

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/84-26(DE)

Docket No. 50-483

License No. CPFR-139

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

Facility Name: Callaway, Unit 1

Inspection At: Callaway Site, Callaway County, MO

Inspection Conducted: May 16-18, 1984

Inspector: R. Mendez

RS Mendez for

6/8/84
Date

Approved By: C. C. Williams, Chief
Plant Systems Section

C. C. Williams

6/8/84
Date

Inspection Summary

Inspection on May 16-18, 1984 (Report No. 50-483/84-26(DE))

Areas Inspected: Followup of previous inspection findings. The inspection involved a total of 15 inspector-hours onsite by one NRC inspector including 3 inspector-hours during off-shifts.

Results: Of the areas inspected, one item of noncompliance was identified (failure to assure that the design basis was adequately translated into construction drawings, specifications and instructions, paragraph 3.a).

DETAILS

1. Persons Contacted

Union Electric Company (UECo)

- *W. H. Weber, Manager - Nuclear Construction
- *J. A. McGraw, Supervising Engineer
- *C. J. Plews, Lead QA Engineer
- *L. P. Cunningham, QA Consultant

Daniel International Corporation (DIC)

- *D. R. Dunning, Project QA Engineer
- *R. Glassner, Compliance Supervisor
- *M. K. Smith, Audit Response Coordinator

The inspector also contacted and interviewed other licensee and contractor personnel during this reporting period.

*Denotes those present at the exit interview conducted on May 18, 1984.

2. Followup on Previous Inspection Findings

(Closed) Unresolved (483/83-28-01): It was previously identified that ASTM A449 bolts were used to install two load center transformers in lieu of ASTM A325 steel bolts. In addition, three different torque values were specified on separate drawings and it was not clear which one of the torque values was used to install the load center transformers. Information provided by the licensee indicates that ASTM A449 is compatible with ASTM A 325 steel. Furthermore, Note 7 in Bechtel Drawing C OC311(Q), Revision 10 states that the subject electrical equipment is to be torqued to 100 ft. lbs. A QC inspection checklist references the above Bechtel drawing.

(Closed) Noncompliance (483/83-28-02): It was previously identified that incorporation of raceway installation criteria in the quality control procedure for the installation of electrical equipment could result in QC inspections based on conflicting acceptance criteria. The licensee has revised Quality Control Procedure QCP-305. The procedure now separates the requirements for electrical equipment installed directly to concrete using expansion anchors, from the criteria for expansion anchors installed in conjunction with unistrut material. A second issue involved the installation of two relay panels using the torque values for concrete expansion anchors designated for the installation of unistrut material. The inspector had been informed that the anchor bolts were concrete expansion anchors. However, it has been determined that the bolts were not concrete expansion anchors, and therefore their use was not an item of noncompliance. This item is being deleted as an item of noncompliance.

(Closed) Unresolved Item (483/84-06-03): It was previously identified that design criteria documentation at the plant did not address the size, spacing and tightness of bolts which connect motor control centers (MCC's) to the mounting channels. Bechtel Specification 10466-E-018-0043-04, Seismic Certification for Class 1E Electrical Equipment, specifies the requirements for the installation of MCC's but bolting information is not addressed. The licensee has obtained the torques values from the vendor and determined that the subject bolts were torqued to 15 ft. lbs. In addition, information provided by Gould, Incorporated (the manufacturer) to Bechtel Power Corporation indicates that mounting of the MCC's were qualified by seismic tests compatible with the as-built installation.

(Closed) Open Item (483-84-06-04): It was previously identified that a drawing detail was observed not to match the as-built installation of a raceway hanger. Bechtel drawing E-2R3711, detail 2, designates the welding configuration to be used. Drawing E-2R3711 cross references the civil drawing C-403 which provides the installation requirements. Review of these engineering documents and the associated as-built installations showed that the requirements were met.

(Closed) Open Item (483/84-06-05): It was previously identified that the as-built installation of two diesel generator gauge panels KJ121 and KJ122 may not have been installed in accordance with the configuration used during seismic qualification testing. The inspector reviewed sections of the seismic report which requires that the entire base of the panel be flush with the surface of the shake table during testing. The as-built installation of the two panels does not appear to be consistent with the above description for mounting of the panels. This item is considered closed as an "open" item and is escalated to an item of non-compliance in this report (see Section 3.a).

(Closed) Open Item (483/84-06-06): It was previously identified that test report data had not been available for the Class 1E batteries, battery chargers and the residual heat removal motors. The inspector verified that the batteries had a greater than 25% load capacity during the 200 minute duty cycle and that the required performance tests for the subject motors and battery chargers had been accomplished. All required test data is now available.

(Closed) Open Item (483/84-20-01): Sealing of Power Operated Relief Valve (PORV) Indication Devices. Qualification testing of the pressurizer power operated relief valve was performed with the position indication device and solenoid enclosure in a sealed condition. The licensee accomplished sealing of the relief valves by means of Conax connectors (electric conductor seal assemblies) to the PORV solenoid valves and position indicator switches. Field Change Notice (FCN) SCPM-10661 was issued to implement the installation of the Conax connectors in accordance with "Conax Instructions IPS0725." Records indicate that the Conax connectors were installed in accordance with instructions IPS-725 and were QC inspected. Additionally, the inspector observed the connections to the solenoid valves and limit switches.

(Closed) Open Item (483/84-20-02): Seismic qualification for bolting of motor control centers (MCC's). The Callaway Safety Evaluation Report (SER) required that the cover plates of adjacent MCC's be bolted together. Callaway Startup Field Report SFR-2-NG-054A was issued to initiate bolting of the MCC covers. Electrical equipment installation records provide instructions for connecting the covers for eighteen MCC's and provide documentation of QC verification of the installation. The inspector verified the bolting of a selected number of MCC tops.

(Closed) Open Item (483/84-14-01): This item pertained to the use of electrician's tape (Scotch 33 tape) around unconnected drain wires. Bechtel Specification E-01013, Section 5.4.9.2.(e) states that Raychem heat shrink or teflon tubing is adequate insulation protection when used in the control room. A request for clarification of information (RCI) was issued through Bechtel in order to clarify this matter. The engineering review concluded that present installations using Scotch 33 tape need not be reworked. However, the RCI further states that in future applications the constructor should not use Scotch 33 tape to isolate drain wires from ground.

3. Observation of Electrical Work Activities

This inspection was performed to followup on previous inspection findings. As a result of additional information obtained to close out two of the items, two additional items were opened.

- a. It had been previously identified that two diesel generator panels KJ121 and KJ122 had been installed with the back of the panels protruding beyond the mounting pad. These panels are thirty inches in depth and the mounting pads to which the panels are mounted are eighteen inches in depth, resulting in the panels being mounted with only about 60% of the bottom surface area in contact with the mounting pad. This did not appear to be consistent with the mounting of the panel in the seismic analysis report. This report is titled, "Test Procedure of a Diesel Generator Control Panel and a Diesel Generator Engine Gauge Panel," test procedure #M-018-0388-02. Descriptions of the seismic testing states, in part, that specimen #2 (the diesel generator gauge panel) "...shall be placed on the Wyle Multi-Axis Seismic Simulator Table such that the base of the specimens shall be flush with the top of the test table." The test report also references drawing #01761414S which shows the mounting of the panels during seismic qualification to be in contact with the shaker table along the entire base of the panels.

The licensee was informed that this finding was an item of non-compliance with Criterion III of 10 CFR 50, Appendix B, failure to assure that the design basis is adequately translated into construction specifications, drawings and instructions (483/84-26-01).

- b. During verification of the installation of two safety related relay panels RP334 and RP335 the inspector was informed that anchor bolts were installed to a snug tight method. The inspector reviewed the applicable Bechtel specifications, drawings and procedures and

found no reference to the use of snug tight method on Class 1E safety related equipment. Daniels procedure QCP-305 and structural steel drawing both reference snug tight anchoring, but the reference appears to be for non-Class 1E installation. An additional concern was whether tightness of the bolts is a consideration during seismic qualification for this installation. This matter is unresolved pending further review (483/84-26-02).

4. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of non-compliance, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 3.b.

5. Exit Interview

The inspector met with licensee representatives (denoted under Persons Contacted) on May 18, 1984. The inspector summarized the scope and findings of the inspection. The licensee representatives acknowledged the findings reported in previous paragraphs.