



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

May 21, 1991

Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Dresden Station Units 2 and 3
Supplemental Response to Generic Letter 89-13
NRC Docket Nos. 50-237 and 50-249

References: (a) NRC Generic Letter 89-13, dated July 18, 1989.
(b) M.H. Richter letter to the NRC dated
January 29, 1990.
(c) D. Taylor letter to the NRC dated
November 14, 1990.

Dear Sir:

NRC Generic Letter 89-13 (Generic Letter) indicated that recent operating experience and studies had raised concerns about service water systems in nuclear power plants. The Generic Letter requested licensees to take actions which would ensure that their service water systems were in compliance with, and would be maintained in compliance with, 10 CFR Part 50, Appendix A, General Design Criteria 44, 45, and 46 and Appendix B, Section XI. Additionally, the Generic Letter required a response which would confirm that each licensee had established programs to implement the recommended actions of the Generic Letter, or that equally effective actions had been pursued. References (b) and (c) provided Commonwealth Edison's response for Dresden, Quad Cities, Zion, LaSalle County, Byron and Braidwood Stations to Generic Letter 89-13.

The purpose of this letter is to notify the NRC that all the actions committed to by CECO in response to Generic Letter 89-13 have been completed for Dresden Station Unit 2. The attachment to this letter outlines those actions taken.

Please direct any questions that you may have concerning this response to this office.

Respectfully,

D.L. Taylor
Generic Issues Administrator

Attachment

cc: A.B. Davis - Regional Administrator, Region III
B. Siegel - Project Manager - NRR
Resident Inspectors - Dresden

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ATTACHMENT

GL 89-13 Item I:

Implement and maintain an ongoing program of surveillance and control techniques to significantly reduce the incidence of flow blockage problems as a result of biofouling.

CECo ACTIONS

The Service Water System (SWS) concrete/debris inspection of the intake structure was completed in September 1990. No major indications of spalling, cracking, or delamination were found. Minor scaling was detected on all three pier noses downstream of the travelling screens and can be attributed to hydrodynamic forces acting on the pier nose. All three bays were found to be clear of silt/debris, except for an accumulation of four inches of organic material extending six feet downstream of the travelling screens in bay 2C. The acceptance criteria requires that cleaning of the intake be performed when the level of debris exceeds six inches above the active portion of the travelling screens. This inspection will be performed during each unit's refuel outage.

The Clam/Sediment inspection of the Units 2/3 crib house was performed in August 1990 by the Environmental Services Department (ESD). Samples were collected using a ponar dredge at 12 bays outside of the Units 2/3 crib house, 6 bays inside the crib house (2A, 2B, 2C, 3A, 3B, and 3C), and the Units 2/3 diesel fire pump bay. The six intake bays were determined to have low levels of live clam population. No mechanical removal of clams was required. The greatest number of live clams was found in the Units 2/3 diesel fire pump bay. Subsequently, the fire pump bay was treated with a non-oxidizing biocide to reduce the live clam population. This inspection will be performed on an annual basis and can be tracked through the GSRV station surveillance program.

A proceduralized program of safety-related intake structure inspection activities and acceptance criteria have been documented through the implementation of DAP 14-07, "Service Water System Performance Verification", and DTS 3900-07, "Unit 2/3 SWS Cribhouse Inspection".

Installation of the Sodium Hypochlorite feed system has been completed. The feed system will inject hypochlorite, and/or activated bromine into the SWS intake/header to control clam growth and microbiological fouling in the heat exchanger, and nodular corrosion in the SWS piping. The feed system may also be used to inject a non-oxidizing agent for control of adult clams and Zebra Mussels, if they should populate the intake water supply.

Flush/flow testing of the pertinent safety related heat exchangers is currently being performed under the following Dresden Operational Surveillance (DOS) procedures:

1. DOS 6600-1, Diesel Generator Surveillance Test (performed monthly)
2. DOS 1500-3, Quarterly Containment Cooling Service Water (CCSW) Pump Test
3. DOS 1500-2, Quarterly CCSW Pump Test for the In Service Test Program
4. DOS 1500-5, LPCI System Quarterly Flow Rate Test
5. DOS 2300-3, High Pressure coolant Injection (HPCI) System Operability Verification, (performed quarterly)

GL 89-13 ITEM II

Conduct a test program to verify the heat transfer capability of all safety-related heat exchangers cooled by service water. The total program should consist of an initial test program and a periodic retest program.

CECo ACTIONS

A systematic evaluation identified seventeen Unit 2 and common safety related (SR) heat exchangers to be tested and/or cleaned. Procedures for testing these heat exchangers have been developed. Testing and/or cleaning was performed and will continue to be performed at a minimum of once per refueling outage as requested in GL 89-13 until adequate trending is performed.

The Unit 2 and 2/3 Diesel Generator (DG) cooling water pump motor coolers were tested for operability using the temperature monitoring method. Both temperatures were found to be acceptable. Testing will be performed monthly.

The Unit 2 and 2/3 DG heat exchangers were cleaned and subsequently tested using the temperature monitoring method. These temperatures were found to be acceptable. The heat exchangers will be tested on a monthly basis.

The 2A and 2B Low Pressure Coolant Injection (LPCI) heat exchangers were cleaned, inspected, and eddy current (EC) tested. These heat exchangers are routinely tested and cleaned under the station EC test program. The multi frequency EC nondestructive test is used to detect and measure tube wall loss, pitting, and other defects on the tubes inner diameter (ID). The data acquired is trended and used for predictive maintenance activities such as tube plugging and replacement. Both heat exchangers were also Hydro Tested for integrity in accordance with Dresden Maintenance Procedure (DMP), DMP 1500-2.

The Unit 2 and 3 shared Control Room HVAC (CRHVAC) Refrigerant Condensing heat exchanger will be tested during the next Unit 3 outage. A proceduralized monitoring program has been developed to monitor control room temperatures and condenser performance. The testing frequency will be on a quarterly basis and monthly during the months of July and August. Although no routine station operational surveillances are currently performed for the CRHVAC system, a review of maintenance history revealed that equipment such as the condensers, motors, and air handling units had been cleaned and repaired as corrective maintenance dictated. CRHVAC service water inlet/outlet temperatures and pressures are trended in accordance with Dresden Technical Procedure, DTP-10, "Plant Performance Monitoring".

The Unit 2 Containment Cooling Service Water (CCSW) pump room coolers were chemically back flushed and then tested using the Delta Pressure (Delta P) test method. The test results are currently being reviewed to determine the proper corrective actions.

GL 89-13 ITEM III

Ensure by establishing a routine inspection and maintenance program for open-cycle service water system piping and components that corrosion, erosion, protective coating failure, silting, and biofouling cannot degrade the performance of the safety-related systems supplied by service water. The maintenance program should have at least the following purposes:

- A. To remove excessive accumulations of biofouling agents, corrosion products, and silt;
- B. To repair defective protective coatings and corroded service water system piping and components that could adversely affect performance of their intended safety functions.

CECo ACTIONS

Two high flow locations in the SWS piping were identified and inspected utilizing the ultrasonic examination test method. Proceduralized tests and inspections were performed in conjunction with the station's Erosion/Corrosion test program. All values of pipe wall thickness were found to be acceptable.

Additionally, five low flow or stagnant piping locations points were UT tested. All values of pipe wall thickness were determined to be acceptable. In addition to the UT test, the low flow points were also inspected for silt and debris. No significant accumulations were identified.

GL 89-13 ITEM IV

Confirm that the service water system will perform its intended function in accordance with the licensing basis for the plant. Reconstitution of the design basis of the system is not intended. This confirmation should include a review of the ability to perform required safety functions in the event of failure of a single active component. To ensure that the as-built system is in accordance with the appropriate licensing basis documentation, this should include recent system walkdown inspections.

CECo ACTIONS

The design review of the SWS has been completed. The design review consisted of the following (4) areas:

- System Configuration Review
- Single Failure of Active Component Review
- Field Verification of P&ID's
- Flood Protection Review
- Pipe Support Review

The Safety related systems reviewed were the following:

- Containment Cooling Service Water (CCSW)
- Service Water (Diesel Generator Cooling Water)
- Diesel Generator Jacket Cooling Water
- Reactor Building Closed Cooling Water (RBCCW)

All discrepancies are being evaluated to determine the required corrective actions.

GL 89-13 ITEM V

Confirm that the maintenance practices, operating and emergency procedures and training that involves the service water system are adequate to ensure that safety-related equipment cooled by the service water system will function as intended and that operators of the equipment will perform effectively.

CECo ACTIONS

A review of the maintenance practices, operating and emergency procedures and training with regards to the adequacy of the SWS has been completed. No major discrepancies were identified.