

APPENDIX C

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/88-10 Operating License: DPR-40

Docket: 50-285

Licensee: Omaha Public Power District (OPPD)
1623 Harney Street
Omaha, Nebraska 68102

Facility Name: Fort Calhoun Station (FCS)

Inspection At: FCS, Blair, Nebraska

Inspection Conducted: March 14-18, 1988

Inspector: *H. F. Bundy* 4/13/88
H. F. Bundy, Reactor Inspector, Test Programs Date
Section, Division of Reactor Safety

Accompanied
By: W. C. Seidle, Chief, Test Programs Section
Division of Reactor Safety on March 17-18,
1988

Approved: *W. C. Seidle* 4/13/88
W. C. Seidle, Chief, Test Programs Section Date
Division of Reactor Safety

Inspection Summary

Inspection Conducted March 14-18, 1988 (Report 50-285/88-10)

Areas Inspected: Routine, unannounced inspection of the licensee's surveillance testing and calibration control program and surveillance procedures and records.

Results: The basic program for completion of Technical Specifications (TS) required surveillances and ASME Section XI required inspection of components and testing of pumps and valves appeared to satisfy all requirements. The licensee was using computer-generated schedules advantageously. However, followup by licensee management on delinquent completion of test reviews and filing appeared inadequate and an apparent deviation from a licensee commitment

was identified (paragraph 2). Scheduling of calibration of safety-related components not identified in the TS appeared acceptable but cumbersome. In recognition of this, the licensee was in the process of implementing a computerized scheduling system for calibration.

Implementing procedures and the associated test records generated pursuant to the above programs generally satisfied all requirements. However, two apparent violations involving failure to promptly resolve deficiencies identified during a surveillance test and failure of the licensee to verify the correct qualification for an examiner completing a reactor coolant leak test were identified (paragraph 3).

DETAILS1. Persons ContactedOPPD

- G. Gates, Manager, FCS
- *L. Kusek, Manager (Acting), FCS
- *M. Core, Supervisor, Maintenance
- *T. Patterson, Supervisor, Technical
- *J. O'Connor, Plant Engineer (Acting)
- *L. Gundrum, Senior Nuclear Production Engineer
- *J. Ressler, Test Engineer
- E. Zbylut, Foreman (Acting), Instrumentation and Control (I&C) Department

NRC

- *P. Harrell, Senior Resident Inspector
- *W. Seidle, Chief, Test Programs Section, Division of Reactor Safety

The NRC inspector also interviewed other licensee personnel during the inspection.

*Denotes those attending the exit interview on March 18, 1988.

2. Surveillance Testing and Calibration Control Program (61725)

The purpose of this part of the inspection was to ascertain whether the licensee had developed programs for control and evaluation of the following:

- ° Surveillance testing, calibration, and inspection required by Section 3 of the FCS TS.
- ° Inservice inspection of components and testing of pumps and valves as required by 10 CFR 50.55a(g).
- ° Calibration of safety-related instrumentation not specifically controlled by TS.

a. Surveillance Testing

The NRC inspector reviewed the licensee's Standing Order (SO) G-23, Revision 22, dated February 25, 1987, "Surveillance Test Program." This SO established a program for satisfaction of all surveillance requirements specified in the TS. Among other requirements it provided for the following:

- ° Performance of surveillance tests (ST) and inspections in accordance with approved procedures

- ° Timely scheduling of all ST and inspections
- ° Proper review and approval of ST results
- ° Followup on late or missed ST and on reported ST anomalies or deficiencies

The NRC inspector learned, during an interview with the test engineer responsible for master ST scheduling and generation of ST deficiency reports, that a short-term delinquent report is generated daily for tests not completed on schedule. It appeared that licensee management had been taking appropriate followup action on the daily report. The test engineer also discussed another report which shows two categories of delinquencies. The first category is failure to receive a certification of test completion from the person responsible for test performance. The second delinquent category is failure to receive the test for filing on time. This delinquency indicates the ST results may not have been properly reviewed and approved. This report is generated approximately every 2 to 3 weeks. The NRC reviewed a delinquent report dated March 2, 1988. It reported 11 STs dating from August 22, 1986, through the end of the spring 1987 refueling outage, as delinquent for filing.

The NRC inspector questioned plant management on how they determine associated component or system operability for STs which have not been formally reviewed and filed. Licensee management responded that any ST deficiencies or anomalies are discussed with the test engineer and an informal disposition on operability is made. However, one of the STs (NZ-1-F.1) on the report contained unresolved deficiencies and anomalies and is further discussed in Section 3 below. The NRC inspector did not identify any direct safety concerns resulting from the delinquent STs.

In pursuing the above problem, the NRC inspector discovered NRC Violation 285/8511-01 had been issued on June 26, 1985. It involved failure to account for six STs, performed during the refueling outage ending in July 1984, in the files. In responding to this violation, the licensee stated, in part, "Each month the surveillance test clerk will issue a list of ST's that are due but not filed and those due but not completed. Each supervisor will be required to respond to this list by indicating the status of each test. This status list will then be compiled and presented to the Plant Review Committee (PRC) by the Supervisor-Technical indicating those tests not completed/not filed and the action taken to assure completion/filing and the action taken to assure completion/filing by the end of the next monthly review period."

This response clearly states that a delinquency will not be allowed to continue more than 1 month from the time it is identified. The existence of the 11 long-term ST delinquencies discussed above

represents an apparent deviation from the licensee's commitment to correct an identical problem in the response to Violation 285/8511-01. (285/8810-03).

The scheduling of STs is performed utilizing a computer data base and appears efficient. The licensee has identified isolated failures in the scheduling which usually involves STs scheduled in a week which overlaps 2 months. The licensee is pursuing a resolution of this problem.

The NRC inspector observed that SO O-30, Revision 4, dated August 27, 1987, "Testing of Safety Related Equipment," provides adequate requirements to ensure TS satisfaction and that safety is not compromised when testing safety-related components. Also, SO G-23 requires a biennial review of all ST procedures which is implemented in accordance with SO G-36, Revision 15, dated April 9, 1986, "Operating Manuals Review Documentation". Standing Order G-36 provides adequate guidelines to assure incorporation of any required changes in the ST procedures.

The NRC inspector reviewed FCS License Amendments 109, 110, and 111 to ascertain that TS ST changes were properly incorporated in the procedures and found no discrepancies. However, the following documents were identified indicating problems with timely incorporation of test changes in procedures had occurred:

- ° NRC Violation 285/8729-04 identified that procedures for certain surveillance tests identified in Amendment 110 had not been timely established and implemented.
- ° FCS Licensee Event Report (LER) 87-037 stated that changes in the EDG surveillance test required by Amendment 111 had not been incorporated in the procedure and implemented as required.

In each instance above, the licensee committed to resolve generic problems of correspondence control and distribution by April 15, 1988.

b. Inservice Inspection (ISI) of Components and Inservice Testing (IST) of Pumps and Valves

The NRC inspector reviewed the FCS "Inservice Inspection Program Plan for the 1983-1993 Interval" (Plan), which was transmitted to the NRC by Letter LIC-83-226 dated September 26, 1983, and updated by Letter LIC-84-009 dated January 10, 1984. The NRC inspector noted that there are outstanding Nuclear Reactor Regulation issues on this document which should be resolved. The licensee committed to the 1980 Edition, Winter 1980 Addenda of the ASME Section XI Code. The NRC inspector noted that review of this document had recently been documented in NRC Inspection Report 50-285/88-06. Also, review of

selected records of component inspections had also been documented in this inspection report. Therefore, the NRC inspector concentrated his review on the program for testing pumps and valves and associated procedures and records as discussed in paragraph 3 below.

The Plan appeared to satisfy the requirements of 10 CFR 50.55a(g) and ASME Section XI for IST of pumps and valves. The licensee utilizes the same computer based system discussed in 2.a. above for scheduling ISI and IST and tracking deficiencies. The NRC inspector selected several pump and valve tests and verified that they were scheduled and performed as required by the Plan.

c. Calibration of Safety-Related Components not Specifically Controlled by IS

The NRC inspector reviewed SO M-26, Revision 9, dated July 16, 1986, "Calibration Procedures." It required PRC-approved procedures for all critical system instruments. However, the Acting Foreman, I&C, stated that PRC approved procedures are used for all regular calibrations and that special calibrations would have equivalent controls. Procedure SO-26 also required shift supervisor approval to perform calibrations and the review and approval of the results by the shift supervisor.

The calibration schedule was being prepared manually. However, a computer data base was being loaded in preparation for switching to computer generated schedules. The manual scheduling and tracking of calibrations appeared cumbersome but effective. The Foreman, I&C, was receiving all feedback on calibration completions. He stated that he would personally follow up on any delinquencies or deficiencies.

Because of prior problems involving inadequate acceptance criteria for some safety-related instruments, plant engineering was reviewing the monthly schedule on an interim basis to determine if acceptance criteria were appropriate for all safety-related instruments. The current calibration program appeared acceptable.

No violations were identified. One apparent deviation is discussed in 2.a above.

3. Surveillance Procedures and Records (61700)

The purpose of this part of the inspection was to ascertain whether the surveillance of safety-related systems and components was being conducted in accordance with approved procedures as required by the TS and IST Plan. Pursuant to this objective, the NRC inspector selected certain TS surveillance requirements and components listed in the IST Plan, and he reviewed the associated licensee test procedures and an appropriate number

of test results records for each procedure. The TS surveillance requirements or IST component together with the associated test procedures reviewed by the NRC inspector are tabulated in the Attachment.

The NRC inspector determined that the required tests were being scheduled and performed as required in accordance with approved procedures. Acceptance criteria were specified in the procedures and, with the exceptions discussed below, the records stated satisfaction of acceptance criteria. Appropriate instructions for returning equipment to service following testing were given. Some problems involving failure to complete timely reviews of completed test records are discussed in Section 2.a. above and an example is given below.

The NRC inspector discovered that completed Procedure ST-NZ-1, Section F.1, for flow testing containment spray nozzles noted anomalies and deficiencies which had not been formally reviewed and dispositioned. Specifically, it was noted that ten nozzles were not tested because of inaccessibility and that one nozzle was not working properly. The test had been completed on May 8, 1987, and was listed as delinquent for filing in the list updated on March 2, 1988. The failure to evaluate the anomalies or deficiencies with these nozzles is an apparent violation of 10 CFR Part 50, Appendix B, Criterion XI, and the approved quality assurance program. (285/8810-01)

The NRC inspector discussed the deficiencies noted in the test record for ST-NZ-1 with plant management on March 15, 1988. The NRC inspector expressed concern that the plant had been restarted with a question about the operability of the containment spray system. The Supervisor-Maintenance initiated an Incident Report on March 16, 1988, to address the test problems noted. It contained the results of a preliminary safety analysis which indicated that over 100 spray nozzles must be plugged before the design flow rate of 5100 gpm would be decreased. The NRC inspector had no further safety concerns on this test or the operability of the system.

During the inspection, the NRC inspector requested records verifying the appropriate qualification level of examiners who completed reactor coolant system leak testing on May 29, 1987, and on June 1, 1987, in accordance with Procedure ST-RLT-1, Section F.1. Because these records were not made available prior to the exit, it was discussed as an unresolved item. Copies of qualification records were subsequently forwarded by the licensee to the NRC Region IV office on March 22, 1988. The qualification record for the examiner completing the test on May 29, 1987, indicated he had only an ANSI N45.2.6, Level I qualification for hydrostatic testing. Paragraph F.1.b.(2)(a) of ST-RLT-1 states that examiners must be qualified in accordance with ASME Section XI, Article IWA-2000. Paragraph IWA-2212 of Article IWA-2000 requires the use of VT-2 visual examination for leak testing. Subarticle IWA-2300 requires qualification of personnel

performing VT-2 examinations in accordance with the comparable levels of competency as defined in ANSI N45.2.6-1973. It also requires annual visual examinations to verify satisfaction of stated criteria. Records of the visual examinations were not made available by the licensee. The licensee's SO G-26, "Maintenance Quality Control Program," implements qualification of personnel to ANSI N45.2.6-1973 requirements. Table 1 of SO G-26 requires a minimum Level II capability for personnel who evaluate and report test results. Compliance with procedures is required by TS 5.8.1 as discussed above. Evaluation and reporting of test results for ST RLT-1, Section F.1, on May 29, 1987, by an examiner having an ANSI N45.2.6 Level I qualification (lower than the required Level II) is an apparent violation of TS 5.8.1. (285/8810-02). Because the examiner who performed the retest on June 1, 1987, appeared to be qualified to ANSI N45.2.6 Level II capability, the NRC inspector had no direct safety concern resulting from the qualification problem.

The NRC inspector noted that neither the qualification records nor SO G-26 specifically mention qualification to ASME Section XI VT-2 requirements. One qualification record referenced hydrostatic testing and the other record referenced leak inspection. To avoid confusion, the ASME, SNT-TC-1A, or other code terminology should be utilized in preparing the qualification record.

Two apparent violations are discussed above. No deviations were identified in this area.

4. Exit Interview

The NRC inspector met with licensee representatives denoted in Section 1 on March 15, 1988, and summarized the scope and findings of the inspection. After receipt of additional information regarding qualifications of the examiners performing Leak Test ST-RLT-1 (discussed in Section 3 above), the NRC inspector contacted the licensee's Ms. L. Lundrum and informed her that there appeared to be a violation involving an inadequate qualification level. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during the inspection.

Attachment

PROCEDURES AND RECORDS REVIEWED

<u>Requirement/ Component</u>	<u>Description</u>	<u>Test Procedure</u>
TS 3.1, Table 3-1, Item 3.C	RCS Flow Rx Trip	ST-RPS-3-F.2, R37/06-05-87
TS 3.1, Table 3-2, Item 5.b	Containment Spray Logic Test	ST-ESF-4-F.3, R13/04-24-86
TS 3.3(2)a	Valve Seat Leakage Test (Record for SI-204)	ST-CV-1, R5/02-15-83
TS 3.4(1)	Leak Test of RCS	ST-RLT-1, R7/12-06-84
TS 3.5(7)a	Inspection of Containment Dome Tendons	ST-CONT-4, R7/10-10-85
TS 3.6(1)	SI System Test	ST-ESF-2-F.3 & F.4, R38/03-20-87 ST-ESF-2-F.1 & F.2, R43/11-25-87
TS 3.6(2)b	Verify Containment Spray Nozzles Open	ST-NZ-1-F.1, R6/03-25-83
TS 3.7(1)b	Test Auto-Start Initiating Circuit for EDG	ST-ESF-6-F.2 R74/01-21-88
TS 3.9(6)a	Auto Actuation of AFW Valves on SI Signal	ST-FW-3-F.4 R12/07-26-84
TS 3.10(1)a.1	Verify CEA Group Withdrawal is above Transient Insertion Limits	ST-CEA-1-F.2, R60/06-18-87
TS 3.10(5)b	Determine \overline{FR} and $\overline{FX}Y$	ST-ICI-1-F.1, R4/10-16-86
TS 3.15(2)d	Functional Test of Fire Pumps	ST-FP-4, R5/3-19-85 OI-FP-6-1, R51/04-23-87

TS 3.15(3)b	Spray/Sprinkler Nozzle Air Flow Test in EDG Room	ST-FP-5, R3/02-12-86
IST/FW-10	AFW Pump Test	ST-FW-1, R34/09-15-87
IST/HCV-383-3	Test of SI Suction to Containment Sump Valve	ST-SI/CS-1-F.1, R43/08-06-87 ST-CONT-3, R25/07-09-87
Calibration	RCS Flow Rate	CP-A/114 W, R10/04-17-87
Calibration	Boric Acid Storage Tank Temperature	CP-255, R3/12-17-86