

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/84-19(DE)

Docket No. 50-483

License No. CPPR-139

Licensee: The Union Electric Company  
Post Office Box 149  
St. Louis, MO 63166

Facility Name: Callaway Site, Callaway County, MO

Inspection Conducted: April 20 through June 8, 1984

Inspectors: *Luis A. Reyes for*  
M. J. Farber

6/15/84

*P. L. Eng*  
P. L. Eng

6/15/84

*M. L. McCormick-Barger*  
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6/15/84

Approved By: *Luis A. Reyes*  
L. A. Reyes, Chief  
Test Programs Section

6/15/84

Inspection Summary

Inspection Conducted on April 20 through June 8, 1984 (Report No. 50-483/84-19 (DE))

Areas Inspected: Routine announced inspection of licensee action on previous inspection findings; approved test procedures; pump and valve inservice test program; temporary modification control; power operated relief valve (PORV) block valve damage; and in-process maintenance control. The inspection involved a total of 124 inspector-hours offsite by three NRC inspectors, including 45 inspector-hours onsite during offshifts.

Results: Of the six areas inspected, no items of noncompliance or deviations were identified in three areas; three items of noncompliance were identified in the three remaining areas (improper control of temporary modifications - Paragraph 5; failure to conduct proper retest of equipment - Paragraph 6; failure to adequately protect equipment during maintenance - Paragraph 7).

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## DETAILS

### 1. Persons Contacted

- \*A. P. Neuhalfen, Assistant Manager for Operations and Maintenance
- C. D. Naslund, Superintendent of Instrumentation and Controls
- W. E. Shephard, Superintendent of Engineering
- S. E. Shepley, QA Engineer
- K. R. Bryant, Supervisory Engineer
- W. R. Robinson, Superintendent of Compliance
- W. A. Witt, Inservice Test Engineer
- R. E. Affolter, Supervisory Engineer
- R. D. Brandt, Shift Advisor
- M. E. Taylor, Operations Superintendent
- W. A. Norton, QA Engineer
- J. G. Gearhart, Supervisory Engineer, Quality Assurance
- \*D. S. Holliabaugh, Supervisory Engineer, Engineering
- \*R. R. Goodenow, Compliance Engineer
- \*C. E. Slizewski, Engineer

\*Denotes those attending the exit interview on June 8, 1984.

Additional plant technical and administrative personnel were contacted by the inspectors during the course of the inspection.

### 2. Action on Previous Inspection Findings

- a. (Closed) Open Item (483/84-09-10(DE)): Review of revised Initial Fuel Load procedure. The inspector reviewed Revision 2 to ETT-ZZ-07010, Initial Fuel Load, and verified that all required items had been properly addressed.
- b. (Closed) Open Item (483/84-09-08(DE)): Review of revised APA-ZZ-00103, Nuclear Operations Initial Startup Test Program. The inspector reviewed the revised procedure and verified that all required areas had been properly addressed.
- c. (Closed) Open Item (483/84-09-09(DE)): Steady state core performance testing during power ascension. The inspector reviewed power ascension flux mapping procedures and using information provided by both Westinghouse and Union Electric determined that all parameter requirements of Regulatory Guide 1.68 which were applicable to a pressurized water reactor core were addressed.
- d. (Closed) Open Item (483/84-09-11(DE)): Correction of rod drop time measurement procedure: Union Electric issued a Temporary Change Notice to incorporate the inspector's comments.
- e. (Closed) Open Item (483/84-09-12(DE)): Review of revised initial criticality procedure. The inspector reviewed ETT-ZZ-07040, Rev. 2, Initial Criticality and verified that all required areas have been addressed.

### 3. Startup Test Procedure Reviews

Below is a list of startup tests for which the inspectors have completed their test procedure review.

ETT-ZZ-07050, Rev. 1, Determination of Core Power Range for Physics Testing  
ETT-ZZ-07071, Rev. 0, Isothermal Temperature Coefficient Measurement  
(All Rods Out)  
ETT-ZZ-07072, Rev. 0, Isothermal Temperature Coefficient Measurement  
(CBD at 0)  
ETT-ZZ-07073, Rev. 0, Isothermal Temperature Coefficient Measurement  
(CBC and CBD at 0)  
OSP-BB-00009, Rev. 0, RCS Inventory Balance  
OSP-BB-00010, Rev. 0, RCS Controlled Leakage Measurement  
ETT-ZZ-07061, Rev. 1, Boron Endpoint Determination (ARO)  
ETT-ZZ-07062, Rev. 1, Boron Endpoint Determination (CBD at 0)  
ETT-ZZ-07063, Rev. 1, Boron Endpoint Determination (CBD, CBC at 0)  
ETT-ZZ-07064, Rev. 1, Boron Endpoint Determination (CBD, CBC, CBB at 0)  
ETT-ZZ-07065, Rev. 1, Boron Endpoint Determination (CBD, CBC, CBB, CRA at 0)  
ETT-ZZ-07066, Rev. 1, Boron Endpoint Determination (ARI and Highest Worth  
Rod Stuck Out)  
ETT-SF-07081, Rev. 0 Control Bank D Reactivity Worth  
ETT-SF-07082, Rev. 0, Control Bank C Reactivity Worth  
ETT-SF-07083, Rev. 0, Control Bank B Reactivity Worth  
ETT-SF-07084, Rev. 0, Control Bank A Reactivity Worth  
ETT-SF-07085, Rev. 0, Shutdown Banks and Highest Worth Stuck Rod  
Reactivity Worths  
ETT-SF-07086, Rev. 0, Control Banks in Normal Overlap  
ETT-SF-07087, Rev. 0, Pseudo Rod Ejection Worth

The procedures were reviewed against the Final Safety Analysis Report (FSAR), Safety Evaluation Report (SER) and applicable Regulatory Guides, Standards and portions of 10 CFR 50.

No items of noncompliance or deviations were identified.

### 4. Pump and Valve Inservice Test Program

The inspector reviewed selected inservice inspection test procedures and data sheets acquired during reference value testing in support of initial fuel load. The inspector also reviewed initial implementation of the inservice testing (IST) program for compliance with Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code and applicable addenda. The inspector had the following comments with respect to the review of:

#### a. Reference Values

Ten completed data sheets were reviewed and the following discrepancies were observed:

- (1) In one case, there was inadequate documentation to ensure that the reference stroke times for the Refueling Water Storage Tank (RWST) valves were obtained using a calibrated stopwatch. The licensee has committed to reperform the test using calibrated equipment. In addition, training classes have been scheduled for personnel who will be performing the surveillances and will emphasize the importance of the requirements for the use of calibrated equipment.
- (2) Incorrect values for maximum allowable stroke times for various valves were called out on the data sheets. The data sheets were revised to reflect the correct maximum allowable stroke times as of May 1, 1984.

b. Surveillance Tracking System

All technical specification and inservice testing surveillances required prior to fuel load are being tracked manually by the licensee's Compliance group through a letter, "Surveillance requirements for Mode 6." This letter is updated and distributed daily. In addition, the Pump and Valve Inservice/Performance engineer is tracking the status of inservice surveillances.

c. Mode 6 Readiness

Nineteen inservice inspection/performance surveillances have been identified as required prior to fuel load. All of these have been satisfactorily completed and will be reviewed by the inspector at a later date.

d. Inservice Testing Program

As a result of initial testing, a revision to the Callaway IST has been prepared to increase the maximum stroke time requirements on some valves. The inspector reviewed the acceptability of these changes and no problems were identified. The revised Callaway Inservice Test Program, Revision 2, has not yet been submitted to the Office of Nuclear Reactor Regulation (NRR), Mechanical Engineering Branch (MEB). Submittal is expected to occur before the end of June 1984.

No items of noncompliance or deviations were identified.

5. Temporary Modification Control

During the inspection period the inspectors observed a number of cases where temporary modifications appeared to have been made to plant systems but were not identified as such. The following are representative but not all inclusive:

- a. A temporary pump was installed on the Containment Spray Additive Tank. The pump was mounted on a wheeled cart and used an electrical drop cord as a power supply. There was no identification on the pump or the piping to which it was bolted to explain its use, however, the piping configuration indicated that the pump was used for recirculating the tank contents. No tag, sticker, label, or marking was attached to identify this configuration as a temporary modification.
- b. A differential pressure gage which was clearly marked as measuring and test equipment was found installed across the recirculation line flow element of the "A" Motor Driven Auxiliary Feedwater Pump. An inquiry by the inspectors revealed that the gage was installed for the performance of an inservice test of the pump but had not been removed when the testing was completed.
- c. The bonnet of a check valve in a line coming from a containment sump had been removed and a temporary bonnet with a vent pipe had been installed. A check valve on a similar line from the same sump had no such bonnet installed. No identification of temporary modification was attached.

The inspectors audited the temporary modification log and determined that the items listed above were not controlled as required. Failure to properly control temporary modifications to plant systems as required by procedure APA-ZZ-00380, Temporary System Modifications, is considered an item of noncompliance (483/84-19-01(DE)).

No other items of noncompliance or deviations were identified.

6. Power Operated Relief Valve (PORV) Block Valve Damage

The inspector conducted an inquiry into the circumstances surrounding the damage which occurred to the "A" train PORV block valve BB-HV8000A. Maintenance, operations, and management personnel were interviewed to define the events leading up to, during, and after the incidents. The first event, which caused damage to the thermal block, the motor, and the stem was apparently caused by a programmatic failure which inadvertently allowed the valve to be returned to operation without a retest. The second incident which caused the disc to be so severely jammed into its seat that it was necessary to disassemble the valve to relieve the stem compression, was caused by a failure to adhere to the station tagging procedure. In both events the valve was operated without required retesting. Failure to provide or adhere to programs adequate to prevent the bypassing of required retesting is an example of an item of noncompliance (483/84-19-02(DE)).

No other items of noncompliance or deviations were identified.

## 7. In-Process Maintenance Control

During the inspection period the inspectors toured the plant frequently to ensure that required standards of equipment protection and preservation were being maintained. The following items were identified as not being in accordance with requirements:

- a. Discharge pressure transmitter EM-PT-0919 for Safety Injection Pump "B" had been determined and removed. The cable was dropped on the floor, lugs were not taped, no equipment removal identification was present. The cable was lying on the floor in such a manner that it could be easily stepped on and damaged.
- b. While maintenance was being performed on the "A" RHR Pump, the pump support skirt was removed from the immediate vicinity of the work and placed on edge and leaned against the wall. The support skirt was not properly cribbed, was not marked as safety-related equipment, and was not covered. Workmen were later observed to be sitting on it.
- c. A diesel jacket water heater element was observed standing on end against a Motor Control Center (MCC). The element was only partially covered, was not identified as to condition and disposition.
- d. The differential pressure indicator for the "B" diesel fuel oil pump suction strainer was observed to be leaking. A bucket had been placed under the leak and approximately two gallons of fuel oil had been collected. Based on the small size of the leak it is suspected that this leak has existed for a considerable length of time.
- e. The motor for a motor operated valve near the "B" Centrifugal Charging Pump had been unbolted from the Limitorque operator but had not been electrically disconnected. Black and yellow caution area boundary tape had been tied around the motor and it had been suspended from a piping support. Additionally, the motor was not properly covered to prevent intrusion of substances.
- f. Pressure transmitter AB-PT-11A and its mounting bracket had been unbolted from its respective Main Steam Isolation Valve (MSIV) actuator and left hanging, supported only by the two lead instrument cables. The manner in which the transmitter and bracket were hanging was causing the flex conduit to chafe and cut into the insulation of the two leads.

Failure to use adequate measures to protect equipment as required by 10 CFR 50, Appendix B, Criterion XIII and SNUPPS FSAR is an item of noncompliance (483/84-19-03(DE)).

No other items of noncompliance or deviations were identified.

9. Exit Interview

The inspectors met with licensee representatives (denoted in paragraph 1) on June 8, 1984 to discuss the scope and findings of the inspection. The licensee acknowledged the statements made by the inspectors with respect to the items discussed in the report.