

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/85-11

License: DPR-40

Docket: 50-285

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

Facility Name: Fort Calhoun Station

Inspection At: Fort Calhoun Station, Blair, Nebraska

Inspection Conducted: May 1-31, 1985

Inspector: LA Yandell
L. A. Yandell, Senior Resident Reactor Inspector,
Fort Calhoun Station

6/13/85
Date

Inspector: P. H. Harrell
P. H. Harrell, Resident Reactor Inspector,
Arkansas Nuclear One

6/24/85
Date

Approved: L. E. Martin
L. E. Martin, Section Chief, Project Section A,
Reactor Project Branch 2

6/26/85
Date

Inspection Summary

Inspection Conducted May 1-31, 1985 (50-285/85-11)

Areas Inspected: Routine, unannounced inspection of licensee's actions on previous inspection findings, operational safety verification, surveillance testing, surveillance program, maintenance activities, followup of IE Information Notices, and followup of LERs. The inspection involved 135 inspector-hours onsite by two NRC inspectors, of which 22 were offshift hours.

Results: Within the seven areas inspected, one violation was identified (failure to follow procedures - paragraph 5).

DETAILS

1. Persons Contacted

- *R. L. Andrews, Division Manager, Nuclear Production
- **W. G. Gates, Manager, Fort Calhoun Station
- *R. L. Jaworski, Section Manager, Technical Services
- *T. J. McIvor, Manager, Technical Support
- *J. K. Gasper, Manager, Administrative Services
- *K. C. Hyde, Test Engineer
- J. J. Fisicaro, Supervisor, Nuclear Regulatory and Industry Affairs
- L. T. Kusek, Supervisor, Operations
- M. R. Core, Supervisor, Maintenance
- J. J. Fluehr, Supervisor, Station Training
- C. J. Brunnert, Operations Supervisor, Quality Assurance (QA)
- B. L. Saucier, Inspector, QA
- L. H. Borcharding, Inspector, QA

*Denotes attendance at the May 17, 1985, exit interview.

**Denotes attendance at the May 17 and June 10, 1985, exit interviews.

The NRC inspectors also talked with and interviewed other licensee employees during the inspection. These employees included licensed and unlicensed operators, craftsmen, engineers, and office personnel.

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Open Item 285/8217-01, "Housekeeping." The licensee failed to include the controlled area of the plant in the Zone IV category. The licensee has issued a revision to Administrative Procedure A-G-6, "Housekeeping," to require that the controlled area of the plant be kept in Zone IV. This item is considered closed.
- b. (Closed) Open Item 285/8312-07, "Alternate Shutdown." The licensee failed to list all valves required to be manipulated during alternate shutdown operations. Emergency Operating Procedure (EOP) EP-24-A, "Forced Evacuation of the Control Room Due to Fire," has been revised to include HCV-2809A and HCV-2883B in the list of the valves to be manipulated during cold shutdown. This item is considered closed.
- c. (Closed) Open Item 285/8312-08, "Fuse Not Labeled." Repair instructions for the raw water system provided in EOP EP-24-A, require that the standby fuse in Switchgear 1A4, Unit 12 be pulled. The licensee had not provided a label in Unit 12 to indicate which was the standby fuse. The NRC inspector verified that the fuse has been labeled and the label clearly indicates which is the standby fuse. This item is considered closed.

- d. (Closed) Open Item 285/8312-09, "Incorrect Procedure." The licensee issued EOP EP-24-A which incorrectly identified the conductors to be jumpered for the repair of HCV-348. The licensee has issued a revision to EOP EP-24-A to correctly identify the conductors to be used. This item is considered closed.
- e. (Closed) Open Item 8410-02, "Procedure Not Issued." The licensee had failed to issue a procedure to implement 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. The licensee has issued Quality Assurance Department Procedure, QADP-17, "Control of Deficiencies and Corrective Action," to implement Criterion XVI of Appendix B. The NRC inspector reviewed the procedure and it appears that the procedure effectively implements the requirements for corrective action. This item is considered closed.

3. Operational Safety Verification

The NRC inspector performed activities as described below to ascertain that the facility is being maintained in conformance with regulatory requirements and that the licensee's management control system is effectively discharging its responsibilities during power operation.

- a. The NRC inspector made several control room observations to verify proper shift manning, operator adherence to approved procedures, adherence to selected Technical Specifications, and operability of the reactor protective system and engineered safeguards equipment. Selected logs, records, recorder traces, annunciators, panel indications, and switch positions were reviewed to verify compliance with regulatory requirements. The licensee's equipment control was reviewed for proper implementation by reviewing maintenance order status and the tag-out log, and by verifying selected safety-related tag-outs. The NRC inspector observed several shift turnovers.
- b. The NRC inspector toured the plant at various times to assess plant and equipment conditions. The following items were observed during these tours:
 - . general plant conditions
 - . vital area barriers not degraded or appropriately manned by security personnel
 - . adherence to requirements of radiation work permits (RWPs)
 - . proper use of protective clothing and respirators
 - . plant housekeeping and cleanliness practices including fire hazards and the control of combustible material
 - . work activities being performed in accordance with approved activities
 - . physical security
 - . HP instrumentation is operable and calibrated

- c. The NRC inspector verified operability of the following safety-related systems by performing a walkdown and switch verification of the accessible portions of the system:
- . High Pressure Safety Injection System per Checklist SI-1-CL-A
 - . Low Pressure Safety Injection System per Checklist SI-1-CL-B
 - . "A" and "B" Monitor Tank secured lineup per checklist contained in Operating Procedure OI-WDL-3, Steps IV.A.18 and IV.B.18
 - . Plant Electrical Distribution per Checklists EE-1-CL-A and EE-2-CL-A
 - . Nos. 1 and 2 Diesel Generator - Starting Air Systems per Checklists DG-1-CL-A and DG-2-CL-A
 - . Nos. 1 and 2 Diesel Generator - Fuel Oil System per Checklists DG-1-CL-B and DG-2-CL-B
- d. The NRC inspector observed portions of Containment Purge 85023, reviewed the discharge permit, and noted the following:
- . the X/Q log was maintained, the readings were within limits, and the shift supervisor review was performed
 - . the limiting X/Q was established
 - . VIAS was tested using RM 061
 - . the stack dewpoint and annubar readings were taken
 - . the tritium sampler was in place and the sample was taken
 - . the recommended release rate was established, and the actual flow was lower than that authorized
 - . radioactivity analyses were performed
 - . the required effluent monitors and recorders were operational
 - . the required auxiliary building exhaust fans were operating
 - . OI-VA-1, Section IV.G was attached to the permit
 - . the initial reading of the stack flow integrator was noted on the recorders
 - . the operations checklist to CMP 4.5 was complete and signed off by the shift supervisor
 - . the permit was reviewed and signed off properly, and the termination time was established

- e. The NRC inspector observed portions of Discharge Permit 85060 for "B" Monitor Tank. The NRC inspector verified that a tank sample had been taken and analyzed, that all radiological and chemical discharge limits were satisfied in the discharge tunnel, that the operations checklist was completed and signed off, that the maximum release rate was established, and that the shift supervisor had signed off the permit. The NRC inspector observed the discharge being secured from AI-100 in the Auxiliary Building.
- f. The NRC inspector attended the entrance and exit interviews of licensee's Safety Audit and Review Committee (SARC) Audit No. 2-85 conducted the week of May 6th. This audit was conducted to "determine whether commitments to the NRC and/or appropriate corrective action to various problems are executed in a timely and effective manner." It was noted that plant QA auditors were utilized to address a substantial portion of the approved audit checklist. The NRC inspector reviewed the checklist, observed the auditors during the inspection, and discussed their observations with regard to specific LERs, Operations Incidents Reports, and NRC inspection reports.

No violations or deviations were identified.

4. Surveillance Testing

The NRC inspector witnessed portions of the following surveillance tests:

- . ST-RM-1, F.2 (Monthly) Area Monitor Checks
- . ST-RM-2, F.2 (Monthly) Process Monitor Checks
- . ST-ISI-SI-1, F.1 (Quarterly) Safety Injection Valves Inservice Testing
- . ST-ISI-CVCS-3, F.1 (Quarterly) Chemical and Volume Control System Pump Test
- . ST-RPS-1, F.3 (Monthly) Power Range Safety Channels Test
- . ST-CEA-1, F.4 (Bi-Weekly) Control Element Assembly Check
- . ST-ESF-5, F.1 (Monthly) Automatic Load Sequencer Check

In the above surveillance tests, the NRC inspector verified where applicable that:

- . testing was scheduled in accordance with Technical Specification requirements
- . procedures were being followed
- . calibrated test equipment was being used

- . qualified personnel were performing the tests
- . limiting conditions for operation were being met
- . test data were being accurately recorded

No violations or deviations were identified.

5. Surveillance Program

The NRC inspector reviewed the surveillance program to verify the program is being conducted in accordance with approved procedures as required by the Technical Specifications, inservice inspection program for pumps and valves, and the approved fire protection/prevention program.

The review included the following verifications:

- . A selected sample of surveillances required by the Technical Specifications are being performed in accordance with properly approved procedures.
- . Surveillance tests for pumps and valves identified in the licensee's approved inservice inspection (ISI) program are being performed in accordance with approved procedures.
- . The procedures used to perform Technical Specification and ISI activities are technically adequate and are written so they can be understood and used by the technicians performing the surveillance.
- . Surveillances are being performed at the frequency required by the Technical Specifications and the ISI program.
- . New or revised surveillance procedures are being issued, when required, in response to recently issued Technical Specification amendments.
- . Surveillance procedures are written in a format that provides prerequisites, acceptance criteria, and instructions for returning systems or components to service.
- . Completed surveillance tests are being filed and retained in a records system in accordance with requirements.

During performance of the above reviews, the NRC inspector noted that there were discrepancies in one of the surveillance tests. The discrepancies were of a minor editorial nature. The licensee was notified of the discrepancies and agreed to correct the procedure.

The NRC inspector reviewed the surveillance records completed during the last refueling outage which ended in July 1984. During a review of the test records, the NRC inspector noted that six surveillance tests were not in the files. Upon notification by the NRC inspector of the missing tests, the licensee initiated a search for the missing tests. The results of the search revealed that three tests had been inadvertently filed with the completed monthly surveillances instead of the refueling outage surveillance tests. One of the tests had not been reviewed by the performing group's supervisor, and two completed tests could not be located. The failure to account for completed surveillance tests in the files is an apparent violation. (285/8511-01)

Based on the review of past NRC inspection reports and discussions with NRC personnel, the maintenance of all types of QA records has been a continuing problem for the licensee.

No other violations or deviations were identified.

6. Maintenance Activities

The NRC inspector witnessed portions of the work performed on the following maintenance items:

- a. Safety-Related Design Change Order (SRDCO) 85-7/MR-FC-84-2^o, "RPS Dual Potentiometer Upgrade." The licensee experienced the failure of three dual potentiometer modules as reported in LERs 83-05, 83-06, and 83-07. An investigation was performed to determine the cause of the failure (see NRC Inspection Report 50-285/84-04, paragraph 6.e) and the licensee decided to replace all 36 modules in the reactor protective system. The NRC inspector reviewed the work package and noted the following:
 - . The Pre-Installation Modification Control Sheet (Form H) was filled out properly, purchase order information was present, and PRC approvals were obtained.
 - . The Engineering Evaluation and Assistance Request (Form A) was completed and contained appropriate approval signatures.
 - . The Safety Evaluation (FC-154) was filled out and approved.
 - . The SRDCO was filled out and approved by QA, Quality Control (QC), and the plant manager.
 - . The PRC approved work procedure contained signed off prerequisites, QC hold points, materials identification information, applicable Technical Specification requirements, and the approved drawing list.

On separate occasions the NRC inspector observed the work performed on Channels A and C, verified that procedure signoffs were current, and confirmed that appropriate jumper log entries were made. The NRC inspector observed portions of Calibration Procedure CP-A/APD after work was complete on Channel A and Surveillance Test ST-RPS-12, F.2 to verify operability.

- b. Maintenance Order (MO) 851270, "Charging Pump CH-1C." A packing leak on the charging pump was identified by the operator who prepared the MO. The NRC inspector verified that the MO was properly signed off, that Tag-Out 85-358 was assigned, and that the applicable Technical Specification was referenced. The pump was repacked in accordance with MP-CH-1, "Inspection and Repair of Charging Pumps." The NRC inspector reviewed the work procedure and verified that initial conditions were signed off, that RWP 125 was assigned to cover this work, and that QC hold points were observed. Qualified craftsmen were assigned to the task and the NRC inspector noted that purchasing information was identified on the MO. Following repairs, the NRC inspector observed performance of Surveillance Test ST-ISI-CVCS-3, F.1, "CVCS Pump Test," to verify operability and noted that the MO was signed off, the tags cleared, and the pump returned to service.
- c. MO 851135, "No. 2 Diesel Generator." During performance of a surveillance test the licensee determined that the voltage regulator could not provide sufficient control to maintain the power factor within operating limits. An approved PRC procedure was prepared to cover this work and the NRC inspector noted that the shift supervisor signoff was present, that procedure steps were signed off, and that the safety analysis (FC-154) was completed and attached. Procedure Change 1477b was processed and incorporated properly. The NRC inspector observed the work in progress and verified that tags were properly hung, that qualified craftsmen were assigned to the task and that they exhibited safe work practices.
- d. MO 851641, "Nuclear Instrumentation (NI)." The SIGMA meter providing temperature indication on the NI detector well cooling channel was in alarm. The MO was written to "calibrate or repair as needed." The NRC inspector reviewed the MO for proper approvals and signoffs. Calibration Procedure CP-734A, "Nuclear Detector Well Cooling Temperature," was performed and it was determined that the meter movement was inoperable. The NRC inspector observed the troubleshooting, installation of jumpers, and removal of the instrument for repair. The NRC inspector reviewed the jumper log for proper entries and verified that the tags were cleared correctly after the instrument was reinstalled.
- e. MO 851061, "Sampling System; PCV-2560." Valve PCV-2560 in the Post-Accident Sampling System was not providing proper control and repairs were initiated. It was determined that new internals were

required. The NRC inspector observed the work being performed and noted that qualified craftsmen were assigned to the task, that current technical manual information was present at the jobsite, that isolation tags were properly hung, and that appropriate HP precautions were observed. The NRC inspector reviewed the MO for completeness and proper approvals.

No violations or deviations were identified.

7. Followup of IE Information Notices

The NRC inspector reviewed the licensee's program to handle IE Information Notices. This review included verification that the notices issued in 1984 were received by the licensee, entered into their licensing tracking system, and distributed to appropriate personnel for review.

The NRC inspector reviewed the licensee's actions taken in response to IE Information Notice 84-06, "Steam Binding of Auxiliary Feedwater Pumps," issued on January 25, 1984. This issue was reviewed in more detail in response to a request from the NRC Office of Inspection and Enforcement.

The NRC inspector determined that the licensee actions were as follows:

- . The auxiliary feedwater (AFW) piping is monitored once per shift by touching the pipe. A permanent local temperature indicating device is scheduled for installation during the 1985 outage.
- . AFW operating and surveillance procedures were reviewed but revisions were not required with regard to check valve leakage because the auxiliary feedwater piping and check valves are not placed in service during testing or normal operation of the pump except for the refueling outage tests.
- . Procedure OI-AFW-2, "Auxiliary Feedwater System Operation - Special Procedures," was revised to provide guidance on detecting and correcting AFW pump steam binding.
- . The licensee is performing periodic leakage tests of the AFW check valves and periodic inspections of the AFW discharge isolation valves.

No violations or deviations were identified.

8. Followup of Licensee Event Reports (LERs)

LERs 83-005, 83-006, and 83-007, "Failed RPS Dual Potentiometer Modules." This item was discussed in NRC Inspection Report 50-285/84-04 and remained open pending replacement of these modules by the licensee. Based on recommendations contained in Combustion Engineering Letter CE-18074-1528 dated January 26, 1984, the licensee elected to replace all Bell & Howell

Model 3846 12-01 modules with upgraded Bell & Howell Model 20-320. Work Order 908 was issued to cover procurement of 60 potentiometers and this work was completed this reporting period under SRDCO 85-7/MR-FC-84-29. The corrective actions taken by the licensee appeared to be adequate.

9. Exit Interview

The NRC inspector met with licensee representatives on May 17 and June 10, 1985, to summarize the scope and findings of the inspection.