U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/82-10(DPRP)

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 1

Inspection At: Callaway Site, Reform, MO

Inspection Conducted: August 1-31, 1982

Inspector: J. H. Neisler RC Knop for 9-16-82

Approved By: J. E. Konklin, Chief RC Knop for 9-16-82
Projects Section 1A

Inspection Summary

Inspection on August 1-31, 1982 (Report No. 50-483/82-10(DPRP))
Areas Inspected: Electrical and instrument cable installation, containment penetrations, IE Bulletins and Circulars, reactor components, preoperational testing, operations procedures, piping installations, and welding activities. This inspection involved a total of 184 inspector-hours onsite by one NRC inspector, including 8 inspector-hours onsite during off shifts.
Results: Two items of noncompliance were identified (failure to follow cable installation procedures - Section 6; and failure to identify nonconforming electrical penetrations - Section 5).

DETAILS

1. Persons Contacted

Union Electric Company (UE)

*R. L. Powers, Site QA Superintendent
*W. H. Weber, Manager, Nuclear Construction
J. V. Laux, QA Supervisor, Startup
*R. Veatch, QA Supervisor, Construction
*A. Sassani, QA Engineer, Consultant
H. W. Millwood, QA Engineer, Consultant
R. Phillips, Pre-Op/Startup
R. Williams, Pre-Op/Startup
*B. K. Stanfield, QA Assistant Engineer
*D. Brady, Pre-Op/Startup
*S. Hogan, QA Engineer
M. Doyne, Construction Superintendent

Westinghouse

G. Keltner, Startup Engineer

Daniel International Corporation (DIC)

*A. Harmon, Procedures Analyst
*D. Kirchoff, Construction Engineer Aide, Audits
C. Wagner, Project Manager
*J. Long, Project Welding Manager
*D. Stites, Project Quality Inspection Manager
K. Gibb, Piping Services Manager
J. Cheesman, Piping Engineer
O. Beningfield, Superintendent Second Shift
*D. King, Construction Manager

*Denotes those persons attending one or more exit interviews.

The inspector also contacted and interviewed other licensee and contractor personnel, including craftpersons, QA/QC, and technical and engineering staff members.

2. Licensee Action on Previously Reported Items

(Closed) Unresolved Item 50-483/80-03-02: Containment spray system duplicate weld number. Licensee and contractor reviews of drawings and travelers have determined that the duplication of this weld number is an isolated occurrence. The inspector has identified no other instance of duplication of weld numbers. This item is resolved.

3. Inspection and Enforcement Circulars

The inspector reviewed licensee actions relative to Inspection and Enforcement Circulars (IEC). For the circulars listed below, the licensee has performed the necessary reviews and assigned responsibilities for the determination of applicability to the Callaway facility. The required actions have been satisfactorily completed. These circulars are considered to be closed.

IEC 76-01	Crane Hoist Control - Circuit Modifications
IEC 76-02	Relay Failures - Westinghouse BF (AC) and BFD (DC) Relays
IEC 76-06	Stress Corrosion Cracks in Stagnant Low Pressure Piping Containing Boric Acid Solutions in PWRs.
IEC 77-05	Liquid Entrapment in Valve Bonnets
IEC 77-15	Degradation of Fuel Oil Flow to the Emergency Diesel Generator
IEC 77-16	Emergency Diesel Generator Lock-Out Procedures
IEC 78-07	Damaged Components on a Bergen-Paterson Series 25000 Hydraulic Test Stand
IEC 78-09	Arcing of General Electric Company Size 2 Contactors
IEC 78-18	UL Fire Test
IEC 80-23	Potential Defects in Beloit Power Systems Emergency Generators

4. Inspection and Enforcement Bulletins (IEB)

The inspector examined licensee actions relative to the following Inspection and Enforcement Bulletins.

IEB 77-02	Potential Failure Mechanism in Certain Westinghouse AR Relays with Latch Attachments. The NSSS supplier verified that Westinghouse AR relays are not used in the solid state protection system at Callaway. This bulletin is closed.
IEB 78-01	Flammable Contact Arm Retainers in GE CR120A Relays. Licensee's investigation shows that GE type CR120A relays are not used in safety related applications or in areas wherein fires have the potential for damaging safety related equipment. This bulletin is closed.

IEB 78-02 Terminal Block Qualification. Bechtel and SNUPPS review has determined that terminal blocks inside the containment which must function in a Post-LOCA environment are protected by enclosures. Terminal blocks observed by the inspector in the reactor building are all protected by enclosures. This bulletin is closed.

IEB 78-04 Environmental Qualification of Certain Stem Mounted Limit Switches Inside Reactors Containment. Callaway does not utilize NAMCO D2400X or EA-170-302 SNAP LOCK switches on safety related equipment inside containment. The inspector did not observe either of the above switches mounted on safety related equipment in containment. This bulletin is closed.

IEB 78-05 Malfunctioning of Circuit Breaker Auxiliary Contact Mechanism General Electric Model CR105X. Licensee review determined that there are no General Electric motor starters used in safety related systems at Callaway, the Motor Control Centers were not manufactured by GE, and no GE model CR105X auxiliary contacts are used on Class IE contactors, starters, or reversing starters. This bulletin is closed.

IEB 78-06 Defective Cutler-Hammer Type M Relays with DC Coils. Licensee's response states that their survey of safety related systems shows that no Cutler-Hammer Type M Relays with DC coils are used in safety related applications. This bulletin is closed.

IEB 78-10 Bergen-Paterson Hydraulic Shock Suppressor Accumulator Spring Coils. No Bergen-Paterson shock suppressors have been supplied to Callaway. The only hydraulic shock suppressors on site are manufactored by Paul-Monroe. To date Paul-Monroe shock suppressors have not experienced accumulator spring coil failures as reported by Bergen-Paterson. This bulletin is closed.

5. Electrical Penetrations

The inspector observed the completed and in process installation activities involving containment electrical penetrations. The installed penetrations were covered to afford protection from construction debris and physical damage. Heat lamps are installed and operational in each installed penetration to provide protection from moisture.

The inspector observed that electrical penetration 2ZNE268 has three cracked modules. Modules A and C show cracks both inside and outside while module D is cracked inside the penetration. No wire or cable had been attached to these modules prior to the inspector's identifying the cracks.

The licensee's failure to identify and correct the nonconforming containment electrical penetrations is an item of noncompliance with 10 CFR 50, Appendix B, Criterion XVI. (50-483/82-10-01)(DPRP).

6. Electrical

The inspector observed electrical cable installation activities in the reactor building, auxiliary building, and the control and diesel building. The inspection included both completed work and work in progress for installations and terminations. Cable identification and separation appeared to be in accordance with procedures and specifications. However, the inspector noted several examples where procedures and specifications regarding minimum bend radius of electrical and instrument cables had not been followed. These examples are:

a. The minimum bend radius had been violated on a cable in Motor Control Center NG04D at Emergency Fuel Oil Pump Breaker DPJE01B in the diesel generator room.

b. The minimum bend radius was violated on cable 1ACI09CA in the Backup Compressed Gas Accumulator Room on elevation 2013 in the auxiliary building.

c. The minimum bend radius was violated on cable 1ALJ05BD in conduit 1J1091 in the auxiliary feed water valve room on elevation 2000 in the auxiliary building.

d. The minimum bend radius was violated on the following cables in the North Electrical Penetration Room, elevation 2026 in the auxiliary building.

(1) Cable in Motor Control Center NG02B cubicle GF5,

(2) Cable in conduit 4U3B3B at the entry to cable tray 4U3B70,

(3) Cable in conduit 4J3B1F at the entry to cable tray 4J3B58.

The above examples of failure to follow cable installation procedures and specifications with regard to cable minimum bend radius constitute an item of noncompliance with 10 CFR 50, Appendix B, Criterion V. (50-483/82-10-02)(DPRP).

7. Piping Installation

The inspector observed work activities relative to the installation of piping systems, including pipe welding and pipe support installation in the auxiliary building and reactor building. The systems inspected included portions of the pressurizer spray, pressurizer relief, and main steam piping in the containment and steam tunnel, and the auxiliary feedwater system. In those areas inspected, installation packages were at the work location, hold points were established and witnessed by quality control inspectors, and those personnel who were performing

the welding and inspection were qualified according to applicable procedures.

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

8. Preoperational Testing

The inspector observed portions of the fuel building crane tests and the pretest alignment of the spent fuel pool cooling system.

The following test procedures were reviewed:

Procedure No. CS-04LF01-1, Revision 0, Dated 8-25-82, "Fuel Building Floor and Equipment Drain System Pre-Operational Test,"

Procedure No. CSP-04KC1-03, Revision 0, Dated 8-27-82, "Fire Protection System 484 Volt System Pre-Operational Test,"

Procedure No. CS-04PG01, Revision 0, Dated 8-25-82, "480 Volt (Non-Class IE) System Pre-Operational Test."

For the above tests, the objectives, acceptance criteria, prerequisites, and test activities met the requirements to which the licensee committed in chapter 14 of the FSAR.

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

9. Regional Requests

Region III requested assistance in responding to an allegation that the No. 4 steam generator was dropped when it was being set in place in 1979. The inspector reviewed documentation relating to the steam generator installation and interviewed cognizant personnel still on site, including the former Bechtel lead site liaison, the licensee's engineer responsible for steam generator placement, the Daniel lead civil engineer, a Daniel shift superintendent, a millwright, and the millwright shop steward. Neither the documentation, including the periodic inspections records by mechanical maintenance, or the personnel interviewed indicate that the steam generator was dropped. This allegation was not substantiated.

10. Headquarters Requests

The inspector received a request from the NRR Licensing Project Manager for information relative to allegations received by Senator Danforth. The allegations concerned honeycombs in the containment dome, cracked concrete foundation, weld defects in the ECCS and seam welds in RHR piping. Review of the operating license hearings showed that these items had been admitted as contentions during the hearings. Each was addressed in the hearings by the intervenors, the licensee and the NRC and their acceptability was determined by the Hearing Board. The inspector has no further questions in this area.

11. Plant Operations

The inspector examined safety related operations administrative procedures AP-E-300, Revision 4, Dated 2-10-82, "Certification of Quality Control Personnel;"

AP-E-303, Revision 2, Dated 10-13-81, "Stop Work Action;" and AP-M-11, Revision 0, Dated 4-23-82, "Control of Welding Consumables."

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

12. Exit Interview

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