



FPL Energy
Seabrook Station

FPL Energy Seabrook Station
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(603) 773-7000

SBK-L-05258

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Seabrook Station
Request for Exercise of Enforcement Discretion

The purpose of this letter is to formally document the discussion between FPL Energy Seabrook, LLC (FPL Energy Seabrook), based upon PL Energy Seabrook's verbal request for enforcement discretion pertaining to Technical Specification 3/4.8.3. "Onsite Power Distribution - Operating". As background, by teleconference with NRC management held on November 29, 2005, at approximately 2330 EST, FPL Energy Seabrook verbally requested NRC to issue a Notice of Enforcement Discretion (NOED) to delay taking actions specified in Seabrook Station Technical Specification 3.8.3.1 under circumstances as discussed and as further described in the Enclosure to this request. At 0220 EST, on November 30, 2005, Mr. B. E. Holian of Region I notified FPL Energy Seabrook, following a briefing with the NRC Region I Administrator and other NRC personnel, that the requested NOED was approved for issuance. The approval was effective immediately and would expire at 2123 EST on November 30, 2005. FPL Energy Seabrook was requested to submit a written request for the NOED within 2 working days. As discussed during the teleconference by FPL Energy Seabrook, the additional time is needed to address repair and post-maintenance testing and any potential unforeseen circumstances that may arise in the restoration of Vital Inverter 1F to operable status.

As requested, FPL Energy Seabrook hereby requests that the NRC exercise enforcement discretion pursuant to its policy regarding exercise of discretion for an operating facility, set out in section VII.C of NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy). The enforcement discretion requested by FPL Energy Seabrook will authorize temporary non-compliance with Technical Specification 3.8.3.1. It is requested that this enforcement discretion be effective from 0323 on November 30, 2005 to 2123 on November 30, 2005.

NRC approval of this request will permit Seabrook Station to avoid an undesirable plant transient by allowing temporary noncompliance with Technical Specification 3.8.3.1 and will not have an unacceptable impact on safety as described in the Enclosure.

This request for enforcement discretion has been reviewed and approved by the Station Operation Review Committee.

FPL Energy Seabrook relied upon the enforcement discretion to delay taking the actions specified in Technical Specification 3.8.3.1 and successfully returned Inverter 1F to operable status at 1522 EST on November 30, 2005.

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

Very truly yours,

FPL Energy Seabrook, LLC.


Gene F. St. Pierre
Site Vice President

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

Oath and Affirmation

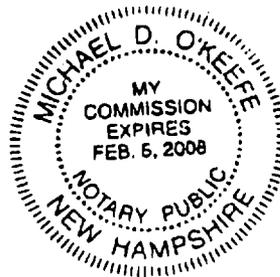
I, Michael W. Kiley, Station Director of FPL Energy Seabrook, LLC, hereby affirm that the information and statements contained within this request are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Sworn and Subscribed
before me this

1 day of December, 2005

Michael O'Keefe
Notary Public

Michael W. Kiley
Michael W. Kiley
Station Director



SBK-05258

**"SEABROOK STATION
REQUEST FOR EXERCISE OF ENFORCEMENT DISCRETION"**

Mashhadi, M.	e-mail
Helfrich, R. E.	e-mail
Dryden, M. S.	e-mail
Aubrecht, J. J.	e-mail
Trepanier, S. P.	e-mail
Letter Distribution	e-mail
File 0018	01-48
File 0052	01-48
RMD	02-06

ENCLOSURE TO SBK-05258

REQUEST FOR EXERCISE OF ENFORCEMENT DISCRETION

1. Technical Specification or License Condition that will be Violated

Technical Specification (TS) 3.8.3.1, "Onsite Power Distribution – Operating", requires in Modes 1 through 4 that 120-volt AC panel 1F be energized from its associated inverter (Inverter 1F) connected to DC bus 11B. TS 3.8.3.1, action b stipulates:

"With one A.C. vital panel either not energized from its associated inverter, or with the inverter not connected to its associated D.C. bus: (1) reenergize the A.C. vital panel within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; and (2) reenergize the A.C. vital panel from its associated inverter connected to its associated D.C. bus within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

On November 29, 2005 at 0323, Inverter 1F failed, and associated vital power panel 1F automatically transferred to its maintenance power supply. Subsequent investigation, in consultation with the vendor, Elgar, determined that the most probable cause is a card(s) failure in the A-2 leg of the inverter. While AC vital panel 1F remains energized from its maintenance power supply, Inverter 1F will not be available to energize power panel 1F within the 24 hours required by TS 3.8.3.1, action b. An additional 18 hours is necessary to complete the repairs to inverter 1F, perform post-maintenance testing, and restore the inverter to operable status. Compliance with the 24-hour allowed outage time (AOT) would force a shutdown of Seabrook Station prior to completing restoration of the inverter. Such a shutdown introduces an unnecessary plant transient with potential safety consequences and operational risks that are not commensurate with a concern for public health and safety. Consequently, FPL Energy Seabrook requests the NRC exercise enforcement discretion to extend the 24 hour AOT of TS 3.8.3.1, action b for an additional 18 hours (42 hours total) to permit completion of repairs and post-maintenance testing of Inverter 1F.

2. Circumstances Surrounding the Need for Enforcement Discretion

At 0323 on November 29, 2005 inverter 1F lost output. The associated static transfer switch successfully transferred the associated power panel to its maintenance power supply. The inverter displayed the following alarms: "AC OUTPUT BKR TRIP", "INV OUTPUT UNDERVOLTAGE" and "INV POWER FUSE FAILURE". A troubleshooting team was assembled and a troubleshooting plan was developed per Station Procedure MA 4.14. The OEM technical support was contacted and concurred with the troubleshooting plan. The troubleshooting determined that the failure occurred in the inverter power leg A-2. An inverter power leg consists of main silicon controlled rectifiers (SCRs), commutating SCRs, diodes, and a gate driver board. Based on the troubleshooting plan and consultation with the vendor and vendor manual, there is a high likelihood that the cause is related to one or more card failures in the A-2 leg of the inverter. A search of the inverter history did not identify any recent failures or problems with the inverter. The repair activity is limited by the lack of spare cards and the complicated nature of replacing the cards.

3. Information Regarding the Cause and Proposed Path to Resolution

Inverter 1F troubleshooting was performed per the Elgar Technical Manual and with the input and concurrence of Elgar Technical Support. The inverter was shutdown and continuity checks done on the 3 leg fuses. The A-2 leg fuse was blown. The fuse was replaced and the inverter was restarted. The inverter successfully started and ran unloaded for 35 minutes when it tripped, and the A-2 leg fuse just replaced was found blown. Per Elgar, the successful restart of the inverter makes the main logic cards an unlikely failure mode. The fact that the inverter blew the same A-2 leg fuse provides very high likelihood the problem is in the A-2 leg. Elgar also indicated that an intermittent failure that allows the inverter to start and run for a period of time is not likely one of the discreet components (i.e. SCRs) but is most likely the SCR driver boards (gating boards). Elgar has seen intermittent problems of this type caused by the SCR driver boards due to ring cracking of the post to hole solder joints on the SCR driver boards. We have not found visual evidence of cracking on our boards; however, lack of visual cracking does not mean the boards are not the problem. Additional troubleshooting and testing of the A2 leg SCRs and diodes was performed and no failures or problems were identified. Based upon our troubleshooting, vendor manual information and input from vendor technical representatives, there is a high level of confidence that the driver cards are the most likely cause. The replacement of the four SCR driver boards is expected to resolve the A-2 leg failure.

The requested 18-hour extension to the inverter AOT is based on the following inverter repair schedule:

Logic and driver cards first replacement and test	0553	11/30
Logic and driver cards second replacement and test	0823	11/30
Logic and driver cards third replacement and test	1053	11/30
Logic and driver cards fourth replacement and test	1323	11/30
Disconnect load bank and re-align inverter	1923	11/30
Work order review and closeout	2123	11/30

4. The Safety Basis for the Request

FPL Energy Seabrook has determined that the requested NOED does not adversely impact overall plant safety or risk. Below are the results of a PRA evaluation that considered extending the AOT for Inverter 1F from 24 hours to 72 hours. The use of a 48 hour extension is a bounding evaluation for the 18 hour extension that is being requested.

Risk Evaluation

The Seabrook Station PRA model (SB2004X) is an integrated, full scope, level 3, all modes model that is current with plant modifications, data, and procedures through December 22, 2004. The zero maintenance model is used to evaluate the risk associated with inverter 1F being out of service. Inverter 1F is not modeled in the Seabrook PRA because it does not power any risk related loads. However, the maintenance supply, 1-EDE-MCC-631, is modeled. Inverter operation on the maintenance supply does not change risk. The inverter feeds power panel 1-EDE-PP-1-F. The loads

on this power panel are not considered risk significant loads. Abnormal procedure OS1247.02 (LOSS OF 120 VAC VITAL INSTRUMENT BUS PPIE OR PPIF) was reviewed for possible plant response following a loss of power panel 1-EDE-PP-1-F. The loss of power to power panel 1-EDE-PP-1-F or 1-EDE-MCC-631 will not result in a direct initiating event.

Dominant contributors

Currently, power panel 1-EDE-PP-1-F is supplied from 460-volt motor control center (MCC) 1-EDE-MCC-631 through a static transfer switch. Should the static transfer switch be lost, a separate maintenance power supply is manually available from the same MCC. This MCC is fed by the B emergency diesel generator (EDG) and the supplemental emergency power supply (SEPS).

Since the loads on power panel 1-EDE-PP-1-F are not currently backed by DC power, a loss of 1-EDE-MCC-631 would result in some valves moving to their loss of power position and some instrument bistables changing state. The loss of 1-EDE-MCC-631 was evaluated using results from the plant no maintenance PRA model (SB2004NM). This is a full scope, all modes model. The results for CDF and LERF for modes 1, 2, and 3 were used. The Risk Achievement Worth for 1-EDE-MCC-631 is 1.0002. The ICCDP calculated for this failure over a 48-hour duration is 3.14E-11. The ICLERP for this duration is 9.46E-14. These values are configuration specific based upon the equipment that is currently out of service. For the duration of the proposed NOED implementation, there are no plans to take risk significant equipment out of service.

There are no significant risk impacts for this configuration. That is, failure of 1-EDE-MCC-631 (i.e. 1-EDE-PP-1F, 1-EDE-PP-11F) is minimal from a risk perspective. Dominant contributors for failure of 1-EDE-MCC-631 involve the PCCW temperature control valves (TCVs) moving to the full cooling position and potential loss of the capability to remotely start both of the EDG-1B ventilation fans. While the PCCW TCV position change does not present any loss of function, or create a plant transient, it has the potential to distract the Operators. The Operations crews are aware of potential long term system reliability impacts of low PCCW temperatures, and would place some attention to restoring the TCV positions. PCCW containment isolation valves may reposition on a power restoration and the operators would restore the normal line-up so there are no potential impacts on the reactor coolant pump motor coolers. The inability to remotely start the EDG-1B ventilation fans does not affect the function of EDG-1B for a number of reasons. If 1-EDE-MCC-631 fails due a LOOP, the ventilation fans will start as soon as EDG-1B starts and loads (~12 seconds). If 1-EDE-MCC-631 fails due to other causes, EDG-1B will still be functional. The PRA diesel mission time for non-severe weather related LOOP is 6 hours. No severe weather is forecast for the period of the NOED. An analysis exists to address EDG functionality with either a supply or exhaust fan unavailable. In the event both fans were unavailable, a contingency plan is available to manual start an EDG fan by utilizing a standing operating order. Manual actuation of the relays is not complicated or time intensive.

Compensatory Measures

Due to the limited history on inverter transfer operations, a cautious approach to energizing power panel 1-EDE-PP-1-F from Inverter 1F will be maintained. The emergency feedwater system (EFW) will be kept fully functional upon restoring the inverter supply to power panel 1-EDE-PP-1-F.

Restoration of the inverter supply to power panel 1F will be performed using approved plant procedures. No maintenance or surveillance activities will be conducted on the emergency diesel generators, Supplemental Emergency Power System (SEPS), or in the Seabrook Station substation (switchyard, high yard and relay room). These actions are qualitatively accounted for in the results by not changing the overall reactor trip or loss of offsite power frequency. FPL Energy Seabrook has established additional compensatory actions while operating with power panel 1-EDE-PP-1-F energized from its maintenance supply. The maintenance power supply to power panel 1-EDE-PP-1-F has been isolated with barrier tape to protect the power source. Additionally, the licensed operators on-shift during the period of the NOED have received just-in-time simulator training for a loss of power panel 1-EDE-PP-1-F. A contingency plan is established for manually starting the EDG supply and exhaust ventilation fans in the event of a loss of 1-EDE-MCC-631 coincident with a condition resulting in an automatic start of EDG-1B. This plan is documented in Standing Operating Order 05-011. FPL Energy Seabrook has administrative controls to identify and protect the equipment in the designated protected train.

The proposed compensatory measures are based on qualitative judgement on the likelihood of offsite power (i.e. losing power to 1-EDE-MCC-631). The plant is currently in a stable state with power panel 1-EDE-PP-1-F on its maintenance supply (1-EDE-MCC-631). No mitigation functions are lost through loss of 1-EDE-MCC-631.

The Bus Failure Analysis (drawing 1-NHY-350014) was reviewed for the effect of loss of power to power panels EDE-PP-1F and EDE-PP-11F in terms of inadvertent equipment operation and required contingency operator actions. With inverter 1F out of service, the power panels are supplied from an emergency diesel generator (EDG) backed motor control center (MCC). The effects of a short term loss of power caused by a loss-of-offsite power (LOOP) and a subsequent restoration of power to the MCC by the EDG is also evaluated.

The inadvertent equipment operation and required contingency operator actions are as follows: The Loop B PCCW temperature control valves will go to the full cooling position. The operators would take local valve control. The main control room emergency clean-up filter system will receive a Train B start signal, and swap to the recirc and filter mode. On power restoration, operators would restore normal ventilation lineup. A Train B containment ventilation isolation (CVI) signal would be generated but the containment ventilation valves are already closed. The automatic function is lost to trip the steam generator feed pump FW-P-32B turbine on steam generator high-high level, safety injection or low-low Tavg with reactor trip which constitutes a feedwater isolation signal. The operators will trip FW-P-32B if a feedwater isolation signal is generated and the pump is still operating.

The effects of a short-term loss of power is as follows: The Loop B PCCW temperature control valves will go to the full cooling position. On power restoration, control will be restored to manual and the operators will then transfer control to automatic. The main control room emergency clean-up filter system will receive a Train B start signal, and swap to the recirc and filter mode. After power restoration, operators would restore normal ventilation lineup. A Train B containment ventilation isolation (CVI) signal would be generated but the containment ventilation valves are already closed. In addition, the PCCW Loop A and B Train B containment isolation valves may close on restoration of power to the control loop. This would isolate PCCW to containment including the RCP motor and oil coolers, containment air handling cooler fans, and containment air compressors. The operators

EDE-PP-11F	
<u>Loss of Power Effect</u>	Contingency Action
Isolate the control building makeup air supply from loss of RM-RM-6506B and 6507B (circuit 1 & 2)	No action required. Main control room emergency clean-up filter system will start and recirc and filter control room air. On power restoration, restore normal ventilation lineup.
RM-RM-6535B, manipulator crane (circuit 3)	No action required. Detectors normally de-energized at power.
RM-RM-6576B, Post LOCA monitor counts (circuit 5)	No action required. No control function. Train A RM available. RM function restored on power restoration.
RM-RM-6527B, Online purge. A Train B containment ventilation isolation (CVI) is generated. Containment on-line purge system isolates and lose ability to control containment pressure. Lose the containment pre-entry and refueling purge systems (circuit 10).	No action required. Closes COP-V-2 & 3/CAP-V-2 & 3 if open. RM function restored on power restoration.
Loss of power to the above radiation monitors can interrupt the communication loop as well as the control function described above.	Contact I&C and determine if communication loop can be restored until circuit power is restored.
Lose the capability to start the diesel generator 1B room ventilation fans. The return air damper opens (circuit 6).	Fans can not be manually started. On power restoration, diesel generator 1B room ventilation fans are restored to service. An analysis exists to address EDG functionality with either a supply or exhaust fan unavailable. In the event both fans were unavailable, a contingency plan is available to manual start an EDG fan by utilizing a standing operating order.
Lose the capability for Train B high energy line break isolation to close PAB aux steam isolation valve AS-V-176, letdown isolation valve CS-V-150, and steam blow down isolation valves SB-V-9, 10, 11 & 12 (circuit 17).	No action required. Train A HELB provides redundant isolation capability.
Lose capability for the Train B MSIV control (circuit 7 & 9).	No action required. Train A MSIV control is still available. On power restoration, Train B MSIV control is restored.

Extent of Condition

Extent of condition has not been determined. However, only Inverter 1E is of similar design. Inverter 1E, like 1F, does not supply risk significant loads and there have been no operational problems or failures identified with Inverter 1E. The remaining four inverters were manufactured by a different vendor (Westinghouse) and are not similar to Inverters 1E and 1F.

External Event Risks

The likelihood and/or consequences of an external event are included in the quantified results. Failure of 1-EDE-MCC-631 does not increase the likelihood of an external event.

Weather Forecast

The weather forecast for the duration of the proposed NOED implementation is normal conditions. No severe weather conditions are forecast for the next 5 days (i.e. no nor'easters/hurricanes)

Conclusion

- There is no loss of risk significant function from inverter 1-EDE-PP-1-F or 1-EDE-MCC-631.
- The ICCDP for the 48 hours period is $3.14E-11$ and is less than the $5E-07$ threshold.
- The ICLERP for the 48 hours period is $9.46E-14$ and is less than the $5E-8$ threshold.
- During the repair of Inverter 1F appropriate compensatory measures associated with configuration risk management will be employed.

5. Justification for the Duration of the Noncompliance

The requested 18-hour extension to the inverter AOT is based on the following inverter repair schedule:

Logic and driver cards first replacement and test	0553	11/30
Logic and driver cards second replacement and test	0823	11/30
Logic and driver cards third replacement and test	1053	11/30
Logic and driver cards fourth replacement and test	1323	11/30
Disconnect load bank and re-align inverter	1923	11/30
Work order review and closeout	2123	11/30

6. The Condition and Operational Status of the Plant

The plant is in mode 1 at 100% power. Both trains of the safety-related fuel storage building emergency air cleaning system are inoperable due to a differential pressure indication problem. The TS action prohibits movement of loads over the spent fuel pool; however, facility operation is otherwise unaffected. The next refueling outage will not occur for over 300 days and there are no plans to move fuel during the duration of the NOED implementation. Other TS-related equipment that is inoperable to support planned maintenance activities is Containment Enclosure Emergency Air Cleanup System Fan-5A. This component is being actively worked to return it to service and in the interim the alternate train is available.

7. The Status and Potential Challenges to Off-site and On-site Power Sources

All onsite and offsite power sources are currently available. ISO–New England confirmed there are no known challenges to the offsite power sources. The TS required components of the onsite emergency power sources and distribution systems (excluding Inverter 1F) are operable and capable of performing their specified safety functions.

8. The Basis for the Conclusion that the Noncompliance will not be of Potential Detriment to the Public Health and Safety

As discussed above there is no safety significance associated with this NOED request. The three "no significant hazards" criteria are met as follows:

Involve a significant increase in the probability or consequences of an accident previously evaluated

The vital inverters are not an initiator of any accident previously evaluated. Although Inverter 1F will be inoperable during the requested NOED period, vital panel 1F will remain energized from its maintenance power supply and power the instrumentation and control functions assuming no additional failures. The other inverters (1B and 1D) in the same train as Inverter 1F are operable. Moreover, the redundant train-A inverters (1A, 1C, and 1E) are operable and capable of performing their specified safety function. A plant-specific probabilistic risk assessment (PRA) demonstrated that the incremental core damage and large early release probabilities associated with the requested NOED period are not risk significant, and operation of the inverter on the maintenance power supply does not change the core damage frequency. Therefore, operation of the inverter on the maintenance power supply for the requested period of enforcement discretion will not significantly increase the probability or consequences of an accident previously evaluated.

Create the possibility of a new or different kind of accident from any accident previously evaluated

The TS allow a vital inverter to be inoperable for up to 24 hours. The requested extended period of operation with an inoperable inverter does not introduce any new modes of plant operation or new accident precursors, and it does not involve any physical modifications to the plant. The inverters function to ensure the availability of a source of electrical power to the instrumentation and controls required for safe shutdown of the reactor following an accident. Continued operation with one inverter inoperable and energized from its maintenance power supply will result in a reduction in power source reliability. However, even with a loss of the entire electrical train, the redundant train is capable of supplying the loads required for reactor shutdown in the event of an emergency. Therefore, operation of the inverter on the maintenance power supply for the requested period of enforcement discretion will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Involve a significant reduction in a margin of safety.

The inverters are designed to ensure the availability of necessary power to the ECCS instrumentation and controls so that the fuel, reactor coolant system, and containment design limits are not exceeded during postulated accidents or transients. Operation of the inverter on its maintenance power supply for the requested period of enforcement discretion does not adversely affect the design or performance of the ECCS or any other plant systems. Although Inverter 1F will be inoperable during the requested NOED period, vital panel 1F will remain energized from its maintenance power supply and power the instrumentation and control functions assuming no additional failures. The other inverters (1B and 1D) in the same train as Inverter 1F are operable. Moreover, the redundant train-A inverters (1A, 1C, and 1E) are operable and capable of performing their specified safety function. In addition, a plant-specific probabilistic risk assessment (PRA) demonstrated that the extended period of operation with Inverter 1F is not risk-significant and will not involve a net increase in radiological risk. The continued operation with Inverter 1F inoperable (powered from the maintenance supply) does not revise any design margin. Therefore, operation of the inverter on the maintenance power

supply for the requested period of enforcement discretion will not involve a significant reduction in margin of safety.

9. The Basis for the Conclusion that the Noncompliance will not Involve Adverse Consequences to the Environment

FPL Energy Seabrook evaluated the proposed request for enforcement discretion against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. FPL Energy Seabrook has determined that the requested action meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based upon the fact that the proposed action is being requested to a license issued pursuant to 10 CFR 50. Although the proposed action involves a noncompliance with a Technical Specification action statement, the proposed action:

- (i) involves no significant hazards consideration;
- (ii) does not significantly change the types or increase the amounts of any effluents that may be released offsite; and
- (iii) does not significantly increase individual or cumulative occupational radiation exposure.

10. Approval by the Facility Organization that Normally Reviews Safety Issues

This request was reviewed and approved by the Station Operation Review Committee (SORC) on November 29, 2005.

11. Applicable NOED Criteria

This NOED is a Regular NOED request, and since the plant is currently in operation at 100% power, the NOED is intended to avoid an unnecessary transient and plant shut down that would result by complying with Technical Specifications, thereby minimizing potential safety consequences and operational risks.

12. Written NOED Request and Follow-up License Amendment

FPL Energy Seabrook will submit a written NOED request within two working days. A follow-up license amendment request will be submitted within four working days. The license amendment request will either propose to relocate the low risk Inverters 1E and 1F to the Technical Requirements Manual consistent with NUREG 1431, Rev 3., "Improved Technical Specifications-Westinghouse Plants," or to extend the allowed outage time for Inverters 1E and 1F.