U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/83-15(DPRP)

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

Licensee: Union Electric Company
Post Office Box 149 - Mail Code 400
St. Louis, MO 63166

Facility Name: Callaway Plant, Unit 1

Inspection At: Callaway Site, Reform, MO

Inspection Conducted: July 1 through August 31, 1983

Inspector: J. H. Neisler H. M. Wescott for 9/28/83

Approved By: J. E. Konklin, Chief H. M. Wescott for 9/29/83
Projects Inspection 1A

Inspection Summary

Inspection on July 1 through August 31, 1983 (Report No. 50-483/83-15(DPRP))
Areas Inspected: Routine inspection by the Senior Resident Inspector of licensee action on previously identified inspection items, IE Bulletins, electrical and instrument construction activities, structural installations, and preoperational testing. The inspector also reviewed allegations and conducted site tours. The inspection involved a total of 216 inspector hours by the Senior Resident Inspector including 8 hours onsite during non-regular hours.
Results: One violation was identified (Procedural inadequacy involving temporary alterations).

DETAILS

1. Persons Contacted

Principle Licensee Employees

*W. H. Weber, Manager, Nuclear Construction
*R. L. Powers, Assistant Manager, Quality Assurance
*J. E. Miltenberger, Manager, Callaway Plant
*B. Stanfield, QA Assistant Engineer
*S. Hogan, QA Engineer
C. Plows, QA Consultant
*R. Veatch, Supervisor Engineer QA - Construction
*J. Laux, Supervisor Engineer QA - Startup
*J. Gearhart, Supervisor Engineer QA - Operations
*M. I. Doyne, General Superintendent, Callaway Construction
*H. Millwood, QA Consultant
*S. E. Shepley, QA Consultant
M. Pechar, QA Consultant
*H. Elkins, Startup Audit Response Coordinator
R. Huston, Test Programs Coordinator
*J. E. Davis, Superintendent, Compliance
*T. Shaw, QC Supervisor
*K. Wickes, Assistant Supervisor I & C
*P. T. Appleby, Assistant Manager, Callaway Plant
*W. Robinson, Compliance Supervisor
J. Marden, Startup Programs Coordinator
M. Dossett, QA Consultant
*B. E. Faust, QA Engineer
*L. Kanuckel, QA Engineer
D. Brady, QA Consultant
A. Sassani, QA Consultant
B. DuBois, QA Consultant
R. Cephus, TPSG Supervisor
R. Williams, TPSG

Daniel International Corporation (DIC)

*R. D. Neal, Project Civil Engineer
*J. J. Long, Project Welding Manager
*D. R. Dunning, Project QA Engineer
*R. H. Glassner, Compliance Engineer, DELCON
*W. L. Petrie, Project QA Engineer
*R. E. Pitt, Piping Manager
*M. S. Stokes, Project Electrical Manager
*W. A. Norton, Electrical Compliance Engineer
*J. Hanvey, Lead Piping Engineer
M. K. Smith, Audit Response Coordinator

*Denotes those persons attending one or more exit interviews.
During the inspection period, the inspector contacted other persons in the crafts, engineering, inspection and management areas.

2. Licensee Action on Previously Reported Items

(Closed) Severity Level V violation (50-483/82-19-01): Surface mounted plate installed, inspected and accepted with hole reamed to excessive diameter. Review by the designer indicated that the one oversize hole would not significantly reduce the load carrying capacity of the plate. Records show that 73 plates were installed during the 7-week period by the second shift, including this plate. Twenty of the plates were randomly selected by DIC Quality Control for reinspection. All of the plates passed the reinspection. This item is considered closed.

(Closed) Severity Level V violation (50-483/82-19-02): Minimum separation distances not maintained between redundant Class IE flexible conduits at feedwater flow control valve. Spacers have been added to maintain required separation. This item is considered closed.

(Closed) Severity Level VI violation (50-483/80-28-01): Acceptance criteria for inspections that were not in accordance with manufacturer's instructions. Bechtel drawing E-01013 has been revised to require that the minimum bend radius shall be measured from the inside edge of the cable bend. This item is considered closed.

(Closed) Open Item (50-483/82-03-04): Trend analysis concerns. Criteria have been established for determining adverse trends. The Trend Analysis Data Base has been reviewed with respect to the data base and data contained in the NCR/DR logs. This item is considered closed.

(Closed) Severity Level V violation (50-483/82-13-01): Failure to preserve installed electrical and instrument cables. Damaged cables were replaced. A 100 percent walkdown/inspection of all safety related exposed cable was performed and similar deficiencies were identified and corrected. Cable protection was included in weekly tool box safety meetings for all craft. Electricians have been trained in cable pulling and terminations for minimum bend violations and other cable handling precautions. This item is considered closed.

3. Inspection and Enforcement Bulletins

The inspector examined the licensee's responses and/or corrective actions relative to the following Inspection and Enforcement Bulletins:

IEB 83-01 "Failure of Reactor Trip Breakers (Westinghouse DB-50) to Open on Automatic Trip Signal." This bulletin was transmitted to the licensee for information only. Callaway does not use the Westinghouse DB-50 circuit breakers for the reactor trip function. The installed breakers are Westinghouse DS-416. This bulletin is considered closed.

IEB 83-02 "Stress Corrosion Cracking in Large Diameter Stainless Steel Recirculation System Piping at BWR Plant." This bulletin is not applicable to Callaway Unit 1. This bulletin is considered closed.

IEB 83-04 "Failure of the Undervoltage Trip Function of Reactor Trip Breakers." This bulletin required actions involving General Electric Type AK-2 circuit breakers. These breakers are not used in reactor trip circuits at Callaway Unit 1. This bulletin is considered closed.

4. Electrical and Instrumentation

The inspector examined electrical and instrumentation activities in the reactor building, auxiliary building and control building. The inspection included completed and ongoing work involving electrical and instrumentation cable installation, cable trays, and termination of electrical and instrument cables.

The inspector observed cable terminations in the control room cabinets, panels in the diesel generator rooms, RP118A, RP118B, RP330, RP334, and RP335. At those areas where terminating was in progress, termination cards were at the work location, connection drawings were available where needed, terminating tool calibrations were current, personnel inspected were qualified according to procedures, and QC inspections were being performed as required by approved quality procedures.

In general, cables in trays in areas where other construction work was in progress were protected from damage by activities in that area. Installed instrumentation not in use for test purposes appeared to be adequately protected. No scaffolding or construction materials were observed on the safety related cable trays or electrical equipment at the time of the inspection.

Cable installation observed during this inspection included the completed cable installations to the RHR and auxiliary feed water pump motors, the auxiliary feedwater motor operated valves, and remote shutdown panels.

Raceway and cable separations and the physical identification of cables, conduits, and trays of those systems inspected appeared to be in conformance with procedures, specifications and industry standards.

No items of noncompliance or deviations were identified in this area during this inspection.

5. Structural

The inspector observed the installation of pipe whip restraints in the reactor building. Work was being performed according to the requirements set forth in the work packages at the work location. Welding and quality inspection activities were being performed in accordance with approved procedures. Welder and inspector qualifications were current and according to applicable code requirements.

The inspector observed work activities involving the drilling of holes in safety related concrete walls and slabs for the installation of expansion anchors and grouted bolts. For each installation observed by the inspector, the location of reinforcing steel was mapped prior to drilling holes in the concrete; and, where possible, bolt locations were shifted to avoid damaging the steel reinforcement. After drilling, the holes were inspected to determine whether steel had been cut and if the steel was cut, it was reported "according to approved procedures.

No items of noncompliance or deviations were identified in this area during this inspection.

6. Preoperation Testing

The inspector observed portions of preoperational testing and flushing activities involving the residual heat removal system, high pressure safety injection system, diesel fuel and lubricating oils systems, and containment local leak rate testing.

The inspector examined procedures and logs controlling the installation and restoration of temporary alterations during the preoperational test phase. The inspector noted that a Barton pressure transmitter BG-PT20 had been replaced by a transmitter manufactured by Rosemount. The temporary alterations log showed the replacement of the Barton transmitter was approved on May 17, 1983. Work Request 2893 dated May 17, 1983, indicates that the work had been performed May 13, 1983, four days prior to approval. Startup Administrative Instruction SAI-11, "Temporary Alterations" does not require approval of temporary alterations prior to the work being performed. The inspector informed the licensee that the failure to establish measures to preclude unauthorized alterations to safety related components was a violation of 10 CFR 50, Appendix B, Criterion V. (50-483/83-15-01)

7. Allegations

The resident inspector received a copy of an allegation from Region III in which it was alledged that there were deficiencies in the concrete patches in the diesel and reactor buildings and unsafe welding on the piping from the pumping station near the cooling tower to the reactor building.

The inspector examined visible concrete patches in the walls of the diesel building and in the interior walls of the reactor building. In the diesel building, the inspector found two patches in the exterior wall that showed surface cracks. The location of the cracks did not indicate a problem with bonding between the sound concrete and the grout used for patching. A nonconformance report and a field change request has been initiated by the licensee's contractor for the architect/engineer review and determination as to acceptability of patches with indications of surface cracking. This matter is unresolved pending the inspector's review of the final desposition of the NCR and FCR. (50-483/83-15-02)

The pipe mentioned in the allegation is the circulation water pipe. The pipe was excavated to repair leaks. The circulating water system is not safety related at Callaway. The inspector does not intend to pursue the matter regarding this pipe since it performs no safety function.

Regarding the allegation QC and NDE personnel were accepting welds with known defects, the inspector did not perform any special reviews or inspections. The vagueness of the allegation prevents meaningful followup, also the welding quality is inspected several times each month and no instances of either QC or NDE site personnel accepting known defective welds in safety related systems have been identified.

8. Atomic Safety and Licensing Appeal Board

In response to an Appeal Board Order dated August 15, 1983, the inspector examined two sections of pipe that had been installed in the Residual Heat Removal System (RHR). The two sections of pipe are part of a spool plice identified as No. EJ02-5046, Heat No. 64034. Based on documentation provided by the manufacturer (Armco Steel), the supplier (Capitol Pipe and Steel), and the fabricator (DRAVO) the inspector determined the material to be SA-358, type 304, 10 inch, schedule 140, stainless steel.

The two sections of pipe examined are 6 inches and 17.5 inches in length. Traceability of these two pieces was questionable in that the 6 inch length was etched as SA-312 and the identification on the 17.5 inch length was covered by a hanger. As a result of the documentation review, the sections were determined to be SA-358.

The licensee has taken action to assure that the two sections of pipe are indeed the specified material and are identified as such. The inspector has no further questions in this area.

9. Independent Quality Assurance Assessments

The licensee has initiated a series of Independent Quality Assurance Assessments of various areas of construction to augment the licensee Quality Audit Program. The first of these was an assessment of HVAC area by a third party contractor, Black and Veatch Corp. The assessment included HVAC equipment adequacy and qualification, ducts, supports, welding and documentation, installation, contractor design control, travelers, inspection documentation, storage, identification, traceability, rework controls, and corrective actions on identified nonconforming items. The licensee informed the inspector that the assessment had identified no significant problem areas in the HVAC system.

10. Site Tours

The inspector toured site and plant areas several times during the inspection period to observe general construction and testing practices.

Tours included storage and laydown areas, fabrication shops, snubber test shop, essential service water pump house, radioactive waste building, fire pump house, and the power block.

No items of noncompliance or deviations were identified during the tours.

11. Exit Interview

The inspector met with licensee representatives (denoted under Persons Contacted) at intervals during the inspection period. The inspector summarized the scope and findings of the inspection. The licensee representatives acknowledged the findings as reported herein.