

ENCLOSURE

# Florida Power

CORPORATION

Crystal River Unit 3

Docket No. 80-302

July 7, 1994

3F0794-07

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Subject: Request For Discretionary Enforcement

Dear Sir:

Florida Power Corporation (FPC) is in the midst of an unanticipated replacement of the rotating element for the Motor Driven Emergency Feedwater Pump (EFP-1). Crystal River Unit 3 (CR-3) entered the Action for Improved Technical Specification (ITS) 3.7.5.B on July 6, 1994 at 1145. The duration of this activity is expected to exceed the 72-hour Allowed Outage Time (AOT) provided in the ITS. FPC believes that, for the reasons provided in the attachment, enforcement discretion to allow up to an additional 48 hours is warranted. This will extend the AOT to 1145 on July 11, 1994. Such discretion is hereby requested.

## BACKGROUND

The CR-3 feedwater and emergency feedwater systems designs include two turbine driven main-feedwater pumps, one 100% capacity motor driven emergency feedwater pump (EFP-1), one 100% capacity turbine driven emergency feedwater pump (EFP-2) and one motor driven non-safety-related auxiliary feedwater pump (FWP-7). The emergency feedwater pumps are automatically initiated and controlled by a control system that has been shown to be highly reliable from a PSA perspective.

The main feedwater pumps are fully operational and in operation. The turbine driven emergency feedwater pump is fully operational under current conditions. If the unit were to be taken to Mode 3, greater reliance is placed on auxiliary steam from neighboring fossil units. One of these units is experiencing a tube leak that may require its removal from service in the immediate future. The auxiliary feedwater pump has been recently modified to improve its performance from a vibration perspective. A 48-hour run portion of the post modification testing is well-underway and will be completed before noon tomorrow. It is now fully functional.

CRYSTAL RIVER ENERGY COMPLEX: 15700 W Power Line St • Crystal River, Florida 34428-6708 • (804) 795-6486

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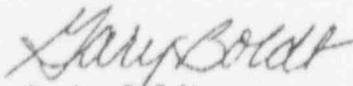
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The EFP-1 rotating element is being replaced because of an anomaly in the shaft which prevents proper fit-up with the outboard bearing. Alternatives considered included replacement of the bearing with one having a smaller ID or repair of the shaft using methods we have not previously utilized. The bearing would not be available in the time frame needed and the shaft repair was not considered the best alternative from a long-term safety perspective. Replacement of the rotating element will take at least 24 hours longer than the remaining time in the AOT. The 48 hour time frame should provide for sufficient time to complete the repairs. Should repairs not be completed within the allowed time, the situation will be reassessed next Monday.

Florida Power Corporation believes the granting of this request will provide a benefit to the over-all safe operation of the unit. We have arranged for a teleconference to discuss this matter tomorrow morning. Copies of relevant drawings and flow diagrams were provided through the NRC resident's via facsimile earlier this morning. Your prompt consideration will be greatly appreciated.

Sincerely,



G. L. Boldt,  
Vice President  
Nuclear Production

GLB/KRW:ff

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

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The following addresses each of the considerations required by the guidance for granting enforcement discretion, NRC Inspection Manual, Part 9900, "10 CFR Part 2 Appendix C Enforcement Discretion":

1. The requirement from which relief is being sought is the AOT for Condition B of ITS 3.7.5. The AOT limits the emergency feedwater train unavailability to 72 hours with 6 hours to be in Mode 3 thereafter.
2. The EFP-1 shaft condition was discovered as a result of routine surveillance activities. During the performance of the quarterly pump run, water droplets were noted in the oil. The oil was replaced and the water jacket hydrostatically tested. No leak was identified. Particulate matter was noted in the oil following a short duration run. The bearing was found to be easily removed off the shaft even though an interference fit should be present. Upon removal of the bearing, the shaft condition was noted. No vibration, particulate or other indicators had alerted us to this shaft condition. Once discovered, neither FPC nor the manufacturer felt a "use-as-is" disposition was appropriate even though the pump's performance had continued to be quite acceptable. This determination was made after a thorough consideration of a number of alternatives and within a few hours of the discovery of the shaft condition. It was briefly discussed with members of the NRC staff immediately thereafter.
3. The safety function of emergency feedwater is to provide alternative means of supporting primary-to-secondary heat transfer following an interruption of normal feedwater. During normal operation, the function is achieved by the two main feedwater pumps, associated equipment and their controls. The MFW system for CR-3 has been highly reliable for a number of years. The function of EFP-1 is to provide a diesel backed, motor driven pump independent and diverse of the turbine-driven emergency pump. Because of this AC dependency (and thus its unavailability during station blackout), the motor driven pump is slightly less significant than the turbine driven pump from either a deterministic or PSA perspective.  
  
The two scenarios being considered in this request are whether the plant is safer in Mode 1 with main feedwater as well as the turbine driven emergency feedwater pump (EFP-2) and auxiliary feedwater pump (FWP-7) available; or, Mode 4 with just the turbine driven emergency feedwater pump (EFP-2) and the auxiliary feedwater pump (FWP-7) available. FPC believes that the additional equipment available makes Mode 1 significantly safer. Further, most accident precursors tend to occur during significant changes in operating mode not steady-state operation. Thus, the likelihood of challenging the safety systems is significantly worsened by causing a transient that can be reasonably avoided. Finally, the limited duration of the request limits the exposure of the plant to other transients that may require emergency feedwater.
4. FPC will control activities that could adversely affect or challenge main or emergency feedwater while EFP-1 is out of service. The auxiliary pump will be returned to full service as soon as the ongoing testing is completed.

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5. The duration was chosen to minimize the extension while allowing sufficient time for necessary activities. The current schedule estimates at least a 24 hour extension will be needed. Thus a 48 hour extension is requested to allow for any contingencies that may arise. Nevertheless, the activities are being expedited and the Condition will be exited as soon as possible.
6. The BASES for the AOT confirms the duration to be based upon estimated repair typical times as well as EFW redundancy and initiating event frequency. Most repairs could indeed be accomplished in the AOT. Repairs of this magnitude are not routinely planned for the development of ITS AOT's. The availability of the auxiliary pump was not credited since it is not an ITS or safety-related back-up. Certainly, such credit is reasonable and relied upon in other plant's technical specifications and longer AOT's are thereby justified. Thus, consideration of this matter does not involve the consideration of a significant safety hazard.
7. The environment will not be adversely affected as a result of this extended AOT. In fact, failure to grant this request would require substantial reliance on alternate energy supplies which generally have substantially higher environmental impacts.
8. The Plant Review Committee reviewed this request and fully support this action as opposed to alternate repairs or plant shutdown.