



**Florida  
Power**

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

July 27, 2000  
3F0700-16

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

Subject: Report Required by Environmental Protection Plan

Dear Sir:

The Crystal River Unit 3 (CR-3) Environmental Protection Plan (EPP), Appendix B of the CR-3 Operating License, establishes reporting requirements related to the National Pollutant Discharge Elimination System (NPDES) Permit. Section 3.2.1 of the EPP requires that violations of the NPDES permit shall be reported to the NRC by submittal of copies of the reports originally mailed to the permitting state agency, the Florida Department of Environmental Protection (FDEP).

The attached report on the Amertap Upset Condition Update was provided to the FDEP on July 25, 2000. If you have any questions regarding this submittal, please contact Mr. Sid Powell, Manager, Nuclear Licensing at (352) 563-4883.

Sincerely,

 *for SLB*

S. L. Bernhoft  
Director, Nuclear Regulatory Affairs

SLB/smg

Attachment

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

COOL



July 25, 2000

Mr. Jeff Hilton  
Industrial Wastewater Section  
Florida Department of Environmental Protection  
Southwest District  
3804 Coconut Palm Drive  
Tampa, FL 33619-8318

Dear Mr. Hilton:

Re: Crystal River Unit 3 Amertap Upset Condition Update

Per your request, enclosed is an update of the upset condition reported earlier to the Department on the Amertap Condenser Cleaning System at Crystal River Unit 3. This update contains an estimate of the Amertap ball releases during this upset condition.

Please call me at 727-826-4283 with any questions or comments.

Sincerely,



Kent D. Hedrick, PE  
Manager, Environmental Programs

Enclosure

Bcc: Dave Bruzek  
Steve Garry  
~~Brian Powers~~

File: *Nuclear*  
CR ~~South~~ NPDES Correspondence

# **NPDES FL 000159 Report on Upset Condition (Update - July 25, 2000)**

## **Background**

Florida Power Corporation (FPC) provided a written report regarding the operation of the Crystal River Unit 3 (CR-3) Amertap condenser tube cleaning system to the Florida Department of Environmental Protection (FDEP) in a letter dated June 30, 2000. That report described the operation of the Amertap cleaning system, Amertap ball loss experience and actions being taken to minimize Amertap ball losses. This report describes continued efforts by CR-3 to minimize Amertap ball losses and provides an estimate of Amertap ball loss as a result of the reported upset condition.

As described in the June 30, 2000 letter, adjustments to the D water box strainer section were unsuccessful in stopping ball losses. In order to minimize further losses, an NPDES modification was requested and approved to allow use of the SIDTEC condenser cleaning system at CR-3. This system was deployed at CR-3 in the D water box the week of July 10, 2000. Cleaning device losses from the D water box have been minimized. Amertap balls remain the cleaning device used in the A, B and C water boxes. SIDTEC is still under evaluation for use in these water boxes.

## **Current Situation**

Amertap balls that escape the strainer section of the Amertap system are released to the discharge canal. A boom collection system, in the discharge canal, associated with the CR-1&2 SIDTEC condenser cleaning system is in place downstream of CR-3. This boom collection system has been recently improved to enhance collection of both SIDTEC cleaners and floating Amertap balls and convey them to an on-shore filtering system for reuse. The SIDTEC system is fully capable of handling simultaneous collection of both Amertap balls and SIDTEC cleaners. In order to maximize Amertap ball collection by the boom collection system, the use of a more buoyant style of Amertap ball began during the week of June 26, 2000.

Ball loss also occurs when balls get stuck in heat exchanger tubes and other various circulating water system trapping areas. As heat exchanger fouling increases, more and more of the balls get stuck in the tubes. When the heat exchangers are cleaned, these balls are recovered. A large number of balls are believed to be trapped within the system. During past water box cleanings as many as 5,000 Amertap balls have been found in a single water box. The Amertap balls will not be retrieved until the water boxes are taken out of service and cleaned. Therefore, the amount trapped in the condenser is estimated to be 50% and cannot be confirmed until the water boxes are taken out of service this fall.

## **Estimated Amount of Ball Releases**

CR-3 has estimated the Amertap ball releases for the weeks of May 29, 2000 through July 17, 2000. These estimates include a credit for SIDTEC system collection, manual collection and a 50% condenser-trapping rate. This results in an estimate of released Amertap balls to be:

<u>Week Of</u>	<u>Estimated Ball Release</u>
05/29/00	720 (4.3 pounds)
06/05/00	535 (3.2 pounds)
06/12/00	932 (5.6 pounds)
06/19/00	1098 (6.6 pounds)
06/26/00	4290* (25.7 pounds)
07/03/00	4411* (26.4 pounds)
07/10/00	1128 (6.8 pounds)
07/17/00	-257** (1.5 pounds)

\*Resulted from operation of the D water box with failed collection strainers prior to the use of SIDTEC cleaners.

\*\*Resulted from improved Amertap ball retention and continued collection of previous releases.

### **Recent Activities**

Additional adjustment and repair activities were completed on the A water box on July 17, 2000 to minimize ball loss. Performance continues to be monitored to ensure effectiveness.

### **Summary**

The CR-3 Amertap ball loss to the environment is being minimized during this upset condition by:

1. Using SIDTEC cleaners in the D water box.
2. Adjusting and repairing the water box collection screens for the A, B and C water boxes.
3. Using more buoyant Amertap balls to allow better collection by the SIDTEC collection system.

4. Making improvements to the SIDTEC collection booms.

5. Environmental inspections and manual shoreline Amertap ball collection.

FPC believes these measures are ensuring compliance with applicable permit criteria relating to the Amertap Condenser Cleaning System. Further repairs to the system will occur during the fall outage.