



Crystal River Unit 3  
Docket No. 50-302  
Operating License No. DPR-72

Ref: 10 CFR 50.90

April 26, 2001  
3F0401-12

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Response to NRC Request for Clarifications Related to License Amendment Request (LAR) No. 265

Reference: FPC to NRC letter, 3F0201-04, dated February 21, 2001, License Amendment Request No. 265, Revision 0, "Emergency Diesel Generator Loss of Power Start"

Dear Sir:

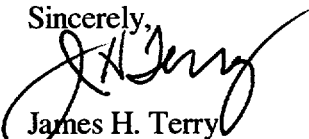
In the above referenced letter, Florida Power Corporation (FPC) requested changes to Improved Technical Specifications (ITS) 3.3.8, "Emergency Diesel Generator (EDG) Loss of Power Start (LOPS)," for Crystal River Unit 3 (CR-3).

During an April 17, 2001 telephone conversation with the NRC CR-3 Project Manager and the Electrical/Instrumentation and Control Systems technical reviewer for LAR No. 265, FPC offered clarifications related to the technical bases for the changes proposed by the LAR. These clarifications addressed the CR-3-specific configuration of the LOPS undervoltage and degraded voltage actuation logic circuits, and the interaction of the undervoltage circuits with the Engineered Safeguards Actuation System automatic actuation logic. The information provided during that conversation is contained in the attachment to this letter.

This submittal contains no new regulatory commitments.

If you have any questions regarding this submittal, please contact Mr. Sid Powell, Supervisor, Licensing and Regulatory Programs at (352) 563-4883.

Sincerely,



James H. Terry  
Manager Engineering

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Attachment: Response to NRC Request for Clarifying Information

xc: Regional Administrator, Region II  
Senior Resident Inspector  
NRR Project Manager

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## **Response to NRC Request for Clarifying Information**

The following information is intended to clarify the technical bases for the changes to ITS 3.3.8, "Emergency Diesel Generator Loss of Power Start," proposed by License Amendment Request (LAR) No. 265.

Each of the two 4160V engineered safeguards (ES) buses is equipped with three undervoltage relays (FLURS), and three degraded voltage relays (SLURS). An undervoltage condition sensed by two-out-of-three FLURS, or a degraded voltage condition sensed by three-out-of-three SLURS will result in automatic stripping of the affected ES bus and an automatic start signal for the associated emergency diesel generator (EDG).

In addition to their loss of power start function, the FLURS provide inputs, via auxiliary relays, to the Engineered Safeguards Actuation System (ESAS) automatic actuation logic matrices. In the event of an ESAS actuation coincident with an ES 4160 volt bus undervoltage condition, block loading of ES equipment (with the exception of Block 1 loads) on the associated EDG will be prevented until the bus undervoltage condition clears, i.e., until two-out-of-three FLURS associated with the bus reset. The SLURS do not provide inputs to the actuation matrices.

The FLURS that monitor the "A" ES 4160V bus provide inputs to the "A" actuation matrix, and the FLURS that monitor the "B" ES 4160V bus provide inputs to the "B" actuation matrix. Each actuation matrix consists of three channels arranged in a two-out-of-three actuation logic with each of the three channels containing an auxiliary contact associated with one FLUR. ITS 3.3.7, "Engineered Safeguards Actuation System (ESAS) Automatic Actuation Logic," requires all three of the logic channels for both the "A" and "B" actuation matrices to be operable.

As discussed in LAR No. 265, tripping an inoperable FLUR is accomplished by installing a jumper. The jumper will "hold" the FLUR in a tripped state until it is removed, and prevent the FLUR auxiliary contact in the associated ESAS actuation matrix channel from resetting. Under this condition, one of the three logic channels of the associated ESAS actuation matrix is rendered inoperable and entry into ITS 3.3.7 Condition A is required.