP are initially assumed to contain borated liquid at the system-average boric acid concentration. Vapor generated due to decay heat boiling exits the CORE with a boric acid concentration of zero (vapor is assumed to condense fully in containment) and is returned to the SUMP as unborated liquid. Borated liquid is added from the SUMP as required to keep the CORE volume full. In this way, the SUMP boric acid concentration gradually decreases, while the CORE boric acid concentration increases toward the boric acid solubility limit. The logic of the mass and boric acid calculations in SKBOR is shown in Figures SNPB-1.2.5-1 and SNPB-1.2.5-2.

Most of the inputs to SKBOR are used to specify plant-specific parameters such as the component masses and boric acid concentrations, the effective vessel mixing volume, and the initial core power level. These inputs are chosen to maximize the rate at which boric acid accumulates in the core. The results of the analysis are used to establish the times at which the necessary operator actions should be initiated. These times are typically reflected in the Final Safety Analysis Report (FSAR) and the Emergency Operating Procedures (EOP).





**Figure SNPB-1.2.5-1**  
**Mass Calculations in SKBOR**



**Figure SNPB-1.2.5-2  
Boric Acid Concentration Calculations in SKBOR**

**References**

1. M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-113), "License Amendment Request No. 205: Extended Power Uprate (EPU)," (TAC Nos. ME4907 and ME4908), Accession No. ML103560169, October 21, 2010.
2. Email from J. Paige (NRC) to T. Abbatiello (FPL), "Turkey Point EPU – Nuclear Performance and Code Review (SNPB) - Round 1.2 (Part 2)" April 19, 2011.

Turkey Point Units 3 and 4

RESPONSE TO NRC RAI REGARDING EPU LAR NO. 205  
AND NUCLEAR PERFORMANCE AND CODE REVIEW ISSUES

Application for Withholding From Public Disclosure Under 10 CFR 2.390

**ATTACHMENT 3**

This coversheet plus 8 pages



Westinghouse Electric Company  
Nuclear Services  
1000 Westinghouse Drive  
Cranberry Township, Pennsylvania 16066  
USA

U.S. Nuclear Regulatory Commission  
Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

Direct tel: (412) 374-4643  
Direct fax: (724) 720-0754  
e-mail: greshaja@westinghouse.com  
Proj letter: FPL-11-129

CAW-11-3163

May 17, 2011

APPLICATION FOR WITHHOLDING PROPRIETARY  
INFORMATION FROM PUBLIC DISCLOSURE

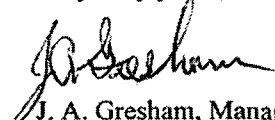
Subject: FPL-11-129 P-Attachment, "Turkey Point Units 3 and 4 – Response to NRC Request for Additional Information (RAI) from the Nuclear Performance and Code Review Branch (SNPB) Related to Extended Power Uprate (EPU) License Amendment Request (LAR) No. 205 (TAC Nos. ME 4907 and ME 4908)" (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-11-3163 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying affidavit by Florida Power and Light.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-11-3163, and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,

  
J. A. Gresham, Manager  
Regulatory Compliance

Enclosures


AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

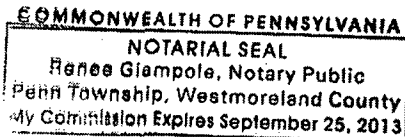
COUNTY OF BUTLER:

Before me, the undersigned authority, personally appeared J. A. Gresham, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

  
\_\_\_\_\_  
J. A. Gresham, Manager  
Regulatory Compliance

Sworn to and subscribed before me  
this 17th day of May 2011

  
\_\_\_\_\_  
Notary Public



- (1) I am Manager, Regulatory Compliance, in Nuclear Services, Westinghouse Electric Company LLC (Westinghouse), and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rule making proceedings, and am authorized to apply for its withholding on behalf of Westinghouse.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.390 of the Commission's regulations and in conjunction with the Westinghouse Application for Withholding Proprietary Information from Public Disclosure accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
  - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
  - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

    - (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of

Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.
- (b) It is information that is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
- (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.



- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
  - (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.
  - (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390; it is to be received in confidence by the Commission.
- (iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.
- (v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in FPL-11-129 P-Attachment, "Turkey Point Units 3 and 4 – Response to NRC Request for Additional Information (RAI) from the Nuclear Performance and Code Review Branch (SNPB) Related to Extended Power Uprate (EPU) License Amendment Request (LAR) No. 205 (TAC Nos. ME 4907 and ME 4908)" (Proprietary) for submittal to the Commission, being transmitted by Florida Power and Light letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse for use by Turkey Point Units 3 and 4 is expected to be applicable for other licensee submittals in response to certain NRC requirements for Extended Power Uprate submittals and may be used only for that purpose.

This information is part of that which will enable Westinghouse to:

- (a) Provide input to the U.S. Nuclear Regulatory Commission for review of the Turkey Point EPU submittals.
- (b) Provide inputs of customer specific calculations.
- (c) Provide licensing support for customer submittals.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of the information to its customers for the purpose of meeting NRC requirements for licensing documentation associated with EPU submittals.
- (b) Westinghouse can sell support and defense of the technology to its customer in licensing process.
- (c) The information requested to be withheld reveals the distinguishing aspects of a methodology which was developed by Westinghouse.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar information and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended.

Further the deponent sayeth not.

## **PROPRIETARY INFORMATION NOTICE**

Transmitted herewith are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal pursuant to 10 CFR 2.390(b)(1).

## **COPYRIGHT NOTICE**

The reports transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.390 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond those necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.