April 15, 2005

Mr. Mark E. Warner, Site Vice President
c/o James M. Peschel
Seabrook Station
FPL Energy Seabrook, LLC
PO Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - CORRECTION OF THE SAFETY EVALUATION TO AMENDMENT REGARDING THE ALTERNATIVE SOURCE TERM (TAC NO. MC1097)

Dear Mr. Warner:

By letter dated February 24, 2005, (Accession No. ML050320373) the Nuclear Regulatory Commission (NRC) issued Amendment No. 100 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No.1 (SS) to revise the SS licensing basis to incorporate a full-scope application of an alternative source term methodology. The Safety Evaluation (SE) enclosed with Amendment No. 100 contained administrative or typographical errors on pages 16 and 30. Therefore, the NRC is enclosing corrected SE pages 16 and 30.

We regret any inconvenience this may have caused. If there are any further questions, please contact me at (301) 415-1484 or vxn@nrc.gov.

Sincerely,

/RA/

Victor Nerses, Senior Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure: As stated

cc w/encl: See next page

Seabrook Station, Unit No. 1

cc:

Mr. J. A. Stall
Senior Vice President, Nuclear and
Chief Nuclear Officer
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Mr. Peter Brann
Assistant Attorney General
State House, Station #6
Augusta, ME 04333

Resident Inspector
U.S. Nuclear Regulatory Commission
Seabrook Nuclear Power Station
P.O. Box 1149
Seabrook, NH 03874

Town of Exeter
10 Front Street
Exeter, NH 03823

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Office of the Attorney General
One Ashburton Place, 20th Floor
Boston, MA 02108

Board of Selectmen
Town of Amesbury
Town Hall
Amesbury, MA 01913

Ms. Deborah Bell
Federal Emergency Management Agency
Region I
J.W. McCormack P.O. &
Courthouse Building, Room 401
Boston, MA 02109

Mr. Tom Crimmins
Polestar Applied Technology
One First Street, Suite 4
Los Altos, CA 94019

Mr. Stephen McGrail, Director
ATTN: James Muckerheide
Massachusetts Emergency Management Agency
400 Worcester Road
Framingham, MA 01702-5399

Philip T. McLaughlin, Attorney General
Steven M. Houran, Deputy Attorney
General
33 Capitol Street
Concord, NH 03301

Mr. Bruce Cheney, Director
New Hampshire Office of Emergency
Management
State Office Park South
107 Pleasant Street
Concord, NH 03301

Mr. Gene F. St. Pierre
Station Director
Seabrook Station
FPL Energy Seabrook, LLC
P.O. Box 300
Seabrook, NH 03874

Mr. M. S. Ross, Managing Attorney
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Mr. Rajiv S. Kundalkar
Vice President - Nuclear Engineering
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

James M. Peschel
Regulatory Programs Manager
Seabrook Station
FPL Energy Seabrook, LLC
PO Box 300
Seabrook, NH 03874

Seabrook Station, Unit No. 1

cc:

David Moore
Vice President, Nuclear Operations Support
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Marjan Mashhadi
Senior Attorney
Florida Power & Light Company
801 Pennsylvania Ave., NW Suite 220
Washington, DC 20004

April 15, 2005

Mr. Mark E. Warner, Site Vice President
c/o James M. Peschel
Seabrook Station
FPL Energy Seabrook, LLC
PO Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - CORRECTION OF THE SAFETY EVALUATION TO AMENDMENT REGARDING THE ALTERNATIVE SOURCE TERM (TAC NO. MC1097)

Dear Mr. Warner:

By letter dated February 24, 2005, (Accession No. ML050320373) the Nuclear Regulatory Commission (NRC) issued Amendment No. 100 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No.1 (SS) to revise the SS licensing basis to incorporate a full-scope application of an alternative source term methodology. The Safety Evaluation (SE) enclosed with Amendment No. 100 contained administrative or typographical errors on pages 16 and 30. Therefore, the NRC is enclosing corrected SE pages 16 and 30.

We regret any inconvenience this may have caused. If there are any further questions, please contact me at (301) 415-1484 or vxn@nrc.gov.

Sincerely,
/RA/

Victor Nerses, Senior Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure: As stated

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	D. Roberts	C. Raynor	OGC
PDI-2 Reading	V. Nerses	G. Hill (2)	ACRS
C. Holden	R. Dennig	G. Matakas, RI	

Accession No.: ML051030138

OFFICE	PDI-2/PM	PDI-2/LA	SPSB/SC	PDI-2/SC
NAME	VNerses	CRaynor	RDennig	REnnis for DRoberts
DATE	4/13/05	4/14/05	4/12/054/12/05	4/15/05

OFFICIAL RECORD COPY

generator and 940 gpd total into the three unaffected steam generators. FPLE states that this allocation of the leakage yields the most limiting doses. The primary-to-secondary leakage continues until the RCS temperature is less than 212 °F (at about 48 hours). In converting the TS maximum allowable volumetric flow to mass flow values for input to analyses, FPLE uses a density value of 62.4 lb/ft^3. This is consistent with the guidance of RG 1.183 (see Appendix F, Paragraph 5.2).

The leakage in the unaffected steam generators mixes with the bulk water and is released at the assumed steaming rate. This steaming from the unaffected steam generators is assumed to continue for eight hours. FPLE determined that the tubes in the unaffected steam generators would remain covered by the bulk water. FPLE assumes that the radionuclide concentration in the unaffected steam generator is partitioned such that one percent of the radionuclides in the bulk water enters the vapor space and is released to the environment.

FPLE assumes a CR isolation delay of 30 seconds to account for diesel generator sequencing, damper positioning, and instrumentation delays. This isolation would be actuated by either safety injection signals or by radiation levels greater than two times background on GM radiation detectors located in the ventilation intake ductwork. Following isolation, the filtered outside air makeup is 600 cfm, and the filtered recirculation flow is 390 cfm. FPLE assumes an unfiltered inleakage rate of 150 cfm, of which 20 cfm is via the emergency fire exit doors and the remainder via the diesel building. This assumed inleakage rate is greater than that determined in recently performed tracer gas infiltration tests.

The NRC staff found that FPLE used analysis assumptions and inputs consistent with applicable regulatory guidance identified in Section 2.0 of this SE. The assumptions found acceptable to the staff are presented in Table 1. Additionally, the NRC staff did independent calculations and confirmed the FPLE conclusions. The EAB, LPZ, and CR doses estimated by FPLE for the MSLB were found to meet the applicable accident dose criteria and are, therefore, acceptable.

3.4.4 SGTR

The accident considered is the complete severance of a single tube in one of the steam generators resulting in the transfer of RCS water to the ruptured steam generator. The primary-to-secondary break flow through the ruptured tube following and SGTR results in radioactive contamination of the secondary system. A reactor trip occurs, safety injection actuates, and a LOOP occurs concurrently with the reactor trip. As this LOOP renders the main condenser unavailable, the plant is cooled down by releases of steam to the environment. A single atmospheric steam dump valve (ASDV) is assumed to fail open providing a continuous release path. Two cases are considered:

- A single ASDV fails open when the water level reaches 33 percent in the ruptured steam generator

- A single ASDV fails open three minutes after the reactor trip.

Secondary containment drawdown time, min	8
Secondary containment filtration	
Aerosols/Elemental	95
Organic	85
Secondary containment bypass fraction	0.6
Release points	
Leakage	Plant vent
Secondary containment bypass	containment surface

ECCS Leakage Pathway

Start of ECCS leakage, minutes	26
ECCS leak rate (includes 2x multiplier), gpd	48
Duration of release, days	30
Containment sump volume, ft^3	69,159
Iodine flashing (fraction of total iodine in leakage)	0.1
Fraction of core inventory iodine in sump	0.4
Chemical form release fractions	
Elemental	0.97
Organic	0.03
Release pathway	Plant vent