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**DUKE POWER**

September 1, 1994

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

Subject: Oconee Nuclear Station  
Docket Nos. 50-269, -270, -287  
Generic Letter 89-13

In the response to a deviation in NRC Inspection Report 93-25, Duke indicated that it would revise the initial response to Generic Letter 89-13. Please find attached a copy of the revised response for Generic Letter 89-13.

Very truly yours,

A handwritten signature in cursive script that reads 'J. W. Hampton'.

J. W. Hampton  
Vice President  
Oconee Nuclear Station

cc: Mr. S. D. Ebnetter, Regional Administrator  
U. S. Nuclear Regulatory Commission, Region II

Mr. L. A. Wiens, Project Manager  
Office of Nuclear Reactor Regulation

Mr. P. E. Harmon  
Senior Resident Inspector  
Oconee Nuclear Site

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## Generic Letter 89-13 - Service Water Systems

### Oconee Re-Response in answer to SWSOPI Inspection

#### 1. Discussion:

Notice of Deviation dated 11 February 1994 as a result of Oconee's SWSOPI Inspection discusses Oconee's response to Generic Letter 89-13. The following re-response is in answer to that deviation.

#### ACTION I: SURVEILLANCE AND CONTROL

##### INTAKE STRUCTURE INSPECTION

Discussion of intake inspection at Keowee has been added to the Service Water Manual.

##### BIOCIDE ADDITION

Discussion of biocide addition at Keowee has been added to the Service Water Manual.

##### FLUSHING AND FLOW TESTING

Work on the Hydraulic Flow Model for the LPSW System has been completed and benchmarked.

Work on the Hydraulic Flow Model for the CCW System has been completed and checked but has not been benchmarked.

Work on the Hydraulic Flow Model for the HPSW System has been completed and checked but not benchmarked.

Work on the Hydraulic Flow Model for part of the SSF has been completed and checked. Benchmarking is in progress as practical.

A Flush and video inspection has been performed on a typical section of seldom used, buried, large bore LPSW piping. Engineering evaluation concludes that similar piping has no problems of a magnitude that would prevent the piping from performing it's required function to mitigate an accident. This inspection will be repeated periodically.

System Flow testing has been expanded on LPSW and CCW on a Refueling Outage basis to assure flow and flow balancing.

A review and random inspections of Keowee service water systems by the Keowee and Raw Water Systems Engineers concludes that there are no stagnant raw water systems at Keowee with the exception of fire protection. Keowee Fire Protection is annually flushed and tested for flow and pressure requirements.

Periodic testing serves as a flush on limited portions of the ASW (tornado) system at present. Expanded testing on the section supplying the HPI pumps will be in place by 1 September 1995. Testing of the section to the Steam Generators is impractical at this time. Check valve inspection provides information as to the relative condition of this piping.

SSF service water systems (HVAC, Diesel Engine and Aux Service Water) are periodically flushed as part of testing programs. A combined suction test has been performed with all three pumps operating simultaneously. Test frequency (combined test) is being evaluated for the future.

#### ACTION II: TEST PROGRAM

##### OPEN-CYCLE SYSTEMS

The Service Water Manual has been updated to add sections for Keowee and the SSF which were not included in the original manual.

Work is being done to prepare appropriate hardware and program modifications to fully include Keowee and the SSF in our Heat Exchanger Programs. These should be completed by 1 September 1995.

##### CLOSED-CYCLE SYSTEMS

No change

##### INSTRUMENTATION

No change

##### TESTING AND CORRECTIVE ACTIONS

No changes

##### TESTING FREQUENCY

Test programs are being revised to include Heat Exchangers from Keowee. Test programs have been developed for SSF Heat Exchangers. Program changes should be in the Service Water Manual by 1 September 1995.

## **SCHEDULE**

See Testing Frequency

## **DOCUMENTATION**

The Service Water Manual has been revised to include Keowee and the SSF and will be further revised to include details of the Heat Exchanger programs as they are developed.

## **ACTION III: INSPECTION AND MAINTENANCE PROGRAM**

### **OPEN-CYCLE SERVICE WATER SYSTEM PIPING AND COMPONENTS**

Additional piping sections are being inspected as part of ongoing programs discussed in the Service Water Manual. This includes portions discussed in Design Study ONDS -252 and piping not included in ONDS - 252, such as Keowee, ASW (tornado) and the SSF.

### **REMOVAL OF FOULING MATERIAL**

No change

### **REPAIR PROGRAM**

No change

## **SCHEDULE**

No change

## **DOCUMENTATION**

No change

## **ACTION VI: CCNFIRMATION OF LICENSING BASIS**

The initial 1987 SITA inspection walkdown included only safety portions of LPSW and some portions of CCW. A more detailed walkdown inspection was performed in early 1993 on the LPSW System. Walkdown inspections and other design basis confirmation activities such as single failure analysis and design basis documents will be completed on safety significant portions of other service water systems as appropriate by 1 September 1995, except as noted.

SSF system walkdowns by the System Engineer are complete. The SSF does not fall under the single failure criteria and thus will not have a single failure analysis. The SSF design basis document for the HVAC system is complete. The SSF design basis document for the Aux Service Water Pump is scheduled to be complete by the 1 September 1995 date. The SSF design basis document for the Diesel system is scheduled to be complete by 1 December 1995.

Initial SSF testing to demonstrate design basis is complete. This includes a reverse flow test from the steam generators and a test of the crossover piping between the Steam Generators. These will be repeated periodically.

A single failure analysis for Keowee will be produced as a part of the Keowee design basis document. The Keowee design basis document is in production at this time.

A walkdown was completed on all Keowee systems for conformance with flow diagrams in July 1994. Flow diagrams are currently in the update process.

Per the EFW design basis document, the ASW (tornado) system is not designed to be single failure proof. A walkdown of the ASW (tornado) system will be completed by 1 September 1995. The design basis documentation for ASW (tornado) system is part of the Emergency Feedwater system.

A major revision of the single failure analysis of the ECCW as it supports the LPSW was completed in August 1994.

#### ACTION V: PROCEDURES AND TRAINING

Our letter of April 20, 1994 in response to Inspection Report 50-269, -270, -287/93-25 provides our discussion on these issues.

The System Engineering program is added to our list of programs for assuring that procedures and training are consistent with our design basis.