FPL Energy
Seabrook Station

FPL Energy Seabrook Station
P.O. Box 300
Seabrook, NH 03874
(603) 773-7000

October 1, 2006

Docket No. 50-443
SBK-L-06171

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

Seabrook Station
Facility Operating License NPF-86

Response to Request for Additional Information Regarding
License Amendment Request 05-11
"Changes to Technical Specification 3.8.3.1 Onsite Power Distribution, for Vital Inverter Allowed Outage Time"

References:

1. FPL Energy Seabrook, LLC letter SBK-L-05260, License Amendment Request 05-11, Changes to Technical Specification 3.8.3.1 Onsite Power Distribution, for Vital Inverter Allowed Outage Time, December 6, 2005.

2. NRC letter to FPL Energy Seabrook, LLC, Draft Request for Additional Information (TAC NO. MC9165), June 21, 2006.

By letter dated December 6, 2005, (Reference 1) FPL Energy Seabrook, LLC submitted License Amendment Request 05-11, Changes to Technical Specification 3.8.3.1 Onsite Power Distribution, for Vital Inverter Allowed Outage Time. In Reference 2, the NRC requested additional information in order to complete its evaluation.

Enclosed is the FPL Energy Seabrook, LLC response to the requested additional information. A copy of this letter has been forwarded to the New Hampshire State Liaison Officer pursuant to 10 CFR 50.91(b).

Should you have any questions regarding this information, please contact Mr. James Peschel, Regulatory Programs Manager, at (603) 773-7194.

A001

Very truly yours,

FPL Energy Seabrook, LLC

Gene St. Pierre
Site Vice President

Enclosure

cc: S. J. Collins, NRC Region I Administrator
E. Miller, NRC Project Manager, Project Directorate I-2
G. T. Dentel, NRC Resident Inspector

Mr. Christopher Pope
State Homeland Security Advisor
Director, Office of Emergency Management
10 Hazen Drive
Concord, NH 03305

OATH AND AFFIRMATION

I, Gene St. Pierre, Site Vice President of FPL Energy Seabrook, LLC, hereby affirm that the information and statements contained within this response to the request for additional information to License Amendment Request 05-11 are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Sworn and Subscribed
before me this

1 day of October, 2006

Gene St. Pierre
Site Vice President

Notary Public

MICHAEL D. O'KEEFE
MY COMMISSION EXPIRES FEB. 5, 2008
NOTARY PUBLIC
NEW HAMPSHIRE

Response to Request for Additional Information Regarding
License Amendment Request 05-11
"Changes to Technical Specification 3.8.3.1 Onsite Power Distribution, for Vital Inverter Allowed Outage Time"

RAI #1

Provide a list of risk important components and configurations that would be impacted by the proposed amendment.

Response

No risk important components and configurations are impacted by this equipment. These inverters do not solely support any mitigative functions (e.g. primarily indication or limited automatic operations that have reliable backup from the main control board). Failure of these inverters does not create an initiating event. Failure of these inverters does not affect containment function or increase the likelihood of a containment bypass event. These inverters do not supply power to the reactor protection system. Seabrook Station operating experience demonstrates that failure of these inverters does not result in a plant transient. These components are not included in the Seabrook PRA due to the limited consequence of their failure

RAI #2

This amendment request is a follow-up to a notice of enforcement discretion (NOED) granted on November 30, 2005. During the discussions regarding the NOED, FPLE stated that the risk would be increased by a small amount as a result of the AOT extension. Provide the changes in incremental core damage probability and incremental conditional large early release probability for the proposed amendment. Additionally, address the changes with respect to core damage frequency.

Response

The discussions during the NOED concerned the potential incremental risk of the additional failure of the backup AC supply to the inverters over the period of the NOED extension as a sensitivity.

The "base case" incremental conditional core damage probability for this amendment is 0. The incremental conditional large early release probability is 0. The associated change in core damage frequency is 0. The change in risk is zero since the inverters do not contribute to core damage frequency or large early release frequency and are therefore not modeled in the Seabrook PRA.

RAI #3

Discuss the Seabrook probabilistic risk assessment (PRA) quality with emphasis on the systems and trains affected by this amendment. Include any potential human errors and risk contributors from external events.

Response

There are no systems and trains in the Seabrook PRA model that are affected by this amendment. This amendment does not increase the likelihood of an external event. This amendment does not increase the probability of a human error important to risk.
The Seabrook PRA model is an all-modes, integrated, full scope level 3 PRA. The PRA model was peer reviewed according to the Westinghouse Owners Group process in 1999. The PRA model has also had a limited scope peer review (SC: success criteria, AS: accident sequence analysis, HR: human reliability analysis, and configuration control) in accordance with the ASME PRA Standard and Regulatory Guide 1.200 in August of 2005. The Seabrook PRA model has been internally reviewed against the ASME Standard and Regulatory Guide 1.200 and was found to meet the requirements for Capability Category II. There are no open 'A' or 'B' facts and observations from either of these peer reviews.

RAI #4

Provide a qualitative or quantitative assessment of the risk changes of:

a. Risk-important components and configurations that will be affected by the proposed extension. Please focus on fire protection equipment.

   Response

   No risk important components and configurations are impacted by this equipment. Failure of these inverters does not create an initiating event or increase the likelihood of an initiating event. Failure of these inverters does not affect containment function or increase the likelihood of a containment bypass event. Seabrook Station operating experience demonstrates that failure of these inverters does not result in a plant transient. This extension does not impact risk important fire protection equipment.

b. Risk quantification tools, including PRA model and uncertainty (or parametric uncertainty).

   Response

   The Seabrook Station PRA model is a linked event tree model that uses the RISKMAN suite of codes. RISKMAN provides the capability to calculate

parametric uncertainty of risk indices by propagating uncertainty from data distributions through accident sequences.

c. Compensatory measures to neutralize the potential risk increases due to the amendment. Discuss the compensatory measures in both quantifiable and non-quantifiable terms if possible.

Response

Removal of these inverters from service is subject to the configuration risk management requirements of 10CFR50.65(a)(4). Reliability of these inverters is monitored in accordance with 10CFR50.65. Because the inverters are not risk significant, no additional compensatory measures are needed.

d. Discuss the reliability of the inverter and any programs designed to improve its reliability. Please include any relationships to maintenance preventable functional failures under Title 10 of the *Code of Federal Regulations* Section 50.65 requirements.

Response

The Seabrook Station balance-of-plant vital inverters, EDE-I-1E and EDE-I-1F, and static transfer switches have been highly reliable and have experienced minimal failures. The equipment failures that have occurred between November 1995 and August 2006 are listed below:

Date	Description	MRFF[1] / MPFF[2]
11/29/05	Vital Inverter 1-EDE-I-1-F Failure. Inverter 1F lost output due to inverter leg fuse blowing resulting in auto transfer to the maintenance source. The equipment failure cause was indeterminate based on the replaced circuit boards all testing satisfactorily.	Yes / No
8/21/03	Received VAS alarm D5749, Vital UPS 1F supply on DC bus. Vital UPS 1F experienced two charger drive board failures in a 2-year period. Board failure was attributed to a tantalum capacitor that shorted out causing the power supply circuit input resistors to act like fuses that failed catastrophically. This failure mode causes the UPS to automatically isolate the UPS rectifier section and operate on DC power.	No / No

Date	Description	MRFF[1] / MPFF[2]
7/11/01	Received D5749. Vital UPS 1F supply on DC bus. Alarm was reset locally but a strong electrical smell was in the air. Replaced charger drive board 615. Verified resistors R1 and R2 shorted.	No / No
9/5/97	During grid disturbance UPS 1E transferred to the station battery source. No output loss was experienced; however, the UPS would not return to the rectifier supply. Investigation determined that the stop drive was caused by the voltage transient and needed to be cleared by shutting down the inverter and draining the DC link to zero then restarted.	No / No

[1] Maintenance rule functional failure [2] Maintenance preventable functional failure

Of these four failures, one was classified as a Maintenance Rule Functional Failure (MRFF), but none have been classified as a Maintenance Preventable Functional Failure (MPFF). These inverters are included in an overall maintenance optimization program. Inverters EDE-I-1-E and EDE-I-1-F are in scope for 10CFR50.65 and are found within maintenance rule function EDE-03B, "Provide 120 VAC uninterruptible power to BOP process controls". These inverters are not risk significant and are monitored for MPFF's as well as for plant level contributions to unplanned trips or power changes.

Below is a table of routine preventative maintenance activities associated with the vital inverters.

PM Number	PM Description	Frequency
1-EDE-I-1-E (F)-E732-0000	Inverter Filter Replacement	24 weeks
1-EDE-I-1-E (F)-IR-000	Perform Infrared Thermography Inspection	18 months
1-EDE-I-1-E (F)-E730-0000	Inverter Inspection	RF02
1-EDE-I-1-E (F)-E731-0000	Elgar Inverter and Static Switch Setpoint Verification	RF02

1-EDE-I-1-E (F)-E732-0000	Capacitor Replacement	RF06
1-EDE-CP-1-E (F)-E150-0000	Static Switch Control Panel Inspection	RF02

e. Potential internal and external events;

Response

Failure of these inverters does not create an initiating event or increase the likelihood of an initiating event.

f. Configuration control program and the on-line risk monitor.

Response

The Station configuration risk management control program meets the requirements of 10CFR50.65(a)(4). The Safety Monitor is used as the risk monitor for all modes. The Safety Monitor model uses the Level 1 results of the full RISKMAN model to evaluate configuration risk. Both models are subject to software configuration and quality assurance requirements.