Progress Energy

Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

Ref: 10 CFR 26

August 26, 2010
3F0810-10

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

Subject: Crystal River Unit 3 – Response to Request for Additional Information Regarding Part 26 Exemption Request

References: (1) CR-3 to NRC letter, 3F0710-03, dated July 13, 2010, "Request for One-Time Exemption from the Requirements of 10 CFR 26.205(d)(3)" (TAC NO. ME4268)

(2) NRC to CR-3 email dated August 11, 2010, "Draft RAIs RE Crystal River, Unit 3 Part 26 Exemption Request" (Accession No. ML102280010)

Dear Sir:

On July 13, 2010, Florida Power Corporation (FPC), doing business as Progress Energy Florida, Inc., requested a one-time exemption from portions of 10 CFR 26.205(d)(3) for Crystal River Unit 3 (CR-3). Subsequently, the Nuclear Regulatory Commission (NRC), by an email dated August 11, 2010, forwarded a request for additional information (RAI) concerning the CR-3 exemption request. The attachment to this letter provides a response to the RAI.

No new regulatory commitments are contained in this submittal.

If you have any questions regarding this submittal, please contact Mr. Dan Westcott, Superintendent, Licensing and Regulatory Programs at (352) 563-4796.

Sincerely,

Jon A. Franke
Vice President
Crystal River Nuclear Plant

JAF/crm

Attachment: Response to Request for Additional Information

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

ADD 1
NRR

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Crystal River Nuclear Plant
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Crystal River, FL 34428

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

DOCKET NUMBER 50-302 /LICENSE NUMBER DPR-72

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

ATTACHMENT

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On July 13, 2010, Florida Power Corporation (FPC), doing business as Progress Energy Florida, Inc., requested a one-time exemption from portions of 10 CFR 26.205(d)(3) for Crystal River Unit 3 (CR-3). Subsequently, the Nuclear Regulatory Commission (NRC), by an email dated August 11, 2010, forwarded a request for additional information (RAI) concerning the CR-3 exemption request. Below is the CR-3 response to the RAIs.

NRC RAI 1

The description of the proposed exemption in Sections 2.0 and 3.0 of the exemption request both mention that Crystal River will ensure that covered personnel do not work greater than an average of 54 hours per week. Describe how working, on average, a 54-hour week reflects fatigue management practices.

CR-3 Response

Progress Energy periodically shares resources to support outages across the Progress Energy fleet. Although covered employees at CR-3 will already average less than 54-hours per week, there is a potential for CR-3 employees to work extended hours at another site prior to the startup. The commitment in the Exemption Request is intended to provide the NRC with an assurance that CR-3 is proactively managing fatigue for all employees, including those temporarily supporting other facilities.

In most cases, CR-3 personnel have averaged considerably less than 54-hours per week since early 2010. The hours worked have generally been consistent with the example shift cycle provided in Section 5.0 of the Exemption Request, where operations, I&C maintenance, chemistry, and health physics personnel averaged 41, 44, 44 and 48 hours per week under 10 CFR 26.205(b), respectively.

CR-3's fatigue management program also encompasses more than just work hour controls. Training and behavioral observations are central to ensuring worker fatigue is appropriately managed. Progress Energy procedures address worker fatigue at length, including the following information: Fatigue and Decreased Alertness Risk Factors and Symptoms; Contributors to Worker Fatigue; Circadian Variations in Alertness; Indications and Risk Factors for Common Sleep Disorders; Shift Strategies for Obtaining Adequate Rest; and Fatigue Countermeasures. When developing and assigning schedules, Progress Energy procedures require that the following are considered:

- *Duration of scheduled work period (not to exceed 12 hours)*
- *Duration of break period*
- *Consistent start times for work periods (e.g., 6 or 7 a.m.)*
- *Consistent stop times for work periods*

- *Consistent rotation (e.g., if working a 5-week shift rotation, the scheduled work days and days off are repeated every five weeks)*
- *The impact of shift rotation and providing suitable transition between rotating shifts*
- *Long range predictability as a key aspect of fatigue mitigation*
- *Circadian factors*
- *Training requirements*
- *Vacation scheduling*
- *Consideration of the impact of unscheduled overtime*

NRC RAI 2

Section 5.0 of the exemption request states that no waivers have been issued to individuals who are part of this exemption request. Without discussing work hour controls, describe any other evidence of managing fatigue at CR-3 during the current unit outage.

CR-3 Response

Reference the CR-3 response to NRC RAI 1 for a discussion of fatigue management during the current unit outage.

NRC RAI 3

The exemption requests a 60-day period of exemption from the normal minimum day off requirements in deference to the outage minimum day off requirements. Why is a 60-day period needed to start-up.

CR-3 Response

The current ongoing outage at CR-3 has been a uniquely complex outage both in terms of amount of time the plant has been offline and the extent of the modifications to both the primary and secondary systems and components. The current schedule indicates 58 days from the time that the unit enters MODE 6 to reaching 100% power. This schedule is still in active development and does not yet fully reflect all of the testing and hold points, nor have all of the standard activity durations been adjusted to reflect the operational complexities of bringing the plant online with new equipment. It is likely that the final scheduled duration will be somewhat longer. In addition, industry data suggests that 75% of delays in startup involved components that had been worked on earlier in the outage. This data shows the main feedwater and reactor coolant systems, both of which have been modified during this outage, have been disproportionately involved in startup delays. Progress Energy feels it is prudent to seek the full 60 days to ensure adequate staffing and flexibility to address equipment challenges as they arise during restart. CR-3 will return to normal, online work hour controls when outage activities are completed.

NRC RAI 4

10 CFR Part 26.205(d)(4) states that licensees need not meet the operating MDO [minimum day off] requirements for individuals who are "working on outage activities." The exemption request does not limit the request to individuals working on outage activities, explain the rational to broaden the scope of the MDO outage relaxation for this exemption request.

CR-3 Response

That was not the intent. The exemption will only be applied to individuals who are "working on outage activities." CR-3 will not use this exemption to broaden the scope of the MDO outage relaxation to covered workers not supporting the outage.