U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-483/81-13

Docket No. 50-483 License No. CPPR-139

Licensee: Union Electric Company
P. O. Box 149
St. Louis, MO 63166

Facility Name: Callaway Plant, Unit No. 1

Inspection At: Callaway Site, Steedman, MO

Inspection Conducted: June 15-18, 1981

Inspector: C. M. Erb C.M. Erb 7/17/81

Accompanying Personnel: D. E. Keating
Inspector-in-Training

Approved By: D. H. Danielson, Chief D.H. Danielson 7/17/81
Materials and Processes
Section

Inspection Summary

Inspection on June 15-18, 1981 (Report No. 50-483/81-13)
Areas Inspected: Observation safety related pipe welding, design, documentation and observation of process pipe penetrations in containment, and procedures and documentation of prestressing concrete containment. This inspection involved a total of 20 inspector-hours onsite by one NRC inspector.
Results: No items of noncompliance or deviations were identified.

## DETAILS

### Persons Contacted

#### Licensee Employees

*W. H. Weber, Manager Nuclear Construction
*W. V. Laux, Supervising Engineer, QA Construction
*H. W. Millwood, Quality Assurance
R. Veatch, Assistant Quality Assurance Engineer

#### Daniel International Corporation (DIC)

*A. D. Arnold, Project Quality Manager
*G. M. Warblow, Service Manager
*K. J. Brucherhoff, Welding Engineer
*S. R. Davies, Engineering
*D. E. Stites, Project Quality Control Manager
D. Rollins, Quality Control - Prestressing Concrete

#### Inland Ryerson Company (InRYCo)

G. Jewell, Project Manager
J. Herbst, Lead Quality Engineer

*Denotes those attending the exit interview.

### Functional or Program Areas Inspected

1. Welding of Safety Related Piping and Valves

The primary loop pipe welds were complete and covered to protect them. Other welds were observed to have a ground finish and were quite acceptable for liquid penetrant examination or ultrasonic examination. Several welds had been completed using the Gas Tungsten Arc Welding Process (GTAW), but the licensee representative stated that all welds requiring a smooth surface would have further work performed.

Welds 2-EJ-01-F002 and F003 which connect the inlet and outlet ends of a 14" Gate Valve No. 8811A to a residual heat removal pipe (RHR) were examined and documentation reviewed. This pipe is in Class 2 Category, and weld procedure NM-8-8-BA-2 utilizing an insert and Shielded Metal Arc Process after the root fusion by GTAW is completed.

Welds 2EJ-01-5035-F044 and F045 were also examined. These welds attached valve No. 8809A into the system and were installed using weld procedure NM-8-8BA-4. This pipe was Class 2 and was stainless steel to stainless steel.

No items of noncompliance or deviations were identified.

2. Installation and Documentation of Process Pipe Penetrations

a. In those cases, where the weld of the guard pipe to the closure disc involves P-1 material to P-3 material, a post weld heat treat (PWHT) must be given the weld. In addition, if the P-3 thickness exceeds 5/8 inch, impact tests must be made.

The following penetrations were observed and documentation reviewed.

| Dwg. | Size Process Pipe | PWHT | Weld Nos. |
|---|---|---|---|
| AB01 | 28"x1" | Yes 1150°F | F096, F095, F074 |
| AE05 | 14"x1 3/8" | Yes 1150°F | F008, F009, F039 |
| BM02 | 4"x.561" | Flued Head | F006, F005, F004 |

The penetration for dwg. AB01 was 44" x 1.942" and the weld procedure used was N-1-3-BA-22. All the penetration welds are made to the requirements of ASME, Section III, 1974 Edition, 1975 Addenda.

The three welds in each penetration involve the guard pipe to the containment, guard pipe to the closure disc and the closure disc to the process pipe.

b. The inspector noted that penetrations #74 and #75 each contained two dissimilar welds, which could have been avoided by using a carbon steel closure disc instead of a stainless steel disc. Each penetration consisted of a 12" carbon steel process pipe, an 18" diameter guard pipe and an 18" x 1½" thick diameter stainless steel closure disc with the 12 inch center opening for the process pipe.

If a carbon steel closure disc had been used, two dissimilar welds would have been eliminated on each penetration. While minimizing the number of dissimilar welds in a nuclear plant has always been a design objective, the inspector could find no prohibition for this particular application in Section III, Subsection NE of the ASME code. Therefore, this item, which was described as unresolved in the exit interview, is considered to be acceptable.

No items of noncompliance or deviations were identified.

3. Concrete Containment Post Tensioning (Unit 1)

a. At the time of the inspection, 50 of the vertical tendons extending from one side over the top and down the other side had been placed and stressed.

Bechtel specification 10466-C 156 with Appendix "B" covers the various requirements for placing, tensioning, and greasing.

b. The inspector noted that tendon No. V-50 was being detensioned. This detensioning was the result of an excessive interval between the tensioning and greasing of the tendon. As a result of this delay, Daniel NCR 2SN-4022-C was initiated and its disposition required that one wire be taken from V50 and tested in accordance with Appendix B of Bechtel specification 10466-C156. The removal of a wire from the detensioned tendon was not covered by a procedure outlining method, cleaning, special tools, length of test specimans or other items pertinent to this job. The inspector stated that lack of a procedure constituted an unresolved item. (50-483/81-13-01).

Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. One unresolved item is described in paragraph 3b.

Exit Interview

The inspector met with licensee representatives (denoted in Persons Contacted paragraph) on June 18, 1981. The inspector summarized the purpose and findings of the inspection, which were acknowledged by the licensee.