U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-237/85-04(DRS)

Docket No. 50-237 License No. DPR-19

Licensee: Commonwealth Edison Company
P. O. Box 767
Chicago, IL 60690

Facility Name: Dresden Nuclear Power Station, Unit 2

Inspection At: Morris, IL

Inspection Conducted: February 1, 1985

Inspector: W. J. Key 3/7/85
Date

Approved By: D. H. Danielson, Chief 3/11/85
Materials & Processes Section Date

Inspection Summary

Inspection on February 1, 1985 (Report No. 50-237/85-04(DRS))
Areas Inspected: Review of Reactor Water Cleanup System pipe replacement program and procedures, review of welder qualifications, observation of pipe spool fabrication and welding, review of weld radiographs and travelers.
Results: No items of noncompliance or deviations with NRC regulations were identified.

DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

*R. Hylka, ISI Coordinator
*D. Schildgen, QC Engineer
C. Anderson, QC Engineer

William A. Pope Construction Company (Pope)

J. Taylor, QC Foreman

*Identifies those attending the entrance and exit meeting.

2. Augmented Inspection

As a result of inspections performed in accordance with IE Bulletins 82-03, Revision 1, and 83-02, and the NRC Order dated August 26, 1983, the NRC in Generic Letter 84-11 directed all licensees of operating BWR's to develop a reinspection program of certain stainless steel piping welds susceptible to intergranular stress corrosion cracking (IGSCC). The reinspection program was required to inspect stainless steel reactor pressure boundary welds in piping with diameters greater than or equal to 4 inches in systems with operating temperatures greater than 200° F. The inspections are required out to the second isolation valve.

During this Unit 2 refueling outage, (see NRC Report 50-237/84-21) the licensee developed an augmented inspection program in accordance with NRC Generic Letter 84-11 that included welds in the systems listed below. This program was developed utilizing a sampling approach with various criteria applied including multiple systems, piping sizes, configurations, and known cracks.

Augmented Inspections

(1) UT furnace sensitized safe ends and welds (2 ea.-12"/1 ea.-28"/ 2 ea.-4")

(2) UT Recirculation inlet thermal sleeve welds (2 ea.-12")

(3) UT Feedwater nozzle bores, inner rad. and safe ends per NUREG-0619 (4 ea.-12")

(4) NRC Generic Letter 84-11:

a. Recirculation system (3 ea.-4"/12 ea.-12"/6 ea.-22"/7 ea.-28")
b. Control Rod Drive (CRD) system (5 ea.-4")
c. Shutdown Cooling system (2 ea.-14" and 3 ea.-16")
d. Reactor Water clean-up system (1 ea.-6"/7 ea.-8"/4 ea.-10")
e. Isolation Condenser system (6 ea.-12" and 4 ea.-14")

f. "A" Low Pressure Coolant Injection (LPCI) system (3 ea.-16")
g. "B" LPCI system (4 ea.-16")
h. Reactor head vent (3 ea.-4")
i. Unrepaired cracked welds (2 ea.-12" and 1 ea.-28")
j. Jet pump instrumentation (10 ea.)

(5) Scram discharge volume modification baseline.

The sampling plan for the augmented program included 84 welds. During inspection of the Reactor Water Cleanup (RWCU) system new crack indications were identified. No new cracks were found in any other systems examined. Due to the indications identified in the RWCU system, all accessible welds in this system were ultrasonically examined, increasing the sample size to 102 welds. The total welds examined included: 1-6" weld, 24-8" welds, and 5-10" welds. Crack indications were reported in 15 of the 30 welds examined. Ten were located outside of the containment and 5 were inside the containment. Ultrasonic examination of welds scheduled for this refueling outage, as well as those identified in the augmented inspection program, were performed by Level II and III personnel who were qualified by having successfully completed the practical examinations required by IE Bulletin 83-02. During a previous exit meeting, NRC Report 50-237/84-21, the licensee informed the inspector that their plan was to replace all RWCU system piping outside of the containment and overlay the welds inside containment. That plan was subsequently changed to include the replacement of piping inside containment from MOV-2-1201-1 through penetration 1201-G-107, leaving only one weld in the containment to be overlayed.

No items of noncompliance or deviations were identified.

3. Repair Program

A repair program, No. M-12-2-164, for replacement of the RWCU system piping and containment penetration flued head from MOV-2-1201-1 through penetration X113 up to MOV-2-1201-2, and MOV-2-1201-3 was developed for the licensee by Nutech. Purchasing, fabrication of spool pieces, and installation is being performed by the William A. Pope Construction Company (Pope). Repairs to the RWCU system are being made in accordance with the ASME Code Section XI 1980, including the Winter 1981 Addenda. The 10" diameter section of pipe from MOV-2-1201-2 to the 10" x 8" diameter reducer has been replaced with 8" diameter pipe.

A safety evaluation performed by Nutech states that "pipe stresses are to be kept within the original code for loading conditions identified in the FSAR. All single event failures and LOCA events described in the FSAR still apply."

No items of noncompliance or deviations were identified.

4. Material Certification

The inspector reviewed Pope purchase orders (PO), receipt inspection reports (RIR), and certified material test reports (CMTR) for materials being installed in the RWCU system as follows:

Purchase Order No. 843SA-1587.

8" schedule 80, BW Tees, 304L SA403 heat code F0395, RIR 123

8" schedule 80, elbows 45°, 304L SA403 heat code F0404, RIR 123

8" schedule 80, elbow 90°, 304L SA-403 heat code F0400, RIR 123

8" x 1" 3000# sol, SA182-F316 heat code 131 BN, RIR 123

8" schedule 80 pipe, SA312-TP304L heat code C7521, RIR 113

Purchase Order No. 843SR-1623.

1" schedule 80 pipe and elbows, heat code 467951, RIR 135

Purchase Order No. 843SR-1613.

8" schedule 80 elbow, heat code F0500, RIR 128

Purchase Order 843SR1587.

8" schedule elbow, heat code F0412, RIR 115.

No items of noncompliance or deviation were identified.

5. Welder and Procedure Qualification

During the inspector's review of weld travelers, the welders and welding procedures listed below were selected for review of qualification records.

a. Procedures No. GT-SM-8-8-CI, Rev. 3, PQR-IV-A
No. GT-SM-1-8-CI, Rev. 0, PQR-1.8

b.

Welders	Stamp No.	Method
L. Weaver	AG	GTAW/SMAW
C. Wells	AJ	GTAW/SMAW
T. Jurgens	Y	GTAW/SMAW
L. Craven	W	GTAW/SMAW
M. Swindeman	H	GTAW/SMAW
O. Higdon	F	GTAW/SMAW

No items of noncompliance or deviations were identified.

6. Radiographic Review

Radiographs of welds in the RWCU system identified below were reviewed by the inspector for radiographic technique and acceptance to the ASME Code.

Weld No.	Line No.
8-10-A	2-1201-8"
8-19-A	2-1201-8"
8-7A	2-1201-8"
8-16A-R1	2-1201-8"
8-2A	2-1202-8"
8-3A	2-1202-8"
8-5A	2-1202-8"

No items of noncompliance or deviations were identified.

7. Exit Meeting

An exit meeting was held with licensee representatives identified in the Persons Contacted paragraph. The scope and findings of the inspection were discussed. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary.