Progress Energy

Docket No. 50-302
Operating License No. DPR-72

Ref: CR-3 ITS Appendix B

July 21, 2003
3F0703-05

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

Subject: Crystal River Unit 3 – Report Required by Environmental Protection Plan

Dear Sir:

In accordance with the conditions of the National Pollutant Discharge Elimination System (NPDES) Permit, Progress Energy Florida, Inc. submitted a report to the Florida Department of Environmental Protection (FDEP) on June 23, 2003. The report summarized the events that occurred on June 12, 2003, when Crystal River Units 1, 2, and 3 experienced an upset condition which resulted in an exceedance of the NPDES three hour rolling average temperature limitation.

The attached copy of the written notification made to FDEP is being submitted in accordance with the Crystal River Unit 3 (CR-3) Improved Technical Specification, Appendix B, Environmental Protection Plan. An Addendum detailing a subsequent re-evaluation of the upset condition data is also being provided.

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

Sincerely,

S. Powell FOR DLT

D. L. Taylor
Manager, Support Services

DLT/ff

Attachments

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

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

IE23

Progress Energy

Michael Olive
Plant Manager
Crystal River Fossil Plant

June 23, 2003

Mr. Tommy Oneal
Florida Department of Environmental Protection
Industrial Wastewater Program
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619-8318

Dear Mr. Oneal:

Re: Progress Energy Florida, Inc. Crystal River Units 1, 2, & 3 Upset
Thermal Limit Excursion Follow Up Notification – FL0000159

As you requested, the following is a description of events that occurred on June 12, 2003 and reported to you on June 13, 2003 by Mr. Michael Shrader. This event resulted in an upset condition with a subsequent exceedance of permitted thermal limits.

Event description

At 1330, June 12, the instantaneous discharge canal temperature started increasing at an unanticipated higher than expected rate. To control this temperature change, load reductions were immediately initiated, decreasing unit 1 from 350 MW to 250 MW and unit 2 from 500 MW to 375 MW (225 MW decrease). At 1340, the instantaneous discharge canal temperature was 96.3 and the 3-hour rolling average was 95.7. At 1419 the condition was reassessed by the shift supervisor and operations superintendent and the decision was made to initiate an additional load reduction. Unit 1 was then lowered from 250 MW to 175 MW and unit 2 from 375 MW to 250 MW (200 MW decrease). The instantaneous discharge canal temperature continued to increase and leveled off at 97.0 degrees. The high and continuous rate of change was not anticipated. At 1539, the 3-hour rolling average had increased to 96.60, exceeding the NPDES permit limit. The instantaneous discharge canal temperature started decreasing one hour and thirty minutes following the initial load reduction. Because the instantaneous discharge canal temperature had increased at such a fast rate and to such a high level of 97.0 degrees, the opportunity to maintain the 3-hour rolling average within the NPDES permit was not achievable. The 3-hour rolling average did not exceed 96.60 during this event and returned within the NPDES limit at 1628. The intake canal temperature at the time of the event was 88.0 degrees.

Progress Energy Florida, Inc.
Crystal River Fossil Plant
15760 W. Powerline Street
Crystal River, FL 34428

At the time of the event ambient conditions were hot. The tide had been incoming all morning. After the tide started going out, the instantaneous discharge canal temperature started increasing at a continuous high rate of change. The shift supervisor and operations superintendent did not anticipate such a significant and continuous increase in canal temperature for this condition.

To alleviate the chance for this type of upset to happen in the future, a more conservative approach will be used when anticipating canal temperature changes and making assumptions as to how the canal temperature will respond to conditions such as the amount of hot water that may be in the discharge canal and leave the canal on an outgoing tide, the amount of gulf (cooler) water that is entering the discharge canal on an incoming tide, an incoming tide bringing in warmer gulf water, ambient air temperature, cloud cover, wind speed, wet bulb temperature, load changes.

Progress Energy Florida appreciates your cooperation in this matter. Please provide your concurrence that Crystal River Units 1, 2, & 3 are no longer in an upset condition. If you have any questions regarding this event, please contact Mr. Michael Shrader (727) 826-4050 or Mr. Ron Johnson (352) 464-7909.

Sincerely,

Michael Olive
Fossil Plant Manager

ADDENDUM

Crystal River Units 1, 2 and 3
NPDES FL0000159
June 2003

During the month of June 2003, Crystal River Units 1, 2, and 3 experienced an upset condition which resulted in an exceedance of the National Pollutant Discharge Elimination System (NPDES) Permit three hour rolling average temperature limitation. This permit limit is associated with outfalls D-011, D-012, and D-013. The following is a description of the event.

On June 12, 2003 at 1300, the instantaneous discharge canal temperature started increasing at an unanticipated higher than expected rate. To control this temperature change, load reductions were immediately initiated, decreasing Unit 1 from 350 MW to 250 MW and Unit 2 from 500 MW to 375 MW (225 MW decrease). At 1340, the instantaneous discharge canal temperature was 96.3°F and the three hour rolling average was 95.7°F. At 1419, the condition was reassessed by the Unit 1 & 2 shift supervisor and operations superintendent and the decision was made to initiate an additional load reduction. Unit 1 was then lowered from 250 MW to 175 MW and Unit 2 from 375 MW to 250 MW (175 MW decrease). The instantaneous discharge canal temperature continued to increase and leveled off at 97.0°F. The high and continuous rate of change was not anticipated. At 1539, the three hour rolling average had increased to 96.80°F, exceeding the NPDES permit limit of 96.5°F. The instantaneous discharge canal temperature started decreasing one hour and thirty minutes following the initial load reduction. Because the instantaneous discharge canal temperature had increased at such a fast rate and to such a high level of 97.0°F, the opportunity to maintain the three hour rolling average within the NPDES permit was not achievable. The three hour rolling average did not exceed 96.80°F during this event and returned within the NPDES permit limit at 1628. The intake canal temperature at the time of the event was 88.0°F degrees.

This event was reported to Mr. Tommy Oneal, Florida Department of Environmental Protection (FDEP), Southwest District, on June 13, 2003. Mr. Oneal agreed that an upset condition had taken place. A written follow up notification was made on June 23, 2003.

During a subsequent re-evaluation of the upset condition data, it was discovered that the point of discharge temperature during the exceedance event reached 96.80°F which is slightly higher than the temperature reported in the June 23, 2003 submittal to FDEP of 96.6°F.

Notification of this updated temperature data was made to Mr. Tommy Oneal on July 18, 2003.