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

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Oconee Auxiliary Service Water System Outage

In accordance with Selected Licensee Commitment (SLC) 16.9.9, please find attached a copy of a report which details the outage of the Oconee Unit 2 Auxiliary Service Water (ASW) System. SLC 16.9.9 requires that a report be submitted to the NRC if the station Auxiliary Service Water (ASW) System and the Standby Shutdown Facility (SSF) ASW System are inoperable for greater than 7 days. The report provides reasons for the outage and outlines plans and procedures to be used to provide for the loss of the system during the outage. No NRC commitments are contained in this report.

Very truly yours,

R. A. Jones
Site Vice President
Oconee Nuclear Station

Attachment

A001

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ATTACHMENT

Selected Licensee Commitment 16.9.9
Auxiliary Service Water System Outage Report

Purpose

This report provides information about the Auxiliary Service Water (ASW) System outage that occurred during the current Oconee Unit 2 refueling outage.

System Description

The ASW System is designed to remove decay heat in the absence of the Main Feedwater (MFDW) System, Emergency Feedwater (EFW) System and Decay Heat Removal (DHR) Systems. DHR is accomplished by supplying water to the steam generators through the EFW headers. The water supply for the ASW System is provided by the Oconee Unit 2 Condenser Circulating Water (CCW) System intake.

Another alternate and independent means of DHR is provided by the Standby Shutdown Facility (SSF) ASW System. Similar to the ASW System, the SSF ASW System removes decay heat by supplying water to the steam generators through the EFW headers. In addition, the water supply for the SSF ASW System is provided by the Oconee Unit 2 CCW System intake.

Selected Licensee Commitments

Condition B of Selected Licensee Commitment (SLC) 16.9.9 allows the ASW system and the SSF ASW system to be simultaneously inoperable for a period of 7 days. If one of the systems cannot be returned to service within that time period, then condition C states that a report be submitted to the Nuclear Regulatory Commission (NRC) within 30 days outlining plans and procedures to be used to provide for the loss of the system.

ASW System Outage Information

A. During the current Unit 2 refueling outage, the CCW System intake was dewatered to allow for maintenance and modification activities. These activities included: 1)installing expansion joint sleeves in the Condenser Inlet Waterboxes, 2)repairing valve seat

leaks, 3)replacing various valves, and 4)inspecting and cleaning CCW Waterboxes. The expansion joint repairs are an infrequent evolution; therefore, they represent a significant increase in the normal scope of work for maintenance activities conducted during Unit 2 CCW outages. As a result of the CCW System intake dewatering, the suction source for the ASW System and SSF ASW System was removed from service. Thus, the ASW System was placed in a 7 day action statement per SLC 16.9.9, Condition B.

B. Originally, this work evolution was scheduled for the duration of 6 days, but because of the complex nature of this evolution and the increased scope of work, there was concern that the work might exceed the 6 days. Contingencies were worked into the maintenance evolution plan in the event that the work ran longer than scheduled. This work evolution was reviewed and approved by the Plant Operations Review Committee (PORC) on March 17, 2004 prior to initiation of the work.

C. The following information outlines the maintenance evolution plans and procedures that were in place at the start of the Allowed Outage Time (AOT) to provide for the loss of the system as specified in Condition C:

No activities were scheduled to adversely affect the operability/availability of Keowee emergency power paths or other protected train components on operating Units 1 and 3 while the SSF was out of service. Other protected trains included Lee Combustion Turbines, High Pressure Injection (HPI), High Pressure Service Water (Elevated Water Storage Tank supply to HPI pump motor coolers and Turbine-driven EFW pumps), and EFW.

C1. Once the SSF was taken out of service, all work activities were performed continuously until the CCW Inlet piping was refilled and the SSF deemed available. The valves that required repairing due to seat leaks were located just below the inlet expansion joints on 2C1 and 2C2 waterboxes. These valves remained closed (the repair involved changing washers one at a time) and were repaired while expansion joint sleeving activities were being performed in the other waterboxes. Valve

replacements did not interfere with waterbox activities. The covers removed from the waterboxes lower manways were hinged and therefore stayed in the immediate area. Outlet side expansion joint sleeving activities were performed after all inlet side activities were completed.

C2. In the event of an emergency situation that would have warranted the return of the SSF to an operable condition, activities in the CCW Inlet waterboxes would have been aborted. All scaffolding, materials, and tooling would have been promptly removed from the Inlet waterboxes, the Inlet valves verified closed, and the waterboxes evacuated prior to Operations initiating refill of this piping. The valve work contingencies included either reinstalling the old valves or continuing to install the new valves, depending on which could be accomplished expeditiously.

D. The action statement was entered for the ASW System and the SSF ASW System inoperable at 0220 hours on March 29, 2004.

Because of the complex nature and increased scope of these activities, additional time was required to complete this work. The 7 day action statement expired on April 5, 2004 at 0220 hours; thus, Condition C was entered to generate the report to the NRC within 30 days.

Condition B for the ASW system and SSF ASW system inoperable was exited on April 10, 2004 at 1300 hours.

E. It is important to note that the additional scope of repairs in the CCW system were necessary to ensure the long-term reliability of the CCW system boundary that provides the primary barrier against turbine building flooding. Similarly, the additional valve maintenance activities were necessary to support long-term reliability of the important flood isolation function provided by these valves. These repairs and maintenance activities provide a long-term risk benefit in the reduction of the Oconee turbine building flood frequency that, in whole or in part,

offsets the risk increase posed by the temporary increase in SSF and ASW system unavailability.

Conclusion:

As described above, the reason that the ASW System outage exceeded the 7 day AOT in SLC 16.9.9 Condition B was due to the complexity and increased scope of the maintenance evolution which required that the CCW intake piping remain dewatered. These activities were deemed necessary to maintain the long-term reliability of the CCW system boundary and the reliability of the related CCW isolation valves. Appropriate risk management actions were implemented within Oconee's Maintenance Rule a(4) to provide for the loss of the system and assure the availability of redundant accident mitigation systems throughout the entire duration of the system outage. No additional actions are necessary as a result of the ASW System outage.