



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

JUN 4 1980

Docket No. 50-483

Union Electric Company
ATTN: Mr. John K. Bryan
Vice President - Nuclear
Post Office Box 149
St. Louis, MO 63166

Gentlemen:

This refers to the inspection conducted by Messrs. H. M. Wescott, T. E. Vandell, J. Hughes, and C. Erb of this office on May 6-9, 1980, of activities at Callaway Unit 1 authorized by NRC Construction Permit No. CPPR-139 and to the discussion of our findings with Mr. Weber and others of your staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

No items of noncompliance with NRC requirements were identified during the course of this inspection.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room, except as follows. If this report contains information that you or your contractors believe to be proprietary, you must apply in writing to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. The application must include a full statement of the reasons for which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.

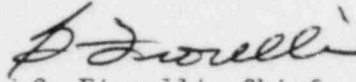
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We will gladly discuss any questions you have concerning this inspection.

Sincerely,



G. Fiorelli, Chief
Reactor Construction and
Engineering Support Branch

Enclosure:
IE Inspection Report
No. 50-483/80-13

cc w/encl:
Mr. W. H. Weber, Manager
Nuclear Construction
Central Files
Reproduction Unit NRC 20b
FDR
Local PDR
NSIC
TIC
Regions I & IV
Ms. K. Drey
Mr. Ronald Fluegge, Utility
Division, Missouri Public
Service Commission

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

REGION III

Report No. 50-483/80-13

Docket No. 50-483

License No. CPPR-139

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

Facility Name: Callaway, Unit 1

Inspection At: Callaway Site, Callaway County, MO & Corporate Offices,
St. Louis, MO

Inspection Conducted: May 6-9, 1980

Inspectors: H. M. Wescott

H. M. Wescott

6-2-80

C. M. Erb
C. M. Erb

6/2/80

T. E. Vandell
T. E. Vandell

6-2-80

J. Hughes
J. Hughes

6-2-80

Approved By: R. C. Knop, Chief
Projects Section 1

RC Knop

6-2-80

Inspection Summary

Inspection on May 6-9, 1980 (Report No. 50-483/80-07)

Areas Inspected: Routine, unannounced inspection: Follow-up of previously identified items; followup of 10 CFR 50.55(e) reports; followup of IE Bulletins and Circulars; procedures and work on seal welds for control rod drive mechanisms; quality records for anchor bolts for lateral supports on Class 1 components. The inspection involved a total of 102 inspector-hours by four NRC inspectors.

Results: Of the five (5) areas inspected, no items of noncompliance were identified.

DETAILS

Persons Contacted

Union Electric Company (UEC)

W. S. Babnar, Nuclear Engineer
**R. W. Dettenmeier, Nuclear Engineer
*M. I. Doyne, General Superintendent Construction
*S. M. Hogan, QA Assistant Engineer
*J. V. Laux, QA Assistant Engineer
**A. C. Passwater, Nuclear Engineer Supervisor
*R. L. Powers, Site QA Superintendent
**D. E. Shafer, Nuclear Engineer
*W. H. Stahl, QA Engineer
**W. S. Strothman, QA Supervisor
*R. Veatch, Assistant Engineer

Daniels International Corporation

*J. R. Cook, QC Manager
*J. A. Holland, Principal QA Manager
*W. L. Sykora, Assistant Project Manager
C. Tye, Lead Civil Engineer
R. Wilson, Area Superintendent

Westinghouse

S. Martinez, Site Manager

Bechtel

C. Plows, Liaison Engineer

Hartford Steam Boiler Insurance Company

*H. Potter, Authorized Nuclear Inspector

**Denotes those attending the exit meeting on May 6, 1980 in UEC's general offices, St. Louis, MO

*Denotes those attending the exit meeting on May 9, 1980 at the Callaway site.

1. Licensee Action on Previously Identified Items

(Open) Unresolved Item (483/78-07-04): The inspector reviewed NCR 2-3293-C-A dated June 29, 1978 and letter QM-249, UTD QA-417, dated

April 18, 1980. This letter established that further response is required from Daniel International regarding NCR's 2-2833-C-A, 2-3006-C-A, and 2-3292-C-A. This item remains open pending the licensee's acceptance of the response.

(Closed) Open Item (483/78-08-03) - DIC Procedures No. WP-303, Revision 0 and WP-305, Revision 1 utilizes attachment exhibits which were not completed to identify specific acceptance criteria for specific equipment and components. The RIII inspector reviewed the following DIC procedures: Work Procedure No. QP-303, Revision 3, dated April 7, 1980; Work Procedure No. WP-305, Revision 3, dated February 22, 1980; Quality Control Procedure No. QCP-303, Revision 2, dated April 9, 1980; Quality Control Procedure No. QCP-305, Revision 3, dated January 15, 1980. Specific acceptance criteria for the aforementioned procedures in the form of exhibits were found to be satisfactory.

(Closed) Noncompliance (483/79-03-02) - Electrical Department Manager (DIC) had not prepared or presented courses of instruction in accordance with Section 4 of Daniel International Construction (DIC) Procedure APXIII-07. The RIII inspector reviewed training records of DIC's electrical engineering department to determine if they had started their training program. Training classes were first conducted on May 18, 1979 and successive months following. All training has been documented.

(Closed) Open Item (483/79-03-03) - Storage and eating of food in equipment areas as defined in DIC Procedure AP-V-10. Housekeeping throughout the powerblock has been upgraded from Zone 5. DIC is monitoring areas to maintain housekeeping at an acceptable level.

(Closed) Deviation (483/79-04-01) - Penetrameter used in radiographing the containment liner was 60% thicker than required by ASME Code Section III, Appendix X. The inspector reviewed the enclosure to letter VLSE 7299, dated June 13, 1979 which stated that Bechtel specifications and CB&I procedures are in compliance with the intent of Regulatory Guide 1.19 and with Bechtel's intention of clarifying the position of Regulatory Guide 1.19 in SNUPPS, PSAR, Section 3.12. A response will be made in the FSAR to clearly indicate that the exception applies only to those items which are specified to be within the jurisdictional bounds of the ASME Code, Section III, namely welds at penetrations, air locks, and access openings. Union Electric Company's letter to RIII, ULNRC-320, dated June 27, 1979 appear adequate. This item is considered closed.

(Closed) Unresolved Item (483/79-14-01) - No QC signoff on percent bearing under reactor pressure vessel nozzles. A W letter WSM261 verifies that a W representative inspected the area in addition to the field engineer. This item is closed.

(Closed) (10 CFR 50.55(e) report dated November 8, 1977) - Dravo provided three pipe spools with incorrect flange material (304 SS rather than the required 316 SS). Dravo also reported this item under 10 CFR Part 21. The three pipe spools have been repaired and accepted by the licensee. The letter from Dravo to NRC RIII dated November 10, 1977 advises of corrective action to prevent future occurrences. This item is considered closed.

(Withdrawn) (10 CFR 50.55(e) Report dated October 26, 1977) - Dravo supplied the licensee with schedule 40 pipe rather than the required schedule 140 for the RHR system. The licensee withdrew this report based on, 1) the pipe initially provided could not have been properly fit-up, therefore, could not be installed, 2) two check valves are located upstream of the pipe spool, 3) there are two other flow paths through the CVCS charging pumps. Dravo has submitted a 10 CFR Part 21 report to NRC RIII describing corrective action to prevent future occurrences. This item is considered closed.

2. Licensee Action on the I&E Bulletins and Circulars

A. Bulletins

77-03 Lack of Testing of Safeguards Actuation Reset Circuitry

The licensee, in a letter to the Region III office of Inspection and Enforcement, dated November 4, 1977, committed to providing testing of all reset circuitry by inclusion of the testing required in the system technical manual. This is considered to be an adequate response. The testing provisions will be reviewed as part of the technical manual review conducted by NRC Operations Inspectors.

78-12 A and B, Atypical Weld Material of Reactor Pressure Vessel

The inspector reviewed correspondence to the NRC which included submittal of a combustion engineering generic report submitted on June 8, 1979 (Letter LD-79-036) to IE Headquarters for review with Revisions 1 and 2 submitted on January 15, 1980. It was noted that, in addition, a commitment was made in the June 1979 letter for Westinghouse to develop surveillance weldment data which will be documented following completion of the pre-irradiation testing program. This bulletin remains open for further review at a later date.

78-14, Deterioration of Buna-N Component in ASCO Solenoids

This bulletin applies to BWR's with operating licenses. However, ASCO solenoids are being reviewed under Bulletin 79-01. This bulletin is considered closed.

79-01 A and B, Environmental Qualification of Class 1E Equipment

The inspector reviewed Letter SNP-301, S.O. SNP-220, dated November 15, 1979, referencing BLWE-1111 dated November 8, 1979. ASCO air pilot solenoids have limited environment qualifications. These valves are qualified for their intended service based on short term functions. ASCO solenoids identified in Bulletin 79-01A are not used.

79-17, Pipe Cracks in Stagnant Borated Water Systems in PWR Plants

The inspector reviewed Letter BLSE-7744, dated October 3, 1979, stating that borated water systems are to be solution annealed and control of weld heat input. The inspector reviewed randomly selected certifications which stated that material had been solution annealed.

79-21, Temperature Effects on Level Measurements

This Bulletin is currently being reviewed by the licensee. This Bulletin remains open.

79-24, Frozen Lines

This bulletin was sent to the licensee for information only. The licensee requested a review by the Architect Engineer (Bechtel) which was completed on December 4, 1979 and responded to by Bechtel letter BLSE 7834 dated December 4, 1979. This item has been satisfactorily resolved.

79-26, Boron Loss From BWR Control Blades

This bulletin was sent to the licensee for information only. However, no action was taken, since it was felt not to be applicable to Callaway. The inspector had no further questions regarding this item.

B. Circulars

The following IE Circulars are not applicable to the Callaway facility: IEC 77-09, 77-12, 78-11, 78-17, 79-07, 79-18, 79-22, and 79-24. Action relative to these circulars is considered closed.

IE Circular No. 79-17

Contact problem in SB-13 switches on General Electric Company metalclad circuit breakers.

The RIII inspector reviewed Nonconformance Report (NCR) 2SN0822E dated July 17, 1979 identifying all defective SB-12 switches throughout the plant. "Hold" tags have been placed on equipment and components also. The licensee has reported a 50.55(e) on this matter to the Region. Therefore, this circular is considered closed.

IE Circular 79-25 and 79-25A

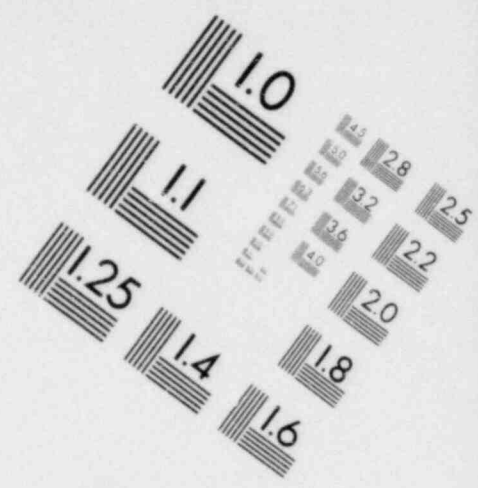
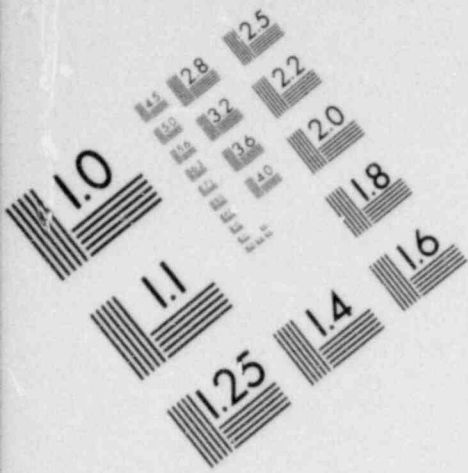
Shock arrestor strut assembly interference.

The RIII inspector reviewed the licensee's report from the vendor that indicated that no affected hangers have been shipped to the Callaway plant. This circular is considered closed

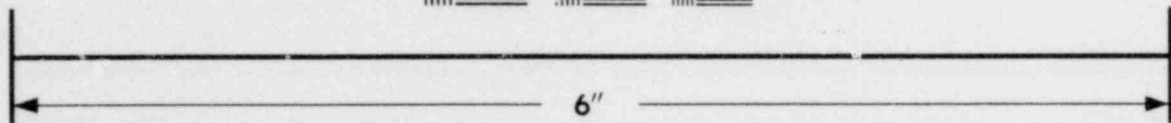
IE Circular No. 80-01

Service advice for GE induction disc relays.

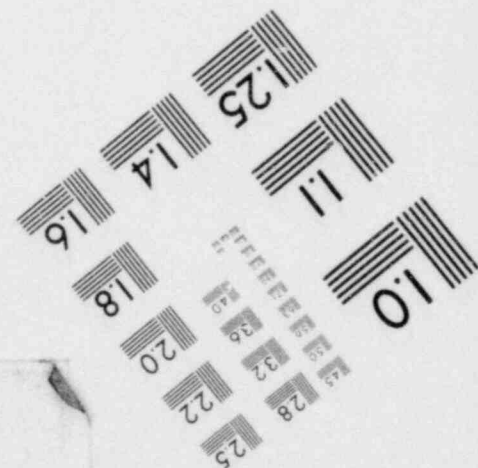
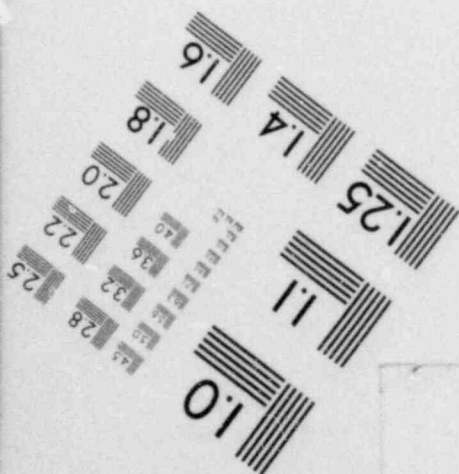
The RIII inspector reviewed deficiency report 2SD-1311-E, dated March 18, 1980, identifying all safety-related relays in the plant. The licensee has reported a 50.55(e) on these relays to the Region office. This circular is considered closed.

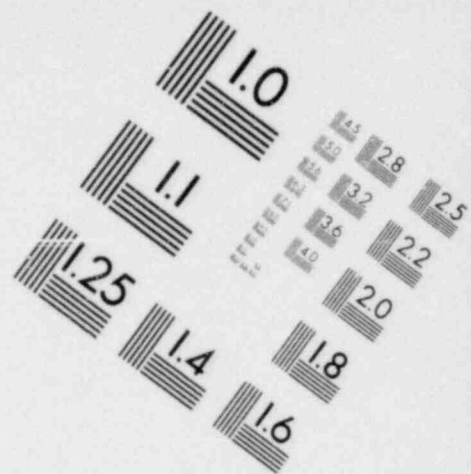
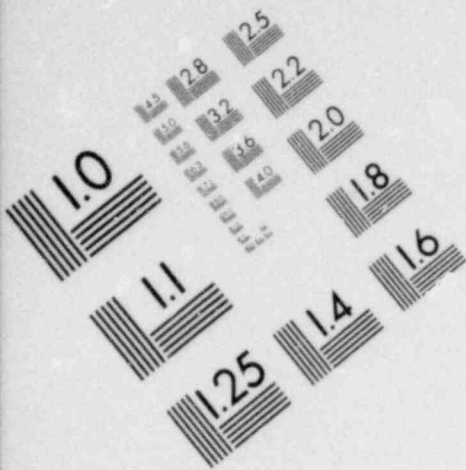


**IMAGE EVALUATION
TEST TARGET (MT-3)**

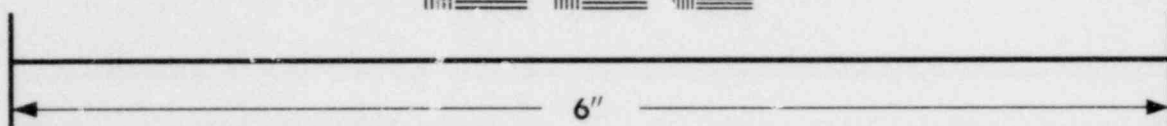
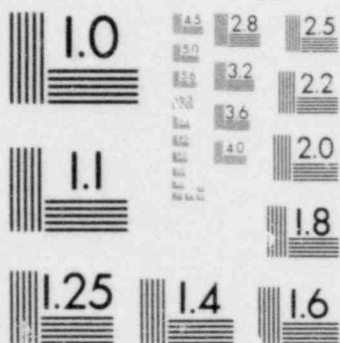


MICROCOPY RESOLUTION TEST CHART

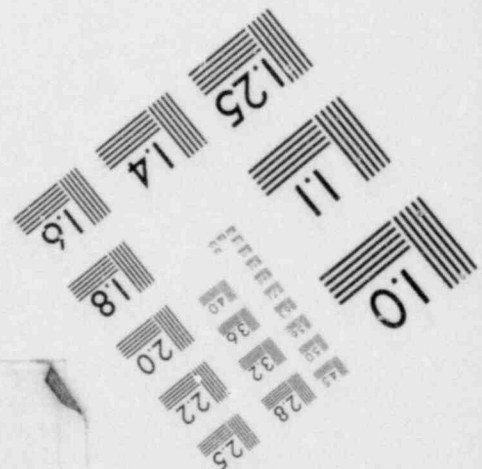
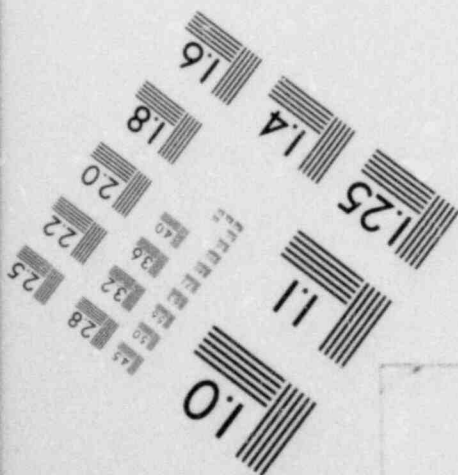




**IMAGE EVALUATION
TEST TARGET (MT-3)**



MICROCOPY RESOLUTION TEST CHART



Section I

Prepared by: C. M. Erb

Reviewed by: D. H. Danielson, Chief
Engineering Support Section 1

Functional or Program Areas Inspected

1. Seals Weld CRDM's to Reactor Vessel Head

Quality records for the Control Rod Drive Mechanisms were examined. The certificate of design from W and the N-2 form indicate these mechanisms are Section III, Class 1 items meeting the requirements of ASME Section III 1974 edition with 1974 addenda.

The welds were smooth with excellent contour, were tacked manually, and made with automatic Astro Arc equipment to Procedures NM-8-8-B-1-W and N-8-8-B-2, Revision 1. Inserts used were ER308-L. An information only Penetrant Test is made, since the final PT must be made after the hydro test. Hydro test will be performed at a pressure of 3,125 psi for ten minutes. Welding of the CRDM's had stopped, pending the hydro test since accessibility to center units for repair would be very difficult if surrounding units were in place.

2. Anchor Bolts for Class 1 Equipment

Certified quality records for various sizes of bolts and nuts used in supports for steam generators and reactor coolant pumps were examined to determine if mechanical requirements have been met. These bolts and studs were procured from Southern Bolt to Bechtel Specification 10466-C-134-A (1-5). The Bechtel specification referenced ASTM A540-70 with two different classes as shown below:

<u>Item Bolts</u>	<u>Size</u>	<u>Material</u>	<u>*Hardness BHN</u>	<u>Deformation Mils</u>	<u>Class</u>
Pump Anchor	3"x4'1"	AISI 4340-H	321-341	40, 39, 40	B23, C14
L. Generator Support	3½"x5'10"	AISI 4340-H	321-341	60, 64, 60	B23, C14
U. Generator Support	3"x5'3"	AISI 4340-H	311-341	45, 42, 42	B23, C14
Generator Tie Down	3½"x5'11"	AISI 4340	341-463	26, 30, 28	B23, C14

*The hardness readings taken on the surface are in the proper range for the specification and the yield and tensiles are also acceptable. Magnetic testing was performed on all the above orders.

The problems with the nuts is a dimensional one, because the threading tool was not centered in the hole properly. The studs, mostly 3 1/2" diameter, are out of tolerance on pitch diameter.

Bechtel is running stripping experiments at Lehigh University to ascertain if out of tolerance conditions in the threads will develop the required strength. Where assembly of a stud and nut is difficult, a hardened \pm 3A fit, will be used to chase the threads.

This item is open and will be checked upon in later inspections.

Unresolved Items

Several studs and bolts were seen to be without covering of any kind out in the plant. Since an eight thread bolt or stud is so dependent on cleanliness of the thread, these threads should be covered and protected from dirt and contamination. This item is unresolved pending action by the licensee (50-483/80-13-01)

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 disclosed during this inspection is discussed in Section I.

Exit Interview

The inspectors met with the licensee representatives (denoted under Persons Contacted) at the conclusion of the inspection. The inspector summarized the purpose and findings of the inspection. The licensee acknowledged the findings reported herein.

List of Attendees and Agenda
for
June 12 Meeting
with the
NUCLEAR REGULATORY COMMISSIONERS

ATTENDEES

Mr. Floyd Lewis, Chairman and President, Middle South Utilities,
Chairman, Three Mile Island
Ad Hoc Nuclear Oversight Committee

Mr. Byron Lee, Executive Vice President
Commonwealth Edison Co.
Chairman of NSAC Committee of EPRI
Research Advisory Committee
Chairman, AIP Policy Committee on Follow-up
to the TMI Accident

Dr. Edwin Zebroski, Director, NSAC

Mr. Robert Breen, Deputy Director, NSAC

Mr. William Layman, Director, Engineering Department, NSAC

AGENDA

- 10 minutes - Introduction, Industry Policy on NSAC - Floyd Lewis
- 10 minutes - NSAC Scope and Utility Interactions - Byron Lee
- 10 minutes - NSAC Program and Organization - Ed Zebroski
- 10 minutes - Operating Experience Analysis - Bill Layman
LER's, Crystal River Analysis
- 10 minutes - Probabilistic Analysis and Risk Assessment - Bob Breen
Emergency Decision Process
- 10 minutes - Degraded Core Studies - Ed Zebroski
Safety Parameters
Safety Goals
- 30 minutes - Question & Answer Time - All

POOR ORIGINAL